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DETERMINANTS OF EMPLOYEES' OPTION FOR PRESERVING TELEWORKING AFTER THE COVID-19 PANDEMIC

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Abstract

The measures imposed by the governments to stop the spreading of SARS-CoV-2 virus, especially those referring to the mandatory character of physical distancing, determined more and more organizations to introduce teleworking, starting with March 2020. This paper analyses the factors that influence the option of the employees to continue teleworking also during the COVID-19 post-pandemic period. The research relies upon a survey conducted onto 377 persons living in Bucharest and neighbouring zones, who had at least 20 active days of teleworking during the emergency and/or alert state established by public authorities due to the pandemic. In order to identify the determining factors of the decision to continue with teleworking after the end of this pandemic, the answers were processed following a LOGIT-type model. The results of the research show that there are no statistically relevant relations between the desire to continue with teleworking and factors as: legal nature of the company's capital (private capital, state capital or mixed), education level, sex of the responding person, employer's training regarding the pandemic issue, the logistics the employer provided, and, surprisingly, the advantages and disadvantages the future brings in the case of this type of working. However, the bias to continue with teleworking significantly depends on three factors: the field of activity, the age of the employee, and the general evaluation of the experience that the involved persons had with "remote" working. Thus, the probability to desire to go on with teleworking even after the end of the pandemic increases if the field of activity is IT and also if the persons are younger, while an experience with working from home evaluated as being rather unpleasant leads to a statistically relevant reduction of the probability of a person to desire to go on with teleworking.

Keywords: teleworking, flexible work, human resources, pandemic, LOGIT model.

JEL Classification: C10, E69, E71, I10, J08

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Introduction

The COVID-19 crisis forced Romania, together with the other states of the world, to rapidly adapt to severe changes, and this required unprecedented measures, at the same time. Physical distancing and measures that were taken to stop the virus from spreading and to ensure safety for citizens implied, where possible, another way of activity deployment by means of work from home. In Romania, teleworking is legally supported by Law 81/2018 and defined as “a form of organizing work in case of which the employee voluntarily carries out tasks specific to her/his job in a working place different from the one specially designed by the employer, at least one day per month, by means of information technology and communications”. However, it is important for the activity profile to enable the activity deployment by teleworking.

A series of worldwide researches, especially during the last years, show that teleworking may have a positive impact, as it stimulates creativity and productivity and, last but not least, leads to cost cut. At the same time, teleworking can offer employees a series of benefits related to stress reduction, to flexible timetable, to savings with transportation, clothing, and for the employers benefits regarding cutting rent expenses, offices maintenance or buying modern equipment. Working from home became, at least temporarily, a new normality.

Starting with COVID-19 pandemic, employees must take part into a real experiment conducted onto themselves: the translation of work from office to home. Employees having an office at home will further become a familiar fact. Generally speaking, this change has numerous positive effects on employees, employers, and society (Katsabian, 2020). For instance, by symmetry with the translation of the workplace towards home, educational processes were also relocated and reached a status very close to home-schooling, despite the debates regarding the viability of such a model (Jora, Iacob and Crişu, 2015).

During the COVID-19 crisis, Romania also approved, by Emergency Government Ordinance 132/2020, measures supporting employees and employers provided the context of the rapidly escalated epidemiological situation. Moreover, to stimulate the increase of occupied labour force, it enacted the *Kurzarbeit* model, applicable to private sector. Despite that, according to a study undertaken by a mixed research group of the European Commission, Romania occupies one of the last places within the ranking regarding the number of employees that can work remotely (Eurofound, 2020).

This paper aims towards *identifying the determining factors of the employees' option to go on with teleworking, at least a number of days per month, after the end of the COVID-19 pandemic, when this is no longer mandatory.*

The research starts from an overview of the evidences that exist within the specialized literature regarding teleworking in general, and especially during the COVID-19 pandemic, and goes on with an analysis applied to a sample of employees from Bucharest and neighbouring zones, who had at least 20 days of teleworking starting with March 2020. Thus, the first section registers the specialized literature, emphasizing various aspects of teleworking from the point of view of employees and employers. The second section is dedicated to the presentation of the research methodology, meaning the LOGIT-type model applied to the set of data resulted from the responses of the 377 employees. The third section offers the description of data used within the study. The fourth section is reserved to the presentation and interpretation of the results of the study, also showing the determinant

factors of the employees' option to go on with teleworking during the COVID-19 post-pandemic period. Finally, one synthesizes the conclusions and further research directions.

1. Review of the scientific literature

The sanitary and economic crisis related to COVID-19 pandemic and the measures like physical distancing determined more and more organizations to widely appeal to teleworking. Coronavirus pandemic brought about an unconceivable state of uncertainty, recently unimaginable. Practically it becomes difficult to estimate not "if", but "to what extent" this crisis will generate disturbances within the ordinary existence of individuals and within their social/economic/civic behaviour (Jora, 2020). Besides, the crisis of COVID-19 pandemic represented an unprecedented event that led to serious economic and social consequences. Thus, there were changes at all levels for all world states, that are included within the most sensible indicators of the economy, while "information sometimes wrongly transmitted had an impact on stock exchange market" (Cepoi, 2020). Under these circumstances, the appearing or in some cases, the continuation of teleworking completely changed the life rhythm, both for population and for organizations. However, a series of question arises: is teleworking influencing productivity? Is teleworking a factor that turns the labour force more flexible? Does it bring benefits to employees and employers? On the other hand, why not, are future side effects possible? Can teleworking be an option also during the post-pandemic period? Next, we will review specialized literature regarding the issue, highlighting the aforementioned dilemmas.

Teleworking is defined (The International Labour Organization - ILO, 2017) as the use of "information technology and communications by smartphones, tablets, laptops, and computers for the work that takes place outside the employer's office". In order to reduce the exposure of employees to COVID-19 at the workplace and to limit the social interaction, also the European Union (EU) member states governments recommended companies to use teleworking. Generally, the organizations and employees were not prepared for such a change. Statistical data show that in EU, in 2019, only 5% of the employees were in teleworking and most of them occasionally. Thus, for the employees, the stress related to the uncertainty of health and work state had an impact onto productivity (Carillo, et al., 2020).

From another viewpoint, teleworking is an alternative of labour relations, having positive benefits for individuals and society, although some organizations do not enthusiastically implement it. Empirical analysis proves that there is some positive connection between teleworking and organizations' results. Teleworking improves productivity, increases organizational commitment and facilitates the reach for performance (Harker Martin and MacDonnell, 2012). Teleworking could provide relevant fuel and offices spaces saving, reduction of carbon emissions; it improves productivity and responsibility, having an impact onto the work labour migration. Many companies embraced this alternative, but the public sector is far from exploiting teleworking, although it offers many opportunities. The challenge of matching the institutional infrastructure on teleworking is important, but the advantages also refer to involved costs (Ruth and Chaudhry, 2008).

A study conducted in Romania (Drumea, 2020) displays the COVID-19 impact onto the work of the employees of public institutions who had to accept teleworking. Thus, as they moved in front of the computers, they had to increase their working period, confronting problems related to knowledge that was necessary for working from home without having the proper

technical facilities. Nevertheless, there were also positive effects, since one observed a better focus and an easier achievement of working tasks, supported by the flexibility of working timetable and by the absence of disturbing factors from the work place.

Nevertheless, some studies (Baker, Avery, and Crawford, 2007) show that individual welfare depends on the combination of some characteristics of her/his job, i. e. difficulty, stress level, independence level, type of received tasks, social acceptance, and social encouragement. Individual welfare as related to these characteristics of her/his work has an impact on her/his attitude/perception onto work, and teleworking ensures the increase of potential and professional satisfaction, of responsibility and flexibility, leading to creating a balance between family and work place. As such, according to Pyoria (2011), teleworking improves both individual performance and the organizational one.

Other studies analyse productivity within teleworking. Such a study is realized in Australia, (Bosua, et al., 2013). The authors highlight that productivity in teleworking is strongly influenced by the organization's information technology (IT) system level. Using appropriate technology, matching work particularities is the key to success. The employees of companies that have a high level IT system prove better productivity and can work independently of the location, since there is no technical hindrance in successfully accomplishing the job tasks. Moreover, the efficiency of employees, the degree of realizing planned tasks increases in the case of teleworking as compared to ordinary working days – as an argument stands the fact that social interactions from work place draws their attention to issues different from those related to work.

One of the papers of Mori and Hayashi (2020) highlights that Japanese workers who did not work remotely by the specified time had issues related to the difficulty of communication, to the lack of digital skills, and also had reduced productivity as compared to those who previously worked remotely. Besides, a different study (Sostero, et al., 2020) states that “working from home turned into a norm for world citizens, which completes the measures of public health”. Belzunegui-Eraso and Erro-Garcés (2020) underline that safety factors are important within the process of teleworking, and an increasing number of companies added specific provisions for this period. Moreover, it is important to understand, at country level, the differences related to “the structure of labour force, between sectors and professions, within organizational culture”, thus realizing the transition towards such a type of work (Milasi, González-Vázquez, and Fernández-Macías, 2021). Actually, the results of a study conducted by Baert, et al. (2020) emphasizes that 85% of the Flemish employees who were questioned regarding this issue stated that they could adapt to teleworking. Despite this fact, there is a part of the employees who fear that teleworking reduces promotion opportunities and, at the same time, leads to damaging their relations with the employer and colleagues from within the organization. There were also studies (Pérez, Sánchez, and Carnicer, 2002) presenting both the advantages and the hindrances of teleworking, having implications at organizational level, the most obvious being related to labour coordination and organization.

Under the present circumstances, the virtual working manner becomes more and more catching, being innovative and bringing new challenges for organizations. In a 2020 study, relying onto the answers of 436 Lithuanian citizens regarding the evaluation of teleworking, Raišienė, et al., showed that there are differences in appreciating factors as efficiency and qualities of the remote worker pertaining to age, sex, education, and previous experience with teleworking. Relying onto the data collected from 29 European countries and related to the employees' perception of teleworking during the lockdown period, the change of working

style from face-to-face to teleworking was positively and optimistically received, rather than negatively (Ipsen, et al., 2021). Other studies (Fana, et al., 2020) highlighted the manner the change imposed by COVID-19 crisis generated effects onto the contents of the tasks and onto organizing work, related to team-work, routine, employees autonomy, types and amplitude of control, and surveillance methods.

Schur, Ameri, and Kruse (2020) refer to the manner COVID-19 crisis influenced disabled persons, who currently face hiring difficulties. Professional barriers vanish once teleworking appears, thus disabled persons having a wider access to a carrier, to professional fulfilment or to fields of activity traditionally less permissive. Although teleworking involves hindering social interaction, technological restraints and even limiting professional growth, this represents a very good chance of affirmation for disabled persons.

The results of a study (Tokarchuk, Gabriele and Neglia, 2020) conducted in Italy confirmed that the large organizations which had the necessary technological resources, for instance those from the high-tech area, quickly adapted. Organizations that desire to stay competitive must adjust their organizational culture to the new conditions imposed by the pandemic, the involvement of managers being of a high importance within this process. Grigorescu and Mocanu (2020) also conducted an empirical analysis regarding the classification of activities within Romanian economy according to CAEN; the results led to the conclusion that „the COVID-19 pandemic quickened the process of fast development of information technology, deepened the gap between the rich and the poor, between educated and uneducated ones”. By means of the results of a study realized by Pouliakas and Branka (2020) one estimates that 45 million jobs of EU-27 (23% of the total number of jobs of EU-27) confronts a high risk due to COVID-19, and 22% of the labour force belonging to this area is exposed to significant risks. This is why one demands immediate measures directed towards preventing the continuous loss of jobs and the spreading of social inequalities due to the pandemic.

If state governments keep on recommending teleworking for a period of time, then economic and political decisions are important for sustaining productivity and continuing businesses (OECD, 2020). In fact, remote working could be an essential part of all continuity plans for activities. In unexpected situations, it allows employees to keep the organization operational (ILO, 2020). However, the question to be raised is if *teleworking will go on the long run after the pandemic*? Despite that more and more companies and employees accept this type of carrying on the activities, the extent of teleworking spreading remains uncertain. Therefore, the future extension of this process depends a lot on how much companies invested into promoting the transition to teleworking, as a consequence of the pandemic (Federal Reserve Bank of Atlanta, 2020). Within one of the few studies (Nguyen, 2021) that tackles the issue of teleworking after the end of COVID-19 crisis by analysing the answers of 355 employees of Hanoi, Vietnam, the option of the employees to go on with teleworking during the post-pandemic period is significantly correlated with factors like the distance from workplace, sex, number of children and the experience with remote working during the lockdown.

From the considered studies follows the fact that the option of the employees to go on with teleworking is related to various factors that belong both to the general experience during the pandemic period, and to other aspects, like age, sex, education level, digital competences, distance from workplace, family conditions a.s.o. Under these circumstances, the inquiry into the determining factors of the Bucharest and neighbouring zones employees' option to go on with teleworking, at least a few days per month, after the end of COVID-19 pandemic represents an interesting and useful research opportunity.

2. Research methodology

To investigate the determinants influencing the decision to continue teleworking once the COVID-19 pandemic will be over, we will use a LOGIT model. The binary variable Y_i that captures the answer given by a respondent to the question regarding the decision to continue teleworking is zero if the respondent i answered NO and 1 if the answer is YES. Let $X_i = (X_{i1}, X_{i2}, \dots, X_{in})$ a matrix that provides us with qualitative and quantitative information about respondents and includes, among other, variables such as age, education, sex, field of activity, and other variables that characterize the employee-employer relationship during the pandemic. To quantify the relationship mentioned above we will have to estimate the following equation i.e., Eq (1):

$$E[Y_i] = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_n X_{in} + \varepsilon_i \quad (1)$$

Unfortunately, Eq. (1), estimated by the OLS method will not provide efficient and consistent solutions because the hypothesis regarding the normality of errors will be violated. In order for the errors ε_i to have the properties required by the OLS estimate Y_i must be a continuous one, which is not the case because it is a binary variable as we previously mentioned. On the other hand, we must keep in mind that $\beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_n X_{in}$ can take any value in the range $(-\infty; \infty)$ while $E[Y_i]$ can be zero or one. To overcome this issue we must consider a function $f(\bullet)$ that once applied to $E[Y_i]$ to generate a valid approach for this binary model. Thus, we derive the LOGIT type specification given by Eq. (2):

$$f(E[Y_i]) = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_n X_{in} \quad (2)$$

Let p_i denote the probability that Y_i equal one, i.e., the probability that by randomly choosing one respondent from the sample he would want to continue the teleworking. Obviously, the probability that he does not want the continuation of the teleworking will be $1 - p_i$. The odds ratio, $\pi_i = \frac{p_i}{1-p_i}$ is a number from $(0; \infty)$, if $p_i \neq 0$. Eq. (2) relies on LOGIT transform for $\pi_i = \frac{p_i}{1-p_i}$ and using the new dataset as dependent variable in Eq. (3):

$$\ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_n X_{in} \quad (3)$$

Once the $\hat{\beta}_i$ coefficients are estimated we will be able to assign a probability of continuing the online working to any respondent for whom we have at our disposal the information matrix $X_i = (X_{i1}, X_{i2}, \dots, X_{in})$.

3. Data description

To investigate the determinants influencing the decision to continue teleworking once the COVID-19 pandemic will be over we conducted a survey, between 25th of January 2021 to 15th of February 2021, based on 377 respondents that were involved in teleworking and live in Bucharest and neighbouring zones. To the question "Do you want to continue the online working even after the COVID-19 pandemic will be over, at least a certain number of days

per month?” 280 respondents answered YES and 97 with NO. The results of this question represent the dependent variable of the LOGIT model.

When choosing the explanatory variables included in the LOGIT regression model we relied on two directions. First, the inclusion of variables such as age, gender, level of education or field of activity was mandatory, as they are widely used in studies with the same characteristics as this one, in various fields such as risk management, product marketing or exit polls. More recently, some academic papers such as Nguyen (2021), which investigate pandemic teleworking, used similar demographic factors. For the reasons mentioned above, they were included in the analysis to control the demographic aspects that characterize a particular subject. Secondly, compared to other studies, in the present analysis we used some variables that describe in a clear and comprehensive way the advantages, disadvantages, as well as the working experience during the pandemic. From this perspective, the present approach is a novel one. In Table no. 1 we present the questions underlying the definition of the explanatory factors in the regression, as well as their distribution by categories of answers.

Table no. 1. Descriptive statistics

Questions	Responses	Distribution	Percentage
(1)	(2)	(3)	(4)
Please specify the type of company you are working for:	Private company	257	68.17%
	Other	120	31.83%
What is your field of activity?	Finance	126	33.42%
	Education	27	7.16%
	IT	57	15.12%
	Other	167	44.30%
What is the last level of education completed?	High-school	64	16.98%
	Bachelor of Arts (BA)	211	55.97%
	Master of Arts (MA) or Philosophiae Doctor (PhD)	102	27.05%
What is your gender?	Female	243	64.46%
	Male	134	35.54%
How old are you?	20-64 years	377	100.00%
In order to start the teleworking, did your employer carry out a special training?	Yes	255	67.64%
	No / I don't know	122	32.36%
During the teleworking you benefited from:	Laptop and other benefits	257	68.17%
	No	120	31.83%
From your point of view, what is the main advantage of remote working?	Increasing efficiency	29	7.69%
	Reducing expenses	52	13.79%
	Lower stress	23	6.10%
	More time with family	68	18.04%
	No wasted time in traffic	189	50.13%
	Other	16	4.25%
What do you consider to be the main disadvantage of teleworking?	Lack of socialization	132	35.01%
	Lack of job logistics	67	17.77%
	Decreasing work efficiency	41	10.88%
	Overlapping the working time and personal time	73	19.36%
	Other	64	16.98%
	Good	119	31.56%

Questions	Responses	Distribution	Percentage
(1)	(2)	(3)	(4)
How would you describe your overall experience in teleworking?	Excellent	74	19.63%
	Very good	129	34.22%
	Unsatisfactory	20	5.31%
	Satisfying	35	9.28%

Although the sample size is not very large, it is in line with other studies investigating similar topics: (Nguyen, 2021) – 355 respondents – or Beck et al. (2020) – 476 respondents. To estimate the LOGIT model as accurately as possible, it is recommended that each characteristic of a categorical variable to account for at least 5% of observations. As we can see in Table no. 1, all the characteristics related to the categorical variables included in the analysis have more than 5%, fact that provides a certain stability for the empirical results.

In addition, we should point out that in question no. 2 we chose those sectors for the following reasons: a) the IT sector, since teleworking was a common practice even before the pandemic; b) the financial sector, because it is crucial for economic stability, and any changes in the working conditions can have serious consequences; c) the education sector, because it had many challenges to face during the pandemic, by going online (telework).

The variable “age” is the only one that has a continuous structure in the selected sample. In the survey, each respondent specified his or her age in years (integers number). Normally, when grouping the “age” into 3, 4 or more categories bias results can be provided, since these categories are very sensitive to the chosen threshold. Moreover, identifying the baseline category can be problematic. Thus, if we choose the range of 20-22 years and 23-28 years, we can get different results compared with another specification such as 20-23 years and 24-28 years. For this reason, we chose an aggregate approach, and the statistically significant coefficient confirmed the indirect link between age and the probability of choosing to continue teleworking. In order to have a much clearer image regarding the “age”, we present in Figure no. 1 its distribution.

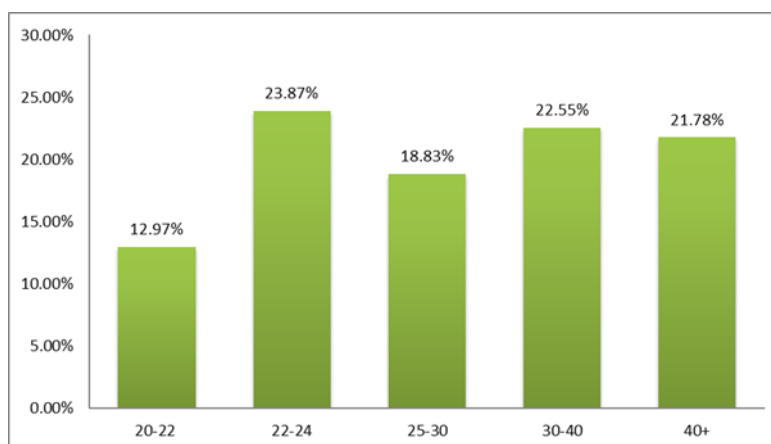


Figure no. 1. Age distribution

It can be seen that almost a third of the sample contains young people aged 20-24. Moreover, 18.83% of respondents are in the early stages of a job, while the rest have a longer experience.

4. Results and discussions

In the following, we will present the results. However, it is mandatory to make some clarifications on how to interpret them. To begin with, we must keep in mind that for all categorical variables, we establish a baseline characteristic. In the LOGIT estimation procedure, this characteristic will be zero, and the interpretations of the other coefficients will be made relative to this characteristic. Thus, we chose as categorical variables those answers that are less interesting, such as “Other”. We highlighted in *italics* these baseline characteristics in Table no. 2.

Table no. 2. Descriptive statistics

Question	Responses	Coefficient	Prob
(1)	(2)	(3)	(4)
Please specify the type of company you are working for:	Private company	0.4106	0.3390
	<i>Other</i>	0.0000	0.0000
What is your field of activity?	Finance	0.1938	0.3486
	Education	-0.4907	0.5695
	IT	1.0104	0.0893
	<i>Other</i>	0.0000	0.0000
What is the last level of education completed?	<i>High-school</i>	0.0000	0.0000
	BA	-0.0676	0.4016
	MA or PhD	0.3934	0.4564
What is your gender?	<i>Female</i>	0.0000	0.0000
	Male	0.0501	0.3578
How old are you?	20-64 years	-0.0299	0.0163
In order to start the teleworking, did your employer carry out a special training?	<i>Yes</i>	0.0000	0.0000
	No/ I don't know	-0.7125	0.6453
During the teleworking you benefited from:	Laptop and other benefits	0.9524	0.3433
	<i>No</i>	0.0000	0.0000
From your point of view, what is the main advantage of remote working?	Increasing efficiency	0.0789	0.9238
	Reducing expenses	0.2062	0.7967
	Lower stress	0.7857	0.9192
	More time with family	0.5140	0.7994
	No wasted time in traffic	0.2376	0.7379
	<i>Other</i>	0.0000	0.0000
What do you consider to be the main disadvantage of teleworking?	Lack of socialization	0.5869	0.5104
	Lack of job logistics	0.6942	0.5272
	Decreasing work efficiency	0.2676	0.5887
	Overlapping the working time and personal time	0.1238	0.5392
	<i>Other</i>	0.0000	0.0000
How would you describe your overall experience in teleworking?	<i>Good</i>	0.0000	0.0000
	Excelent	2.8257	0.0001
	Very good	1.2092	0.0000
	Unsatisfactory	-2.4291	0.0040
	Satisfying	-0.1612	0.4471
Intercept	-	0.3389	1.0683

In Table no. 2, on columns (3) and (4) we report the estimated coefficients, as well as their statistical significance. To begin with, one can see that the legal structure of the company's

capital does not influence an employee's decision to continue teleworking after the end of the pandemic. Thus, regardless of whether he/she works in a company with private, state or mixed capital, the coefficients of the LOGIT model are not statistically significant. However, if we refer strictly to their sign, we can see that the probability of continuing teleworking increases if the institution in which a respondent operates has fully private capital. We can explain this by the fact that the logistics of private companies in Romania is far much better, compared with the one of public sector, and the development of teleworking could be done with increased productive.

The field of activity reveals in a much clearer way its importance to the decision of continuing teleworking. Thus, the probability of continuing teleworking even after the end of the pandemic increases if the field of activity is IT. This result is a logical one since the trend in this field, observable in recent years, puts more and more emphasis on working from home, or with reduced participation at the company's headquarters. Relative to the baseline characteristic "Other", if we refer strictly in terms of the sign of the coefficient and not on the statistical significance, it can be seen that people working in the financial field would be tempted to continue teleworking after the pandemic, but the coefficient impact is five times lower compared with IT sector. As expected, the impact coefficient is negative in the case of Education, indicating that teleworking with students was much more demanding for teachers compared with baseline characteristic. We can explain this phenomenon by the fact that in the field of education, the transition to the new teaching methods was much more difficult due to the lack of high-performance communication devices.

Regarding the level of education, we fail to report statistically significant estimates relating the level of education to continuing the teleworking. However, in relation to people who have finished high school, the individuals with higher education such as master's or doctoral studies would be more tempted to continue teleworking, unlike those who have only a bachelor's degree. This result is quite surprising, but we must have in mind that the coefficients are not statistically significant with an error around 40%. The same result is obtained in the case of the sex of the respondent, which shows us that there are no differences between men and women in terms of continuing the teleworking. This can be considered surprising, given that men are viewed as more "relaxed" and we would have expected a negative coefficient.

Another statistically significant variable is the age of the respondent. The negative coefficient indicates that increasing age will lead to a decrease in the likelihood of continuing the teleworking. In other words, younger people prefer teleworking. This result is quite interesting. Basically, there is a tendency towards teleworking of younger people to the detriment of socialization. One possible explanation would rely on the fact that younger people do much better with technology compared to older people. This result, given that most respondents were predominantly residents of Bucharest, has great political and social implications, as it shows us that the inclination of younger people is to work from home, and consequently, not giving so much importance to face-to-face socialization with their colleagues. Thus, we believe that the future governments should take into account this paradigm shift in the substantiation of urban or social policies.

Surprisingly, the decision to continue teleworking does not depend on the training provided by the employer in this regard or by the logistics. Moreover, the potential advantages and disadvantages of teleworking do not appear to have a significant influence on the decision to continue this activity. Thus, although relative to the "Other" the estimates of the other

advantages of teleworking have a positive coefficient, they are not statistically significant, the degree of error related to the alternative hypothesis being in all five situations over 70%. Identical results can also be seen when listing the disadvantages of teleworking.

Finally, the propensity to continue teleworking even after the pandemic is sensitive at a very large extent to the experience that those people had during the lockdown period. Thus, people with a very good and excellent experience with teleworking want to continue it. On the other hand, a bad experience will lead to a negative and statistically significant coefficient regarding the probability of continuing the teleworking.

Related to the literature, which for the subject chosen by us is very small, the results regarding age, education or gender are in line with those reported by Nguyen (2021). However, our contribution to literature relies on the connections highlighted between the desire to continue teleworking, the field of activity and the previous experience with the teleworking. The Pseudo R-squared of the LOGIT regression is 23%, a very high value if we refer to the study of Louviere et al. (2000). Accordingly, a value of 20% for Pseudo R-squared is equivalent to an adjusted R-squared around 70% in an OLS model. This fact suggests that reported results and conclusions drawn from them are reliable. As a robustness test, we also included in the LOGIT model the age according to the classification presented in Figure no. 1. The age categories 30-40 years and 40+ years were statistically significant, the coefficients being negative and more pronounced in the 40+ category. The remaining results were only slightly affected compared to initial specification, so we can conclude that the model is robust.

Conclusions

Teleworking appeared as the efficient tool that allowed population to work from home given the conditions imposed by the infection with SARS-CoV-2 virus. The new technologies revolutionized our way of working within the 21st century, and working from home may be an option also for the post-pandemic period.

The results of the research showed that there are no relevant relations between the desire to go on with teleworking and factors as: the legal nature of the company's capital (private, state or mixed), education level, responding person's sex, and, surprisingly, the advantages and disadvantages of this type of working identified by the responding person. Still, the bias to continue with teleworking significantly depends on three factors: the field of activity, the age of the employee, and the general evaluation of the experience that the involved persons had with "remote" working. As such, the probability to desire to go on with teleworking even after the end of the pandemic increases if the field of activity is IT and teleworking is preferred by younger persons, one of the possible explanations being related to the easier adaptation of younger people to digital technologies. Moreover, employees who had a positive experience during the pandemic with teleworking desire to go on with it least for a period of time afterwards, unlike those who had a less pleasant experience and who do not want to keep on working remotely.

The results of this study suggest that the large majority of responding persons desire to go on with teleworking. As previously mentioned, just a limited number of factors explain the desire to go on with teleworking, variables like the legal nature of the capital of the employer, sex or education level having an insignificant impact.

As a future research direction, we will test the strength of these results for the same sample and we will include more explanatory factors that were not considered by this analysis, like income, infection with SARS-CoV-2 or the number of children and their age.

References

- Baert, S., Lippens, L., Moens, E., Weytjens, J. and Sterkens, P., 2020. The COVID-19 Crisis and Telework: A Research Survey on Experiences, Expectations and Hopes. *IZA Discussion Papers*, no. 13229, [online] Available at: <<https://www.iza.org/publications/dp/13229/the-covid-19-crisis-and-telework-a-research-survey-on-experiences-expectations-and-hopes>> [Accessed 5 February 2021].
- Baker, E., Avery, G.C. and Crawford, J., 2007. Satisfaction and perceived productivity when professionals work from home. *Research and Practice in Human Resource Management*, 15(1), pp.37-62.
- Beck, M.J., Hensher, D.A., and Wei, E., 2020. Slowly coming out of COVID-19 restrictions in Australia: Implications for working from home and commuting trips by car and public transport. *Journal of Transport Geography*, 88, p.102846. <https://doi.org/10.1016/j.jtrangeo.2020.102846>.
- Belzunegui-Eraso, A., and Erro-Garcés, A., 2020. Teleworking in the Context of the COVID-19 Crisis. *Sustainability*, 12(9), p.3662. <https://doi.org/10.3390/su12093662>.
- Bosua, R., Gloet, M., Kurnia, S., Mendoza, A., and Young, J., 2013. Telework, productivity and wellbeing: An Australian perspective. *Telecommunications Journal of Australia*, 63(1). doi: 10.7790/tja.v63i1.390.
- Carillo, K., Cachat-Rosset, G., Marsan, J., Saba, T., and Klarsfeld, A., 2020. Adjusting to epidemic-induced telework: empirical insights from teleworkers in France. *European Journal of Information Systems*, 30(1), pp.69-88. <https://doi.org/10.1080/0960085X.2020.1829512>.
- Cepoi, C.-O., 2020. Asymmetric dependence between stock market returns and news during COVID-19 financial turmoil. *Finance Research Letters*, 36, p.101658. <https://doi.org/10.1016/j.frl.2020.101658>.
- Drumea, C., 2020. Work-related Stress and Subsequent Productivity in a Teleworking Environment Induced by Pandemic-related Confinement. Evidence from the Public Organizations. *Ovidius University Annals, Economic Sciences Series*, 20(1), pp.337-341.
- Eurofound, 2020. *The potential for teleworking in Europe and the risk of a new digital divide*. [pdf] Available at: <<https://www.imf.org/en/News/Articles/2020/06/11/na061120-kurzarbeit-germanys-short-time-work-benefit>> [Accessed 1 February 2021].
- Fana, M., Milasi, S., Napierala, J., Fernandez Macias, E., and Gonzalez Vazquez, I., 2020. Telework, work organisation and job quality during the COVID-19 crisis: a qualitative study, [online] *EUR - Scientific and Technical Research Reports*, JRC 122591, Available at: <<https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/telework-work-organisation-and-job-quality-during-covid-19-crisis-qualitative-study>> [Accessed 4 February 2021].
- Grigorescu, A. and Mocanu Nicolae, A., 2020. Teleworking perspectives for Romanian SMEs after the COVID-19 pandemic. *Management Dynamics in the Knowledge Economy*, 8(4), pp.383-399. doi 10.2478/mdke-2020-0025.

- Guvernul României, 2020. *Ordonanța de urgență nr. 132 privind măsuri de sprijin destinate salariaților și angajatorilor în contextul situației epidemiologice determinate de răspândirea coronavirusului SARS-CoV-2, precum și pentru stimularea creșterii ocupării forței de muncă*. Monitorul Oficial nr. 720 din 10 august 2020. [online] Available at: <<http://legislatie.just.ro/Public/DetaliiDocument/229026>> [Accessed 4 February 2021].
- Harker Martin, B. and MacDonnell, R., 2012. Is telework effective for organizations: A meta-analysis of empirical research on perceptions of telework and organizational outcomes. *Management Research Review*, 35(7), pp.602-616. <https://doi.org/10.1108/01409171211238820>.
- Ipsen, C., van Veldhoven, M., Kirchner, K. and Hansen, J.P., 2021. Six Key Advantages and Disadvantages of Working from Home in Europe during COVID-19. *International Journal of Environmental Research and Public Health*, 18(4), pp.1826. <https://doi.org/10.3390/ijerph18041826>.
- Jora, O.D. Iacob, M. and Crișu, A., 2015. Proprietatea privată și educația: între “homesteading” și “homeschooling” [Private Property and Education: Between “Homesteading” and “Homeschooling”]. *Æconomica*, 24(1), pp.109-123.
- Jora, O.D., 2020. In Pursuit of the Vaccine Against Viral Inequalities? Notes on Pandemic, Panacea, Poisons and Placebo. *The Visio Journal*, 5, pp.30-39.
- Katsabian, T., 2020. The Telework Virus: How the COVID-19 Pandemic Has Affected Telework and Exposed Its Implications for Privacy and Equality. *SSRN Electronic Journal*. <http://dx.doi.org/10.2139/ssrn.3684702>.
- Louviere, J.J., Hensher, D. and Swait, J., 2000. *Stated Choice Methods: Analysis and Application*. Cambridge: Cambridge University Press.
- Milasi, S., González-Vázquez, I., and Fernández-Macías, E., 2021. Telework before the COVID-19 pandemic: Trends and drivers of differences across the EU. *OECD Productivity Working Papers*. doi: 10.1787/d5e42dd1-en.
- Mori, T. and Hayashi, H., 2020. Difficulties in introducing telework for Japanese companies as seen from business culture. *Nomura Research Institute (NRI) Group Urgent Proposals Regarding Measures for COVID-19* No. 31, [online] Available at: <<https://www.nri.com/en/keyword/proposal/20200602>> [Accessed 8 February 2021].
- Nguyen, M.H., 2021. Factors influencing home-based telework in Hanoi (Vietnam) during and after the COVID-19 era. *Transportation*. [online] <https://doi.org/10.1007/s11116-021-10169-5>.
- Parlamentul României, 2018. *Legea nr. 81 privind reglementarea activității de telemuncă*. Monitorul Oficial nr. 296 din 2 aprilie 2018. [online] Available at: <<http://legislatie.just.ro/Public/DetaliiDocument/199418>> [Accessed 6 February 2021].
- Pérez, M.P., Sánchez, A.M. and de Luis Carnicer, M.P., 2002. Benefits and barriers of telework: perception differences of human resources managers according to company's operations strategy. *Technovation*, 22(12), pp.775-783. [https://doi.org/10.1016/S0166-4972\(01\)00069-4](https://doi.org/10.1016/S0166-4972(01)00069-4).
- Pouliakas, K. and Branka, J., 2020. EU jobs at highest risk of COVID-19 social distancing: Is the pandemic exacerbating the labour market divide? *IZA Discussion Papers*, no. 13281, [online] Available at: <<https://www.iza.org/publications/dp/13281/eu-jobs-at>>

- highest-risk-of-covid-19-social-distancing-will-the-pandemic-exacerbate-labour-market-divide> [Accessed 5 February 2021].
- Pyöriä, P., 2011. Managing telework: risks, fears and rules. *Management Research Review*, 34(4), pp.386-399.
- Raišienė, A.G., Rapuano, V., Varkulevičiūtė, K., and Stachová, K., 2020. Working from Home – Who Is Happy? A Survey of Lithuania's Employees during the COVID-19 Quarantine Period. *Sustainability*, 12(13), pp.5332. <https://doi.org/10.3390/su12135332>.
- Ruth, S. and Chaudhry, I., 2008. Telework: A Productivity Paradox? *IEEE Internet Computing*, 12(6), pp.87-90. <https://doi.org/10.1109/MIC.2008.132>.
- Schur, L.A., Ameri, M. and Kruse, D., 2020. Telework After COVID-19: A “Silver Lining” for Workers with Disabilities? *Journal of Occupational Rehabilitation*, 30(4), pp.521-536. <https://doi.org/10.1007/s10926-020-09936-5>.
- Sostero, M., Milasi, S., Hurley, J., Fernandez-Macias, E. and Bisello, M., 2020. Teleworkability and the COVID-19 crisis: a new digital divide? *JRC Working Papers Series on Labour, Education and Technology*, JRC 121193, [online] Available at: <<https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/teleworkability-and-covid-19-crisis-new-digital-divide>> [Accessed 2 February 2021].
- The International Labour Organization (ILO), 2017. *Working Anytime, Anywhere: The Effects on the World of Work*. [pdf] Luxembourg and Geneva: Publications Office of the European Union and ILO. Available at: <https://www.ilo.org/global/publications/books/WCMS_544138/lang--en/index.htm> [Accessed 6 February 2021].
- The International Labour Organization (ILO), 2020. *Keys for effective teleworking during the COVID-19 pandemic*. [online] International Labour Organization. Available at: <https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_739879/lang--en/index.htm> [Accessed 4 February 2021].
- The Organisation for Economic Co-operation and Development (OECD), 2020. *Productivity gains from teleworking in the post COVID-19 era: How can public policies make it happen?* [pdf] OECD Policy Responses to Coronavirus (COVID-19). Available at: <<https://www.oecd.org/coronavirus/policy-responses/productivity-gains-from-teleworking-in-the-post-covid-19-era-a5d52e99/>> [Accessed 9 February 2021].
- Tokarchuk, O., Gabriele, R. and Neglia, G., 2021. Teleworking during the COVID-19 Crisis in Italy: Evidence and Tentative Interpretations. *Sustainability*, 13(4), p.2147. <https://doi.org/10.3390/su13042147>.