
The impact and challenges of teleworking and the work based on information and communication technology for employees during the COVID-19 pandemic

Dana Luiza GRIGORESCU PhD Student (danaluiza2004@yahoo.com)

Bucharest University of Economic Studies

Abstract

This article is based on an analysis of the latest information available on telework and mobile work based on information and communication technology.

In addition to Telework and work based on information and communication technology, when dealing with work outside the normal workplace, three different but often overlapping concepts can be identified, namely: remote work, telework and home work . Remote work can be carried out by both freelancers and employees and occurs when the work is carried out in whole or in part outside the normal place of work, not necessarily from home. In contrast, telecommuting is generally limited to employees and involves the use of information technology and digital devices. Finally, home-based work refers to work that takes place in whole or in part in the employee's own home, can be performed by both freelancers and freelancers, and does not necessarily involve the use of digital devices. Each of these concepts overlaps with Telework and ICT-based work.

Recent trends in remote work, its impact on employees, employers and society are analyzed in this article which provides an overview of the main legislative and policy measures adopted at European Union and national level in order to identify possible political actions within the European Union. The study is based on an extensive analysis of the specialized literature, five case studies of the countries of the European Union: Finland, Germany, Ireland, Italy and Romania.

Keywords: telework, remote work, pandemic, employees, information technology

JEL Classification: E10, E30

Introduction

During the pandemic, remote work was considered a way to limit the spread of the virus among employees. Several companies in various sectors (e.g. ICT, retail, banking, outsourcing, logistics, services) have turned to full telecommuting or hybrid models (rotational telecommuting) to ensure the continuity of their activities. Not only has telecommuting increased during the pandemic, but it appears to continue even after the pandemic, with studies and stakeholder interviews suggesting that hybrid models are likely to characterize the future labor market.

In 2019, before the COVID-19 pandemic, Ireland (19.9%) and especially Finland (31.7%) had a higher share than the EU average (14.4%) of workers (employed and self-employed) who usually or sometimes work from home.

Germany (12.6%) was in line with the EU-27 average (14.4%); while Italy (4.7%) and, especially, Romania (1.4%) recorded relatively low shares.

Homework increased between 2006 and 2019 in Finland and Ireland, especially among those who sometimes work from home.

According to Eurostat (2021), Romania is one of the Member States with the lowest levels of telework both before (0.4% of workers in 2018 and 0.8% in 2019) and during the COVID-19 pandemic. Before this COVID-19 pandemic, remote work was framed as a benefit offered by large and multinational companies, especially in certain sectors (eg IT, outsourcing, banking).

First of all, the labor market is dominated by low-skilled and manual labor, which limits the use of telework (just over 50% of Romanian enterprises are in the fields of retail, trade, construction, industry and hotels).

Second, a low percentage of employees are employed in sectors that require significant knowledge of information and communication technology.

Third, there is limited digital infrastructure, such as high-performance computers and servers, also lacking electronic signature.

Eurostat data from 2020 indicates a lack of appropriate procedures and equipment, together with a generally low level of digital skills, especially in sectors that do not rely heavily on digital technologies. A challenge is the fact that almost half (45.8%) of Romanians live in overcrowded homes, which makes it difficult to work remotely.

The recent survey of the Association of Business Service Leaders (ABSL) in Romania shows that, during the pandemic, 50% of the 59 companies in the business services sector used full telework, 45% used hybrid models (telework and in-person work) and 5% used only in-person work. According to the survey, 13% of companies said they will continue with full telecommuting, 48% of them are considering hybrid approaches for the near future, and 39% said that telecommuting is difficult to implement or is not considered an option by management.

Literature review

Anghelache, C., Grigorescu, D.L. et al (2023) carried out a complex analysis on labor resources in Romania. Anghelache, C et al (2022) undertook a study on the effect of the coronavirus pandemic on the labor market. Anghelache, C., Popescu, A.M., Grigorescu, D.L. (2021) addressed a series of issues related to the role of a country's population in the analysis of economic potential. Barbu I.C (2019) analyzed the legislative aspects regarding the regulation of work in the virtual office (telework-teleworking). Chivu L, Georgescu G (2020) showed the vulnerabilities of the labor market under the impact of COVID-19 in Romania. Cojocaru A. (2017) studied the adverse effects of working from home: loneliness, depression, lack of productivity. Batut, C, Tabet, Y (2020) showed the economic effects of remote work. Fana M. et al. (2020) studied telecommuting, work organization and workplace quality during the COVID-19 pandemic crisis. Aspects of remote work during the Covid-19 pandemic were also addressed by Waizenegger et al (2020).

Data, results and discussion

The COVID-19 pandemic has led to a massive expansion of telecommuting and ICT-based work, especially as a result of measures introduced by governments across the European Union, such as school and kindergarten closures, recommendations and obligations to work from home as well as other strict isolation measures.

Although official EU-level statistics on the phenomenon are not yet available, preliminary data from Eurofound's "Living, working and COVID-19" survey show a substantial increase in the share of Europeans working from home in the first wave of the pandemic.

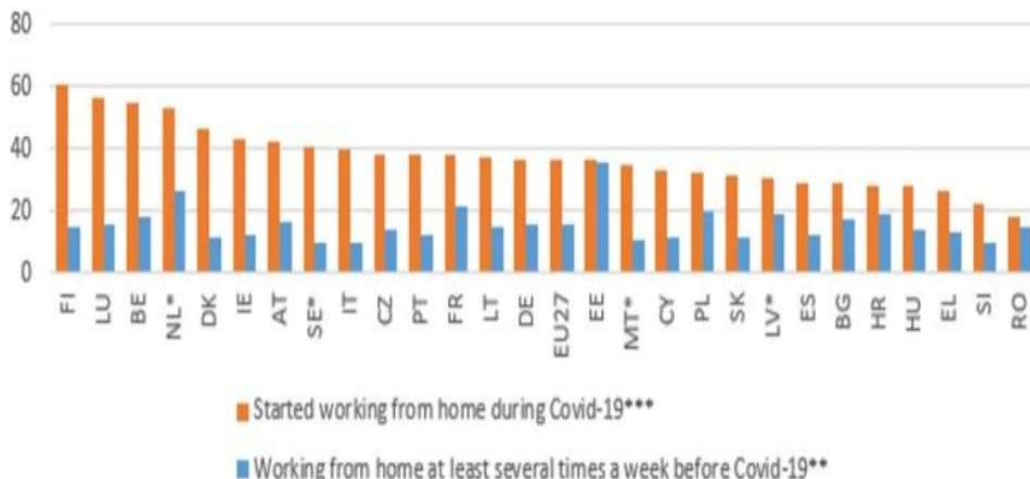
Almost a quarter were employees who frequently used information and communication technology for work and worked in at least two locations, several times a week; about 15% were employees who frequently used information and communication technology to work from home; and about 15% were freelancers who occasionally or frequently used information and communication technology to work from locations other than their headquarters.

Figure 1 reports the results of the Eurofound (2020) survey on life, work and COVID-19, conducted in April 2020. Among EU-27 respondents, the share of those who started working from home was 36.5% following the pandemic, compared with only 15.8% reporting working from home at least a few times a week before the pandemic.

Those who started working from home due to COVID-19 were partly employees who were already regularly working remotely before (54%), although 46% were "new" remote workers with no previous remote work experience.

Share of the population (18+) working online before the health crisis and share working online as a result of the COVID-19 pandemic (%), (April 2020 wave)

Figure 1



Source: Eurofound (2020)

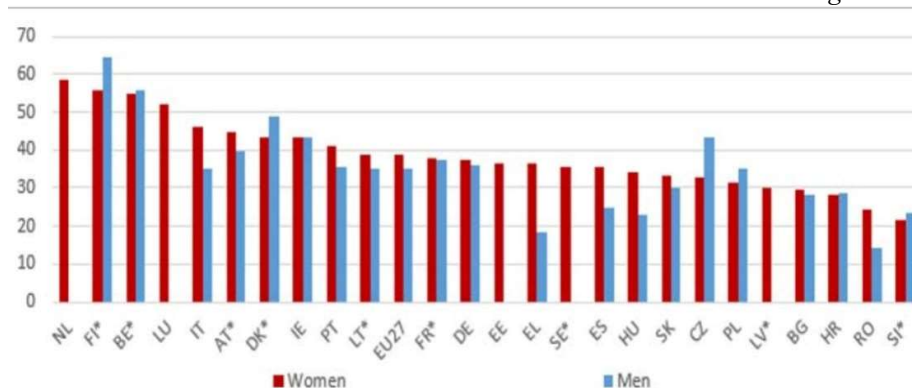
These figures mask significant differences between EU member states. The highest shares of employees with online activity were recorded in those countries with a tradition in this field before the pandemic (eg BE, FI, LU, NL, SE) and in those that were most affected by the outbreak of the epidemic, such as, for example, Italy. The share of those who started working from home due to the COVID-19 pandemic is close to the share of "teleworking" employment (about 37%).

Women were more likely than men to report that they started working from home as a result of the COVID-19 pandemic: 38.6 percent and 34.9 percent, respectively, according to the survey.

As shown in Figure 2, there is some variation between countries. For example, large gender differences in favor of women were recorded in Greece, Hungary, Italy, Romania and Spain, all showing gender differences of +10 p.p. On the contrary, a higher share of new remote freelancers was recorded among men than among women in the Czech Republic and Finland.

Share of the population (18+) who started working from home due to the COVID-19 pandemic, by sex (%), (April 2020 wave)**

Figure 2



Source: Eurofound

In terms of age, the biggest increase in the incidence of such activity during the COVID-19 epidemic was among younger employees: almost half of young remote freelancers had never worked from home before: 49% of employees younger and less skilled workers (18–34) worked remotely for the first time during the COVID-19 pandemic, compared to 44% of prime age workers (35–49) and 45% of older employees (50+).

Figure 3, taken from the Eurofound report(2020) shows a significant variation between Member States in the proportion of respondents who said they work exclusively from home, ranging from around 20% in Croatia, Poland, Slovakia, Bulgaria and Hungary to more than 40% in France, Spain, Italy, Ireland and over 50% in Belgium.

Employment of employees during the pandemic by country, EU27 (%) (June/July 2020 wave)

Figure 3



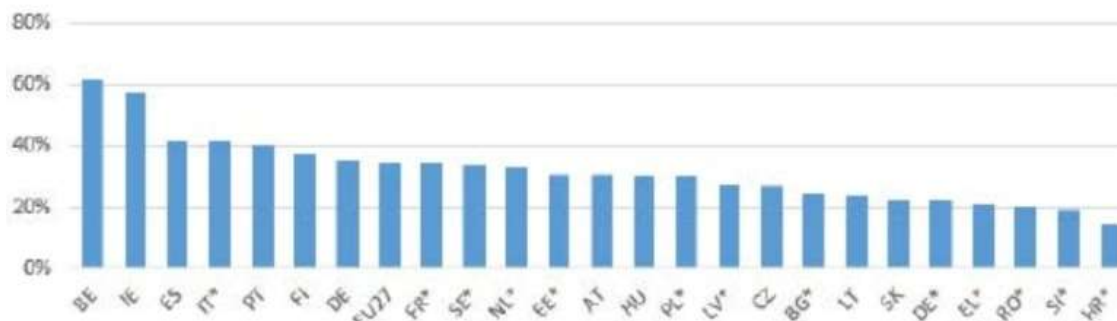
Source: Eurofound

As shown in Figure 4 below, on average across the EU-27, survey respondents reported working from home for a third of their total weekly hours worked in the month prior to the survey.

The highest incidence was recorded in Belgium and Ireland (almost 60% of all hours worked), as well as in Spain, Italy and Portugal (around 40%).

Hours worked from home as a percentage of total hours worked on average (population 18+) in the month prior to the interview (%), (July 2020 wave)

Figura 3

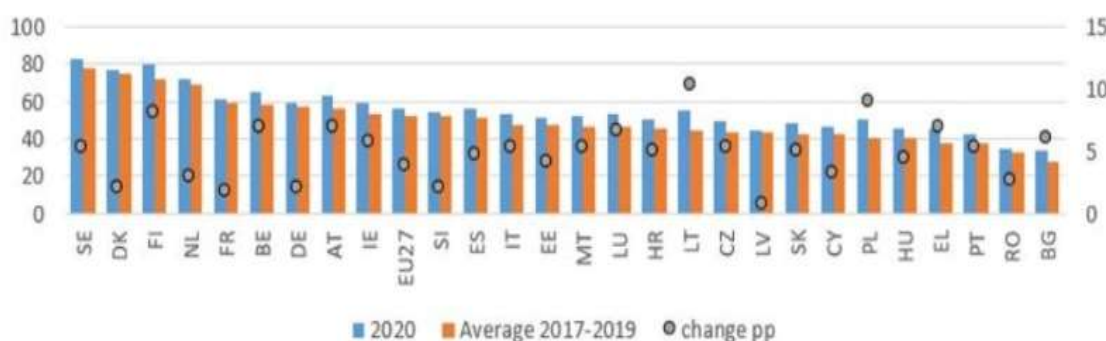


Source: Eurofound

There were significant increases not only in countries where the share of employees using computers with Internet access before the COVID-19 crisis was lower than average, such as Lithuania, Poland or Greece, but also in countries with high shares before the outbreak of the pandemic, such as Finland, Belgium or Austria.

Share of employees using computers with access to the World Wide Web in enterprises with 10 or more employees (%), EU-27. Year 2020 and average 2017-2019

Figure 5



Source: Eurostat

The massive expansion of remote work during the COVID-19 pandemic has brought about major changes in the number, type and profile of employees who are engaged in such work, which now spans a much wider range of sectors and occupations than before.

According to the Eurofound online survey (2020), over 80% of respondents employed in the education sector worked from home exclusively or partially, as did over 70% of those working in financial services and almost 70% of those in the public sector. administration.

In addition, home working during the COVID-19 pandemic has become quite widespread among workers in industry and construction, despite having lower shares compared to the previously mentioned sectors:

- in each sector approximately 30% of employees worked exclusively or partially from home, compared to a share of approximately

- 10% in each sector who said they worked from home at least sometimes in 2018.

The forced workplace closures due to social distancing and isolation measures due to COVID-19 have led to a significant increase in online activity among low- and mid-level office and administrative workers who previously had very limited access to such of work arrangements, despite the fact that, based on job characteristics, almost all (84%) office workers were able to work remotely.

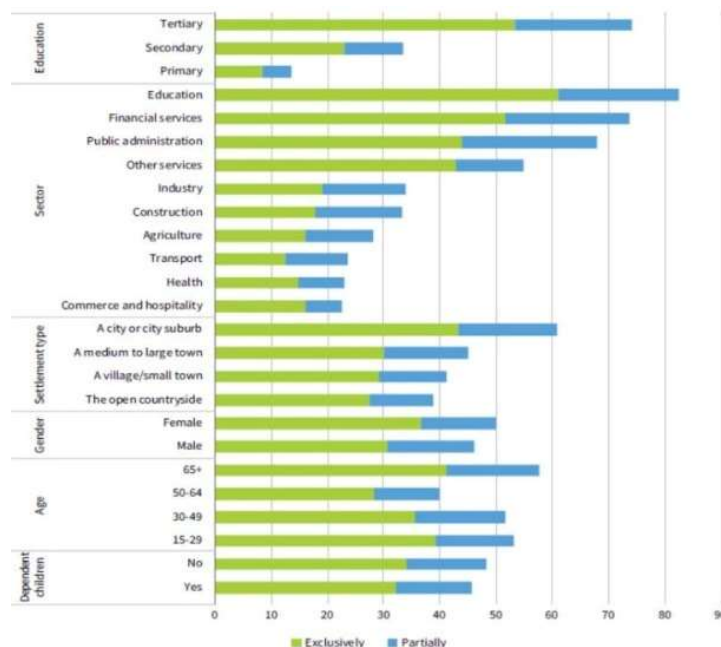
Even so, in line with the pre-COVID-19 reality, the findings of both waves of the Eurofound online survey confirm the disproportionate prevalence of Telework and ICT-based work in the urban, white-collar, well-educated service sector. employees with strong digital skills.

As shown in Figure 6, employees with higher education (74% worked from home) and those residing in cities or city suburbs (about 60% worked from home) were more likely to work from home than those with lower education levels. low (only 14% of those with primary education worked from home) or those living in less populated areas (less than 40% of those living in rural areas worked from home), confirming the trends recorded before the outbreak of the COVID-19 pandemic. In addition, the Eurofound online survey shows that the share of those working from home was higher among those without dependent children than among those with dependent children.

This would tend to confirm that the main determinant of home working was the nature of the work and the extent to which remote work was feasible, rather than individual or household circumstances.

Share of employees over 18 working from home during the COVID-19 pandemic, by personal and work-related characteristics (%), EU27

Figure 6



Source: Eurofound

The effects of remote work on employees mainly relate to its implications for work flexibility and autonomy, work intensity and work-life balance, as well as health and safety conditions. These implications have different effects depending on the personal characteristics and jobs of employees, with different opportunities and risks of inclusion or exclusion from work for different groups of employees, e.g. women, people with disabilities, low-skilled people.

The increased spatial (location) and temporal (time) flexibility offered by telecommuting and ICT-based work is considered an important beneficial factor for employees.

According to a wide range of research and company case studies, compared to their office-based counterparts, ICT-enabled remote/mobile employees typically report higher levels of job satisfaction and happiness, less stress and improved balance between work and private life, if they have a considerable degree of control over where and when they work.

Spatial flexibility allows employees to avoid office distractions, which most appreciate. Another benefit related to the spatial flexibility of telecommuting and ICT work is that the negative aspects of commuting can be avoided – Telecommuting and ICT work either completely reduces travel time where the work is not location dependent, or it creates opportunities for more convenient travel time outside of busy and expensive travel times where work is place dependent but not time dependent.

As argued, by avoiding the time-consuming and often frustrating daily commute, employees can gain more free time.

As a result, telework and work based on information and communication technology offer the potential to improve work-leisure balance. It gives employees more freedom to better manage their care responsibilities or attend meetings that are difficult to do during normal working hours and reduces commuting time.

However, Eurofound(2020) points out that the flexibility and greater autonomy associated with telecommuting and ICT-based work can also have a number of adverse effects on employees' mental and physical well-being, related to the so-called paradox of autonomy.

This concept – the paradox of autonomy – means that although higher levels of autonomy and flexibility for employees (which are, for example, a result of telecommuting and ICT-based work) have positive effects on employees, such as making work more be more rewarding, increasing job satisfaction and other aspects mentioned above, they can also have negative effects such as increased work intensification, longer and more irregular working hours, the balance between work at the office and free time.

The paradox of autonomy can be the result of either the employee himself (through his self-expectations and ambitions) or aspects related to the employer, such as the way work is organized and performance targets set and monitored, as well as organizational and associated culture. management styles.

The following negative effects of telecommuting and work based on information and communication technology have been identified:

- Monitoring the work process through technology can lead to increased workload and stress levels.
- Constant connectivity can lead to increased work pressure and stress. As Eurofound recently pointed out almost 30% of those who work from home are significantly more likely to carry out the activity every day, compared to less than 5% of office workers. This in turn often means that the minimum daily rest period of 11 hours in the Working Time Directive is not respected.
- Disruptions - caused by being constantly connected, working in demanding jobs with competing demands, such as at home with caring roles, put pressure on employees to make up for lost time and work even harder.
- Social exchange between employers and employees – employees tend to reciprocate because they have been given a flexible working arrangement and to demonstrate that their commitment and work ethic has not been adversely affected, they will work longer hours.
- Information and e-mail overload – as people do not regularly meet and talk to each other face to face, the volume of e-mails sent has increased enormously. Therefore, employees spend a lot of time processing information and emails.

The factors mentioned above also have negative effects on the work-life balance of employees especially when working remotely from home. The fact that home telecommuters work longer hours

and consequently have difficulty separating paid work from their private lives is well documented and considered one of the main negative effects of such work.

Another potential negative impact of telecommuting and ICT-based work relates to the type of work and the tasks themselves. The more flexible way of organizing work through telecommuting and ICT-based work, which often relies less on regular work patterns typically adopted at the employer's premises, is also associated with a more general trend towards more high fragmentation of work and on-demand, project-based work paid for performance.

While the impacts (positive and negative) mentioned above may generally occur in "Telework and ICT-based work" situations, the COVID-19 pandemic has created a context in which it has been observed that Telework and ICT-based work and communications has further negatively affected the conditions of remote employees. This was due to the sudden and widespread use of Telecommuting and ICT-based work for many employees, combined with the effects of social distancing and isolation measures taken by governments to combat the pandemic. During the COVID-19 pandemic, working conditions may have deteriorated for many employees due to, among other things, lockouts, lack of childcare, inadequate workspaces, and information and communication technology tools. Some of these negative effects are unlikely to persist with a return to less intensive use of telework arrangements and the reopening of care services.

The COVID-19 pandemic broke out so suddenly that the massive expansion of remote work happened very quickly, with no time for employers or employees – especially those who had not worked remotely before – to properly prepare for it.

For example, the Eurofound e-survey found that less than half (47%) of respondents said their employer had provided them with the equipment they needed to work from home following the sudden job closure.

The effects of the COVID-19 restrictions on remote workers depend on their occupation. With the widespread national lockdowns during the first wave of the pandemic – and the partial ones since – employees whose work involves a high degree of face-to-face social interaction and emotional labour, such as teachers, social workers, home care aides and psychologists, had to resort to telework.

However, there is a consensus among these employees that remote work has reduced the quality of their work, as well as its effectiveness, efficiency and purpose. In contrast, employees involved in sales activities, where the degree of emotional involvement is quite limited, reported greater satisfaction with the new remote work arrangements that involved less direct contact with customers.

Without having to go to client premises or face-to-face meetings, they felt they could better focus on the task at hand.

In addition to different occupational characteristics, the degree to which changes related to remote working (relying more on online tools, e.g. internal communications, team meetings and performance monitoring) were perceived as a major change, e.g. in regarding the autonomy of one's work, strongly depends on the position of the workers in the occupational hierarchy. Overall, during the COVID-19 pandemic, the net effect of telecommuting on workplace autonomy in terms of work procedure latitude was positive for middle-skilled workers and white-collar workers and neutral for high- and low-skilled workers.

The psychosocial risks are a major cause of work-related illness, which can lead to absenteeism, reduced productivity and performance.

As discussed in the previous section, although on the whole telecommuters and ICT workers value positively the flexibility and autonomy that such work offers, they may also experience an increased intensity of work, longer working hours and interference with home life. They are likely to negatively affect the stress level of employees. In addition, employees who use telecommuting and ICT-based work may experience feelings of social isolation and loneliness which, in turn, may reduce the ability to cope with the aforementioned changes in workload and working time. These can negatively

affect stress levels and the mental and physical well-being of remote workers - after headaches and eye strain, high stress levels have the second strongest negative association with ITC use.

The massive increase in remote working as a result of the COVID-19 pandemic has exacerbated the adverse effects of this way of working on the mental health of employees. Lockdown measures, including school and workplace closures, have disrupted daily routines, limited social and in-person interactions, and increased loneliness and feelings of social isolation, all of which have negatively affected the mental health of Europeans. For example, a French survey of 2,000 employees found that 18% of remote workers experienced symptoms of severe anxiety, depression and other mental disorders - with many more women reporting a deterioration in their mental health.

Conclusion

Remote work has both positive and negative implications.

The positive effects for employees and employers relate to the continuity of business activities, guaranteeing the preservation of jobs and reducing the risk of employees becoming infected with COVID-19. Employers and employees both benefited from lower costs due to lower workplace expenses for employers and reduced commuting for employees. Another benefit that extends beyond employees and employers is increased employee digital skills and productivity. At the societal level, remote work has contributed to increasing citizens' attention to public health issues, the digitization of public services and the attractiveness of provincial cities. In the long run, it can also prevent internal and external migration.

Remote work also has negative effects for employees, employers and society. For employees, these relate to mental health, increased workload and family responsibilities (especially for women), reduced income due to loss of benefits and overtime, coupled with increased personal costs. Data protection and workplace safety is a challenge for both employer and employee.

For employers, adopting telecommuting on a large scale requires financial investment. Employers also face challenges in managing teams and collaborative work and protecting employee professional development. Tax burdens related to working everywhere represent another challenge for employers. At the societal level, the negative effects of remote work include the potential to deepen the social and economic inequalities that characterize Romanian society (i.e. geographical development gaps), the weakening of employee protection and social rights and the limitation of local economic development (following the reduction of employee incomes).), the impacts on investment plans in the real estate market, as well as the fact that some sectors depend on the presence of employees in the office.

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