




Motivation to work remotely in the face of organizational and cost conditions

AGNIESZKA ZIOMEK

Poznań University of Economics and Business, Institute of Economics,
Al. Niepodległości 10, 61-875 Poznań, Poland

✉ agnieszka.ziomek@ue.poznan.pl

 orcid.org/0000-0001-7052-5855

Abstract

Motivation: Working conditions have changed significantly as remote working has become widespread in many countries. These changes were caused by a pandemic, as a result of which the possibility of direct communication as well as control and integration of employees was limited. There are also new cost categories for employees and employers, such as installing a better internet connection, purchasing new hardware and software, and implementing better security for data transmission outside the company's premises. These changes resulted in changes in the employee motivation factors against the background of organizational and cost conditions, which is important for the proper development of the organization.

Aim: The aim of the article is to assess motivation to work remotely, based on a survey of opinions among 450 employees in total in Poland, the Czech Republic and Hungary.

The assessment was performed by verifying, using the logistic regression method, ten hypotheses describing organizational and cost conditions as well as individual effects, such as career opportunities, increase in knowledge and skills, and the occurrence of stress that arose as a result of working remotely. The motivation to work remotely was verified by establishing the willingness to continue working through an opinion.

Results: Motivation in remote work is influenced by both efficient communication and technical assistance provided to the employee remotely. Motivation resulting from the independent organization of working time is also important, and it is based on the decision to choose the duration of work, hours and intensity of its performance.

Organizational and cost-related factors are related to motivation, as well as individual effects experienced by the employee. Directly from the survey, it appears that only 26.8% of the respondents incurred higher costs related to remote work during the COVID-19



pandemic. However, the respondents want to continue it with their current earnings. The study found that employees are motivated to work remotely because the organizational conditions and earnings meet their needs. They also admitted that thanks to remote work, they have a better chance of developing a professional career, as well as a higher level of their knowledge and skills, which is also associated with the motivation to continue working remotely.

Keywords: motivation; remote work; costs; communication; stress

JEL: J31; J53; J83

1. Introduction

The COVID-19 pandemic has had catastrophic health effects and is also a catalyst for new forms of work. Remote work (Work From Home — WFH), usually performed in the place of residence, has now become widespread all over the world. Another form of work is conducive to changing needs and attitudes. Motivation is an individual basis for meeting the internal needs of an individual, grounded only emotionally, but caused by the working conditions, both its organization and the costs incurred by the employee.

The interest in the issue of motivation of people working remotely results from the results of the previous study consisting in the identification of factors determining the perceived productivity in remote work and the measurement of the importance of factors determining the productivity of work (Barczyk et al., 2022). The results show that in the studied sample, high stress, low employee control and limited communication with managers minimize the increase in the productivity of remote work. Nevertheless, the features of work organization, such as a suitable working environment, savings in travel costs, access to technical support, and high-speed internet connection are positively related to the efficiency of remote work. It is worth, by deepening this study, verify the issue of motivation in remote work.

The aim of this study is to assess the motivation of people working remotely, which is conditioned by the rules prevailing in the organization and the costs incurred by the employee in these conditions. To achieve the set goal, a study using the logistic regression method was used, where binomial variables were compiled, i.e. the dependent variable with ten variables illustrating organizational conditions and the effect of changes in costs. A selected set of questions and the corresponding database of results collected at the research stage were used to conduct the study (Barczyk et al., 2022).

We begin this article with a brief look at the organizational culture associated with the organizational conditions and costs of remote work, which assumes an immaterial approach to the study of motivation. Then we propose a literature review on motivation factors, including the antecedents of satisfaction and willingness to continue working remotely. The literature review is followed by a methodological part in which we describe our empirical research procedure. Finally, we present and discuss the results of empirical research.

2. Literature review

Among the existing concepts of research on motivation, Ross (2022) focused on determining how the employee's motivational factor influences his involvement, finding that WFH moderates the employee's motivational factors. In turn, Yildirim et al. (2016), propose to consider it in accordance with the analysis of the organizational culture. This manifestation of a holistic view of motivation favors the search for its sources in the working conditions, attitudes and actions of the employee. Overall, organizational culture can have both positive and negative effects on motivation and performance. A positive culture increases the efficiency and commitment of employees. An effective culture encourages employees to carry out their tasks with vitality and energy. It can therefore be concluded that organizational culture is positively correlated with satisfaction, commitment and performance. In recent years, many organizations have realized that in order to achieve organizational goals, it is necessary to focus on activities that inspire employees. This is due to the fact that inspiration and excitement increase commitment, making work more important and interesting, which leads to an improvement in employee productivity (Kamery, 2004; Nuur et al., 2021; Ramakrishnan & Arokiasamy, 2019). Research conducted much earlier indicated areas of internal motivation. In the research of Hackman and Oldham (1976), it is an individual basis for realizing the internal needs of an individual, grounded only emotionally, which would indicate that the culture of the organization matters. In order to present the structure of determinants of motivation, Hackman and Oldham (1976) took into account the assumptions of extensive theories of motivation, based on the needs dimension (content theories) and the expectations dimension (process theories). The complete model of factors consists of four areas, which are: the motivational potential of an individual, contextual satisfaction, individual willingness to develop and employee qualifications. While the motivational potential is the meaning of work or responsibility, satisfaction comes from a wider set of elements, where maintaining relationships and safety play an important role. The studies by Fadzilah et al. (2021). Their words show that employees appreciate that they do not have to travel to and from work on a daily basis. In turn, Davidescu et al. (2020) mentions working time, but in the context of flexibility, which it treats broadly. By presenting four types of it, it assumes: flexibility of working time, contracts, functional flexibility and workplace flexibility. Each of them brings the employee the satisfaction of reconciling work and family responsibilities, giving emotional stability. It also has a positive effect on employee flexibility, lower absenteeism, greater retention and faster response to needs, increasing work efficiency (Agrawal et al., 2020). However, there is no certainty that both satisfaction and productivity increase in remote work, as is often claimed. Kohont and Ignjatović (2022) proved that during the COVID-19 pandemic, when workers perceive WFH as temporary and necessary, their negative attitudes to work are accompanied by increased productivity. On the other hand, if em-

ployees perceive WFH positively for other reasons, their work efficiency decreases. Moretti et al. (2020), researching 51 employees in Italy, found that in the WFH mode, compared to office hours, employees were less productive (39.2%), but also less stressed (39.2%), and still satisfied (51 %). The effects of remote work on satisfaction and productivity remain unambiguous. Motivation to work is influenced by the spectrum of elements, including those related to work-life-balance. Employees' needs in terms of achieving a balance between life and work are met by a hybrid work mode.

For example, in France, working hours were cut to improve work-life balance, almost 20 years ago. Moreover, Canada, the Netherlands and New Zealand have experimented with the idea of a four-day work week. In fact, they are working to make these changes permanent. In the UK, when the business sector introduced a four-day working week for some full-time employees, employee satisfaction was noted to have increased. They also observed an increase in employees efficiency/productivity and less turnover (Laker & Roulet, 2019). Positive perceived conditions, such as reduced commuting and family responsibilities, do not necessarily promote motivation. Feng and Savani (2020) report that the pandemic contributed to the deepening of gender differences in labor productivity. This is because when couples work from home all day and schools are closed, women are expected to spend more time on housework and childcare. Before the pandemic, women showed similar productivity and job satisfaction as men, after the outbreak, they were less productive and satisfied. This review shows that organizations and families are not immune to these issues. On the other hand, women are expected to fulfill all household chores, even if they work from home, as do their spouses (Banerjee & Pati, 2020). However, other studies have shown that the ability of most women to multitask, as during a pandemic, supports the empowerment and maintenance of the role of women, and brings positive results in managing work and family life, regardless of the intensity of professional and family requirements (Toyin et al., 2021).

Occupational stress is one of the phenomena that are unfavorable to motivation. The source of stressful situations is the pressure caused by the lack of individual possibilities and resources to perform the work in an effective manner. In other words, some organizations may require some performance from remote workers, while their workers may not be able to adapt. Moreover, Mizuno et al. (2006) defined work pressure as a social problem containing elements of physical and mental disruptions of employees' abilities caused by a lack of teamwork (Conway et al., 2008).

In remote work, constant monitoring of the workplace and constant being at work are used. Digital technology makes it easy to call and locate employees on the go. Working in this mode leads to stress, because it requires knowledge of new technologies, multitasking and availability, and at the same time constant presence in front of a computer (Fahmi et al., 2022). Niebuhr et al. (2002) examined the impact of remote work on health and job satisfaction on a sample of 512 German employees from various industries.

They found that the functionality of home technical equipment has a positive effect on employee health and job satisfaction. It is also raised by a sense of increased autonomy. Unfortunately, increased weekly working hours have a negative effect on stress. The authors of Wut et al. (2022), drew attention to the isolation of people who switched to remote work during the pandemic. Using the PLS-SEM model, they showed that involvement in work is negatively related to social assimilation and deepens mental isolation. In addition, physical isolation is associated with mental isolation, so it can be expected that as people continue to work from home, they may feel uncomfortable. Employees also experience a greater degree of loneliness when working remotely. This can be remedied by changing remote and office work, as well as chatting and even virtual breakfasts. Zito et al. (2021), also pointed to the potentially protective role of communication in remote working conditions. It would reduce technostress and increase the employee's self-efficiency. Authors (Rahul et al., 2020) interested in the "dark side" of virtual teams and distributed work report that WFH is associated with technostress. People working remotely are under intense control and all interactions are excessively stressful, and it is known that during a pandemic this form of work cannot be denied to an employer. (Choukir et al., 2002). Internet connections and digital technology make it easy for managers to call and locate subordinates at any time, even outside of working hours. This has led to an increase in time devoted to work, but also to an increase in technostress. Through WFH, employees must learn new technologies, be available for work. However, they have to cope with multitasking due to simultaneous care for school children (Kohont & Ignjatović, 2022; Pasi et al., 2021). As they noted, once the pandemic is over, workers' organizations are likely to claim the right to disconnect after working hours, gaining refuge from continued work pressure. In the context of striving for a work-life balance and stress management, measures were taken already in 2018 in Spain (López & Moreno, 2021). In the Act of December 5, 2018, a regulation appeared regarding the right to disconnect, i.e. long before the pandemic. The regulations stipulate the employer's obligation to ensure that a remote employee is disconnected, and at the same time place emphasis on the procedures for recording working time. It indicates that employees will have the right to digital disconnect in order to guarantee, beyond the agreed working hours, respect for rest times, personal and family privacy. There are also reports in the literature that the work pressure of WFH does not cause any particular tension, because the employee, to a certain extent, can independently set its schedule (Rupietta & Beckmann, 2016; Wut et al., 2022). The authors described them as a kind of "self-leadership", which means that a person can independently control the performance of a task, and by verifying his results, he checks whether they comply with the set standard.

If an employee can have autonomy in planning and carrying out their work, they are more likely to return to work having it at hand. Therefore, it is assumed to have a higher intrinsic motivation (Rupietta & Beckmann, 2016). The advan-

tages of WFH include job satisfaction, resulting from the well-being associated with work-home balance, appreciated by some. However, the sources of motivation for teleworking remain unclear. Authors (Bailey & Kurland, 2002), who studied the motivation associated with teleworking, suggest that clerks are more likely to refuse employers to accept telework. Therefore, it is not always possible to be fully prepared to accept long-distance work (Rathnayake, 2022). The authors (Mokhtarian et al., 1998) assessed that remote work influences how employees are assessed by their managers, and thus has an impact on career advancement. The key to increasing motivation in many situations is, after all, proper communication. Thanks to successful communication, an organization can have great coordination between its teams or units, and control and evaluate employees. Its absence will reflect problems in the performance of business tasks or will generally cause damage / conflict between employees (Mokhtarian et al., 1998; Rahul et al., 2020). Kim et al. (2016) pointed to a partially different role of interactions and social networks. Their research shows that when the scale of contacts and communication is limited, the creativity of an individual increases. Thus, weak bonds under WFH conditions can enhance work efficiency. Employees in isolation are highly open to experience, have an innovative style and are internally motivated, as demonstrated by Kim et al. (2016). However, they noted that as the worker is physically isolated, the impulse to creativity diminishes. Sometimes the commitment to teamwork decreases, the sense of belonging also decreases, and virtual teamwork does not facilitate the exchange of information.

3. Assessment of motivation to work

Staying in the picture of this theory, we focus on identifying motivation factors resulting from organizational and cost conditions. For this purpose, the source of internal motivation, which is contextual satisfaction, provided by Hackman and Oldham (1976) was used. The authors define contextual satisfaction with the help of components, two of which are used in remote work, they are security and relations with the manager and with clients. The source of the assessment of employees' motivation in relation to organizational and cost conditions are the opinions expressed by the survey participants by answering the survey questions. For this purpose, a set of selected questions was used, illustrating both organizational and cost issues that can be related to the employee's safety and his relationship with the manager.

They determine employee satisfaction, in line with the model of Hackman and Oldham (1976), and therefore determine the occurrence of motivation to work remotely. The source of the data are the results of a survey conducted on a sample of 450 people in Poland, the Czech Republic and Hungary in July 2021, i.e. during a pandemic. Referring to the earlier argument, the following research hypotheses were proposed:



1. Organizational conditions:

- H1 Motivation to work is more likely in employees who judge that they have a properly equipped and adapted remote work place.
- H2 Workers are more likely to be motivated to work when they feel they are working remotely in a quiet and peaceful environment.
- H3 Motivation to work is more likely in the case of employees who judge that the quality of the Internet connection is satisfactory.
- H4 Work motivation is more likely in employees who judge their managerial control to be limited.

2. Cost conditions:

- H5 Motivation to work is more likely in employees who assess that communication with the manager and / or client is limited in remote work.
- H6 Work motivation is more likely in employees who believe that their costs have decreased.
- H7 Motivation to work is more likely in the case of employees who believe that with their current earnings they will continue to work remotely. Effects that occur as a result of undertaking remote work.
- H8 Work motivation is more likely in employees who believe that remote work has increased their career development opportunities.
- H9 Work motivation is more likely in employees who judge that during the period of remote work, their level of knowledge and skills increased.
- H10 Work motivation is more likely in employees who find also that working remotely causes stress.

The researched areas of motivation mainly include employee satisfaction resulting from the work context. In this context, there are components such as occupational safety (H1–H7), in the sense of:

- working conditions, including a quiet and peaceful environment and a well-adapted remote working area;
- stress caused by the difficulty of working remotely;
- $\frac{3}{4}$ Internet connection quality that guarantees constant contact with the manager and the timely and safe transfer of work results;
- $\frac{3}{4}$ costs incurred by the employee;
- $\frac{3}{4}$ the amount of earnings;
- $\frac{3}{4}$ career development opportunities.

As regards the phenomenon of the work context, stress was mentioned as an element of the psychological determinant of employee motivation, with the assumption of no or low level of stress as a configuration conducive to a good attitude to work and the willingness to continue it. Among the next areas of motivation there are aspects of the relationship with the supervisor (H4), expressed by the assessment of the limitation of the employee's control in relation to the situation of stationary work. The limitation of control is treated as a phenomenon that positively stimulates motivation, because in remote work, the employee has more freedom than in stationary work in organizing the time and sequence of tasks, during the day or even the working week. While iden-

tifying the motivation in the area of relations, a study of the limitation of communication was also undertaken (H5), including not only with the manager, but also with the client. In the opinion of the respondents, the lack of such a limitation is treated as a factor supporting motivation. The issues of motivation include the assessment of the increase in the level of knowledge and skills during remote work (H9). A positive assessment of this growth is assessed as a motivating factor for the employee.

4. Methodology and research participants

4.1 Methodology

Each of the hypotheses was assessed by logistic regression analysis. The explanatory variable was the motivation to work, the vector of which was determined in response to the question “On the basis of the current employment conditions (not taking into account remuneration), would you like to continue working remotely?”. The relationships between the explained variable and the motivation factors were identified separately for each of the ten hypotheses. Logistic regression was adopted as an appropriate method due to the nominal and dichotomous nature of the explained variable. The responses of the respondents, consisting in the participant’s assessment of motivational factors, were reduced from a 5- to 2-point scale, where for 1, two positive levels were adopted, for 0, two negative levels, the middle answer is “hard to say”, “not applicable”, “I don’t know” deleted. The logistic regression method is used in employee motivation research. Davidescu, et al. (2020) found that logistic regression is appropriate to highlight the importance of employee development and employee flexibility as important aspects of sustainable human resource management in increasing the overall work level of employees. The authors used logistic regression to see if and to what extent teleworking, as an important source of workplace flexibility, may affect the way Romanian workers evaluate their level of satisfaction. The study revealed that flexibility is an important factor in contributing to satisfaction and also varies by region, sector and type of company. In the work of Sablok et al. (2017), using logistic regression, the authors determined the determinants of training expenses, examining the management development strategy, talent management policy and succession planning. By examining the data of ten questions in accordance with the above literature, we aim to verify the hypotheses.

4.2 Data collected and respondents’ context

The data was collected through a survey questionnaire that consisted of questions about opinions and facts. It uses closed and cafeteria questions addressed to respondents of different age, gender and education, and representing various



sectors of economic activity. The questionnaires were administered by interviewers after being posted online by research agencies (different from country to country). The data was collected in June 2021 during the COVID-19 pandemic by the CAWI survey for a sample of 450 people, with a national quota of 150 people in Poland, the Czech Republic and Hungary. The survey was carried out by three different research agencies, one in each country in the group of self-declared respondents. The target population consisted of all citizens residing in the country of the study and working fully or partially remotely, at the time of the survey or in the past, regardless of how long and how often, with an amount by age, gender and occupation. All questionnaires turned out to be valid. Conducting a survey with the help of a research agency ensures the credibility of the respondents and has an advantage over research conducted anonymously using the Internet method among previously unrecorded and unreliable respondents.

The results of the survey show that 100% of the respondents worked remotely, but 71% of them combined this activity with a stay at the company's headquarters, and about 2% of the respondents did not give an unambiguous answer to this question (see Table 1). The dominant form of performing tasks among employees (81%) was an employment contract, a smaller number indicated self-employment (11.5%) and a civil law contract (3.5%). The remaining respondents (3.5%) stated that in their case there was a different form of employment. According to the demographic criterion, including sex, age, education and the indicated main industry of employment. The results indicate the proportion of men (56%) as compared to women (44%). Most of the respondents were middle-aged (over 48%), i.e. 30–50 years old. The share of younger people, i.e. under 30 years of age, turned out to be small, i.e. 16%, but relatively high (36%) of people over 50 years of age. In the education structure, people who graduated from higher education constitute 64%, people with secondary education — 33%. The rest have lower than secondary education, i.e. vocational — 2% and primary — 1%. Employment by industries showed the dominance of broadly understood services (78%). A smaller percentage worked in the processing industry and construction (about 15% each). People in the agricultural sector played an even less important role.

To sum up, the study was based on a research sample consisting of people working — most importantly — remotely, under an employment contract, in a hybrid mode. The age was dominated by middle-aged people, i.e. 30–50 years old, more educated, employed mainly in services. There was also some balance in the representation of both genders.

5. Results

5.1. The results of empirical research

Chart 1 presents the answers to the questions about organizational and cost-related motivations, which were assessed by 450 by people indicating the use of remote work (according to the data in Table 1). They concern financial, technical and non-material aspects that accompany remote work. On their basis, the organizational and cost conditions were assessed.

Firstly, the division of the areas of conditions, according to the adopted research objective, indicates, according to empirical research, a lower assessment of cost conditions than organizational ones. Among the survey participants, on average 53% assessed the organizational conditions as good, and 42% — the cost ones. Thus, half of the respondents, and in the case of cost conditions it is slightly less, concluded that the conditions are conducive to motivation and willingness to continue working remotely. In organizational conditions, the assessment of individual elements varies considerably. Stress resulting from remote work was indicated by only one in five out of 450 respondents. High employee motivation is represented by the self-realization of professional plans by increasing the chances of career development. 41.6% assessed that remote work creates such opportunities, probably facilitating obtaining a job thanks to remote recruitment of employees. Almost 80% indicated that they work in an appropriate environment and a properly prepared workplace. In turn, over 80% answered that there is no problem with the Internet connection.

The technical side of working at a distance makes contacts possible, of course, but devoid of many elements of direct communication. Conducting the control is also demanding, as the access to the employee is based only on the electronic channel. Just over one third of the respondents said that communication was limited (33.8%). Thus, for a large proportion of the study participants, digital transmission, reduced to a text, sound and sometimes sound and image, is not a restriction on communication. Employees slightly more often pointed out the difficulties of control. Almost half of the respondents (47.6%) stated that the control is actually limited, while working remotely, they gain more freedom in action than when working at the company's premises.

Second, in terms of cost conditions, more than a third (39.2%) confirmed improvements in labor costs, including travel, food, childcare. On the other hand, satisfaction with the financial conditions in remote work was expressed by those who decided that with their current earnings, they would continue to work remotely (45.1%). The results in terms of cost conditions are not fully satisfactory. Positive opinions are not popular, and the number expressing them does not reach half of the respondents. It is also not certain whether both the organizational and cost conditions, in the opinion of the respondents, coincide with the feeling of motivation to work remotely. However, a certain model

of presented opinions emerges, based on a few relatively less sophisticated but strong principles. Among the organizational conditions, the respondents mainly confirmed some advantages, including:

- $\frac{3}{4}$ a well-adapted workplace;
- $\frac{3}{4}$ quiet and peaceful environment;
- $\frac{3}{4}$ good internet connection, allowing for uninterrupted work.

This picture seems to fit well those features of remote work that are easily and on a daily basis noticeable, but are nevertheless important for the employee.

In the next section, we present an analysis of the relationship between the presented assessments and the motivation to work remotely.

5.2 Assessment of motivation in organizational and cost conditions

For the analysis of the study results, 450 valid responses were obtained. The number of observations included in each of the models differed and it resulted from the share of ambiguous answers, which were excluded at the stage of data preparation. Information on the dependent variable and explanatory variables was obtained from the same participant. A one-way model with the intercept for logistic regression was used. The estimation was performed with the use of a forward selection method based on a likelihood ratio (Danieluk, 2010). The results of the estimates are presented in Table 2. The total variance, explained by the Wald coefficient, was significantly below the 50% threshold in most models. For hypotheses 7, 10 and 8, it exceeded 40%. All models met the condition of significance, except for hypothesis 6. The null hypothesis was rejected at the level of <0.05 . The odds ratio was relatively high, i.e. the maximum value was $\text{Exp}(B)=1.01$. For hypotheses 4 and 5, the odds ratio showed a relationship between the dependent variable and the negation of the explanatory variable (negative (B)), and a relationship with the willingness to continue working remotely, i.e. (H4): control ($\text{Exp}(B)=0.990$) and (H5): communication ($\text{Exp}(B)=0.987$). In other cases, there was a probability of the factor influencing motivation, in accordance with the value of the odds ratio, on the dependent variable indicated in the hypothesis. The analysis showed that the person would like to continue working remotely on the basis of the current employment conditions (not taking into account the salary), because he has a properly adapted and equipped remote work place, works in a quiet and peaceful environment, does not feel the stress associated with working remotely despite the constant exposure during virtual communication and constant work at the computer. A person is also motivated to continue working remotely during a pandemic, i.e. without the possibility of giving up this form, because their labor costs have decreased in relation to work in the company, they are satisfied with their salary and want to continue working remotely, receiving it in the current amount. The participants would like to continue working remotely, claiming that it creates opportunities for the development of their professional career, and also noticed that thanks to it, the level of their knowledge and skills has increased.



Noticing such benefits, individuals still want to work remotely. Their attitude expresses motivation because, as can be seen, most of the respondents satisfied the individual needs of the individual. In the case of hypotheses 4 and 5, the first of which concerns limited control and the second of limited communication, the result was that, although control and communication are not limited, people prefer to continue working remotely. Both models met the materiality condition, therefore the above claim cannot be rejected.

6. Discussion

Except for the sixth hypothesis (see above: H6; $p > 0.05$). all the hypotheses in the study were confirmed. They assume a relationship between motivation and organizational conditions, including:

- the environment, that is, maintaining peace and quiet;
- workplace, i.e. its equipment and the efficiency of the internet connection;
- communication with the company and work control.

With the longer duration of the pandemic and the need for isolation, workers feel the benefits of working from home and are able to arrange appropriate conditions either on their own or with an employer. Fahmi et al. (2022) showed that WFH causes stress, while in our research stress was indicated by only 22% of respondents and was not indicated as a barrier to motivation in employees. The respondents stated the presence of stress that accompanies them, but also expressed their willingness to pass the job. It can be said that the level of individual stress does not discourage people from working remotely. In turn, Agrawal et al. (2020), Verma et al. (2021) referred to the importance of communication and control in remote work. They noted the greater flexibility of the employee and the company when working remotely. As they claim, cooperation with the company is so good that it allows for an efficient response in unexpected situations. It is related to the quality of communication and controls, which were not limited as a result of adopting the distance working mode. Maintaining them affects the motivation to continue working remotely, as shown in this study. Good organizational conditions, such as Internet access, remote connection, e-mail and telephone contact, allow faster and direct access to a wider group of recipients. As a result, they increase effectiveness and cause greater involvement (Wut et al., 2022). Motivation arises when an employee has unimpeded access to such communication opportunities. Higher knowledge and skills are another effect of remote work, which is associated with the need to learn new technologies, but also to increase access to knowledge via the Internet and higher employer requirements. Smite et al. (2021), in a WFH study, a few months after its start, have already confirmed such results. It is understandable that these benefits motivate to continue working remotely, since they will allow the employee to improve his status, including material status, on the labor market. These hypotheses were supported by the results of the study presented above. However, the impact of remote work costs on motivation has not been

confirmed. It is known, however, that their structure has changed in relation to the period of stationary work. The tool used did not make it possible to distinguish the relationship between costs and motivation. On the other hand, the participants noticed (39.2%) that they bear lower labor costs. According to research (Agrawal et al., 2020), they do not have to bear the costs of childcare or meals during work, and most of all stay at home and do not avoid travel time. These costs are employees' control. Hypothesis 7 assumes a relationship between motivation and earnings at which the person will continue to work remotely. This means that the salary is not a disincentive to remote work, despite the fact that there are situations of shifting to a lower salary. In our study, 45.1% of participants are satisfied with their salary, so the salary was not reduced in these people. Hypotheses 4 and 5 assume a negative relationship between motivation and restriction of control and communication. According to the value of the odds ratio (see Table 2), there is a positive relationship between motivation and lack of constraints, i.e. efficiency and effectiveness of control and communication. This result turned out to be consistent with Nuur et al. (2021). Corporations have been in contact with employees since the beginning of the pandemic. The meetings were organized virtually, the rules of communication were set so as not to lose commitment and motivation among employees, virtual team building workshops were conducted, especially due to their important role in creating the atmosphere of teamwork. As a result, employees are able to use technology to maintain contact with managers. Also, other studies (Nuur et al., 2021) showed that working from home for a long time did not affect communication and solving problems encountered in the office. Besides, remote access and control of office computers helped the employees to perform most office tasks. Obtaining efficiency in remote communication has an impact on motivation and makes it easier to solve everyday problems in the company. In turn, remote work control may support the performance of tasks by the employee, which strengthens his involvement (Nuur et al., 2021).

7. Implications for theory, future research and practice

Earlier studies emphasized the psychological conditions of work and the technical difficulties of performing it. Difficulties due to having children or the complexity of remote work due to the isolation of an employee were also identified. We have indicated three groups of factors, including organizational and cost conditions, taking into account organizational elements, those reflecting the environment and equipment, as well as communication and control. At the outset, it is worth noting that the countries of Central and Eastern Europe are definitely a good place to study. The popularity of remote work in them only increased during the pandemic, and employees have been meeting its experiences only recently.

The study provided evidence that labor costs in the form of WFH have a positive effect on motivation. On the other hand, among the organizational factors,

good workplace equipment, a quiet environment and an efficient internet connection have a positive and strong influence on motivation. Sufficient control and intense communication also control motivation, but to a lesser extent than the other organizational factors.

It turned out that almost all respondents work in good conditions and are motivated to continue their work. Employees notice lower costs in remote work and no remuneration changes, hence it turned out that cost factors support motivation. We have found that several effects that may be influenced by the employer play a role in keeping you motivated. These include opportunities for career development and an increase in competences and knowledge as a result of remotely performed work. A separate effect that we drew attention to was stress, described in the literature as a negative stimulator of work and motivation. The study showed a positive relationship between these effects and motivation.

The respondents are willing to continue assigned work, but are aware of the stress that accompanies them, and its level does not discourage them from working remotely.

In this study, for further analysis, we propose a method of researching motivation, which explains the attitudes of employee involvement conditioned by organizational and cost factors. Their illustration is possible by getting their opinion directly.

With regard to practice, we recommend that in such conditions managers do not deviate from employee control. It will be an activity recognized rather as supporting employees, not threatening the loss of motivation. In order to increase the motivation, one should also proceed to such solutions that would shorten the path to work by renting work premises not far from the place of residence. Employees appreciate lower costs as well as keeping wages unchanged. It is also worth taking or continuing workshops on integration in remote work conditions. It will certainly be easier for employees to perform their work with a sense of higher motivation.

The suggested research model includes ten questions that concern not only the organizational and cost conditions, but also the effects. Future research may expand the range of identified motivation factors in remote work to include productivity and satisfaction with the context, as well as their possible structure. It is also worth including the aspect of the employee's mental isolation. Let us take into account that 450 employees from three Central and Eastern European countries appreciated the remote work, expressing their willingness to continue it, and expressed their satisfaction with the good conditions for its performance. Their experience of working in this form may affect future organizational and management activities in companies where its use is desirable. Research on commitment or motivation to work remotely is useful for learning and practice, because its application will still be present in the economy.

The findings contained in this paper verify the attitude of employees towards continuing remote work from the perspective of organizational and cost

conditions, and the effects of work. This study assessed employee motivation in the context of remote work, based on the relationship between work motivation during the COVID-19 pandemic and conditions and outcomes. The account was explained by all the hypotheses, except for one of them. Therefore, this model can provide an initial understanding of the impact of remote working on motivation and an indication of its determinants.

References

- Agrawal, K.P., Pani, A.K., & Sharma, R. (2020). Pandemic pandemonium and remote working: an investigation of determinants and their contextual behavior in virtualization of work-from-home (WFH) process. In S.K. Sharma, Y.K. Dwivedi, B. Metri, & N.P. Rana (Eds.), *Re-imagining diffusion and adoption of information technology and systems: a continuing conversation. TDIT 2020. IFIP Advances in Information and Communication Technology*, 617, 261–273. Springer. https://doi.org/10.1007/978-3-030-64849-7_2.
- Bailey, D.E., & Kurland, N.B. (2002). A review of telework research: findings, new directions, and lessons for the study of modern work. *Journal of Organizational Behaviour*, 23(4), 393–400. <https://doi.org/10.1002/job.144>.
- Banerjee, G., & Pati, I. (2020). Women working from home during COVID-19: an analysis. *Parikalpana: KIIT Journal of Management*, 16(1), 173–191. <http://dx.doi.org/10.23862/kiit-parikalpana/2020/v16/il-2/204566>.
- Barczyk, R., Spychała, J., Urbanowicz, Z., & Ziomek, A. (2022). What to look for to increase work added value: remote work and perceived productivity: a study in Poland, Hungary and the Czech Republic. *Research Papers in Economics and Finance*, 6(1), 46–71. <https://doi.org/10.18559/ref.2022.1.4>.
- Choukir, J., Alqahtani, M.S., Khalil, E., & Mohamed, E. (2022). Effects of working from home on job performance: empirical evidence in the Saudi context during the COVID-19 pandemic. *Sustainability*, 14, 3216. <https://doi.org/10.3390/sul4063216>.
- Conway, N., Deakin, S., Konzelmann, S., Petit, H., Rebérioux, A., & Wilkinson, F. (2008). The influence of stock market listing on human resource management: evidence for France and Britain. *British Journal of Industrial Relations*, 46(4), 631–673. <https://doi.org/10.1111/j.1467-8543.2008.00698.x>.
- Danieluk, B. (2010). Zastosowanie regresji logistycznej w badaniach eksperymentalnych. *Psychologia Społeczna*, 2–3(14), 199–216.
- Davidescu, A.A., Apostu, S.-A., Paul, A., & Casuneanu, I. (2020). Work flexibility, job satisfaction, and job performance among Romanian employees: implications for sustainable human resource management. *Sustainability*, 12(15), 6086. <https://doi.org/10.3390/sul2156086>.
- Fadzilah, N., Hanafi, M., Fatimah, S., & Azram, A.A.R. (2021). A study of work from home motivation among employees international. *Journal of Asian Social Science*, 11(8), 388–398. <https://doi.org/10.18488/journal.1.2021.118.388.398>.

- Fahmi, P., Sudjono, Parwoto, Supriyatno, Saluy, A.B., Safitri, E., Effiyaldi, Rivaldo, Y., & Endri, E. (2022). Work stress mediates motivation and discipline on teacher performance: evidence work from home policy. *Journal of Educational and Social Research*, 12(3), 80–89. <https://doi.org/10.36941/jesr-2022-0068>.
- Feng, Z., & Savani, K. (2020). COVID-19 created a gender gap in perceived work productivity and job satisfaction: implications for dual-career parents working from home. *Gender in Management*, 35(7), 719–736. <https://doi.org/10.1108/GM-07-2020-0202>.
- Hackman, J.R., & Oldham, G.R. (1976). Motivation through the design of work: test of a theory. *Organizational Behavior and Human Performance*, 16(2), 250–279. [https://doi.org/10.1016/0030-5073\(76\)90016-7](https://doi.org/10.1016/0030-5073(76)90016-7).
- Kamery, R.H. (2004). Employee motivation as it relates to effectiveness, efficiency, productivity, and performance. In *Allied academies international conference: academy of legal, ethical and regulatory issues: proceedings*, 8(2), 139-144.
- Kim, S.K., Shin, S.J., Shin, J., & Miller, D.R. (2018). Social networks and individual creativity: the role of individual differences. *Journal of Creative Behaviour*, 52(4), 285–296. <https://doi.org/10.1002/jocb.153>.
- Kohont, A., & Ignjatović, M. (2022). Organizational support of working from home: aftermath of COVID-19 from the perspective of workers and leaders. *Sustainability*, 14(9), 5107. <https://doi.org/10.3390/sul4095107>.
- Laker, B., & Roulet, T., (2019). *Will the 4-day workweek take hold in Europe*. Retrieved 23.02.2023 from <https://hbr.org/2019/08/will-the-4-day-workweek-take-hold-in-europe>.
- López, M.M., & Moreno, A. (2021). *The impact of digitization of the economy on the skills and professional qualifications, and their impact on working conditions and labor*. Aranzadi.
- Mizuno, M., Yamada, Y., Ishii, A., & Tanaka, S. (2006). A human resource management approach to motivation and job stress in paramedics. *International Congress Series*, 1294, 167–170. <https://doi.org/10.1016/j.ics.2006.02.021>.
- Mokhtarian, P., Bagley, N., & Salomo, I. (1998). The impact of gender, occupation, and presence of children on telecommuting motivations and constraints. *Journal of the American Society for Information Science*, 49(12), 1115–1134. [https://doi.org/10.1002/\(SICI\)1097-4571\(1998\)49:12%3C1115::AID-ASI7%3E3.0.CO;2-Y](https://doi.org/10.1002/(SICI)1097-4571(1998)49:12%3C1115::AID-ASI7%3E3.0.CO;2-Y).
- Moretti, A., Menna, F., Aulicino, M., Paoletta, M., Liguori, S., & Iolascon G. (2020). Characterization of home working population during COVID-19 emergency: a cross-sectional analysis. *International Journal of Environmental Research and Public Health*, 17(17), 6284. <https://doi.org/10.3390/ijerph17176284>.



- Niebuhr, F., Borle, P., Börner-Zobel, F., & Voelter-Mahlknecht, S. (2022). Healthy and happy working from home: effects of working from home on employee health and job satisfaction. *International Journal of Environmental Research and Public Health*, 19(3), 1122. <https://doi.org/10.3390/ijerph19031122>.
- Nuur, A., Yulianti, R.D., Fauzi, M.N., Wawodjo, M.D., Suhartini, F. ., & Sumadhinata, Y.E. (2021). The effect of work motivation, work stress and work satisfaction on the performance of employees working from home (wfh) during the COVID-19 pandemic at xyz University Jakarta. *Review of International Geographical Education Online*, 11(5), 3189–3197. <https://doi.org/10.48047/rigeo.11.05.209>.
- Pasi, N.B., Mahajan, K.S., & Rane, B.S. (2021). A method for performing forging operation: a perspective of Industry 4.0. *Recent Patents on Mechanical Engineering*, 14(3), 423-435. <https://dx.doi.org/10.2174/2212797614666210120110548>.
- Rahul, De'., Pandey, N., & Pal, A. (2020). Impact of digital surge during COVID-19 pandemic: a viewpoint on research and practice. *International Journal of Information Management*, 55, 102171. <https://doi.org/10.1016/j.ijinfomgt.2020.102171>.
- Ramakrishnan, S., & Arokiasamy, L. (2019). Flexible working arrangements in malaysia: a study of employee's performance on white collar employees. *Global Business and Management Research: An International Journal*, 11(1), 551-559.
- Rathnayake, N.M., Kumarasinghe, P.J., & Kumara, A.S. (2022). How do different types of university academics perceive work from home amidst COVID-19 and beyond. *Sustainability*, 14(9), 4868, <https://doi.org/10.3390/sul4094868>.
- Ross, D.S. (2022). A study on employee motivational factors and employee engagement in South India: the moderating role of work from home. *Vision: The Journal of Business Perspective*, Advance online publication. <https://doi.org/10.1177/09722629221087382>.
- Rupietta, K., & Beckmann, M. (2018). Working from home: what is the effect on employees' effort. *Schmalenbach Business Review*, 70(1), 25–55, <https://doi:10.1007/s41464-017-0043-x>.
- Sablok, G., Stanton, P., Bartram, T., Burgess, J., Boyle, B. (2017). Human resource development practices, managers and multinational enterprises in Australia: thinking globally, acting locally. *Education and Training*, 59(5), 483-501. <https://doi.org/10.1108/ET-02-2016-0023>.
- Smite, D., Tkalic, A., Moe, N.B., Papatheocharous, E., Klotins, E., & Buvik, M.P. (2022). Changes in perceived productivity of software engineers during COVID-19 pandemic: the voice of evidence. *Journal of Systems and Software*, 186, 111197. <https://doi:10.1016/j.jss.2021.111197>.



- Toyin, A.A., Aiyenitaju, O., & Olatunji, D.A. (2021). The work-family balance of British working women during the COVID-19 pandemic. *Journal of Work-Applied Management*, 13(2), 241–260. <https://doi.org/10.1108/JWAM-07-2020-0036>.
- Verma, S.K, Kumar, B.D, Singh, N., Kumari, P., Ranjan, M., & Verma, A. (2021). The impact of COVID-19-induced factors on ,work from home' of employees. *Journal of Pharmacy and Bioallied Sciences*, 13(6), S1000–S10002. https://doi:10.4103/jpbs.jpbs_247_21.
- Wut, T.M., Lee, S.W., & Xu, J. (2022). Work from home challenges of the pandemic era in Hong Kong: a stimulus-organism-response perspective. *International Journal of Environmental Research and Public Health*, 19(6), 3420. <https://doi.org/10.3390/ijerph19063420>.
- Yildirim, S., Acaray, A., & Candan, B. (2016). The relationship between marketing culture and organizational commitment: an empirical study in Turkey. *World Journal of Entrepreneurship, Management and Sustainable Development*, 12(1), 66-80. <https://doi.org/10.1108/WJEMSD-08-2015-0035>.
- Zito, M., Ingusci, E., Cortese, C.G., Giancaspro, M.L., Manuti, A., Molino, M., Signore, F., & Russo, V. (2021). Does the end justify the means: the role of organizational communication among work-from-home employees during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(8), 3933. <https://doi.org/10.3390/ijerph18083933>.

Acknowledgements

Author contributions: author has given an approval to the final version of the article.

Funding: this research was undertaken as part of the *Regional initiative for excellence* programme of the Minister of Science and Higher Education of Poland and was fully funded by a grant (004/RID/2018/19).

Note: the results of this study were presented at the *5th Scientific Conference ,Institutions: theory and practice'* (15–16 September, 2022, Toruń, Poland).



Appendix

Table 1.
Characteristics of the study participants

	Category	Frequency	%
sex	woman	199	44.22
	man	251	55.78
age	–29	72	16.00
	30–40	103	22.89
	40–50	114	25.33
	51–	161	36.78
education level	high	289	64.22
	middle	149	33.11
	others	12	2.67
branch	services	351	78.00
	industry	88	19.56
	agriculture	11	2.44
form of remote work	only remotely	131	70.89
	hybrid	319	29.11
employment type	employment contract	366	81.33
	self-employment	52	11.56
	civil-law contract	16	3.56
	others	16	3.56

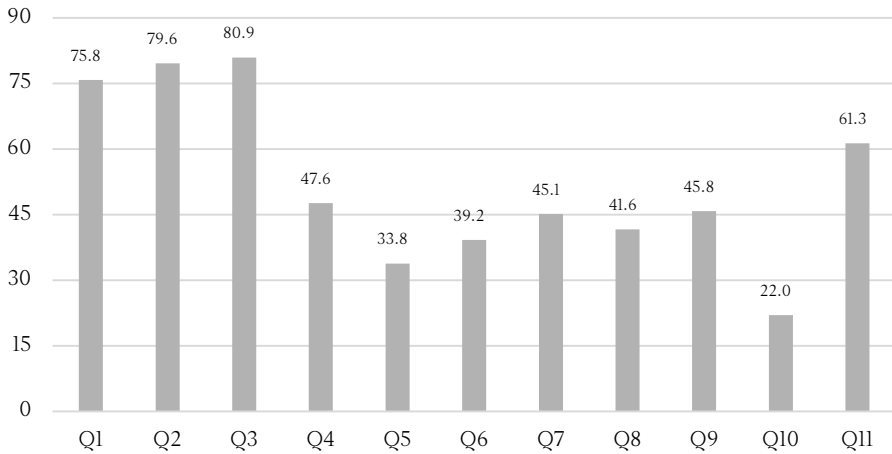
Source: Own preparation.

Table 2.
Assessment of models determining motivation to work

Condition	H	B	Standard error	Wald	df	p	Exp(B)	R ² Cox–Snell	R ² Nagelkerke
Organisational									
equipped workplace	H1	0.010	0.003	10.743	1	0.001	1.010	0.028	0.040
peaceful workplace	H2	0.009	0.003	9.114	1	0.003	1.010	0.158	0.222
internet connection	H3	0.010	0.003	10.841	1	0.001	1.010	0.270	0.039
control of worker	H4	–0.010	0.003	15.532	1	0.000	0.990	0.047	0.066
communication with manager	H5	–0.013	0.002	30.130	1	0.000	0.987	0.078	0.109
Costs/earnings									
worker costs of work	H6	0.001	0.003	0.065	1	0.798	1.001	0.000	0.000
earnings	H7	0.040	0.004	107.760	1	0.000	1.041	0.142	0.198
Effects									
chances of career development	H8	0.017	0.003	42.586	1	0.000	1.018	0.047	0.066
skills and knowledge increase	H9	0.015	0.006	6.824	1	0.009	1.015	0.033	0.049
stress	H10	0.021	0.003	58.758	1	0.000	1.021	0.158	0.222

Source: Own calculation based on SPSS Predictive Solution software.

Chart 1.
Assessment of motivation factors by the respondents (%)



Notes:

Q1: I have a well-equipped and suitable place to work remotely; Q2: I work remotely in a quiet environment; Q3: Internet connection quality is satisfactory; Q4: Manager's control is limited in the remote work; Q5: Communication with a manager and/or client is limited in the remote work; Q6: My costs have decreased; Q7: At my current salary I will continue working remotely; Q8: Remote working has increased my career opportunities; Q9: My level of knowledge and skills has increased during the period of remote working; Q10: Remote working has increased my stress levels; Q11: Based on your current terms and conditions of employment (not including salary), would you be willing to continue working remotely?

Source: Own preparation.