

**Maria Denisa VASILESCU, PhD (corresponding author)**

maria.vasilescu@csie.ase.ro

Bucharest University of Economic Studies, Romania

National Scientific Research Institute for Labour and Social Protection, Bucharest,  
Romania

**Larisa STĂNILĂ, PhD**

larisa.stanila@incsmpls.ro

National Scientific Research Institute for Labour and Social Protection, Bucharest,  
Romania

**Erika MARIN, PhD**

erika.marin@csie.ase.ro

Bucharest University of Economic Studies, Romania

**Mihaela MAFTEI, PhD**

mihaela.maftai@ase.ro

Bucharest University of Economic Studies, Romania

## **Work-Life Balance when Working from Home**

**Abstract.** *In shaping the new labour market, the long-term sustainability of working from home is largely related to work-life balance. Our paper focuses on employees' perceptions concerning how working from home during the pandemic influenced work-life balance, using a cross-country perspective. Also, we aimed at outlining the socio-demographic profile of those affected by the restrictive measures. We employed cluster analysis and logistic regression, using data from the e-survey Living, working and COVID-19 and the Eurobarometer 94.3. We found that the reaction to the pandemic shock differed greatly between countries, with some showing greater flexibility and adaptability to the new working conditions. Regarding the personal profile of individuals who found it hard to cope with the pandemic measures, our analysis indicated that it is more likely to have been difficult for employees, 25-54 years old, with children under 10 years, living in urban or metropolitan areas, from middle and upper class.*

**Keywords:** *work from home, work-life balance, labour market, pandemic, cluster analysis, nlogistic regression.*

**JEL Classification:** J81, J22, J24, C25, C38.

### **1. Introduction**

Telework facilitates flexibility and work-family balance while reducing the environmental impacts of mobility. Until 2019, telework had a very slow increase, mostly performed occasionally and especially by self-employed persons. Due to more women in the workplace and more employees wanting to balance work and life responsibilities, there was a growing demand for flexible work-life programs (de Vries, Tummers and Bekkers, 2019). But the COVID-19 crisis, through all the

---

DOI: 10.24818/18423264/58.1.24.05

© 2024 The Authors. Published by Editura ASE. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

measures taken to protect citizens from the virus, has made telework more and more important. According to the European Commission Joint Research Centre (2020), working from home has become the norm for millions of workers in the EU, since the outbreak of the COVID-19 pandemic. We may consider that the crisis is an opportunity for countries to modernise employment services and make them more flexible.

The aim of our paper is twofold. Firstly, we attempt to investigate the implications of COVID-19 restrictions, looking at home-based teleworking from the work-life balance point of view, through the data from the Eurofound Living, working, and COVID-19 e-survey. Secondly, we proposed to look more closely at the pandemic restrictions at the individual level and search for the individual profile of those most affected by the pandemic, through the data collected from the Eurobarometer 94.3.

## 2. Review of the scientific literature

Telework may be defined as a means by which workers can work outside the employer's premises, thus occurring from multiple locations (home, office, and other places) using different technologies and with different frequencies (Belzunegui-Eraso and Erro-Garcés, 2020). Being first described over 40 years ago (Nilles, 1975), telework has become more popular and easier to conduct with the widespread of information and computer technologies (ICTs), digitalisation, and increasing labour market flexibility. Working from home is one possibility of carrying out telework, and this happens when the worker fulfils the responsibilities of the job from their home.

Over time, telework has been promoted as a means of conferring benefits on both the employer and the employee. Some of the advantages associated with telework are: support human capital (including a greater inclusion of individuals with various disabilities who have been previously excluded from the workplace), improve productivity, job satisfaction, work-life balance, autonomy, loyalty and organisational commitment, retaining and attracting employees, perceived career opportunities, flexibility, reduce infrastructure and utilities costs, as well as reduce air and noise pollution, traffic congestion, commuting time and costs (Morilla-Luchena et al., 2021). Moreover, as telework is perceived to increase productivity and performance, secure retention, and strengthen internal organisational commitment, successful companies embrace teleworking as a source of competitive advantage (Offstein, Morwick and Koskinen, 2010).

Chiriță et al. (2021) underline the important growth of companies in the ICT sector in recent years, studies highlighting its positive impact on working from home by ensuring the technological capacities: digital tools, employee technology support, as well as data security (Urbaniec et al., 2022).

Organisational culture also plays an important role in implementing telework and is directly related to social sustainability (Dima et al., 2019). Although teleworking can help workers achieve a work-life balance, a context of instrumental

support and promotion is needed, which is directly linked to organisational culture, and changing it can encourage teleworking and improve work-life balance (Gálvez, Tirado and Martínez, 2020).

Some barriers might appear when discussing teleworking, such as individual perception of job suitability and career success, employers' willingness, changes in how work is organised and controlled, time-consuming through asynchronous communication, tension due to the distribution of attention between work tasks and intense communication, the blurred line between work and family, the costs related to this arrangement that are borne by the employee, or the social/professional isolation (Vyas and Butakhieo, 2021). Many perceived barriers are slowly being overcome by actual telework patterns implemented during the COVID-19 pandemic. Since the outbreak of the pandemic, 37% of employed people have started working from home (López-Igual and Rodríguez-Modroño, 2020), and many of them are beginning to see the advantages associated with it (more autonomy, flexibility, same rights, and status). At the same time, companies have also discovered the advantages of teleworking, some mentioned previously, but also the great opportunity to continue their activity during that period with severe restrictions.

In a Joint ILO–Eurofound report (2017), several disadvantages of telework are listed, including but not limited to the tendency to lead to longer working hours, to create an overlap between paid work and personal life (work-home interference), and to result in work intensification. Paraschiv et al. (2021) studied the satisfaction of individuals when working from home and concluded that the main reasons for workers' dissatisfaction are related to the reduction of free time and greater efforts in fulfilling work tasks. It appears that partial and occasional forms of telework result in a more positive balance between the benefits and drawbacks. In terms of positive effects, the ILO–Eurofound report (2017) mentions a reduction in commuting time, greater working time autonomy, better overall work–life balance, and higher productivity, while for companies are mentioned the increased motivation, enhanced productivity and efficiency, reduction of some operating costs.

Based on a Eurofound survey taken back in 2015, López-Igual and Rodríguez-Modroño (2020) obtained that the most significant determinants of telework were self-employment, a higher educational level, and non-manual occupations.

A UK study suggests that flexibility and autonomy have a role in improving performance (Beauregard et al., 2013), but the authors have identified two possible explanations: home-based teleworkers tend to work more unpaid hours (as compared to their office-based counterparts) and an increase in productivity could be, at least partly, due to an increase in actual working time; home-based teleworkers might be more productive because they experience fewer interruptions than office-based workers.

De Vries et al. (2019) found that, for public servants, home-based teleworking, leads to increased work-to-life and life-to-work conflicts, greater professional isolation, and less organisational commitment. There is one aspect that might improve the results: a higher leader–member exchange might reduce the impact of teleworking on professional isolation.

In March 2020, a large survey on the 'Work from Home' experience was launched, targeting over 5000 respondents in 25 countries, across 18 sectors

(Boogaard and Moller, 2020). Their results reveal several important aspects, one of them being that 82% of the respondents are willing to telework from home one or more days per week, even when the COVID-19 crisis is over. Moreover, out of the respondents who had never worked from home before COVID-19, 73% would like to work from home at least one day a week after COVID-19. Furthermore, half of the respondents said their productivity did not change working from home; 27% believed that their productivity increased and 23% felt that their productivity decreased. Also, more than 75% of respondents still feel connected to their team even though they are not physically together, while 63% of respondents state their work-life balance has improved since working from home due to COVID-19.

Several individual and family factors might also interfere with working from home: ability to work independently, time management skills, self-motivation, working space available for work, number of people present when working at home, and age of children in the household (Vyas and Butakhieo, 2021).

The non-implementation of teleworking is due not only to the lack of or poor ICT infrastructure, but also to organisational cultural barriers, such as culture of presence, and in the expectations revealed explicitly or implicitly by management. Equally important is the way employees are supervised in teleworking by their employers; too much pressure on control and monitoring through ICT can lead to a negative perception of teleworking by employees (Lott and Abendroth, 2020).

Regarding the prevalence of telework in the EU, this was generally rather low. Although in 2002 the European Framework Agreement on Telework was signed, only around 5% of all employed persons in the EU-27 usually worked from home before the COVID-19 crisis, with an extra 10% sometimes. However, since the early 2000s the share of employed persons working at least sometimes from home increased from nearly 5% to 9% in 2019. Estimates from early 2020 suggest that nearly 40% of those currently working in the EU began to telework as a consequence of the outbreak of COVID-19 (OECD, 2020).

Fana et al. (2020) have translated these percentages into a new indicator (which ranges from 0 for sectors with no telework to 100 for sectors where all workers usually telework), obtaining a value of 10.24 for EU-27. The interesting aspect is that the indicator records large differences between countries, with the highest value of 25.41 calculated for the Netherlands and the lowest value of 0.57 for Romania. In the sectors classified in the study as 'teleworkable', the differences are even greater, with 41.7 for the case of the Netherlands and 1.02 for Romania.

Across the OECD area, the data indicate a similar situation, around 40% of teleworkers in France and almost half of the workers in the US (OECD, 2020). Vyas and Butakhieo (2021) mention that 35.2% of the workforce worked from home in May 2020 in the US.

### 3. Data description and methodology

Our methodology of analysis is based on several statistical methods, using data from both a Eurobarometer and an e-survey carried out in 2020 and 2021.

One of the data sources for our analysis is the Eurofound *Living, working and COVID-19* e-survey, which gathered data across the European Union countries on the implications of the COVID-19 pandemic for the labour market, working conditions, and quality of life. We analyse data from the first round, taking place in April 2020 and the third round, from March 2021. The data for the surveys was collected online, using the snowballing sampling method, a nonprobability sampling technique, with the respondents being recruited through the Eurofound stakeholders in each member state. The overall sample for the two rounds consists of 87,477 individuals from EU countries, of which 63,354 in round 1 and 46,800 in round 3. In our analysis, we used the responses included in the *working during COVID-19* section, addressing issues such as teleworking, working time, working conditions, and work-life balance.

The other data source for the analysis is the Eurobarometer 94.3 carried out in February-March 2021, in 39 countries or territories (out of which 27 Member States of the European Union). We selected several questions to profile the individuals for whom it was difficult to cope with the measures taken to fight the pandemic. The basic sample design of the questionnaire is multi-stage and random. In each country, several sampling points were drawn with probability proportional to population size and population density. Where feasible, interviews were conducted face-to-face in people's homes or on their doorstep and in the appropriate national language.

We started our investigation with a comparative analysis of data from the two rounds of the Eurofound survey, emphasising the change in working hours and work-life balance. We tested the statistical significance of the differences using a t-test and for some of the indicators, as will be detailed in the next section, the differences proved to be statistically significant, showing that the COVID-19 pandemic has indeed changed the world of work.

We further extended our analysis and investigated possible correlations between a range of indicators using the Pearson correlation coefficient. We explored the links between working conditions (work from home) and work-life balance, each described by specific indicators. The Pearson coefficient is a measure of a linear correlation between two variables, calculated as the covariance of the two variables divided by the product of their standard deviations; its values can range between -1 and 1. The linear relationship is stronger when the value of the coefficient is greater in absolute value, with 0 indicating the absence of a linear correlation. In addition, we have tested the statistical significance of the calculated correlation coefficients.

We have also used a cluster analysis to group the EU countries by the indicators that best describe working conditions and work-life balance during the COVID-19 pandemic. Cluster analysis refers to grouping different objects, countries in our case, into groups, based on a set of characteristics/variables/indicators, in such a way that the similarity between two countries is maximal if they belong to the same group

(cluster) and minimal otherwise. It can be done by using various algorithms, such as connectivity-based, centroid-based, density-based, distribution-based, etc. For this analysis, we used the SPSS statistical software.

We performed the hierarchical clusterisation algorithm, which is a connectivity-based method, that connects countries to form clusters based on their distance. We used the Euclidian distance as the measure of distance and the average linkage as the linkage method. We then selected the number of clusters.

Based on an in-depth analysis of the indicators, we described the country profiles falling into each cluster and drew our conclusions concerning the implications of work-from-home on work-life balance during the COVID-19 pandemic.

Last, but not least, we completed the analysis with a logistic regression. The logit model facilitates the exploration of how the explanatory variables influence the probability of a certain event occurring. In our case, the dependent variable will take the value of 1 if the individual finds it difficult to cope with the confinement measures taken to fight the Coronavirus pandemic and 0 if not. Thus, the logit model describes the relationship between a binary variable  $Y$  and several explanatory  $X$ s. Starting from a linear probability model:  $Pr(y = 1 / x) = \beta * x + \varepsilon$ , if the probabilities are to be restricted in the  $[0,1]$  range, we should obtain the following model:

$$\Omega(x) = Pr(y = 1 / x) / Pr(y = 0 / x) = Pr(y = 1 / x) / (1 - Pr(y = 1 / x)).$$

If logarithms are applied to this relation, the logit model follows:

$$\ln\Omega(x) = \beta_0 + \sum_{j=1}^k \beta_j * x_{ij}.$$

In this last relation,  $\ln\Omega(x)$  is the logarithm of the probability of an individual belonging to a category in relation to the explanatory variables. If needed, the log odds of the outcome in a logit model can be modelled as a linear combination of the predictor variables. To do so, it is necessary to calculate the exponential of the  $\beta$  coefficient:  $OR=e^\beta$ .

## 4. Results and discussion

The pandemic has profoundly affected the labour market, and one way to adapt to this major shock was by intensifying work from home. Although working from home is not new, only a small part of the employees used to practice it before. But the pandemic pushed the boundaries, and working from home became a necessity, rather than an option.

### 4.1 The effects of working from home on work-life balance

The beginning of the pandemic was a shock to most people. There was an increased pressure both psychologically - fear of illness, lack of information, unprecedented restrictions, as well as physically, by changing daily routines. But as the pandemic continued, some people adapted to the situation and managed to

organise their lives and work efficiently, while others experienced difficulties on many levels, including work-related.

We investigated how the perpetuation of a unique situation has left its mark on the labour market and we compared the answers collected in the spring, shortly after the beginning of the pandemic, with those in March 2021, when the paradigm shift related to labour relations began to be internalised.

The work-family balance can be easily disturbed in the context of working from home, an increase in work-from-home intensity may negatively affect employees' work-life balance satisfaction, but not always. A dedicated workspace within the home positively influences work-life balance, while the number of members in the household has a negative influence (Biju et al., 2022). However, a good telework experience could have a positive effect on work-life balance, and companies should make efforts to support their employees in the telework process (Erro-Garcés et al., 2022), knowing that an increase in work-life balance satisfaction leads to job performance and job satisfaction.

On the one hand, family may be an obstacle to the successful completion of work tasks: frequent interruptions, difficulty in concentrating, and family responsibilities that the employee must deal with during the day. We must bear in mind that not only work was affected by the restrictions in place, but, in many countries, also schools and childcare units were closed, and employees working from home were forced to work and take care of children at the same time. On the other hand, working from home can often mean a lack of clear workday's end, resulting in diminished time spent with the family or to satisfy personal needs or desires. While Campo et al. (2021) found there is no correlation between work-from-home and work-life balance in the pandemic context, other research results indicate that work-from-home significantly and negatively correlated with work-life balance (Lonska et al., 2021).

We first analysed the increase in the share of people having difficulties to accomplish work tasks from home due to family responsibilities, in March 2021 compared to the beginning of the pandemic.

Croatia and Luxembourg are the most affected countries: the share of people who cannot work efficiently from home has increased a lot. As the pandemic continues, more people have difficulties concentrating, and family responsibilities prevent them from allocating the necessary time to work. After a year of pandemic, a share of 73.4% of Croatians and 72.5% of Luxembourgers said they had difficulty concentrating because of their family while working from home, while 60% of the Croatians and 63.5% of the Luxembourgers felt that family responsibilities prevented them from allocating the time needed to perform their duties.

In terms of difficulties in concentrating when working from home, the Romanians also had a large share of the population complaining in March 2021, as compared to the beginning of the pandemic (68.8%, respectively, 63.7%). In Lithuania, there is a large increase in the share of people considering that family responsibilities interfere with their job, although in terms of difficulties, the numbers are similar between the two periods.

It is noteworthy that in almost half of the countries, employees have quickly adapted to working from home, and have shown flexibility to the new working conditions so that there have been lower shares of people with difficulties in performing work tasks because of family responsibilities. These results indicate that employees' flexibility and adaptability may ensure the resilience of the labour market in times of crisis. At the European Union level, the share of people who consider it difficult to concentrate or that family responsibilities interfere with their jobs has decreased since the pandemic started.

The second aspect of work-life balance when working from home was investigated through two other variables, assessing how work at home affects leisure and family time. In this case, the situation is worrying in most countries: there has been an increase in the share of people who said that working from home meant less time for the family, as well as those who had to work in their free time to meet work demands.

The countries where work-life balance has been significantly weakened, to the detriment of the family, were Luxembourg, Austria, Croatia, and Malta. Only in Sweden and Denmark, there has been a decrease in the share of those who believe that working from home affects their family time, in the spring of 2021 compared to the spring of 2020. However, in Croatia, the share of people who must work in their free time to perform their duties has decreased. Also, in Hungary, Poland, and the Czech Republic, this share registered a decrease.

As for those who consider that their job prevented them from spending time with family, only in Denmark and Sweden the share of persons considering this aspect has decreased in the first year of the pandemic. Very small increases are observed in Portugal, Lithuania, and Hungary (less than 1 percentage point).

Work from home expanded rapidly, with some employees being overwhelmed by this situation, while some felt comfortable and worked more efficiently. Working from home has advantages and disadvantages for both employees and employers.

The correlation analysis allowed us to obtain valuable information about the balance between personal and professional life. Work-life balance was analysed using several indicators, to better capture the connections with work from home phenomenon, both from the perspective of it affecting personal life and to assess the difficulty of working in the space that until recently was dedicated to the family.

We found a very strong correlation between the increased difficulties of concentration encountered due to the family and the limited working time due to family responsibilities, indicating the perception of some people that working from home is difficult to manage in the presence of the family. The presence of the family nearby may be a factor of stress, interruptions, and professional inefficiency.

From the other perspective, of work that harms personal life, the results indicated a direct link between overtime to meet work demands and the percentage of hours worked from home.

The fragility of work-life balance when working from home is also highlighted by the strong correlation between the variables that indicate that family acts as an obstacle in carrying out professional activities and the variable that quantifies the

fact that work affects family life. In other words, it is essential to look at this balance globally. Things are not unilateral in the context of working from home; not only is work affected by the family but also vice versa, and the two aspects are closely interconnected.

Further on, we used cluster analysis to identify different typologies among EU member states from the perspective of workers' adaptability to a shock in the labour market, such as the pandemic. We included the following variables: difficulties in concentrating, family responsibilities interfering with the job, job preventing time with family, working on free time to meet work demands, and the percentage of hours worked from home. Due to a lack of data, Cyprus and Malta were excluded from the analysis.

We obtained that the countries can be grouped into five clusters:

- Cluster 1: Bulgaria, Slovenia, France, Romania, Latvia, Estonia, the Czech Republic, Germany, Lithuania;
- Cluster 2: the Netherlands;
- Cluster 3: Sweden, Austria, Hungary, Slovakia, Denmark;
- Cluster 4: Finland, Italy, Poland, Ireland, Belgium, Greece, Portugal, Spain, Luxembourg;
- Cluster 5: Croatia.

The first cluster is characterised by a relatively small work-from-home phenomenon, where despite the pandemic, the percentage of hours worked from home is rather small. Regarding work-life balance, these states are around the average, with slightly increased values for the share of people who consider that working from home prevents them from allocating enough time to the family.

The second cluster, in which we find only the Netherlands, recorded a below-average share of people complaining about the work-life balance. Although they work overtime and have a higher number of hours worked from home, this way of combining things is suitable for them.

The third cluster, consisting of Sweden, Austria, Hungary, Slovakia, and Denmark, is characterised by values well below average, suggesting that people in these countries adapted more quickly and easily to the new conditions in the labour market. Their work-life balance seems to be in good shape, knowing when to put healthy limits to work and successfully managing to pay attention to family life.

The countries in the fourth cluster (Finland, Italy, Poland, Ireland, Belgium, Greece, Portugal, Spain, Luxembourg) have registered higher than the average values for all variables. For people in these countries, it seems that the pandemic brought difficulties in the work-life balance: family responsibilities act as an obstacle in carrying out work tasks and diminish concentration, whereas working from home affects time with the family since they must work in their free time to meet work demands.

Cluster 5 is composed of a single country, Croatia, which stands out with a major contradiction: although it records the lowest number of hours worked at home, it has the highest percentage of people with difficulties in balancing personal life with work from home. A proportion of 73.4% of respondents have difficulties

concentrating due to family responsibilities, 88.4% say that the job prevents them from spending time with family (the maximum value recorded), and 60% fail to allot the necessary time to work due to family responsibilities.

#### ***4.2 The profile of individuals with difficulties in coping with the pandemic***

Based on the Standard Eurobarometer 94 - Public Opinion in the European Union, we estimated a logistic regression to establish the categories of population for which was more difficult to cope with the measures taken to fight the Coronavirus pandemic. Among the measures against the spread of the virus, all EU countries have adopted limiting interactions in the workplace at different levels. Thus, working from home was imposed, at least for limited periods, according to the economic, social, and health safety conditions of each country. This is why we believe that there is an overlap between the prevalence of challenges faced in imposed home-based work and the difficulties in coping with COVID-19 restrictions. Profiling individuals who find it hard to comply with restrictive measures, could point out some characteristics of those who were having difficulties in working from home during the pandemic. So, we selected several characteristics to explore the impact of the coronavirus pandemic on the population in Europe.

For the personal characteristics of the individuals, we worked with gender (male/female) and age. The former is a 0/1 variable, with 1 for men and 0 for women, while for the latter, even if the survey collected the exact age of the individuals, we decided to use the following age intervals: 15-24 years, 25-39 years, 40-54 years and over 55 years (the basis for comparison was the 55+ age group).

For the education level, we constructed three categories: ISCED 0-2, ISCED 3-4 and ISCED 5-8. The basis for the comparison in the regression was the first group.

The marital status is coded 0 for single, while the social class is grouped in low, middle, and upper class; for the household composition, we considered two different numerical variables, one for the number of children younger than 10 years of age and another for the number of children older than 10, but younger than 14 years.

Regarding the residency, we used the type of community: village, small town, and large city; the basis for comparison was the first one. We also included in the regression a variable related to the labour market status: self-employed, management, white collar, and manual worker, with the basis for comparison being the first category.

In addition to these individual characteristics, we selected several information related to the pandemic: the person has difficulties paying the bills (yes/no); faced financial consequences (yes/no); is satisfied with the measures undergone at national/European level implemented to reduce/limit the effects of the pandemic (satisfied/unsatisfied); considers the measures justified or not; considers that the pandemic has serious economic consequences for his country (yes/no); and if EU should offer support for its citizens/businesses (yes/no).

The general form of the estimated model was:

$$\begin{aligned} \text{difficult\_to\_cope} = & \beta_0 + \beta_1 * \text{age\_cat} + \beta_2 * \text{gender} + \beta_3 * \text{education} + \\ & \beta_4 * \text{marital\_status} + \beta_5 * \text{community} + \beta_6 * \text{job\_cat} + \beta_7 * \text{diff\_bill} + \beta_8 * \text{social\_class} + \\ & \beta_9 * \text{fin\_conseq} + \beta_{10} * \text{econ\_conseq} + \beta_{11} * \text{support} + \beta_{12} * \text{recovery\_plan} + \\ & \beta_{13} * \text{cov\_measures\_gov} + \beta_{14} * \text{cov\_measures\_eu} + \beta_{15} * \text{just\_measures} + \\ & \beta_{16} * \text{kidsU10} + \beta_{17} * \text{kids10-14} + \varepsilon_t \end{aligned}$$

Although not all the variables taken into consideration proved to be statistically significant, we consider our results to be valuable, bringing some interesting information to light.

Regarding age, the group of the youngest respondents turned out to be insignificant, while the other 2 groups were statistically significant. So, according to our results, respondents in the 25-39 years age group have an odd ratio of 1.3 to find themselves in the group of people who find it difficult to cope with the confinement measures taken to fight the Coronavirus pandemic, as compared to the 55+ years age group. Those in the 40-54 years age group have a similar odd ratio. Although not statistically significant, our results suggest that the youngest respondents have fewer chances to feel that it is difficult to cope with these measures.

Men appear to have less chance of feeling that it is difficult to cope with the pandemic measures, by 12.6%. At the same time, for the singles it is more likely to find it difficult to cope with those measures, the odds ratio being 1.224.

Regarding education, the results of our analysis indicate that only the category of highly educated respondents is statistically significant; for them, the chances are 30.7% less to feel it is difficult to cope with pandemic measures, as compared to the respondents with at most ISCED 2 level of education, in line with previous findings (Zhang et al., 2020). For the respondents with a medium level of education, the result suggests that their chances are still lower than of those with lower education.

In the case of residency, it appears that both small-town and large-city inhabitants have more chances to feel difficulties coping with pandemic measures as compared to the villagers. This might be related to their lifestyle, their jobs, and their hobbies.

Also, according to our results, the lower-class respondents have more chances to find themselves in the group of people with difficulties coping with pandemic measures, as compared to those in the middle class. The coefficient for the upper-class respondents turned out to be insignificant.

As for the labour market status, it seems that all categories considered have more chances to belong to the group having difficulties coping with pandemic measures, as compared to the self-employed. However, only the result for the management category came out statistically significant. They have almost 20% higher chances of finding it difficult to cope with these measures.

Regarding the family composition, our results indicated that as the number of children under 10 years increases, the higher the chances for the respondent to find himself in a group of people with difficulties coping with pandemic measures, in line

with Zhang et al. (2020). Thus, if the number of small children is to increase by 1, the chances increase by 9.5%. The variable accounting for the number of children in the 10-14 age group was not statistically significant.

The respondents who admitted that they have difficulties paying bills are more likely to consider it difficult to comply with pandemic measures, as compared to those that do not have trouble paying their bills. The odds ratio turned out to be 1.5.

**Table 1. The results of the logistic regression**

<b>Dependent variable:</b>		<b>Logistic regression</b>				
<b>Difficult to cope with the confinement measures taken to fight the Coronavirus pandemic:</b>						
<b>1 for yes and 0 for no</b>		<b>Coefficient</b>	<b>Wald (z) test</b>	<b>Odds ratio</b>	<b>Percentage change in Odds</b>	<b>Probability</b>
<b>Intercept</b>	Baseline odds	-0,148	0,405	0,862	-13,80%	46,30%
<b>Age</b>	15-24 years	-0,033	0,019	0,968	-3,2%	49,20%
	25-39 years	0,262	8,535*	1,3	30%	56,50%
	40-54 years	0,291	15,069*	1,338	33,80%	57,2
	55+ years (base)	-	-	-	-	-
<b>Gender</b>	Male	-0,134	5,116*	0,874	-12,60%	46,60%
	ISCED 0-2 (base)	-	-	-	-	-
<b>Education level</b>	ISCED 3-4	-0,198	1,652	0,82	-18%	45,1
	ISCED 5-8	-0,367	5,473*	0,693	-30,70%	40,90%
<b>Marital status</b>	With partner	0,202	5,328*	1,224	22,40%	55%
<b>No of children less than 10 years old</b>		0,09	3,982*	1,095	9,50%	52,30%
<b>No of children 10-14 years old</b>		-0,077	1,945	0,926	-7,40%	48,10%
<b>Type of community</b>	Village (base)	-	-	-	-	-
	Small town	0,112	2,408	1,118	11,80%	52,80%
	Large city	0,211	8,036*	1,235	23,50%	55,30%
<b>Labour market status</b>	Self-employed (base)	-	-	-	-	-
	Management	0,18	3,618**	1,197	19,70%	54,50%
	White collar	0,049	0,254	1,05	5%	51,20%
	Manual worker	0,078	0,647	1,081	8,10%	52%
<b>Difficulties paying the bills</b>	Yes	0,405	33,004*	1,499	49,90%	60%
<b>Social class</b>	Lower class	0,158	5,210*	1,172	17,20%	54%
	Medium class (base)	-	-	-	-	-
	Upper class	0,014	0,025	1,014	1,40%	50,40%
<b>Personal financial consequences</b>	Agree	0,944	225,513*	2,57	157%	72%
<b>Country economic consequences</b>	Agree	0,523	17,993*	1,688	68,80%	62,80%
<b>Support for businesses and workers</b>	Offer support	0,249	14,181*	1,283	28,30%	56,20%
<b>Recovery plan</b>	Effective	-0,078	1,43	0,925	-7,50%	48,10%
<b>Satisfaction with covid measures at national level</b>	Satisfied	-0,467	46,411*	0,627	-37,30%	38,50%
<b>Satisfaction with covid measures at EU level</b>	Satisfied	-0,181	7,228*	0,834	-16,60%	45,50%
<b>Justified measures</b>	Justified	-1,063	199,868*	0,346	-65,40%	25,70%

\*The parameter is statistically significant at 5%,

\*\*The parameter is statistically significant at 10%.

Source: Authors' estimation using STATA16.

As for the respondents admitting they had personal financial consequences from the Coronavirus pandemic, they have 157% more chances to admit that they are having difficulties complying with pandemic measures than individuals who did not suffer financial consequences. Regarding the economic consequences of their country, our results indicate that individuals who consider that their country faced serious economic consequences are more likely to find it difficult to cope with pandemic measures. In their case, the odds ratio turned out to be 1.7.

Another category included in the analysis is that of people who believe that the COVID-19 measures undertaken by their government are justified. Our results suggest that individuals satisfied with the measures have smaller chances of finding it hard to comply with those measures. The same is true for those satisfied with the EU COVID-19 measures. Also, those who agree that the measures are justified have fewer chances of experiencing difficulties generated by the pandemic restrictions, as compared to those individuals that consider the restrictions unjustified.

Individuals considering that the European Union should offer aid for businesses and workers are more likely to be in the category of affected people, not being in favour of the imposed restrictions.

Last, but not least, individuals considering that the recovery plan of 750 billion euros, NextGenerationEU, to support the economy through grants and loans are effective are less likely to find themselves in the category of individuals facing difficulties in coping with pandemic limitation measures.

## 5 Conclusions

Our paper has attempted to shed light on the developments of the labour market, focussing on the changes in telework in the European Union countries and its implications on working hours and work-life balance. Undoubtedly, the trigger for these new developments has been the COVID-19 pandemic outbreak, but the changes will most likely last and evolve. We used data collected through an e-survey carried out by Eurofound, covering all EU countries, regarding changes in the labour markets, working conditions and quality of life, as well as data from the Eurobarometer 94.3.

We found that the immediate reaction to the pandemic shock differed a lot among countries, some of them showing greater flexibility and ability to adapt to the new labour market and working conditions. This can be explained partly by the occupational and industrial structure of their economies, the prevalence of digital skills among workers, wide internet connectivity and easy access to new generation technical equipment, but also by cultural, social, and psychological determinants. The shift from working in the premises of the economic unit to working from home had different intensities by country, but overall, it came with increases in working hours.

One consistent finding emerging from our investigation is that as working from home intensifies and working hours increase, people face more and more difficulties or even fail to fulfil family responsibilities, but at the same time, their job

commitment can be affected, yielding difficulties in concentrating on job tasks. Among the countries analysed, Croatia and Luxembourg are the most affected in both ways, while others are more affected on one side of the balance or the other (work: Bulgaria, Lithuania, Romania, or family: Austria, Malta, Cyprus). It is worth mentioning that in some countries the work-life balance did not suffer from this perspective, such as Sweden or Denmark.

Using the correlation analysis, we also find that overall, at the EU level, there is a strong correlation between the incidence of two phenomena: family responsibilities affect jobs and job prevents spending time with family. This biunivocal relationship has been further investigated in a country clusterisation setting, and some additional findings emerged. A typology of countries based on the intensity of working from home and work-life balance was defined, using cluster analysis. The results indicated that in countries where work-from-home increased greatly (above average) during the second quarter of 2020, the work-life balance was seriously hampered (Finland, Italy, Poland, Ireland, Belgium, Greece, Portugal, Spain, Luxembourg). One particularly outstanding country is Croatia, which does not fit in either group, displaying a certain contradiction: lowest share of hours worked at home - the highest percentage of people with difficulties in balancing personal life with work from home. Another country which does not fit among others turned out to be the Netherlands: although they work overtime and have a high number of hours worked from home, this way of combining things is suitable for them and does not put pressure on the work-life balance. In conclusion, working from home seems to be a two-edged blade, hampering the work-life balance in both senses, sharper though on the life side. These results are confirmed by other studies as well, such as López-Igual and Rodríguez-Modroño (2020) and Vyas and Butakhieo (2021), which draw attention to the disadvantages of working from home.

As for the personal profile of the individual for which it was difficult to cope with the pandemic measures, our analysis indicates that it is more likely to be difficult for employees, regardless of their jobs, as compared to the self-employed, who are more adaptive. They had to adjust to home-based work, job connection limitations, and bigger family responsibilities. Also, for mature people aged 25-54 years, restrictions were challenging, which is consistent with previous findings (Zhang et al., 2020). Those living in urban or metropolitan areas, part of the middle and upper class, suffered the most from imposed measures. Individuals that have children younger than 10 years of age are more likely to be affected by pandemic restrictions, as compared to those that do not have small children in their care. They had to undertake new childcare responsibilities at home since kindergartens and schools closed, which most likely interfered with work. As for the attitude towards the measures taken at the national or European level, those not satisfied with the measures taken are more likely to find themselves in the group of individuals most affected by pandemic restrictions. More likely to have been affected by pandemic measures were also those individuals experiencing financial consequences or those considering that their country had to face economic consequences.

To sum up, we are witnessing the emergence of a new labour market, with considerable changes in working conditions and huge implications on the work-life balance and job performance. OECD (2020) anticipated that besides the work from home, which replicates the working conditions of the office to the largest extent possible, that prevailed before COVID-19, other forms of telework will become more and more popular: the objective-based working, which involves the employees fulfilling their tasks in the ways they find suitable, or the hybrid working, which brings together working from home and in the office. In the long run, the changes are both at the individual level, increasing digital skills, investments in technical equipment and digital tools, at the company level, new models of employee management and work organisation, at the government level, the development of e-government (Stancu et al., 2023) and investments in ICT infrastructure, all this contributing to the resilience of the labour market. As always, winners are those able to foresee, prepare, and adjust their skills, attitudes, and behaviours.

**Acknowledgements:** *Part of this work was supported by the NUCLEU Program funded by the Romanian Ministry of Research, Innovation and Digitization (Project PN 22100201).*

## References

---

- [1] Beauregard, A., Basile, K., Canonico, E. (2013). *Home is where the work is: A new study of homeworking in Acas – and beyond*. Available at: <<https://webarchive.nationalarchives.gov.uk/ukgwa/20210104110803/https://archive.a cas.org.uk/index.aspx?articleid=2056>>.
- [2] Belzunegui-Eraso, A., Erro-Garcés, A. (2020). *Teleworking in the context of the Covid-19 crisis*. *Sustainability*, 12(9), 3662.
- [3] Biju, A.V., Vijaya K.M., Akhil, M.P. (2022). *Assessing the Effect of Work From Home on the Work-Life Balance of IT Employees*. *International Journal of Human Capital and Information Technology Professionals*, 13(1), 1-14.
- [4] Boogaard, J.J., Moller, S. (2020). *Exploring the post-COVID-19 Workplace*. [online] Available at: <<https://www.colliers.com/en-hr/research/exploring-the-post-covid19-workplace>>.
- [5] Campo, A.M.D.V., Avolio, B., Carlier, S.I. (2021). *The Relationship Between Telework, Job Performance, Work–Life Balance and Family Supportive Supervisor Behaviours in the Context of COVID-19*. *Global Business Review*, Early Access.
- [6] Chiriță, N., Ciurea, C., Nica, I. (2021). *An Analysis of Investment Decisions from IC&T Industry in the Context of Behavioral Economy*. *Economic Computation and Economic Cybernetics Studies and Research*, 55(2), 159-176.
- [7] Dima, A.M., Tuclea, C.E., Vrânceanu, D.M., Tigu, G. (2019). *Sustainable social and individual implications of telework: A new insight into the Romanian labor market*. *Sustainability*, 11(13), 3506.

- [8] Erro-Garcés, A., Urien, B., Čyras, G., Janušauskienė, V.M. (2022). *Telework in Baltic Countries during the Pandemic: Effects on Wellbeing, Job Satisfaction, and Work-Life Balance. Sustainability (Switzerland)*, 14(10).
- [9] Eurofound and International Labour Office (2017). *Working anytime, anywhere: The effects on the world of work*. [online] Luxembourg: Publications Office of the European Union. Available at: <<https://www.eurofound.europa.eu/publications/report/2017/working-anytime-anywhere-the-effects-on-the-world-of-work>>.
- [10] European Commission - Joint Research Centre (2020). *Telework in the EU before and after the COVID-19: where we were, where we head to*. [online] *Science for Policy Briefs*, Available at: <[https://ec.europa.eu/jrc/sites/jrcsh/files/jrc120945\\_policy\\_brief\\_-\\_covid\\_and\\_telework\\_final.pdf](https://ec.europa.eu/jrc/sites/jrcsh/files/jrc120945_policy_brief_-_covid_and_telework_final.pdf)>.
- [11] Fana, M., Tolan, S., Torrejón Pérez, S., Urzi Brancati, M.C., Fernández-Macías, E. (2020). *The COVID confinement measures and EU labour markets*. [online] *JCR Technical Reports. Luxembourg: Publications Office of the European Union*. Available at: <<https://publications.jrc.ec.europa.eu/repository/handle/JRC120578>>.
- [12] Gálvez, A., Tirado, F., Martínez, M.J. (2020). *Work-Life Balance, Organizations and Social Sustainability: Analyzing Female Telework in Spain. Sustainability*, [online] 12(9), 3567. Available at: <<https://search.proquest.com/scholarly-journals/work-life-balance-organizations-social/docview/2397179893/se-2?accountid=136549>>.
- [13] Lonska, J., Mietule, I., Litavniece, L., Arbidane, I., Vanadzins, I., Matisane, L., Paegle, L. (2021). *Work-Life Balance of the Employed Population During the Emergency Situation of COVID-19 in Latvia. Frontiers in Psychology*, 12, 1-15.
- [14] López-Igual, P., Rodríguez-Modroño, P. (2020). *Who is teleworking and where from? Exploring the main determinants of telework in Europe. Sustainability*, 12(21).
- [15] Lott, Y., Abendroth, A.K. (2020). *The non-use of telework in an ideal worker culture: why women perceive more cultural barriers. Community, Work and Family*, 23(5), 593-611.
- [16] Morilla-Luchena, A., Muñoz-Moreno, R., Chaves-Montero, A., Vázquez-Aguado, O. (2021). *Telework and Social Services in Spain during the COVID-19 Pandemic. International Journal of Environmental Research and Public Health*, [online] 18(2), 725. Available at: <<https://search.proquest.com/scholarly-journals/telework-social-services-spain-during-covid-19/docview/2479081559/se-2?accountid=136549>>.
- [17] Nilles, J.M. (1975). *Telecommunications and Organizational Decentralization. IEEE Transactions on Communications*, 23(10), 1142-1147.
- [18] Offstein, E.H., Morwick, J.M., Koskinen, L. (2010). *Making telework work: leading people and leveraging technology for competitive advantage. Strategic HR Review*, [online] 9(2), 32-37. Available at: <<https://search.proquest.com/scholarly-journals/making-telework-work-leading-people-leveraging/docview/217176004/se-2?accountid=136549>>.
- [19] Organisation for Economic Co-Operation and Development (OECD) (2020). *Exploring policy options on teleworking: Steering local economic and employment development in the time of remote work*. [online] Available at: <<https://dx.doi.org/10.1787/5738b561-en>>.

- [20] Paraschiv, D.M., Țițan, E., Manea, D.I., Bănescu, C.E. (2021). *Quantifying the Effects of Working from Home on Privacy. An Empirical Analysis in the 2020 Pandemic*, *Economic Computation and Economic Cybernetics Studies and Research*, 55(4), 21-36.
- [21] Stancu, S., Pernici, A., Bălă, D.E., Marinescu, D.E. (2023). *Linking E-Government to Socio-Demographics. A Multi-Model Approach using Panel Data, Regression, and Neural Networks*, *Economic Computation and Economic Cybernetics Studies and Research*, 57(2), 57-72.
- [22] Urbaniec, M., Małkowska, A., Włodarkiewicz-Klimek, H. (2022). *The Impact of Technological Developments on Remote Working: Insights from the Polish Managers' Perspective*. *Sustainability*, 14(1), 552.
- [23] de Vries, H., Tummers, L., Bekkers, V. (2019). *The Benefits of Teleworking in the Public Sector: Reality or Rhetoric? Review of Public Personnel Administration*, 39(4), 570-593.
- [24] Vyas, L., Butakhieo, N. (2021). *The impact of working from home during COVID-19 on work and life domains: an exploratory study on Hong Kong*. *Policy Design and Practice*, 4(1), 59-76.
- [25] Zhang, S., Moeckel, R., Moreno, A.T., Shuai, B. Gao, J. (2020). *A work-life conflict perspective on telework*. *Transportation Research Part A: Policy and Practice*, 141, 51-68.