

1. Telework and its effects in Europe

Lutz Gschwind and Oscar Vargas

EXECUTIVE SUMMARY

Europe combines several unique features in regard to the development, incidence and effects of telework. Many countries on the continent have seen large-scale economic shifts over the past five decades, away from employment in manufacturing and towards information and telecommunication-enabled service and knowledge-based jobs. This development coincided with an increasing demand for flexible workplace and working time policies at the national, sectoral and company levels, fuelled by a steady rise in dual-earner households owing to increasing female labour market participation. Europe is also unique in the sense that policy-making and social dialogue regarding telework are embedded into a 2002 framework agreement for telework on the supranational level, the European Union. This agreement among the European Union level social partners has changed the nature of dialogue and policy-making in relation to telework in a way that cannot be found outside this region. A comparison of European countries also unveils how telework can, against the backdrop of these common characteristics, develop differently depending on the social and economic setting. All of these particularities are discussed in detail in this chapter with help of 2015 data from the European Working Conditions Survey and detailed national reports compiled by experts from ten countries on the continent.

1. INTRODUCTION

Europe can be considered an ideal breeding ground for the rise of telework. National economies across the continent have been following a similar trajectory over the past five decades, away from employment in manufacturing and towards service jobs and high-skill tasks (Gallouj et al. 2015; Wölfl 2005). Mobile information and communication technologies (ICTs) play a crucial role in this development. Automation and

digitalisation are drastically reducing the necessity of human labour in the stationary production of goods as well as, to an increasing extent, in services such as transportation, sales and accounting (Autor 2015; Brynjolfsson and McAfee 2014). A growing number of tasks in Europe's new, knowledge-based economy are enabled by Internet connections and can be performed anywhere at any time with the help of mobile ICTs. Increasingly fewer jobs remain entirely dependent on a single location (Gallouj et al. 2015; Holtgrewe 2014; Popma 2013). This rise in mobility and use of ICTs for work is coupled with an increasing demand for flexible working time and workplace arrangements. In addition, rapid increases in female labour-market participation have increased the number of dual-earner households. This transformation has created an increasing demand for the ability to arrange paid work and private life flexibly for all working household members across space and time (Annesley 2007).

All these conditions speak in favour of a large-scale expansion of telework across the European continent. Nevertheless, progress has been slow. Estimates by Eurofound for the early years of the 21st century show that the share of home-based telework had increased from 5 per cent to 7 per cent between 2000 and 2005 (Welz and Wolf 2010). These increases appear rather modest. However, they do not give the full picture. Reported estimates exclude mobile and occasional telework. The work pattern has experienced an expansion owing to the technological developments of the last 15 years. Moreover, they do not reflect to what extent and how work with mobile ICTs developed differently across countries. This chapter complements such earlier findings with help of two new sources of information: (1) an expert survey that was conducted in ten European countries in order to gather statistics, policy reports and study results on the national level, and (2) the sixth wave of the European Working Conditions Survey (EWCS). Data for both sources were gathered in 2015. Detailed findings of this analysis were discussed in the joint European Foundation for Improvement of Living and Working Conditions (Eurofound) and International Labour Organization (ILO) report (Messenger 2017). This chapter presents a summarised version together with updated results of the study.

2. MAIN DATA SOURCES AND OPERATIONALISATION OF TELEWORK

Reported figures and examples for the incidences and effects of telework in Europe are derived from a combination of data sources. The primary source is an expert survey that was designed and distributed for a joint

project of Eurofound and the ILO in 2015. It captures the use of telework across ten European countries: Belgium, Finland, France, Germany, Hungary, Italy, the Netherlands, Spain, Sweden and the UK. Each of the national experts was given a guideline for the collection of research reports, policy evaluations and company examples for the study of telework in their respective countries. The predominant sources of information for the incidence and intensity of telework were large-n surveys. Telework is of growing interest for public authorities and policy-makers across all country cases. Standardised questions for this topic are therefore included in some national labour force or working conditions surveys. However, they are rarely the main focus, which means that telework tends to be addressed by only one or two items. Statistics on the incidence of telework thus vary greatly in relation to the organisation of work (home-based or mobile), the intensity of telework (once a week or once a month) and the reference population of the survey (employees or all workers). Results of the national reports were therefore complemented with data from the sixth wave of the EWCS.

Data for the EWCS is generated with the help of face-to-face surveys and standardised questionnaires. The sixth wave was conducted in 2015 with about 44000 workers in 35 European countries. Telework is not directly addressed in the survey. However, respondents were asked about both their work location and the use of ICTs for work. This information was combined to identify four types of workers: (1) regular home-based teleworkers who use ICTs at least several times a month to work from home, (2) regular mobile teleworkers who work with help of ICTs several times a week or more at locations other than their home or employer's premises, (3) occasional teleworkers who work primarily at their employer's premises but occasionally (less than several times a month) work from home or at other locations, and (4) non-teleworkers who remain at their employers premises at all time. This categorisation is unique in the context of this volume, as it allows for great detail and an operationalisation of telework that is more in tune with the latest developments of ICT-enabled work (see the Introductory chapter of this volume; see also Messenger and Gschwind 2016). It is used as a framework both for the discussion of national reports and for the presentation of data from the EWCS.

3. DRIVERS OF AND BARRIERS TO TELEWORK

The parallel trends of workplace digitalisation and increased demand for work–life balance can be considered common drivers of telework across the European continent. However, their forces do not unfold evenly over

all countries and sectors. Comparative studies on regulatory barriers to working time and workplace flexibility highlight a strong split across Europe. The Nordic countries, Sweden and Denmark in particular, are found to combine generous social security for parents and the elderly with a regulatory framework and working culture that allows for flexible coordination between paid work and private life. Southern and Eastern European countries, such as Greece, Italy, Portugal, Spain and the Czech Republic, Hungary, Poland and Slovakia are characterised by a lower level of formal flexibility and an emphasis on presenteeism. Central European countries, most prominently Germany, fall in between those two poles (Chung et al. 2007; Goudswaard et al. 2013; Muffels and Luijkx 2008; Wilthagen and Tros 2004). The development of telework is intertwined with these contextual factors. Work away from the employer's premises is facilitated in a regulatory framework and working culture that enables both working time and workplace flexibility (Bailey and Kurland 2002; Baruch 2000; Taskin and Edwards 2007). Time-related and cross-country variation in the contextual determinants of telework are discussed below in light of these considerations.

The trend towards an increasing demand for work–life balance policies is clearly reflected in results of a survey among 1556 German companies for the year 2012. About 81 per cent of employers consider family friendliness to be 'important' or 'quite important' for their company. Only 47 per cent responded this way when the same study was first conducted in 2003. Information and communication technology-enabled mobile and home-based work is identified as an adequate response to this trend by both employers and employees. The share of companies with policies for home-based telework increased from 8 per cent in 2003 to 21 per cent in 2012 (BMFSFJ 2013). Results of a survey among German workers in 2012 show that home-based telework is undertaken by 62 per cent of respondents in order to balance paid work and private life. In comparison, only 27 per cent state that they choose to work at home because it improves their job satisfaction (Pfisterer et al. 2013).

A comparison with other national reports shows that the trend towards telework adoption has unfolded unevenly across the European continent. Evidence from a company survey in Sweden indicates an even larger increase than in Germany. The share of companies with employees who work away from the employer's premises for at least half a day per week increased from 36 per cent in 2003 to 51 per cent in 2014 (Statistics Sweden 2014a). Results of a study among 300 companies in Spain, in contrast, indicate a much slower rise of telework. About 7 per cent of surveyed companies reported in 2003 that they adopted formal policies to enable work away from the employer's premises. Ten years later the share had only

increased to 13 per cent (IDC 2013). The authors of the national report for Spain explain the modest adoption of telework with a relatively strong emphasis on presenteeism in the Spanish working culture, a slow development of the required ICT infrastructure and a general lack of public policies for working time and workplace flexibility. These explanations are in line with comparative research on social security and workplace flexibility in Europe (Chung et al. 2007; Goudswaard et al. 2013; Muffels and Luijkx 2008; Wilthagen and Tros 2004).

The comparison across countries lends support to the hypothesis that the driving forces of telework are bound to contextual factors such as employment regulation, working culture and ICT infrastructure. This dependence is also emphasised by cross-sectoral comparisons within the country cases. Results from a study of equality plans and collective agreements in 56 large Spanish companies shows that it is more difficult to introduce telework as a mode of work in direct manufacturing processes (for example, for workers in a workshop or production line). Typical office jobs such as accounting and management can be adapted more easily to working time flexibility and telework programmes (Otaegi 2015). Similar cross-sectoral variations are also reported for the case of France. Telework is found to be particularly prevalent in technology-intensive and in Anglo-Saxon multinational companies (MNCs). However, there is a high degree of heterogeneity among these companies as well (Greenworking 2012). This variation suggests that barriers to telework can also be found on the individual and company levels.

Technical problems and reluctance among managers are reported as the main individual- or company-level barriers for telework. A 2015 survey among 1027 teleworkers in Sweden asked respondents if they encountered any obstacles when working away from the office. The results showed that 63 per cent encounter difficulties to access the company's information technology (IT) system and 56 per cent stated that they find it problematic to participate in meetings with the help of ICTs. Word of such technical and organisational problems can make employers reluctant to adopt of telework in their own companies. A study among employers in Flanders, Belgium, shows that a majority of employers fears high costs for ICT infrastructure and loss of managerial control owing to the adoption of flexible working time and workplace arrangements. These fears are particularly pronounced in small and medium-sized companies and among managers who themselves have not had any experience with telework (Walrave and De Bie 2005).

4. THE INCIDENCE OF TELEWORK

The review of drivers of and barriers to working time and workplace flexibility in Europe indicates a considerable cross-country variation in relation to the current incidence and intensity of telework. At first glance, a comparison of reported figures in the national reports seems to lend support to this expectation. Table 1.1 shows that shares of teleworkers are particularly high in the Nordic countries. Every third employee in Finland and Sweden is working at least occasionally away from the employer's premises with the help of ICTs. Moderate levels of telework can be found in Central Europe. Workers in Southern and Eastern Europe work almost exclusively at their employer's premises. These figures seem to indicate a rough North/South and East/West divide in the incidence of telework. However, it is highly problematic to draw general conclusions from the summary of these individual national reports alone. The number of countries per region varies greatly, together with the data sources, reference populations and operational definitions of telework. It is therefore important to complement these reported figures with additional data from EWCS.

Results of analyses with 2015 data of the EWCS are summarised in Figure 1.1. They indicate a similar general North/South and East/West divide as in the national reports. Shares of teleworkers are much higher in Denmark (37 per cent), Finland (24 per cent) and Sweden (33 per cent) than in Greece (9 per cent), Italy (7 per cent), Portugal (11 per cent) and Spain (13 per cent). Central and West European countries fall in between, ranging from 30 per cent in the Netherlands to 12 per cent in Germany. The same can be said for Eastern European countries. Shares of teleworkers vary between 24 per cent in Estonia and 10 per cent in the Czech Republic. Differences between the country reports, on the one hand, and estimates on the basis of the EWCS, on the other, can be explained with variations in the form and timing of the data collection processes as well as the different definitions of telework. This is particularly visible in relation to occasional telework. National labour force and working conditions surveys rarely include questions about work in between a worker's home and the employer's premises. Estimates for the incidence of telework in the national reports are therefore conservative and fall on average below those of the EWCS.

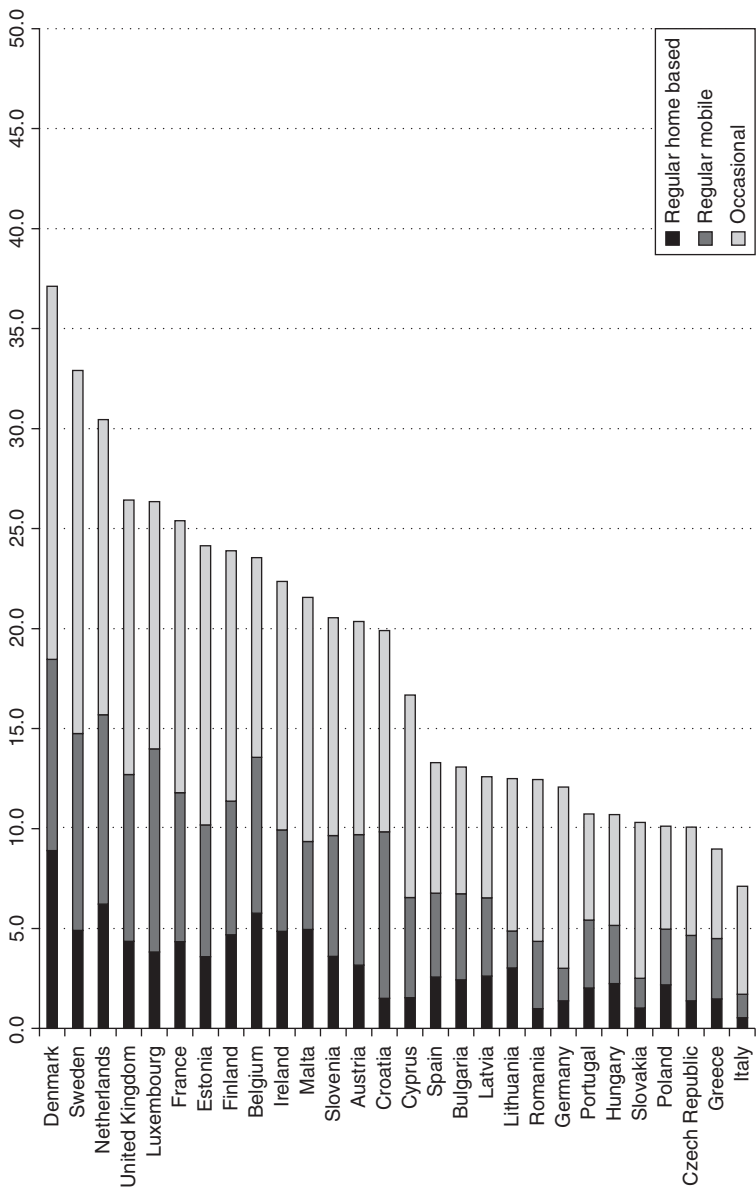
The national data collected from the ten EU member states also enables us to draw some conclusions about the characteristics of teleworkers. The breakdown by occupations shows that not all types of work can be performed away from the employer's premises and not all jobs are dependent on ICTs. Some occupations (for example, shop assistants or manufacturing) require the employee to work at a fixed workplace in

Table 1.1 Incidence of telework on basis of national reports for ten European countries

Country	Percentage share	Operational definition	Intensity	Reference population	Year of data collection
Sweden	32	Home-based	A few hours per week or more	Employees	2013
Finland	28	Home-based + mobile	At least occasionally	Employees	2013
Belgium	20	Home-based	At least sometimes	All workers	2011
Netherlands	15	Home-based + mobile	At least half a day per week	Employees	2014
UK	14	Home-based + mobile	Main job	All workers	2014
France	12	Home-based + mobile	At least rarely	All workers	2003
Germany	12	Home-based	At least sometimes	All workers	2011
Spain	11	Home-based + mobile	Regular place of work	All workers (who work with computers)	2011
Italy	5	Home-based + mobile	Regular place of work	All workers	2013
Hungary	1	Home-based	Regularly	All workers	2014

Sources: Sweden (Statistics Sweden 2014b), Finland (Lyly-Yrjänäinen 2015), Belgium (Eurostat 2015), Netherlands (Hooftman et al. 2015), UK (ONS 2015), France (DARES 2004), Germany (Brenke 2014), Spain (OECT 2015), Italy (Chiaro et al. 2015), Hungary (KSH 2015).

order to perform work-related tasks. Other occupations (such as bus drivers) constantly work away from the employer's premises, but do not use ICTs during work. Consequently, Brenke (2014) reports a low share of telework in Germany among shop assistants and in manufacturing occupations, as well as for construction workers. Similarly in Hungary and



Source: Eurofound (2015).

Figure 1.1 Share of workers by type of telework and country (percentage)

the Netherlands, the lowest share of telework is to be found among plant and machine operators, as well as elementary occupations and craft and related trades' workers (Hooftman et al. 2015; KSH 2015).

By contrast, the highest share of teleworkers is normally among knowledge workers, that is, highly qualified employees, often in managerial posts (see Hungary, KSH 2015; Netherlands, Hooftman et al. 2015; Spain, INSHT 2011). In the UK, for example, those employees who mainly work from home and who depend on the use of ICTs are overrepresented in the more professional occupations: 43 per cent of them are managers or professionals (compared with 29 per cent among all employees). This suggests that availability of teleworking may be partly related to seniority (Ruiz and Walling 2005). The same tendency is also reflected in the data from the Netherlands: 41 per cent of managers and 24 per cent of professionals use ICTs for work away from their employer's premises, while only 15 per cent do so in the population as a whole. Similarly in Finland, several studies show that telework is more common among employees with higher occupational status (Lyly-Yrjänäinen 2015; Perkiö-Mäkelä and Hirvonen 2013; Sutela and Lehto 2014).

This pattern of telework or mobile telework distribution is also recognisable across economic sectors: telework is relatively scarce in sectors which require the employee to work at a fixed workplace in order to perform work-related tasks (for example, manufacturing), while sectors with high ICT dependence and more flexibility for working location show a larger incidence. Data for the Netherlands, for instance, shows that telework is most prevalent in information and communication (42 per cent), financial and insurance activities (36 per cent) as well as professional, scientific and technical activities (28 per cent) (Hooftman et al. 2015).¹ In Hungary, the proportion of teleworkers is higher in services, among non-profit and non-governmental organisations, but below the average in the public sector (KSH 2015). In Spain, mobile telework seems to be more prevalent in the service sector than in agriculture, construction or industry (INSHT 2011). In Sweden, it has been found that telework is strongly associated with high-status occupations in the advanced service sector (Vilhelmson and Thulin 2016).

Available results based on national data vary substantially across countries in relation to demographic characteristics. The distribution of teleworkers between men and women, for example, is almost equal in Germany (Pfisterer et al. 2013) and Hungary (KSH 2015). By contrast, men are more likely to be teleworkers in Finland (Perkiö-Mäkelä and Hirvonen 2013), the UK (Ruiz and Walling 2005), France (Greenworking 2012), Sweden (Statistics Sweden 2014b) and the Netherlands (Hooftman et al. 2015). The difference ranges from slight – four percentage points in

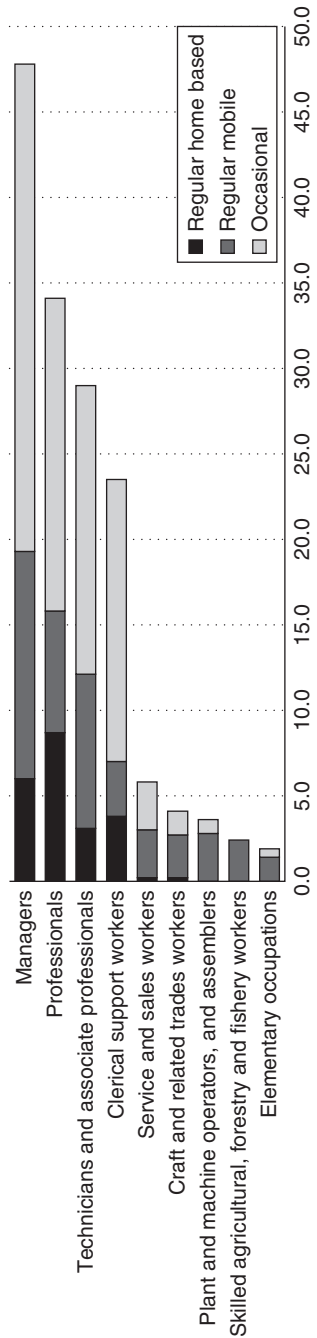
Finland and six percentage points in the Netherlands – to considerable – in France, 63 per cent of employees working away from the employer's premises and using ICTs are men, while in the UK, the male–female breakdown of teleworkers is 70 per cent–30 per cent. The results of these national sources also differ in relation to the frequency of telework usage between men and women.

Results from the EWCS (Eurofound 2015) are presented in Figures 1.2 and 1.3. They lend support to the hypothesis that teleworkers are mainly found in higher-level professions (managers, professionals and technicians). However, this type of work is not exclusively reserved for one group of occupations. Clerical support workers regularly use ICTs for work away from the employer's premises as well. The EWCS also shows more consistent cross-country results across sectors: telework is more prominent in the services sector, especially in finance and other services, followed by public administration and defence and education. In relation to the type of telework arrangement, regular home-based telework is typical of higher-level professions, and especially in the education sector is related to teachers working from home.

Results for the distribution across demographic characteristics help explain some of the conflicting results of the national reports. The percentage of women is higher in home-based telework (57 per cent) than in mobile telework (34 per cent), while men are overrepresented in the latter. These results are consistent with the national reports when a distinction of these typologies is available in labour force and working conditions surveys. Therefore, it can be concluded that in Europe, in general, women tend to perform slightly more home-based telework than men, whereas men tend to carry out much more mobile telework work than women.

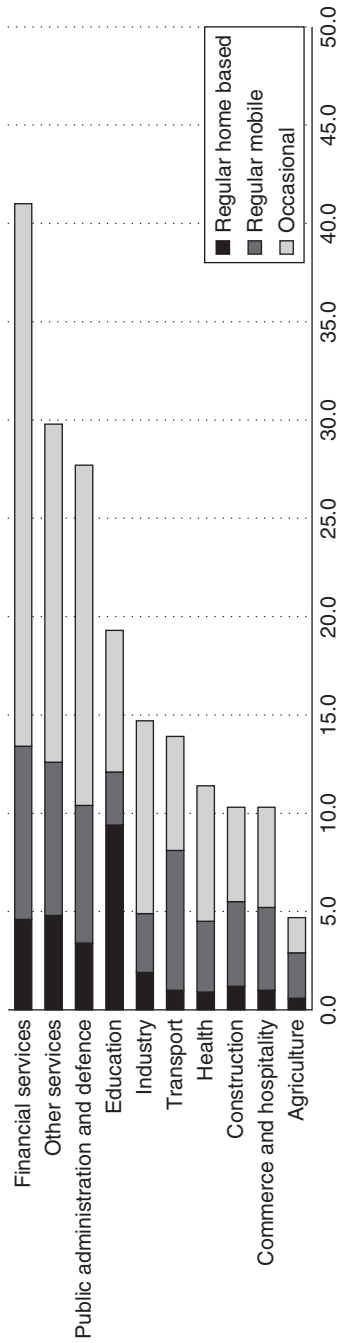
5. THE EFFECTS OF TELEWORK

The national studies point to a wide, but uneven, spread of telework across the European continent. This should be taken into account when studying the effects of using mobile ICTs for work away from the employer's premises. New technologies such as tablets and mobile phones have the potential to fundamentally alter the way work is undertaken in the 21st century. However, these effects unfold only slowly in some countries and sectors, while they have more profound impacts in others. This section offers a detailed comparative analysis of these effects and their variations for the European case in relation to the following dimensions: working time, work–life balance, occupational health and well-being, and individual and organisational performance. It should be noted early on that the



Source: Eurofound (2015).

Figure 1.2 Share of workers by type of telework and occupation (percentage)



Source: Eurofound (2015).

Figure 1.3 Share of workers by type of telework and economic sector (percentage)

results presented are not interpreted in terms of causality. Results are rarely disaggregated by sector or occupation, which means that the effects are often simply a characteristic of the work itself rather than its location and organisation. A similar problem occurs with the interpretation of effect direction. New policies relating to work–life balance or a strategic reorganisation of work schedules, for example, can make room for the use of ICTs rather than the other way around. Moreover, it is difficult to reach definitive conclusions on the effects of mobile ICTs on the world of work based on the current state of research on this topic. This is either because studies are not on a scale that could provide a sufficient basis for general, nationwide conclusions, or because operational definitions vary across countries or from those used in this chapter. Nevertheless, with the contribution of the EWCS 2015 analysis, in the context of the almost complete absence of comparative research on this topic, the results presented in this chapter can provide some comparative evidence of the effects of telework.

5.1 Working Time and Work Organisation

Almost all surveyed national expert reports show that teleworkers tend to work longer than the average employee in their respective countries. For example, in Belgium, employees report 39 contractual working hours a week; yet their actual working hours vary and are different for teleworkers and other employees. Those employees who always work at their employers premises work 42.6 hours per week on average; teleworkers, however, work an average of 44.5 hours per week (Walrave and De Bie 2005). Similar results are given for Finland (Ojala 2011), the Netherlands (Hooftman et al. 2015), Spain (INSHT 2011), Sweden (Trygg 2014) and the UK (Tipping et al. 2012). Results of the Spanish National Working Conditions Survey show that 19 per cent of workers who remain at the employer's premises work more than 40 hours a week, compared with 24 per cent of those working at home and 33 per cent working at another location.

The only study whose findings differ from the above is that by Wheatley (2012) for the UK. Findings on basis of the British Household Panel (ONS 2015) suggest that home-based teleworkers have a lower number of working hours than those employees who always work at the employer's premises. Additional variations show up when the results are disaggregated by work location and gender. Mobile teleworkers have around the same working hours as regular employees for both men and women. Home-based teleworkers, in contrast, have a shorter working week on average: 2.6 hours less among men and 7.4 hours less among women. The figures for female employees are substantially lower for all work locations, reflecting their higher propensity to work part-time. These gender differences

are also found in a Finnish study, which shows that 19 per cent of male teleworkers work more than 41 hours, compared with 6 per cent of female teleworkers (Ojala 2011).

Data from the British Labour Force Survey (ONS 2015) includes information about the remuneration of telework. About 80 per cent of overtime worked by teleworkers remains unpaid, compared with 60 per cent of overtime worked by regular employees. One reason for this difference is the blurring of boundaries between formally contracted and informally supplemented working hours. In Finland, 65 per cent of respondents reported that they had been contacted about work-related matters outside normal working hours in 2013, mostly via e-mail. One third of respondents reported that these contacts had been made several times during the reference period (Sutela and Lehto 2014). Similarly, in Spain 68 per cent of workers confirm that they receive e-mails or telephone calls outside normal working hours (Randstad 2012). In Sweden, more than half of the respondents of a survey (53 per cent) were available after normal working hours even on a daily basis (Unionen 2013). One-third of the respondents agree completely or to a certain degree that they often check work e-mails after normal working hours. Stated reasons for this occasional telework vary substantially between mobile and non-mobile workers. About half of all workers who stay at the employer's premises report that they answer e-mails and telephone calls primarily in order to stay reachable for their colleagues. About one-third reports that they do so in order to help customers and clients. In comparison, 74 per cent of mobile workers stay connected in order to be reachable for colleagues and 61 per cent do so in order to connect with clients and customers (Unionen 2013).

The relatively long workweeks of teleworkers and their informal supplemental working hours contribute substantially to an alteration of traditional work schedules. Walrave and De Bie (2005) show for Flemish teleworkers that the planning of a workday looks very different in comparison with a regular eight-hour office day. Almost half the teleworkers (45 per cent) run little errands in between work periods, gear their working hours to family needs or do odd jobs or domestic chores when having a break. Just a minority of the home-based teleworkers (9 per cent) keep to the timetable of the office, whereas others start working earlier or later or quit working earlier or later (36 per cent). Thus, while the working day of teleworkers is typically longer than those of office workers, it is also more 'porous' (see Genin 2016).

Evenings and weekends seem to be particularly prevalent for supplemental working hours with ICTs. Hoofman et al. (2015) report that 70 per cent of Dutch teleworkers frequently or sometimes carry out their work in the evening, and about half of them (50 per cent) do so on Sundays.

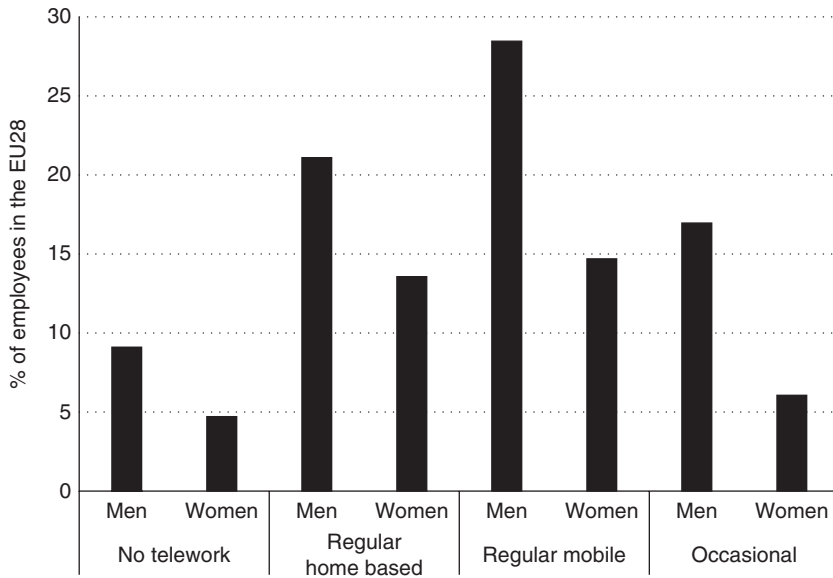
In comparison, only 52 per cent of non-teleworkers report to work frequently or sometimes during evenings and 38 per cent do so on Sundays. Interestingly, this working time pattern by teleworkers occurs more frequently on an occasional basis than on a regular basis. Similar results are reported for Belgium (Glorieux and Minnen 2008), Spain (INSHT 2011) and Finland (Anttila et al. 2009). However, working at night (defined as midnight to 6 am) is as unusual among teleworkers as it is among regular employees. Hooftman et al. (2015) report that working regularly at night is even less prevalent among home-based teleworkers (3 per cent) than among other employees (8 per cent) in the Netherlands.

Employers' attitudes towards such atypical work schedules are mixed. According to Pfisterer et al (2013), 29 per cent of the surveyed employers in Germany did not expect employees to be available for work outside normal working hours. Another 28 per cent stated that they expected availability, but only in exceptional cases. Of the surveyed companies, 19 per cent expected employees to be available on weekday evenings and 17 per cent expected them to also be available at weekends. Only 4 per cent expected employees to be available during holidays or at night. In contrast, in France, according to the OBERGO survey, respondents reported that the reason for their longer and more intensive working time and more atypical work schedules while teleworking is the perceived pressure to justify their activity while being absent from the office (Lasfargue and Fauconnier 2015).

In Europe, the EWCS data show that the share of employees working long hours – defined as 48 hours or more per week – is higher among workers doing telework than among other employees, including regular home-based teleworkers and especially among mobile teleworkers (see Figure 1.4). This is the case for both men and women, although men are more likely to work such long hours both in the office (or industrial plant) and in each category of telework, especially mobile telework. These results appear to support the findings from the national studies that teleworkers are more likely to work long hours than their office-based counterparts.

5.2 Work–Life Balance

Studies on the effects of telework on work–life balance typically generate mixed results. Information and communication technologies can be used as tools to better integrate paid work and private life. However, this practice is also prone to blur the boundaries between the two. Harris (2003) argues that this lack of clear boundaries can help to explain why teleworkers tend to have a longer workweek. Paid work is simply spreading further into the time reserved for family and private life. Such ambivalent



Source: Eurofound (2015).

Figure 1.4 Percentage share of employees working 48 hours or more per week, by type of telework and gender, EU28

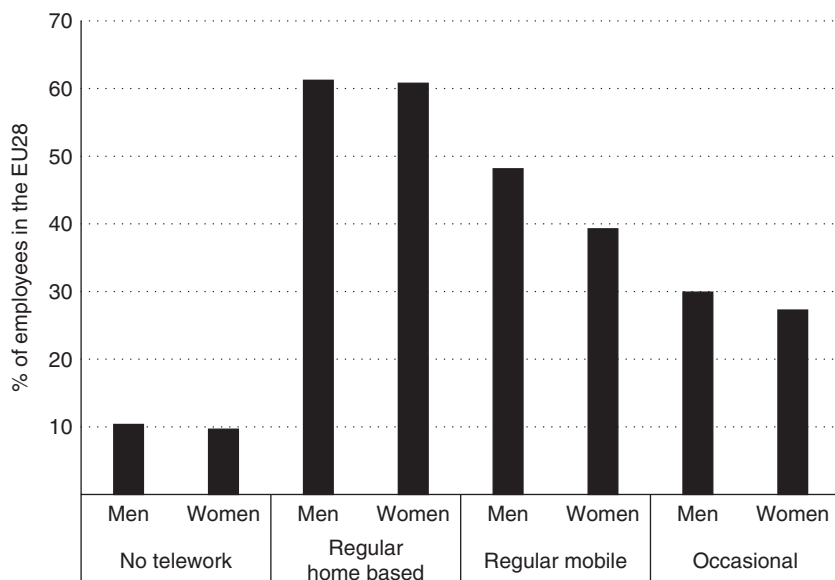
outcomes are reported in some of the national reports. Using data from the Finnish Quality of Work Life Surveys 2003 and 2008, Ojala et al. (2014) studied the effects of both telework and informal overtime work at home on the work–family interface. The findings suggest that flexible working schedules enable employees to integrate paid work and private life, but also that family life is being infringed upon. According to this study, home-based telework is not only positive for the work–family interface. In particular, working unpaid overtime at home – that is, supplemental telework– increases feelings of guilt about neglecting home issues, and employees working informal overtime at home are more likely to report that work disrupts family life (Ojala and Pyöriä 2013). Such ambiguities are also reflected in a study of teleworkers in Germany. While 79 per cent of 505 employees surveyed stated that working from home helped them to reconcile work and family life, 55 per cent stated that it caused private and working life to overlap too much (Pfisterer et al. 2013).

The studies from Finland and Germany suggest that positive and negative effects on work–life balance are essentially cancelling each other out. However, it should be noted that many workers prefer to integrate their

work and personal lives at the expense of blurring boundaries and longer workweeks. A study on telework in France suggests that this form of work contributes to longer working hours, but also to an enhanced perception of work–life balance (Lasfargue and Fauconnier 2015). Respondents stated that longer working hours are balanced by time saved through, for example, shorter commuting hours. Consequently, 95 per cent of the respondents stated that telework has had a positive impact on their quality life both at work and away from it; 89 per cent reported a higher quality of family life, and 88 per cent perceived a better work–life balance. Results from the Belgian national study also show a tendency towards a positive attitude among teleworkers. Walrave and De Bie (2005) report that telework has a positive impact on work–life balance for 56 per cent of teleworkers, no impact for 34 per cent and a decrease for 11 per cent. Positive net effects on work–life balance are also reported for the Netherlands (Peters et al. 2009), Italy (Boni and Vultaggio 2013) and Hungary (Magyar Távmunka Szövetség 2016).

Positive aggregated net effects in the described studies can give the impression that telework generally has more positive than negative effects for workers. However, readers of these studies should take into account that the effects follow a gender imbalance. Wheatley (2012) found that female home-based teleworkers perform extensive housework and are more likely to work shorter hours in their paid work. Male teleworkers, by contrast, tend to have a work pattern that is more akin to full-time hours and contribute little by way of housework. An interesting report from Spain, however, shows how ICTs can help to break down gendered working patterns. In-depth studies with male home-based teleworkers show that they become adapted to their new work pattern once they start to take over more care responsibilities. They value their newfound flexibility and do not want to go back to rigid work schedules. However, the report also concludes that it is not possible to establish a clear cause-and-effect relationship between a flexible work environment (with or without ICTs) and greater parental involvement in childcare. That is, it is not clear if the option of flexible work arrangements is a cause, or a consequence, of parents' involvement with their children and their interest in work–life balance (Miyar Cruz and Rimbau Gilabert 2012).

Results of the EWCS 2015 reflect the described ambiguities in relation to the effects of telework on work–life balance. Home-based teleworkers are particularly prone to work in their free time in order to meet work demands. About 60 per cent of both men and women do so either on a daily basis or several times per week. In comparison only 10 per cent of those who always stay at their employer's premises report the same blurring of boundaries. The shares of mobile teleworkers fall in between those two



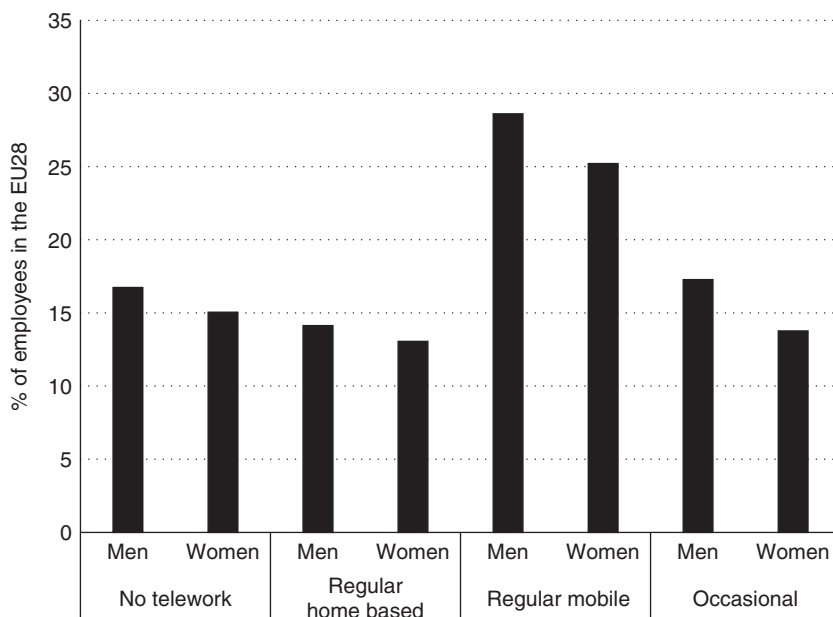
Source: Eurofound (2015).

Figure 1.5 Percentage share of workers who report working in their free time to meet work demands daily or several times a week by type of telework and gender, EU28

extremes (Figure 1.5). Yet, this blurring of boundaries does not seem to translate into strong negative effects for home-based teleworkers. They report that their working hours do not fit well with their personal life at a slightly lower rate than those employees who always work at the employer's premises. The share for mobile telework, in contrast, is two times higher than that for home-based telework. Blurred boundaries seem to be more problematic for this group. This is particularly the case for male teleworkers (Figure 1.6). They report negative effects of blurred boundaries at a slightly higher rate in relation to both mobile telework (29 per cent for men and 25 per cent for women) and occasional telework (17 per cent for men and 14 per cent for women).

5.3 Occupational Health and Well-Being

Maintaining standards for occupational health and well-being in the transition from stationary to mobile work is challenging both for employers and employees. Workers are by definition on the move and could be



Source: Eurofound (2015).

Figure 1.6 Percentage share of employees who report that their working hours do not fit with family or social commitments, by type of telework and gender, EU28

subject to health risks that do not exist to the same extent at the employer's premises. However, questions of health and well-being also move beyond a critical discussion of ergonomics at work. A look into the national reports reveals a growing interest in other detrimental aspects of telework, such as stress and isolation, but also positive effects, such as reduced commuting time and increased autonomy. Such diverging interests reflect the strong relationship between work–life balance, on the one hand, and health and well-being, on the other. Excitement and concern about the impact of ICTs are directed to these dimensions of work jointly. Corresponding results from the expert survey are reviewed in this section and are compared to analyses with data on health and well-being in the EWCS 2015.

Some studies in the national reports emphasise that the growing work-related use of mobile ICTs can have detrimental effects on occupational health. Hoofman et al. (2015) report for the Netherlands that teleworkers use visual displays for a longer time per day (5.8 hours) than other workers (3.5 hours). These results are consistent across sectors. These workers are

exposed to a higher risk of typical health issues among display users, such as eyestrain, headaches or muscular pain. These results were underlined by a conference in the Madrid region (organised by Unión Interprofesional de la Comunidad de Madrid, UICM) which took place in April 2014. The results showed that the main health concerns arising from the use of mobile technologies are neck pain and tendon pain in the wrists and fingers. Ophthalmic problems and sleeping disorders may also occur (Unión Interprofesional 2015).

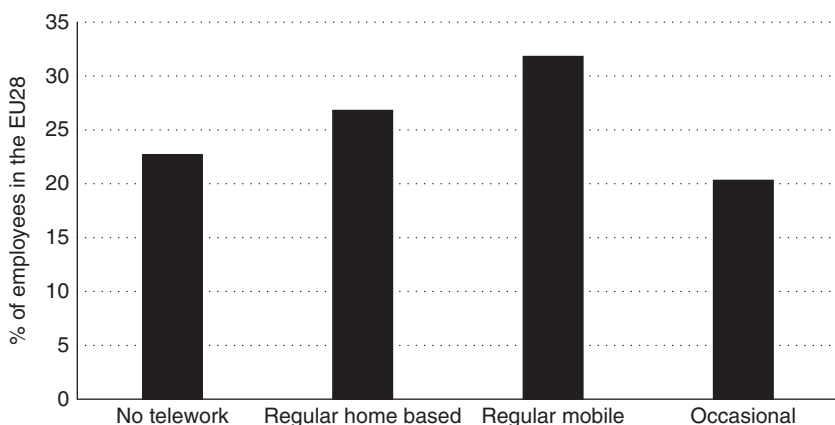
More ambiguous results are found regarding the relationship between telework and stress. In the UK, Kelliher and Anderson (2010) note the apparent paradox between the high satisfaction among flexible workers (teleworkers) and work intensification. They argue that part of the reason why there is greater work intensification for teleworkers is because of the social exchange between employers and employees: in return for the ability to work flexibly, workers may respond with more effort (often called 'reciprocity'). However, this seems to be just one element of the equation. A report from Grant et al. (2013) confirms that there are risk factors associated with ICT use, resulting from intensification and lack of time to recuperate, which could go beyond the simple social exchange between the employer and the employee. The trend for teleworkers to work longer can, at least partly, explain Grant's finding.

Studies from Finland and Germany reflect the ambiguity of telework in relation to stress as well. Kandolin and Tuomivaara (2012) analysed data from the Finnish Work and Health Survey 2009 and found that flexibility regarding the time and place of work correlates positively with employee overall well-being. However, the Finnish national study also highlights the increased risk of stress when engaged in telework, due to less time for recovery (Ojala and Pyöriä 2013; Vesala and Tuomivaara 2015). In similar vein, the study of Hammermann and Stettes among digitally networked employees in Germany shows that they are largely satisfied with their level of work intensity, but only if they are also given a sufficient autonomy to set their own work schedules (Hammermann and Stettes 2015). Research by Walrave and De Bie (2005) for the case of Belgium shows that stress levels decreased for 43 per cent of employees through the shift from regular office work to telework. However, 46 per cent of them saw no significant change and 11 per cent reported an increase. Hence, the majority of teleworkers did not experience any change in work pressure at all.

Studies on the working time management of teleworkers indicate a trade-off between autonomy and isolation. In the UK, Beauregard's study of Advisory, Conciliation and Arbitration Service (Acas) employees (Beauregard et al. 2013) found that teleworkers enjoy more freedom when it comes to setting their own schedules. However, they also feel more

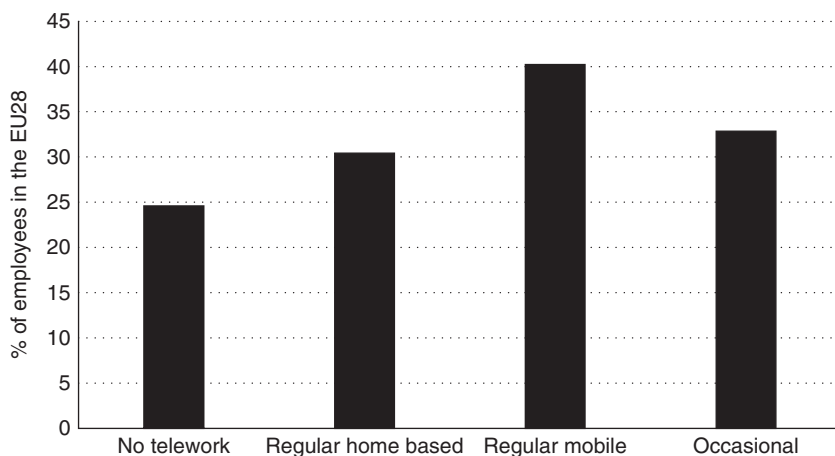
isolated and miss day-to-day interactions with co-workers. Similar findings are reported from Italy. According to Manager Italia (2011), based on a survey of managers of companies in the services sector, a serious threat to workers' well-being arises from the lack of social interaction and loneliness (42 per cent), as well as the lack of help from colleagues when working (30 per cent). In Hungary, a web-based survey among teleworkers shows that they report a weakening of social ties and support, as well as diminished company loyalty and motivation. Findings from Finland suggests that such isolation can be linked to higher burnout levels among teleworkers (Ojala and Pyöriä 2013; Vesala and Tuomivaara 2015).

Findings based on the EWCS suggest that employees themselves feel that telework takes a toll on their health and well-being. Negative effects are reported more frequently by employees who are performing mobile telework (32 per cent) or home-based telework (27 per cent) than by office-based employees (23 per cent) and those who only occasionally work with ICTs away from the employer's premises (20 per cent) (Figure 1.7). Moreover, working with ICTs away from the employer's premises seems to be related to slightly higher stress levels. Those who do mobile telework report at a higher rate (40 per cent) that they feel work-related stress 'always' or 'most of the time' when compared with those who work exclusively at their employer's premises (25 per cent). Shares for home-based (31 per cent) and occasional teleworkers (33 per cent) are also higher, but not to the same extent (Figure 1.8). These differences reflect the results of the



Source: Eurofound (2015).

Figure 1.7 Percentage of employees who report that work affects their health negatively by type of telework, EU28



Source: Eurofound (2015).

Figure 1.8 Percentage of employees reporting they feel stress at work 'always' or 'most of the time' by type of telework, EU28

studies reviewed above in respect of both the ambiguity and the net effects of telework on occupational health and well-being. Working with mobile ICTs away from the employer's premises does take its toll on workers in terms of stress and blurring boundaries between paid work and private life. However, this form of work entails positive elements as well. Workers are more autonomous and can reduce their commuting hours with the help of new technologies. This inner ambiguity can help to explain why net effects of telework on health and well-being are only felt to be modestly negative by some workers in the national studies described above.

5.4 Individual and Organisational Performance

Telework is not only attractive to employers because it allows them to offer enhanced autonomy and work–life balance to employees. Information and communication technologies also enable a reduction in office space and a closer connection with clients and customers. These innovations are promising as regards productivity and a company's overall performance. Yet, such effects cannot be treated as a given. The causal link between telework and job performance is not as clear as is often presumed, but depends to a large extent on the balance between communication and location that is inherent to all forms of telework. Moreover, reviews of studies in earlier sections highlight that telework can have negative or, at best, ambiguous

effects on the health and well-being of employees. It is therefore important to critically discuss whether and to what degree such ambiguities translate into improved performance on both the individual and the organisational levels.

Results for the Swedish case suggest that telework is largely welcomed by employers. Almost 80 per cent of them state that allowing employees to sometimes work away from the employer's premises generally leads to higher productivity (André 2013). A UK study similarly suggests that flexibility and autonomy have a role in improving performance, but with some nuances (Beauregard et al. 2013). According to the study, productivity is higher among home-based teleworkers, and two main reasons are put forward for this. First, home-based teleworkers tend to work more unpaid hours than their office-based counterparts, so an increase in productivity is partly due to an increase in actual working time. The second explanation is that home-based teleworkers are more productive because they experience fewer interruptions than office-based workers.

Similar results were found in France: according to a study by the research institute OBERGO, 84 per cent of teleworkers stated that their productivity increased owing to telework, and 81 per cent said that their telework is of higher quality than their office work (Lasfargue and Fauconnier 2015). The reasons given in the French report also relate to the individual, micro-level organisation of work aspects, such as: teleworkers being less frequently interrupted by colleagues or their superiors; spending less time answering telephone calls or communicating via e-mail; and having more time to perform work as that they do not have to travel to and from the office. Both the French and UK contributions suggest that partial telework seems to have a higher impact on performance/productivity than the more extreme cases of no or high levels of telework.

For companies, telework is found to be a way of improving staff retention. Telework (especially regular home-based telework) is becoming an increasingly important strategy among workers struggling to combine the daily use of time for various purposes at different locations, as investigated by, for example, Wheatley (2012) for the case of the UK. Therefore, telework can be a way to attract those workers. Kelly et al. (2008) found for the same case that organisations use telework as a recruitment tool to attract high-skilled professionals, the main group of workers demanding flexible work schedules.

One of the barriers to using telework for improving performance is the complexity and skills needed to use ICTs effectively, especially for some groups of workers. According to the Spanish contribution, 26 per cent of small and medium-sized enterprises (SMEs) report such problems. In the UK, arguments about flexible working have suggested that without

some sort of company policy in place, there will be ICT skills gaps that employers will struggle to fill. In Sweden, a survey focused on individual performance was conducted by TNS Sifo on behalf of TDC, a company that provides IT solutions to corporations and organisations (TDC 2015). The 1027 participants were asked if they encountered any obstacles when working away from the office. The results show that many employees had experienced technical difficulties that hindered their work.

In Belgium, Walrave and De Bie (2005) showed that teleworking is not feasible for certain jobs (27 per cent of respondents). They identified concerns regarding the lack of supervision of employees (17 per cent) as another barrier for implementing telework to obtain performance advantages. According to the Swedish national study, managers found coordinating telework costly, the required programmes difficult and, in particular, controlling remote workers problematic. Issues of trust, control and power were regarded as the main obstacles constraining the implementation of teleworking programmes and favouring professionals rather than clerical workers.

In conclusion, telework seems to generally enhance performance, owing to a more efficient use of the working time and space, longer working hours and higher levels of motivation related to work autonomy. These experiences are taking place at the same time that there are still issues related to trust and control reported by managers and employers.

6. POLICY RESPONSES TO TELEWORK

In recent years, policies have been formulated in relation to the promotion and organisation of both home-based and mobile telework aimed at fostering the positive effects of telework and at reducing its negative effects. These policy responses come from various actors and at various levels: national governments, national and sectoral social dialogue, and at company or workplace level. The particularity for all policy responses in the case of Europe is the supranational structure under which coordination and legislation for telework operates. Some legislation and social dialogue are embedded into directives or agreements reached on the level of the European Union (EU). The discussion of policy responses thus deviates from the other sections in this chapter. A first subsection will sketch the development of supranational policy-making in relation to telework on the EU level. National-, sectoral- and company-level responses are then discussed in reference to this overarching structure.

6.1 Supranational Level

Although there are no EU directives specifically focused on telework, several have particular relevance for workers subject to these types of work arrangements. For example, the EU Working Time Directive specifies a number of provisions designed to protect the health and safety of workers across the EU, including those performing telework. These provisions set up a legal framework determining a maximum of 48 working hours per week, including overtime. The reference period should not exceed four months, but may be extended up to six months. Under certain conditions (for example, in the case of a collective agreement), it may be extended up to a maximum of one year. The Working Time Directive also provides for minimum periods of consecutive hours of daily rest (11 hours) and weekly rest (35 hours); the latter can be averaged over a two-week period. Other relevant EU directives in the field of occupational health and safety are related to the use of ICT to work away from the employer's premises. Directive 89/391 – the OSH 'Framework Directive' – does not differentiate between different work locations, but the European Framework Agreement² on Telework (2002) specifies that: 'The employer is responsible for the protection of the occupational health and safety of the teleworker in accordance with Directive 89/391 and relevant daughter directives, national legislation and collective agreements.'

In terms of specific arrangements related to telework at European level, the European Framework Agreement on Telework is of paramount importance. It was concluded between the social partners (European Trade Union Confederation, ETUC; Business Europe; the European Centre of Employers and Enterprises, CEEP; and the European Association of Craft, Small and Medium-Sized Enterprises, UEAPME) in July 2002. This framework agreement was ground-breaking because it was the first time an agreement, which had to be implemented directly within member states' different industrial relations systems, was concluded in an autonomous social partnership. The agreement provides a general European framework for people doing telework, which is to be implemented in accordance with national procedures and practices.

In this agreement, telework is defined as follows: 'Telework is a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis' (European Framework Agreement on Telework, Article 2). This definition is intentionally broad in order to cover both mobile and home-based telework. This means that it can be adapted flexibly to technological advancements and new forms of work. It also

implies that the definition relates to many of the studies mentioned in this chapter. Central elements of the agreement are the voluntary character of telework, equal treatment between teleworkers and regular employees, the provision of a safe and secure workspace despite the difference in location, and respect of the employees' collective rights. Most of the EU member states have translated the European Framework Agreement on Telework into national-level social partner agreements. Ireland and the UK, which do not have a national system of collective bargaining, have introduced guides and codes of good practice. Other countries have transposed the agreement into their national labour laws.

6.2 National- and Sectoral-Level Policies

In Finland, teleworking has been on the national agenda and in several government programmes. In 2006, the Finnish government made the decision to promote teleworking, based on tripartite preparatory work. The main objectives were to improve the quality of working life, increase productivity and promote ecological and sustainable ways of working. In 2007, an employer guide for teleworking was published by the Finnish Ministry of Employment, financed by the European Social Fund, to support the development of management and working arrangements towards better productivity and quality of work (Pekkola and Uskelin 2007). In 2009, the Finnish Ministry of Employment and the Economy published a report on teleworking, providing practical recommendations and measures to facilitate the introduction of teleworking in companies and organisations. While in Finland teleworking has generally been considered to be a win-win arrangement if properly organised, white-collar unions have recently started to focus on the issues of work-life balance and health and well-being for those workers who use ICT away from the employer's premises on a regular basis, particularly the issue of unpaid overtime, as illustrated by a campaign of the Federation of Professional and Managerial Staff, YTN (see website at 8tuntia.fi, accessed 4 January 2019).

Hungary was the first country to incorporate the European social partner agreement on telework into the national regulatory framework, in consultation with and involving social partners. The legal recognition at national level was officialised through a law (Act XXVIII of 2004 concerning the modification of certain employment related acts) whose provisions on telework were later incorporated into the labour code (Act XXII of 1992) as a separate chapter. In 2003, the Hungarian government developed a comprehensive mid-term strategy on the Hungarian information society (*Magyar Informacios Tarsdalom Strategia*). In the same year, the Minister of Labour entrusted the newly established Telework Board to develop a

roadmap for the introduction of telework in Hungary. While a number of institutions were subsequently created, such as a telework centre in the Budapest Labour Market Intervention Centre (dealing with the training of potential teleworkers), it lost its emphasis on telework in 2011 when it was renamed the Turr Istvan Training and Research Centre.

Although telework is not very popular in Italy, a draft law on agile work (*lavoro agile*) was nevertheless drawn up, in January 2016, aimed at increasing productivity and facilitating work–life balance. Specifically, the draft law defines agile work as a type of employment contract with the following characteristics: it is possible to fulfil some work duties away from the employer’s premises within the working time limits set in legislation and collective agreements; it is possible to use technological tools in order to carry out the work; and there is no fixed work station during those times when work is being done away from the employer’s premises. Furthermore, the draft law establishes employer responsibility for employee safety and health as well as for the correct functioning of the technological tools provided to accomplish work tasks away from the employer’s premises. Every enterprise must sign an ad hoc agreement for the introduction of agile work: these agreements regulate the ways through which the employer exercises its managerial power as well as establishing rest days and the guarantee of the right to disconnect. The draft also notes the principle of equality of treatment (economic and legislative) between the agile worker and an employee working at the employer’s premises in the same company.

In Spain, the only national-level legislation related to telework is included in the Law 3/2012 regarding urgent measures for the reform of the labour market (*Ley 3/2012 de 6 de Julio, de medidas urgentes para la reforma del Mercado laboral en Espana*) regulates some aspects of distance work (telework). Telework agreements need to be formulated in writing, and the teleworker has the same rights as the other workers concerning health and safety, wages, training and representation. This provision was included because of the introduction of new forms of employment relationships based on the use of ICT. The objective is to promote innovations in work organisation, improve work–life balance and increase employment opportunities. It is only a preliminary and approximate legal framework, with many aspects to be further regulated later. However, at the local level there are some interesting examples, such as the community of Madrid, which created an intermediation service for psychosocial risks (*servicio de intermediacion en riesgos psicosociales*). This service deals with, for instance, mental health issues, such as increasing stress due to higher uncertainty or lack of boundaries between work and private life. Telework is more actively addressed in social dialogue in Spain. The Second

Agreement for Employment and Social Dialogue 2012–2014 (*II Acuerdo para el Empleo y la Negociación Colectiva 2012–2014*) acknowledges that telework is an innovative work organisation form. It also states that telework should be voluntary and reversible, and should involve the same rights as those for workers who do not work away from the employer's premises. The agreement notes the need to further regulate aspects such as privacy, confidentiality, training and health and safety. Furthermore, in Spain a number of collective agreements refer to these aspects, particularly in relation to health and safety. An example is the sectoral collective agreement for the chemical industry (*convenio colectivo general de la industria química*) setting out the conditions for telework in that sector.

In Sweden, while rules and regulations related to the labour market are almost exclusively decided by the social partners (who do not consider telework to be a particularly important issue for negotiation or regulation), the Swedish Work Environment Agency deals with issues related to work environment and workers' rights. In relation to teleworking, the authority has highlighted the issue on its website by publishing articles related to computer work in the home and IT stress; for example, the overwhelming amount of information available and the feeling that someone should be constantly available to respond to work demands via mobile phone or e-mail. The main message of this agency is that telework is a joint responsibility and that the employer is partly responsible, whether there is a written agreement for telework or not.

In the UK, the government has drafted a guide for teleworking in the wake of the European Agreement on Telework. More broadly, in the UK all employees have (since 2014) the right to request flexible work (including working from home), subject to a qualification period of two years. Previously, this right to request was only available to carers, including the parents of young children. However, the employer is not obliged to accept the employee's demand for flexible working, and are only required to give due consideration to requests for flexible work made by their employees. Many larger companies in the country had similar procedures, including extension to all employees, even before the new legislation came into force. An example of social dialogue on telework in the UK is the negotiating guide for teleworking in local administration by the trade union UNISON (UNISON 2014). It was generated in reference to a number of agreements already in place. The guide summarises a number of issues such as the regular review of home-based telework policies, the types of work eligible for home-based telework and the procedures to terminate the agreement. The guide also states that one of the key elements to examine, in order to determine whether the type of work is suitable for telework or not, is whether clear objectives can be established for it.

In the Netherlands, the Working Conditions Act was revised on 1 July 2012 to broaden the definition of telework and working from home to locally independent work. Performing paid work in the living quarters or another place chosen by the employee away from the employer's premises falls under the Working Conditions Decree (*Arbowet*), including all health and well-being legislation. According to this decree, the employer has a duty of care, which includes when an employee works from home or elsewhere, away from the employer's premises, and they should check whether the employee is working according to the Working Conditions Act. The nature of this check is not specified, but it may include the provision of information, registering working hours, and having discussions about performance and appraisal interviews for the employee. Ultimately, the employer is liable. If an employee refuses to follow an instruction of the employer, then the employer may refuse them the option to telework. Examples of sectoral-level collective agreements include the sectoral agreement for childcare in children's centres and childminding (*AAV CAO 2013 kinderopvang voor kindercentra en gastouderschap*), which establishes an allowance for teleworking, both for teleworking and also for the use of space or a room at home, in cases where the worker works more than 70 per cent from home, and the employer has to provide them with a computer, modem and software. The sectoral social agreement in welfare and social services (*AVV 2015/16 welzijn en maatschappelijke dienstverlening*) is a specific collective agreement that includes an allowance for teleworking.

In Italy, the inter-confederal agreement of June 2004 implemented the European Framework Agreement on Telework in the private sector. In addition to the general principles already mentioned (such as the voluntary nature of telework and its reversibility), it refers to the right of workers to get appropriate training in the necessary ICT equipment, in relation to the characteristics of this type of work arrangement. It also establishes that costs of communication, purchase and maintenance of ICT devices are the responsibility of the employer, who is also responsible for the health and safety of the workers. At national level, the 2011 agreement on work-life balance policies explicitly mentions teleworking as a family-friendly measure that could be considered by companies in terms of promoting flexibility. Moreover, several social partner agreements established at industry level in Italy contain clauses governing telework, such as telecommunications, chemistry, commerce, electricity, services and distribution, bread-making and food processing for SMEs, ceramics, insurance, social and third sector companies, and the textile and clothing industry. The rationale behind these industry agreements is primarily to promote work-life balance.

The ‘right to be disconnected’ and related policies

A new policy approach, known as the ‘right to be disconnected’, attempts to limit the negative effects of telework by protecting employees’ non-working time to ensure adequate rest periods and to address work–life conflict and well-being issues.

The policy issue of constant availability for work due to the constant connectivity enabled by ICTs is still emerging, for which only a few initiatives at national or sectoral level, in a handful of countries, have been undertaken thus far. The majority of these policy responses have taken place at company or workplace level, most prominently in France and Germany. In the majority of cases, different agreements – both at sectoral or company level – have tried to grant a type of ‘right to be disconnected’ by limiting the functioning of e-mail servers after normal working hours, as well as during those periods that should be considered rest times for workers (such as weekends and holiday periods).

As regards company-level agreements related to the right to be disconnected, some examples from major automobile companies in Europe have been developed and implemented in recent years; in France by Renault and in Germany by BMW and Daimler. Also, several sectoral-level agreements related to the right to disconnection (*droit à la déconnexion*) have been signed in France. For example, the telework collective agreement in the French telecommunications sector (*Accord relatif au télétravail dans la branche des télécommunications*) of 6 October 2006 specifies that the employment contract must include a provision specifying the time periods during which the teleworker can be contacted. The right to switch off has also been introduced in the oil sector agreement, in which the minimum of 11 hours of daily rest between working days are protected.

However, the most important initiative regarding the right to disconnect has been addressed by a legislative initiative. France introduced a specific article on the right to be disconnected (*le droit à la déconnexion*) in the most recent revision of the French labour code, in 2016.³ The new legislation in France, to implemented from 2017, includes an obligation for employers and employees in every company with 50 employees or more to negotiate ‘the use of ICTs’, with a view to ensuring respect for the rest and holiday periods of workers and their personal and family lives. If no agreement is concluded, then the employer needs to adopt a charter after consultation with worker representatives. It is up to the employer to define the modalities to be developed to guarantee the right to be disconnected. Some possible means of ensuring that such time periods are respected include blocking e-mail access during those times and mutual agreements between employees and their superiors regarding respecting such time periods.

6.3 Company-Level Policies

In addition to recent examples of company initiatives related to the right to disconnect, national studies also include other company policies and practices, most of which relate to home-based telework rather than to other telework arrangements. Depending on the country, these are based on social partner agreements or are unilateral company practices. In the examples that follow, selected from the national studies, it is clear that companies often decide to introduce telework in order to address employee needs for work–life balance, including regarding the location of work and their family responsibilities.

In DRV Braunschweig Hannover, a statutory retirement insurance company in Germany employing 2000 employees (65 per cent women), an establishment-level social partner agreement on work–family reconciliation policies has been in place since the 1990s. In this company, employees have the right to work from home if they have care responsibilities for children (under 18 years) or other family members. The company provides the hardware and software needed for working from home. Rules were introduced to establish when teleworkers needed to be available for working from home, with a view to facilitating cooperation between office-based workers and teleworkers. Working hours are fixed between the employee and their direct superior (between 0600 and 2000), and once a month the teleworker and their supervisor meet to discuss working time and other issues. In addition, employees can participate in stress or time management seminars. This practice has been introduced together with other working-time arrangements that could better enhance the reconciliation of work and private life, such as flexible part-time work, job sharing, sabbaticals and a parent–child room. Around 135 employees participate in the teleworking options, the majority of whom choose designated times for working in the office (to ensure good coordination with colleagues and management) and for working from home. As a result of this initiative, absenteeism was reduced by 20 per cent, and the average number of months spent on parental leave fell from 19 months to 14 months. Staff surveys show that employees appreciate the freedom to adapt their working hours to their private needs, as well as the reduction in commuting time.

In Belgium, KBC Bank provides another example of how telework company practices can have a positive impact on work–life balance. The company introduced a new work organisation plan in 2010, in which three possibilities were offered: working in a more decentralised manner by creating satellite offices in administrative buildings of the bank closer to employees' homes; facilitating telework by providing laptops and mobile phones; and introducing flex desks. The number of home-based

teleworkers in the bank is increasing year by year. One of the conditions, however, is to be at the employer's premises for at least three days a week. Telework is not possible for those who work less than 70 per cent of a full-time job. The results of an employee satisfaction survey show work–life balance has increased for 87 per cent of teleworkers there. In addition, 83 per cent said that they can work with greater concentration, 72 per cent feel less stress at work, 68 per cent are more motivated and 62 per cent can better organise their work.

In France, the same aim of achieving a better work–life balance for workers was behind the choice of the Thales Group, where a group-level agreement on telework was concluded on 26 April 2013 for a two-year trial period. This is detailed in a company-level agreement of 24 April 2015, which provides practical guidelines to help social partners introduce and manage telework at local level. This agreement initially provided for telework one day a week, which was later extended to two days a week. Eligible employees have been in their position for six months and in the group for one year. They must work either full-time or a minimum of 80 per cent full-time hours. In each Thales company, 8 per cent of the workforce telework for two days a week and 10 per cent telework for one day a week. The agreement also contains a provision regarding the right to disconnect outside normal company opening hours or at least during the minimum rest period between two consecutive working days (11 hours), in accordance with minimum legislative standards (see section 6.1 on the Working Time Directive). Similarly, PSA Peugeot Citroën introduced home-based telework in 2011 for a trial period after consultation with the social partners. It was introduced and evaluated as a 'new social contract', whereby employees and employers evaluated it positively as leading to a reduction in stress related to commuting, better work–life balance, a gain in efficiency for employees, and higher motivation and efficiency for employers. Telework is possible for all employees who have been in the company with a permanent contract or have at least one year of seniority in the group. Six criteria need to be fulfilled: sufficient autonomy, mastery of skills, mutual trust, compatible work organisation, a telework-compatible position and a properly equipped work space. Telework is voluntary both for employees and their supervisors. This case reflects that in some companies the right to telework is limited to certain workers according to criteria such as employment status.

In Italy, company examples can be found across a range of different sectors, each with its own motivation and modalities. Most have involved consultation with social partners or have been included in a collective agreement. The University of Palermo introduced the possibility of teleworking for three days a week maximum to increase workers' well-being

and motivation, improve their work–life balance and to adapt to a different work culture (with a focus on goals for workers, rather than physical presence at the company). A company-level collective agreement was concluded in Telecom Italy, whereby workers can work up to a maximum of four days a week from home. Another driver there was improving the company's capacity to cope with difficult economic situations and reducing absenteeism rates and labour costs.

Along similar lines, Indra, a multinational Spanish consulting and technology company, introduced telework in 2002 (first via a pilot) to improve workers' motivation and satisfaction, and to increase performance. It has a dual objective: to facilitate work–life balance and working time flexibility; and to increase competitiveness, while reducing absenteeism and turnover. Telework is voluntary, but needs to be approved by the employee's supervisor. One of the requirements is that the tasks need to be 'teleworkable'; the telework period can be between 25 per cent and 80 per cent of the total working time. The same employment conditions are maintained, and the employer pays for any necessary investments in ICT infrastructure.

More innovative approaches have been developed in Finland and the Netherlands with apparent positive consequences for companies and employees. The Finnish Transport Agency conducted a one-year experiment with telework. They wanted to find out if work efficiency could be improved by giving employees more freedom as to the time and location of their work. Positive consequences included: improved work–life balance for workers, reduced commuting time for workers, greater efficiency regarding work tasks that require a high degree of concentration, and a change in organisational culture, whereby trust and responsibility have become central.

KPN, a telephone company in the Netherlands, has implemented what they call 'a new way of working' or 'a new world of work' (*het nieuwe werken*). This refers to work that is independent of time and place and is largely based on the use of ICTs. The works council in the company was involved throughout the process. The aim is to share with employees the benefits derived from this way of working. It involves greater time and space flexibility for work, more efficient use of resources, and productivity optimisation by stimulating communication and collaboration. This process started with a pilot in 2009 and was later extended, through a series of implementation stages. A corporate programme manager was employed to coordinate the introduction of this new way of working, and guidance was provided by an external consultant, for all employees seeking to reach an optimal way of working and collaborating. All employees received equipment needed to work from home and there was a reduction in office

space, which has been reorganised into four types: open work spaces; closed work spaces (for work requiring concentration); open work and meeting spaces; and closed meeting spaces. Quantitative and qualitative tests that were carried out before and after the pilot process indicated that the initiative resulted in lower rates of sickness absenteeism, better work satisfaction, reduced commuting times and an increase in working from home. Some unexpected issues arose. For example, the workplace became quite untidy, probably because each individual felt less responsible for keeping the shared spaces clean. Also, employees who did not start work early in the morning could find themselves without a workstation when they arrived at the office.

In Sweden, at the computer giant Hewlett Packard, the senior safety representative, together with the Human Resources (HR) department, put a teleworking policy in place. This policy prescribes that telework should take place for a maximum of three days a week; on the remaining days, employees must work at one of the company's premises. The rationale behind this relates to the social aspect of work and the importance of colleagues seeing each other, not only for improved efficiency but also for employee well-being. It is interesting that this type of partial-teleworking policy seems to be common in many different organisations, both public and private, in a wide range of countries.

The increase in telework across countries analysed in this report, and awareness of the positive and negative effects for both workers and employers, are encouraging policy-makers to include provisions in national laws related to this work arrangement. This process was fostered in the EU by the Framework Agreement on Telework (2002), and it is still evolving in some countries to incorporate new potential benefits and rights, as well as to protect workers from potential negative side effects. Such developments are mainly related to the improvement of work-life balance and, to a lesser extent, occupational health and well-being (for example, mental well-being). Initiatives are being considered and/or developed to monitor the amount of time a worker is available for work and is actually working, with a view to safeguarding their rest periods. In this regard, Finland's sustainable work and well-being approach is interesting. In most countries, legislation tries to ensure equal rights in relation to working and employment conditions between teleworkers and workers at the employer's premises. Issues such as labour market participation, business continuity and organisational performance seem to be more relevant outside Europe, for example in Japan and the US (Eurofound and ILO 2017).

7. CONCLUSIONS AND OUTLOOK FOR THE FUTURE

The review of studies on the driving forces, incidence, effects and policy responses in relation to telework indicates that mobile ICTs have had, and will continue to have, a profound impact on work in Europe. Virtually all countries on the continent have experienced a transition both from manufacturing to service jobs and from single-earner to dual-earner households in some form. These developments are fuelled by technological advancements and, not least, the possibility of working away from the employer's premises with help of mobile ICTs. Several particularities in relation to this development could be uncovered for the case of Europe. Comparative analyses show that telework is spreading with varying speeds across countries, sectors and occupations. These variations are primarily connected to the pace of technological development, but also to each country's specific economic structure, working culture, and the nexus between workplace flexibility and social security. Owing to a lack of systematic comparative research on the topic, it is difficult to estimate whether and to what degree these conditions act as catalysts for the effects of telework. However, the results of the reviewed studies indicate that they are likely to do so in an ambiguous way, including both advantages and drawbacks in relation to working time, work–life balance, well-being, health and performance.

Another unique feature of the European case is the multi-level structure of telework governance. The 2002 Framework Agreement on Telework by the Social Partners of the European Union preceded policy-making and social dialogue about telework in many European countries. It is ambitious in its demands for standards on occupational health, safety, working hours and equal treatment of home-based and mobile employees. Its definition is also broad enough to incorporate many of the telework arrangements currently used in the world of work in Europe, and it has fuelled a considerable amount of social dialogue on this subject. However, following the literal wording of the agreement omits some teleworkers (for example, only regular telework is included in the agreement). Moreover, since the agreement covers only employees and some workers do telework in their free time (sometimes such work is not paid, and therefore this work would not formally qualify as telework as defined in the framework agreement), this might pose some new challenges for the implementation of the agreement. This is rather important for the emerging debate about the so-called 'right to disconnect' (and the actual effects of such regulations on working time have yet to be determined). National reports for France and Germany indicate early developments in relation to collective

agreements and legislation that aim to protect employees from continuous reachability via mobile ICTs and its implication for individual health and privacy. These developments may give precedent to a new interpretation of the Framework Agreement on Telework that covers work anywhere at any time in a more holistic sense. In relation to these aspects, Europe has the potential to take a pioneering role in the ongoing debate about telework.

NOTES

1. Electricity, gas, steam and air-conditioning supply also shows a high share of employees using ICTs at least half a day away from the employer's premise (42 per cent) – which however might not be classified as mobile teleworkers per se – the workplace of employees in this sector is mostly at the clients' premises. The work performed away from employer's premises is thus contingent on the industry itself and may not necessarily be a work arrangement enabled by the use of ICTs.
2. Framework agreements signed by EU-level social partners have to be implemented by their affiliates at national level. Therefore, the obligation for their implementation is on the social partners and not on the national governments. A different aspect is that the provisions of the agreement have been included in the national legislation in some European countries.
3. Article L2242-8, modified by Law no. 2016-1088 of 8 August 2016, article 55 (V).

REFERENCES

- André, M. (2013), 'Svenska chefer gillar distansarbete' ('Swedish bosses like working from a distance'), accessed 21 December 2018 at www.chef.se.
- Annesley, C. (2007), 'Lisbon and social Europe: towards a European "adult worker model" welfare system', *Journal of European Social Policy*, **17** (3), 195–205.
- Anttila, T., Nätti, J., Ojala, S. and Tammelin, M. (2009), *Ansiotyö kotona: Yleisyys, minaispiirteet, seuraukset ja hallinta palkansaajilla (Gainful Employment at Home: Prevalence, Characteristics, Consequences and Management of Wage and Salary Earners)*, Tampere: Finnish Work Environment Fund.
- Autor, D.H. (2015), 'Why are there still so many jobs? The history and future of workplace automation', *Journal of Economic Perspectives*, **29** (3), 3–30, doi:10.1257/jep.29.3.3.
- Bailey, D.E. and Kurland, N.B. (2002), 'A review of telework research: findings, new directions, and lessons for the study of modern work', *Journal of Organizational Behavior*, **23** (4), 383–400, doi:10.1002/job.144.
- Baruch, Y. (2000), 'Teleworking: benefits and pitfalls as perceived by professionals and managers', *New Technology, Work and Employment*, **15** (1), 34–49.
- Beauregard, A., Basile, K. and Canonico, E. (2013), *Home Is Where Work Is: A New Study of Homeworking in Acas – and Beyond*, London: ACAS.
- Boni, M. and Vultaggio, A. (2013), 'La via italiana al welfare aziendale: scenari attuali e prospettive future', *Sociologia e Politiche Sociali*, (2), 1591–2027.
- Benke, K. (2014), 'Heimarbeit: Immer weniger Menschen in Deutschland gehen ihrem Beruf von zu Hause aus nach' ('Homeworking: fewer and fewer people in

- Germany are following their profession from home'), DIW Weekly Report No. 8/2014, Deutsches Institut für Wirtschaftsforschung, Berlin.
- Brynjolfsson, E. and McAfee, A. (2014), *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, New York: W.W. Norton.
- Bundesministerium für Familie, Senioren, Frauen und Jugend (BMFSFJ) (2013), *Unternehmensmonitor Familienfreundlichkeit 2013 (Company Monitor Family-Friendly Policies 2013)*, Berlin: Ministry of Family Affairs, Senior Citizens, Women and Youth.
- Chiaro, G., Prati, G. and Zocca, M. (2015), 'Smart working: dal lavoro flessibile al lavoro agile', *Sociologia Del Lavoro*, (138), 69–87.
- Chung, H., Kerkhofs, M., Ester, P. and Chung, H. (2007), *Working Time Flexibility in European Companies*, Luxembourg: Office for Official Publications of the European Union.
- Direction de l'Animation de la recherche, des Études et des Statistiques (DARES) (2004), 'Le télétravail en France' ('Telework in France'), research report no. 51.3, accessed 4 January 2019 at https://travail-emploi.gouv.fr/IMG/pdf/publication_pips_200412_n-51-3_teletravail-en-france.pdf.
- Eurofound and the International Labour Organization (ILO) (2017), *Working Anytime, Anywhere: The Effects on the World of Work*, Luxembourg: Publications Office of the European Union and Geneva: ILO.
- European Foundation for Improvement of Living and Working Conditions (Eurofound) (2015), *Sixth European Working Conditions Survey*, Luxembourg: Publications Office of the European Union.
- European Framework Agreement on Telework (2002), European Trade Union Confederation, Union of Industrial and Employers' Confederations of Europe, European Association of Craft, Small and Medium-Sized Enterprises, and European Centre of Employers and Enterprises (ETUC-UNICE-UEAPME-CEEP), 16 July.
- Eurostat (2015), *Labour Force Survey, ad-hoc module 2011*, accessed 21 December 2018 at <https://ec.europa.eu/eurostat>.
- Galloway, F., Weber, K.M., Stare, M. and Rubalcaba, L. (2015), 'The futures of the service economy in Europe: a foresight analysis', *Technological Forecasting and Social Change*, **94** (May), 80–96.
- Genin, É. (2016), 'Proposal for a theoretical framework for the analysis of time porosity', *International Journal of Comparative Labour Law and Industrial Relations*, **32** (3), 280–300.
- Glorieux, I. and Minnen, J. (2008), 'Thuiswerk in Vlaanderen' ('Homework in Flanders'), in E. Martinez, E. Krzeslo and J. De Shamphelre (eds), *Telewerk: Inzet, regels en praktijk (Telecommuting: Commitment, Rules and Practice)*, Brussels: FOD WASO.
- Goudswaard, A., Dhondt, S., Vergeer, R. and Oeij, P. (2013), *Organisation of Working Time: Implications for Productivity and Working Conditions*, Dublin: European Foundation for the Improvement of Living and Working Conditions.
- Grant, C.A., Wallace, L.M. and Spurgeon, P.C. (2013), 'An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work-life balance', *Employee Relations*, **35** (5), 527–46, doi:10.1108/ER-08-2012-0059.
- Greenworking (2012), 'Le télétravail dans les grandes entreprises françaises – Comment la distance transforme nos modes de travail' ('Telework in major companies in France – how distance is transforming our ways of work'), synthesis

- for the Minister for Industry, Energy and the Digital Economy, Greenworking SAS, Paris.
- Hammermann, A. and Stettes, O. (2015), *Bewältigung von Stress in einer vernetzten Arbeitswelt – Befunde aus der BIBB/BAuA-Erwerbstätigenbefragung (Coping with Stress in a Networked Work Environment – Findings from the BIBB/BAuA Employment Survey)*, IW-Trends No. 2/2015, Cologne: Institut der deutschen Wirtschaft, pp. 113–35.
- Harris, L. (2003), ‘Home-based teleworking and the employment relationship: managerial challenges and dilemmas’, *Personnel Review*, **32** (4), 422–37.
- Holtgrewe, U. (2014), ‘New new technologies: the future and the present of work in information and communication technology’, *New Technology, Work and Employment*, **29** (1), 9–24.
- Hooftman, W., Mars, G.M.J., Janssen, B., de Vroome, E.M.M. and van den Bossche, S. (2015), *Nationale Enquête Arbeidsomstandigheden 2014 – Methodologie en globale resultaten (National Working Conditions Survey – Methodology and Results)*, Leiden: TNO.
- Instituto Nacional de Salud e Higiene en el Trabajo (INSHT) (2011), *Encuesta Nacional de Condiciones de Trabajo 2011 (National Working Conditions Survey)*, Madrid: Instituto Nacional de Salud e Higiene en el Trabajo.
- International Data Corporation (IDC) (2013), *El trabajo Flexible en España ¿Es España realmente Flexible? (Flexible Work in Spain: Is Spain Really Flexible?)*, Madrid: IDC.
- Kandolin, I. and Tuomivaara, S. (2012), ‘Työ, terveys ja työssä jatkamisajatukset’ (‘Work, creating flexibility at work’), in M. Perkiö-Mäkelä and T.M. Kauppinen (eds), *Työ, terveys ja työssä jatkamisajatukset*, vol. 41, Helsinki: Institute of Occupational Health, Work and Human Research, pp. 27–41.
- Kelliher, C. and Anderson, D. (2010), ‘Doing more with less? Flexible working practices and the intensification of work’, *Human Relations*, **63** (1), 83–106.
- Kelly, E.L., Kossek, E.E., Hammer, L.B., Durham, M., Bray, J., Chermack, K., et al. (2008), ‘Getting there from here: research on the effects of work–family initiatives on work–family conflict and business outcomes’, *Academy of Management Annals*, **2** (August), 305–49.
- Központi Statisztikai Hivatal (KSH) (2015), Tájékoztatósi adatbázis (Information database), accessed 19 December 2018 at <http://statinfo.ksh.hu/Statinfo>.
- Lasfargue, Y. and Fauconnier, S. (2015), *Enquête 2015 sur les impacts du télétravail (2015 Survey on the Impacts of Telework)*, Paris: OBERGO.
- Lyly-Yrjänäinen, M. (2015), *Työolobarometri: Syksy 2014 Ennakkotietoja (Työolobarometri: Autumn 2014 Preliminary Information)*. Helsinki: Ministry of Employment and the Economy.
- Magyar Távmunka Szövetség (2016), ‘Távmunka: itt a családbarát és hatékony munkavégzés ideje!’ (‘Teleworking: it’s time for family-friendly and efficient work!’), study report, Budapest, accessed 19 December 2018 at <http://tavmunka.org>.
- Manager Italia (2011), *Italia e lavoro, così non va! Ultimi in Europa per occupazione e lavoro (Italy and work, that’s not the way! Last in Europe for employment and telework)*, study report, Milan, accessed 19 December 2018 at www.psicopolis.com.
- Messenger, J.C. and Gschwind, L. (2016), ‘Three generations of telework: new ICTs and the (r)evolution from home office to virtual office’, *New Technology, Work and Employment*, **31** (3), 195–208.

- Miyar Cruz, D. and Rimbau Gilabert, E. (2012), 'Nuevas tecnologías, trabajo y paternidad: Las nuevas formas de flexibilidad laboral y sus efectos sobre la implicación de los hombres en el cuidado de los hijos' ('New technologies, work and paternity: new forms of labour flexibility and their effects on the involvement of men in childcare'), IN3 Working Paper No. DWPI2-001, Universitat Oberta de Catalunya, Barcelona.
- Muffels, R. and Luijkx, R. (2008), 'Labour market mobility and employment security of male employees in Europe: "trade-off" or "flexicurity"?', *Work, Employment and Society*, **22** (2), 221–42.
- Observatorio Estatal de Condiciones de Trabajo (OECT) (2015), 'Encuesta Nacional de Condiciones de Trabajo 2011' ('National Working Conditions Survey 2011'), accessed 6 June 2019 at www.insst.es.
- Office for National Statistics (ONS) (2015), *Labour Force Survey 2014*, Office for National Statistics, Newport, accessed 4 January 2019 at <https://www.ons.gov.uk/>.
- Ojala, S. (2011), 'Supplemental work at home among Finnish wage earners: involuntary overtime or taking the advantage of flexibility?', *Nordic Journal of Working Life Studies*, **1** (2), 77–97.
- Ojala, S. and Pyöriä, P. (2013), 'Kotona työskentelyn yleisyys ja seuraukset: Suomi eurooppalaisessa vertailussa' ('Working at home, the prevalence and consequences: a European comparison Finland'), *Työpoliittinen Aikakauskirja*, **56** (1), 52–64.
- Ojala, S., Nätti, J. and Anttila, T. (2014), 'Informal overtime at home instead of telework: increase in negative work–family interface', *International Journal of Sociology and Social Policy*, **34** (1–2), 69–87.
- Otaegi, A. (2015), 'Análisis de los planes de igualdad de empresas del sector industrial' ('Analysis of equality plans in enterprises of the industrial sector'), Newsletter No. 113, 1st of May Foundation, Madrid.
- Pekkola, J. and Uskelin, L. (2007), *Etätyöopas työnantajille (Telecommuting Guide for Employers)*, Helsinki: Ministry of Labo.
- Perkiö-Mäkelä, M. and Hirvonen, M. (2013), *Työ ja terveys – haastattelututkimus 2012 Taulukkoraportti (The National Finnish Work and Health Survey 2012)*, Helsinki: Finnish Institute of Occupational Health.
- Peters, P., den Dulk, L. and van der Lippe, T. (2009), 'The effects of time-spatial flexibility and new working conditions on employees' work–life balance: the Dutch case', *Community, Work & Family*, **12** (3), 279–97.
- Pfisterer, S., Streim, A. and Hampe, K. (2013), *Arbeiten 3.0 – Arbeiten in der digitalen Welt (Work 3.0 – Work in the Digital World)*, Berlin: Bundesverband Informationswirtschaft, Telekommunikation und neue Medien e.V. (BITKOM).
- Popma, J. (2013), 'The Janus face of the "new ways of work": rise, risks and regulation of nomadic work', working paper, European Trade Union Institute, Brussels.
- Randstad (2012), 'Las tecnologías destruyen las fronteras entre vida privada y laboral' ('Technologies destroy the boundaries between private and work life'), press release, accessed at www.randstad.es.
- Ruiz, Y. and Walling, A. (2005), 'Home-based working using communication technologies', *Labour Market Trends*, **113** (10), 417–26.
- Statistics Sweden (2014a), *ICT Usage in Enterprises 2014*: Stockholm: Statistics Sweden.
- Statistics Sweden (2014b), *The Work Environment Survey*, Stockholm: Statistics Sweden, accessed 21 December 2018 at <https://www.scb.se/en/>.

- Sutela, H. and Lehto, A.-M. (2014), *Työolojen muutokset 1977–2013 (Changes in Working Conditions 1977–2013)*, Helsinki: Statistics Finland.
- Taskin, L. and Edwards, P. (2007), 'The possibilities and limits of telework in a bureaucratic environment: lessons from the public sector', *New Technology, Work and Employment*, **22** (3), 195–207.
- TDC (2015), 'IT förhindrar distansjobb' ('IT impedes distance working'), report, Stockholm, accessed 4 January 2019 at www.mynewsdesk.com.
- Tipping, S., Chanfreau, J., Perry, J. and Tait, C. (2012), *The Fourth Work–Life Balance Employee Survey*, London: Department for Business Innovation and Skills.
- Trygg, K. (2014), *Arbetets geografi – Kunskapsarbetets organisation och utförande i tidrummet (Geography of Work – the Organisation of Knowledge-Intensive Work and Its Application in Time and Space)*, Stockholm: Department of Human Geography, Stockholm University.
- Unión Interprofesional (2015), 'Jornada divulgativa sobre la prevención de patologías asociadas a las tics' ('Informative day on the prevention of pathologies associated with ICTs'), Madrid, accessed 4 January 2019 at www.uicm.org
- Unionen (2013), 'Jobbet alltid närvarande – en studie om tjänstemännens gränslösa arbetsliv' ('Work is always present – a study on the boundaryless working life of white-collar workers'), Unionen, Malmö.
- UNISON (2014), 'Homeworking and teleworking – a negotiators guide', accessed 4 January 2019 at www.unison.org.uk.
- Vesala, H. and Tuomivaara, S. (2015), 'Slowing work down by teleworking periodically in rural settings?', *Personnel Review*, **44** (4), 511–28.
- Vilhelmson, B. and Thulin, E. (2016), 'Who and where are the flexible workers? Exploring the current diffusion of telework in Sweden', *New Technology, Work & Employment*, **31** (1), 77–96. doi:10.1111/ntwe.12060.
- Walrave, M. and De Bie, M. (2005), 'Teleworking @ home or close to home – attitudes towards and experiences with homeworking, mobile working, working in satellite offices and telecentres', report, University of Antwerp.
- Welz, C. and Wolf, F. (2010), *Telework in the European Union*, Dublin: European Foundation for the Improvement of Living and Working Conditions (Eurofound).
- Wheatley, D. (2012), 'Good to be home? Time-use and satisfaction levels among home-based teleworkers', *New Technology, Work and Employment*, **27** (3), 224–41.
- Wilthagen, T. and Tros, F. (2004), 'The concept of "flexicurity": a new approach to regulating employment and labour markets', *Transfer: European Review of Labour and Research*, **10** (2), 166–86.
- Wölfel, A. (2005), 'The service economy in OECD countries', in Organisation for Economic Co-operation and Development, *Enhancing the Performance of the Services Sector*, Paris: OECD, pp. 27–62.