
ECONOMICS

Sociology

Konczos Szombathelyi, M., Borgulya, Á., & Balogh, G. (2023). Home-based telework: aspects of communication. Evidence from Hungary. *Economics and Sociology*, 16(3), 178-197. doi: 10.14254/2071-789X.2023/16-3/10

HOME-BASED TELEWORK: ASPECTS OF COMMUNICATION. EVIDENCE FROM HUNGARY

Márta Konczos

Szombathelyi

*Széchenyi István University of
Győr, Hungary*

E-mail: kszm@sze.hu

ORCID 0000-0001-5248-7752

Ágnes Borgulya

University of Pécs, Hungary

E-mail:

borgulya.istvanne@ktk.pte.hu

Gábor Balogh

University of Pécs, Hungary

E-mail: baloghg@ktk.pte.hu

Received: October, 2022

1st Revision: August, 2023

Accepted: September, 2023

DOI: 10.14254/2071-
789X.2023/16-3/10

JEL Classification: M1

ABSTRACT. This paper examines the communication aspect of Home-Based Telework (HBT). The aim of this study is to focus on internal organizational communication from the perspective of occupation and time spent in HBT by answering two research questions. Firstly, how does the occupation influence the perception of organizational communication and the attitude towards remote work? Secondly, does the evaluation of communication within the organization change according to the employees' judgment, depending on the time spent in HBT? During the research, a systematic literature review related to HBT was carried out. Moreover, an anonymous online questionnaire survey was conducted in four occupational groups, on a sample of 1,100 people. The results show that there are significant differences related to the perception of communication between groups that can be distinguished based on occupations and time. The conclusions drawn from the results can serve as a reference point both for the researchers of the topic and for those company managers who prepare and organize the permanent introduction of HBT.

Keywords: home based telework (HBT); intern corporate communication; influence of the profession and time spent in HBT

Introduction

Due to the measures related to COVID-19, the amount of research motivated by management science in the field of remote work has increased by leaps and bounds worldwide. The reason for this, on the one hand, is that before the epidemic, employees – mainly in Central and Eastern Europe – had little experience of remote work, and not everywhere was management prepared to support such work (Wang et al., 2021). Those who did work from home did not gain the experience through a permanent arrangement, but rather through occasional remote work (for example, HBT one day a week). The pandemic and the lockdowns, on the other hand, forced managers and subordinates to work from home continuously from one day to the next. HBT became a consequence of enforcement, not individual decision. As a result, a series of questions were raised, forced by the new practice. While some previously researched topics suddenly became very important and researchers were encouraged to search

for immediate solutions, several questions lost their timeliness due to the crisis; for example, the issue of which personality and work types are more suited to working from home is no longer among the main questions.

This work focuses on internal organizational communication from the perspective of occupation and time spent in HBT. The first chapter introduces the main concepts and organizes the recent literature on HBT based on the main research areas that have become particularly important as a result of COVID-19. It brings the studies dealing with the connection between communication and HBT under closer scrutiny. The second chapter places the research to be presented in a model developed by the authors to map the factors affecting organizational communication and the effects caused by communication. It also includes the questions motivating the research and the hypotheses. The third chapter presents the research methodology and data. The results show that there are significant differences related to the perception of communication between groups that can be distinguished based on occupations and time. The results and discussion can be found in the fourth chapter. In the fifth chapter, the authors draw their conclusions. These are followed by the presentation of the research limitations and the list of references.

Although the research was conducted in Hungary, this paper can be relevant for academics, senior managers of corporations and other large companies operating in the Central and Eastern European environment. The study draws attention to the importance of the continuous development of digital literacy. In addition, it presents factors to be kept in mind for managers who prepare and manage the long-term introduction of HBT, including the fact that employees performing different tasks require different preparation. A systematic review of recently published literature can provide clues for researchers.

1. Literature review

This chapter of the study focuses on conceptual interpretations and the literature review. First, we review the interpretations of corporate communication and then HBT.

1.1. Corporate communication

According to van Riel and Fombrun (2007, p. 22), “corporate communication addresses the fulfilment of organizational objectives”. Cornelissen, explaining the increasing importance of corporate communication, wrote (2020, p. 4), “when other stakeholders, internal and external to the company, started to demand more information from the company, practitioners subsequently started to look at communication as being more than just ‘public relations’. This is when the roots of new corporate communication function started to take hold. This new function came to incorporate a whole range of specialized disciplines, including corporate designing, corporate advertising, corporate communication to employees, issues and crisis management, media relations, investor relations, change communication and public affairs.” Defining corporate communication, we accept the approach of Cornelissen (2020) that it is a management function, which is complex in nature and demands integrated approach.

Our study uses the concepts of internal corporate communication in the following sense: “Internal communication's purpose is to provide an effective flow of information between an organization's departments and colleagues. This applies both up and down the management/employee chain. It also works among employees who are interacting with each other in the company.” (Herman, 2022).

Although communication appears in almost every study, explicitly or implicitly, and its importance is emphasized by the authors (Allen et al., 2015; Fay & Kline, 2011; Fonner &

Roloff, 2010; Golden et al., 2008; Madlock, 2013; Wiesenfeld et al., 2001), it is relatively rarely in the focus of research (DeFilippis et al., 2020; Gibbs et al., 2021; Golden et al., 2008; Konczosné Szombathelyi et al., 2015). For this reason we made internal organizational communication the key question of our investigation.

In our opinion, it is necessary to deal with communication from two aspects in connection with remote work: on the one hand, from the point of view of corporate effectiveness, and on the other hand, from the point of view of the employee's well-being, mental health and community integration.

From the point of view of corporate effectiveness, the goal of communication is to ensure that information in all directions be available to both management and employees without interruption. This primarily means ensuring communication technology, the transmission of work-related information, and overall communication conditions. The availability of the data required for work, the possibility of uninterrupted information sharing, recording, monitoring and evaluation of performance must be ensured. This includes not only the provision of appropriate technology, but also the formation and development of the skills necessary for their use. From the point of view of corporate efficiency, the question in the examined studies was how the amount of communication changed depending on the channels after the transition to HBT and how this affected the "output" of work. Research on the amount of communication has been carried out, for example, by DeFilippis and colleagues (2020), and Gibbs and colleagues (2021).

From the point of view of employee well-being, mental health and community integration, the aim is to prevent or reduce social isolation and loneliness. HBT's support also arises from both a technical and community point of view, the transition of which from Office-based-work (or Work from Office, WFO) to HBT is a major task for management.

The issue of communication is therefore generally published from the perspective of productivity (Bilan et al., 2023; DeFilippis et al., 2020; Gibbs et al., 2021), job satisfaction (Golden et al., 2008), social psychological effects (Fay & Kline, 2011), mental health and its preservation (Kuroda & Yamamoto, 2018), employment risks (Mishchuk et al., 2023).

The study written by Wiesenfeld, Raghuram and Garud (1999) highlights the role played by communication in individuals' cognitive attachment to the company. Attachment significantly influences the efforts made for the sake of the company.

DeFilippis and his colleagues (2020) examined the digital communication practices of employees in the early stages of the pandemic in a sample of more than 3 million people in nearly 21,500 companies (in major cities in North America, Europe, and the Middle East). They analyzed metadata about meetings and emails and they found that communication changed after the lockdowns. Immediately after the closures, the number of meetings and emails skyrocketed. The number of meetings per person increased by almost 13%, and the number of participants in meetings also increased. At the same time, the average length of meetings decreased significantly (by almost 20%). Email traffic also picked up, company employees sent more emails to more recipients than before. In other words, the employees simultaneously increased the frequency and extent of communication. DeFilippis and his colleagues assess that "such a change in communication is in line with the need to replace the usual face-to-face communication in office work with a virtual one". (DeFilippis et al., 2020, p. 7). On the other hand, it was also revealed that the increase in communication activity was accompanied by an increase in the length of working hours. The first and last e-mails of the day, or the documentation of check-ins and checkouts of meeting clearly indicates an average increase of nearly 8% in working hours (p. 6). In other words, within the framework of HBT, the usual output can be achieved with increased working hours and communication activity. According to the authors, the results also show that "patterns of email and meeting activity began to

change, on average, about a week prior to formal lockdown issuances, suggesting that organizations can rapidly adjust their communication patterns in anticipation of formal policy requirements, or in response to local environmental conditions.” (p. 8).

Gibbs et al.'s (2021) research on a large sample is also based on the company's point of view: it focuses on the relationship between HBT productivity and the amount of communication. The data attests that “employees spent more time participating in various types of meetings, but less time in personal meetings with their manager or receiving coaching”. (Gibbs et al., 2021, p. 3) It can be read from the data that the time of meetings with managers increased significantly, participation in calls between team members (MS Team calls) increased almost a hundredfold. The number of emails sent per week also increased as did the number of participants in intra-company networking per person. These findings partially coincide with DeFilippis and his colleagues' (2020) results.

1.2. Home based telework

Working from home to earn income has been given many names. In our study, we decided on the designation HBT (Home Based Telework). “HBT is considered and defined as working from home by deploying information and communication technologies (ICTs) to keep in touch with colleagues and deal with allocated working tasks“ (Nguyen & Armoogum, 2021). Even with this content, the name Work(ing) from Home (WFH) appears in many studies (Gibbs et al., 2021; Vyas & Butakhieo, 2021).

Telecommuting as a new mode of work has gained more and more space in the past few decades, especially in “western” countries, so its research also goes back decades. Bailey and Kurland (2002) provide an overview of telework research: which topics have been the most researched in the previous 15 years.

However, because of the COVID-19 pandemic, Central and Eastern European countries were suddenly forced to implement it extensively, thereby raising a series of problems. Due to the forced circumstances, topics that had already been researched and new points of view appeared worldwide. Among others, such topics are the following.

- reconciling family and work: negative effects on workers' work-life balance (European Parliament's committee on Employment and Social Affairs, 2021; Bencsik & Juhasz, 2023); work and life domains (Galanti et al., 2021; Vyas & Butakhieo, 2021),
- evolution of traditional male and female roles (Galanti et al., 2021; Huws et al., 1996; Iscan & Naktiyok, 2005; Nguyen & Armoogum, 2021),
- social support (Bentley et al., 2016; Fonner & Roloff, 2010; Golden & Gajendran, 2019; Guo, 2017),
- psychological effects such as stress, loneliness, emotional exhaustion, well-being (Bentley et al., 2016; Jurek et al., 2021), satisfaction (Guo, 2017), social isolation (Davidescu et al., 2020; Lal & Dwivedi, 2009; Lengen et al., 2021),
- health effects (Xiao et al., 2021),
- work ability: time management, self-management, autonomy (Clear & Dickson, 2005),
- work design (Parker, 2014; Vyas & Butakhieo, 2021; Wang et al., 2021) and mastering new professional skills (Davidavičiene et al., 2023),
- effectivity, productivity, performance (Allen et al., 2015; Davidescu et al., 2020; Etheridge et al., 2020; European Parliament's Committee on Employment and Social Affairs, 2021; Gibbs et al., 2021; Wang et al., 2021), task and process management (Raišienė et al., 2021),
- time exploitation and utilization (Teodorovicz et al., 2022).

In the research, sociological, (work) psychology, and business economics viewpoints appear and are mixed. Researchers are widely concerned with the factors influencing the output of remote work (Allen et al., 2015; Etheridge et al., 2020). On the one hand, they considered such factors

- the characteristics of the company, such as
 - the sector of activity (e.g. digital service provider, cultural-creative sector, intellectual service provider: translation, education),
 - the size of the company,
 - ICT supply and level of use,
 - the preparedness of the management (Harris, 2003);
- on the other hand, the individual characteristics of the employees, (Astroza et al., 2020), such as
 - income (research shows that there is a close correlation between income, status and the output of telework. Telework has become a form of work for people with higher incomes, while people with low incomes were forced to work in their workplaces even during the epidemic.
 - other important factors that correlate with teleworking are gender, educational level, employment status, and occupation (Astroza et al., 2020, p. 1).
 - gender, primarily as a result of the roles associated with them (for example, in the case of a traditional female role, the effect of marital status and child care),
 - educational level (higher educated individuals are more likely to work from home),
 - employment status (blue collar and white collar positions) and in this connection income,
 - activity (financial work, business management, professional and scientific services), occupation (translator, programmer, teacher),
 - also individual psychological characteristics (ability to work independently, ability to withstand stress, self-discipline, need for internal and external motivation).

According to Vyas and Butakhieo (2021), such factors affect the complex phenomenon of work and the family, and through them, on the one hand, productivity, job satisfaction, flexibility, and dedication to work, and on the other hand, the balance between work and other areas of life, also satisfaction with life and family (*Figure 1*).

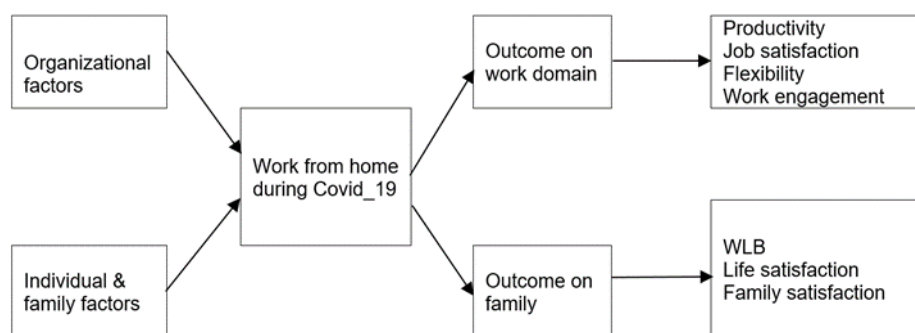


Figure 1. Analytical framework: Factors affecting HBT and its impact on work and other areas of life

Source: Vyas, & Butakhieo (2021, p. 66)

We find it remarkable that research looks for and presents the characteristics of remote work (Work from Home/WFH) in relation to Office Based Work (OBW) (Gibbs et al., 2021; Vyas & Butakhieo, 2021). The respondents who express their opinions in the surveys comparing their Work-from-Office and Work-from-Home experiences, report e.g. increased workload, stress, disorganization, changes in communication. These findings are aligned with research highlighting the high level of mental distress in terms of social isolation during the pandemic (Ginevičius et al., 2022). The SWOT analysis of Vyas and Butakhieo provides an overview on this basis (*Table 1*).

Table 1. The impact of working from home during COVID-19 on work and life domains: An exploratory study on Hong Kong

SWOT analysis of the situation of Hong Kong		
	Work-from-Office	Work-from-Home
STRENGTHS	Networking opportunities, face-to face interactions Opportunities for collaboration Prevent miscommunication/effective supervision Separation of work and personal life Greater sense of belonging Better on boarding for new employees A focused environment Greater access to technology No risk of information leaks	Flexible arrangement No office distractions (e.g. no office noise) Autonomy/Freedom Cosy/Familiar environment (reduced stress) Time saving/No commuting Money saving (e.g. spend less on renting office spaces) Work-life balance Reduce absenteeism
WEAKNESSES	Lack of flexibility Sedentary lifestyle Noisy workplace(e.g. loud conversations) Time wasted in unnecessary meetings Irrelevant side conversations Commuting expenses Higher operating coast (e.g. utility bills)	Distractions (e.g. family members, household duties) Uncomfortable environment (e.g. living in a small space) Lack of supervision Communication barriers Missing social interactions/loneliness Lack of hardware support Blurred lines between work and personal life Unhealthy lifestyle (e.g. lying on the sofa all day) Not favoured by all employees Injustice
OPPORTUNITIES	Maintain a professional appearance (e.g. build lasting relationships with clients)	Hybrid models New talents from around the world
THREATS	Less workforce diversity (e.g. married woman, & elderly) Traffic-related air pollution	Cybersecurity (e.g. data theft) Privacy (e.g. loss of corporate /employee/customer data) No WFH policies and regulations Extra expenses associated with homework High competition (e.g. job maybe outsourced to cheap overseas labour)

Source: Vyas, & Butakhieo (2021, p. 68)

It is important from the point of view of evaluating the studies that many of them were based on 2-3 weeks of telework experience. We consider this to be a fairly short period of time. There are many variations between full HBT and short HBT. Some research also classified those who work from home once a week as HBT employees (Astroza et al., 2020). In this study, we differentiate between those who work remotely for more than 6 months and those who work remotely for less than that. Only those who work from home for at least 50% of their working time are considered HBT workers.

2. Research model(s) /frame(s) and hypotheses

The effects impacting the quality of communication and the effects of communication on the company and on the individual can be summarized in a model below (own compilation, based on the literature (*Figure 2*)).

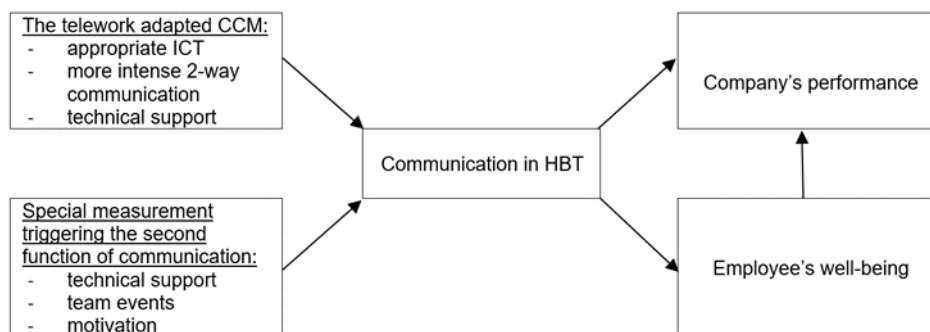


Figure 2. HBT – communication framework – Impact on the and of the Communication in Home Based Telework

Source: *own compilation*

According to this model, the quality of HBT communication is determined by the regular corporate communication management (CCM) adaptation to telework: management of organizational communication, appropriate information provision (planning, organization, operation, control, evaluation), provision of ICT, appropriate development of the ICT skills of colleagues (together with technical support), ensuring rapid adaptation to changing conditions.

On the other hand, it is determined by special measures triggering the social function of the communication of HBT. Among them are the enabling and support of events that maintain social ties and can be implemented online. For this, the provision of communication media and the integration of team events into working hours are prerequisites.

In terms of its consequences, HBT communication has a direct impact on the performance and effectiveness of the company and on the employees (access to information necessary for work, knowledge sharing, psychological well-being). At the same time, the latter itself affects the company's performance.

In our empirical research, we deal with the effects of HBT communication on individuals, displayed in the lower right quarter of the model.

Our research questions:

- Do company employees feel internal organizational communication changed with the introduction of HTB?
- What are the consequences of the change in communication from an individual point of view?

- What inhibiting and supporting phenomena do they face in HTB?
- Does the assessment of internal organizational communication depend on the occupation (activity within the company)?
- Does the evaluation of internal organizational communication depend on the time spent in HBT?

With the transition to HBT, we regard the change in internal organizational communication as a fact that does not require proof, but we wanted to make sure that the affected employees also experience this. Therefore, this statement was labeled H0.

Our hypotheses:

- H0 With the transition to HBT, internal organizational communication changes.
- H1 Due to the transition, one has to deal with negative phenomena.
 - H1a It is difficult to cope with IT applications.
 - H1b Obtaining information necessary for work in HBT is more difficult than under OBW conditions.
 - H1c Spontaneous learning and knowledge sharing is impaired
- H2 Positive communication effects also occur.
 - H2a The employee is freed from: frequent interruptions in work due to co-workers' interactions, unnecessary chatting, unpleasant communication behaviour of the boss.
 - H2b Work performance improves due to the elimination of disrupting communication.
- H3 Different occupational groups experience positive and negative changes differently.
- H4 The longer the employee spends in HTB, the more experience they have with HBT communication, the less they find the changes in communication to be negative.

3. Sample and research methodology

3.1. Sample characteristics

Our sample includes 1,110 people employed at different companies, who were randomly selected and contacted with our online questionnaire in the spring of 2022. The respondents are mainly employees of companies in North-West Hungary who attended a correspondence course at a university. Based on the occupations and activities specified by the respondents, four groups emerged: corporate informaticists / IT people (INF-group) (186 people), people working in business positions (BUS-group) (359 people), people holding management positions (MAN-group) (322 people) and people performing human-oriented tasks (HOT-group) (secretaries, organizers, trainers, corporate lawyers, psychologists, etc.) (218 people). 25 people did not belong to either group, so their answers were only taken into account in the evaluation of the entire sample. We differentiated between those working remotely for more than 6 months and those working remotely for less than that, and only those who work from home for at least 50% of the working time are considered HBT workers

62% of the respondents are employed by a Hungarian organization, 26% have a Hungarian employer with headquarters abroad, and 12% have a foreign employer. More than half of the respondents (52%) work for large companies (with more than 250 employees), one-fifth work for medium-sized companies (between 51-250 employees), another fifth work for small companies (11-50 employees), and 8.6% work for microenterprises (1-10 employees). More than two-thirds (72%) of the respondents became home workers due to the epidemic

measures, and 41% of them had been working from home for more than six months at the time of filling out the questionnaire, while only 4.7% of the respondents were hired for working from home from the very beginning. 83% of the sample works for a company, 14% for a public institution. In the case of 44% of the respondents, the company operated working from home even before the epidemic, while with another 44% it was not operated, and 12% did not know. 34% of the respondents has a higher education degree, 12% has completed secondary education, the remaining 54% did not provide an education level.

In our research, we did not measure the change in the performance of the companies involved, as this can only be demonstrated over a longer period of time (over 6 months) and the measurability entails other difficulties (Gibbs et al., 2021). Our outlook on this is basically based on literature, self-evaluation and logical conclusion.

3.2. Methodology

Our database contains 75 variables (items), most of which concern quality criteria. The vast majority of the scales are nominal or ordinal. A five-point Likert scale was used for several questions, and the respondents could choose from the following for the listed statements: "I don't agree at all, I rather disagree, I neither agree nor disagree, I rather agree, I completely agree". Since we did not use quantitative variables, we could not build correlation and regression models either. In the model specification, we compared findings related to HBT with occupational groups, time (have you been working from home for more than 6 months), and a combination of the two (time spent in HBT within occupational groups). For the cross tables of the non-metric dependent and independent variables, we used the Pearson's Chi-square test, which measures the statistical significance of the correlations of the compared variables. The condition of the test is the independence of the variables and the expected frequency, which was examined in each case and found to be ensured. In the case of the null hypothesis, there is no relationship. In the following, we only present results for which the significance level is less than 0.05, so for the data tested at the 5% significance level, the null hypothesis can be rejected and a significant relationship can be identified.

In the questionnaire

- statements B 1-8, C 1-5, C-8, 11 serve for the examination of telework adapted CCM,
- statements B-9, 17, C-9 and 11, as well as additional questions, are applied for special measurements,
- we intended to reveal the effect of individual communication on the effectiveness of corporate communication with statements B-11, 18, 19 and C-7, 9, 12, and
- the employees' well-being and mental health were examined with statements B-9, 10, 12, 13, 14, 15, 16, 20, 21 and C-6, 10.

4. Results

According to the time spent in HBT, we examined which statements have a significant relationship with the type of job the respondents work in (*Table 2.*).

Table 2. Significant relationships between statements about HBT and occupational groups, time factor (significance p value)

Qs	Statements	Occ. grs	Time	INF	MAN	BUS	HOT
B-1	Communication within the organization has changed.				0,046		
B-3	Direct interpersonal (in person) communication was primarily replaced by work meetings through telephone.				0,014		0,029
B-4	Direct interpersonal (live) communication has primarily been replaced by online meetings (video chat, video conference).			0,001		0,001	0,038
B-5	The greatest difficulty was learning how to use new communication platforms, storage spaces, and software.					0,025	
B-6	The greatest difficulty was caused by the fact that the direct personal contact has ceased and it is therefore more difficult to ask for help in the work processes.					0,010	
B-7	The greatest difficulty was attempting to mitigate and eliminate technical problems (e.g. image and sound errors) during online meetings.					0,025	
B-8	The greatest difficulty was caused by the fact that we were technically unprepared for online meetings (e.g. using PPTs, screen sharing).				0,003	0,013	
B-9	My work has become more difficult because important information does not reach me; I have to go after it.		0,001			0,013	
B-10	It is a bad feeling that I feel isolated and left to myself in daily communication.		0,008			0,007	
B-12	The most positive change was caused by my colleagues not bothering me with their questions and chatter.		0,019		0,003		
B-13	The most positive change was caused by the fact that communication with the boss(es) and co-workers that caused stress became less frequent				0,001		
B-14	Lack of informal "chat" at work causes a sense of absence.	0,017					

INTERDISCIPLINARY APPROACH TO ECONOMICS AND SOCIOLOGY

Qs	Statements	Occ. grs	Time	INF	MAN	BUS	HOT
B-15	The lack of sharing of informal professional news causes a sense of loss.	0,042				0,033	
B-17	It is a loss for me that the mutual spontaneous knowledge transfer has ceased.		0,023				
B-18	In my case, the change in internal communication resulted in a decrease in work performance.	0,010	0,001			0,015	
B-19	In my case, the change in internal communication resulted in an increase in work performance.	0,001	0,001				
B-20	I wanted to return to office work as soon as it was feasibly possible.		0,001	0,006		0,001	
B-21	I would be happy if my institution/company made it possible to work from home.		0,001		0,001	0,001	
C-1	Our company/institution management has experience in organizing and managing work from home.					0,001	
C-2	Our company/institution introduced working from home as a result of measures related to COVID-19.					0,001	
C-4	The management introduced new info-communication technology solutions.					0,004	
C-6	Technology cannot replace direct personal professional conversations.					0,019	
C-7	The lack of personal meetings has a negative impact on the direct sharing of knowledge and innovative ideas.	0,001	0,006			0,045	
C-9	Our internal communication has become more efficient, because time is not wasted on chatter.		0,006			0,006	
C-10	Our internal communication has become more bleak because we are distanced and disengaged from each other.					0,017	
C-11	Management could do a lot more to improve our internal communication.					0,006	
C-12	Hybrid working would be a good solution: some days in the office, some from home.					0,033	

Source: *own compilation*

No significant relationship can be demonstrated between the time spent in HBT or the occupational groups and the following statements in the questionnaire:

- B-2. Direct interpersonal (face-to-face) communication was primarily replaced by electronic correspondence.
- B-11. The most positive change is that our communication has become more efficient, thanks to new communication solutions (online meetings, circulars).
- B-16. I feel that I have become more distanced from my colleagues.
- C-3. The management brought a series of measures to replace direct interpersonal communication.
- C-5. Management increases the efficiency of communication by using previously unused software.
- C-8. Management supports internal communication not only with technology development.

We examined the temporal dynamics of each occupational group separately. It can be seen that not only could we not identify a relationship to the time spent in HBT in the case of human oriented task professionals (HOT), we were able to identify relationships only in some cases in the case of IT professionals as well. In the case of managers (MAN) and business workers (BUS) there were a number of statements that were significantly influenced by how much experience they had with HBT, i.e. they had worked in this manner for more or less than 6 months.

5. Discussion

We considered it generally accepted that communication within the organization changed significantly with the introduction of HBT. In the following chapter, we analyze the responses regarding the assessment of communication and performance depending on the occupational groups and the time spent in HBT.

5.1. Assessment of communication and own performance according to occupational groups

Our research was aimed at finding out how HBT workers evaluate the personal effects of the change in communication. Furthermore, we would like to know what kind of inhibiting and what kind of supporting phenomena the respondents faced in HTB, and, in addition, how they felt about the development of their own performance as a consequence of this.

Assessment of communication according to occupational groups

Some of the changes are in the nature of the communication tools, that is, daily direct interpersonal communication was replaced by telecommunications. This change brought with it the task of managing technology.

After the cessation of direct interpersonal communication, all four occupational groups switched to online meetings and video conferences, although electronic mail and the telephone were also important substitutes. In the group of computer scientists (INF-group), a very high proportion (76%) indicated the video conference as the most important tool, while in the HOT-group it was 53%, and among the human-oriented group, electronic correspondence had almost the same proportions.

In terms of device use, less than a quarter of the respondents in all groups alleged difficulty in learning how to use new devices, software, platforms, and storage. Understandably, in the INF-group the proportion of those indicating difficulty remained below 1%.

While the majority of respondents believe that they were technically prepared for online meetings (for example, screen sharing), the members of the HOT group felt disadvantaged in this area; 47% of them did not feel prepared or were uncertain. Although the majority were not frustrated by technical errors that may occur during online meetings, as much as 20% of the members of the INF-group and 32% of the members of the HOT group were afraid of technical hitches.

In addition to technical information, the information required for work is also a basic prerequisite. On average, half of the entire sample of the respondents believe that they receive the necessary information; however, according to almost one third of the members of the MAN, BUS and HOT groups, they do not receive all necessary information and have to look it up themselves.

The weakening of social relations had its effect on all groups. In all four groups, between 40-45% of respondents felt that it is more difficult to ask for professional help in work processes due to the loss of personal contact. The proportion of those who did not report such difficulties was below 30%, except for the INF group, where the proportion of those who did not experience that it was more difficult to get help was slightly above 41%.

Spontaneous learning from each other is one of the benefits of community work that is often forgotten. The loss of this opportunity was also indicated by a high percentage of the respondents. In the total sample, on average 49% experienced this consequence as a loss, but nearly 57% of the managers perceived the problem.

As a result of the cessation of personal contact, work can become more uninterrupted: colleagues do not constantly bother each other with questions and comments. Nearly a third of them are happy that work is more peaceful this way; however, more than 50% of the respondents do not consider the "chattering" of colleagues to be a condition that interferes with communication.

Based on these results, it can be stated that a significant difference can be identified in the occupational groups in the sense of deprivation due to the lack of informal "chatting" at work, the lack of sharing of professional news, as well as in how the change in internal communication affected work performance.

The lack of personal meetings also had a different effect on the individual groups in terms of direct knowledge sharing and innovative ideation. By examining the internal distributions of the statements, it can be concluded that IT professionals coped best with the situation (they had less of a sense of deprivation, their work performance declined less, and the lack of personal meetings had a more negative effect on direct knowledge sharing than in the other groups).

Assessment of own performance according to occupational groups

With regard to performance, literature sources report an increased time spent in HBT. In other words, it seems that in order to be able to provide the performance that employees provide during office-based work, they have to spend more working hours at home (DeFilippis et al., 2020; Gibbs et al., 2021; Golden et al., 2008). Our survey was not directed at the amount of time spent at work on average per day. However, it is clear from the answers that the work performance - according to their own assessment - has not changed significantly. For both increase and decrease questions, nearly 60% indicated that performance had not decreased, and nearly 40% indicated that it had not increased. The largest proportion (40.8%) of IT professionals report an increase in performance. The HOT group showed the most significant

decrease in performance; 22% of them felt that they did not deliver on their performance during OBW. Related to the performance self-assessment, we will compare the answers of the INF and HOT group members in the following section.

5.2. Results depending on the time spent in HBT and the occupation

Based on the aspect of time, we examined how many people were already working in HTB before the epidemic. We had 451 such respondents in the sample, but only 41 of them had worked in HTB for more than 1 year. The comparison was made between those who had been working at home for more than six months before our inquiry and those who had been working at home for less than that.

Assessment of communication and self-performance according to the time spent in HBT and the occupation

Keeping in mind the most efficient work and the best possible performance, we first of all researched the prerequisites of communication: the existence of technical conditions, the provision of the necessary information, psychological and well-being conditions.

36% of those who have been working from home for more than 6 months rather or completely agreed that the most positive change was caused by not being disturbed by their colleagues with their questions and chatter, while only 28% of those who have worked in HBT for a shorter time answered this way.

The absence of direct interpersonal communication was mainly associated with psychological consequences, mostly experiencing difficulties and frustration. The fact that learning to use new devices, software, platforms, and storage spaces generally did not cause any difficulties is gratifying. At the same time, 25% of those performing human orientation tasks (HOT) experienced this change as a difficulty. This is an important message for business leaders.

According to almost a third of the members of the MAN, BUS and HOT groups, they did not receive all the information for their work and had to research it themselves. 33% of the HOT group indicated this problem. Since the acquisition of information is time-consuming, it is an important factor in terms of work efficiency.

The answers to coping with technical difficulties suggest that those who had almost no problems with the technique (INF: 1%) did not show a decrease, but rather an improvement in performance (40.8%). Those who had to struggle with hardware and software (HOT 25%) and felt unprepared for online meetings (HOT 47%) did not manage to work with the same previous performance level.

We found that in the case of HBT workers for more than 6 months the company introduced remote work mostly before COVID-19 (this indicates that the management had time to plan remote work and prepare for working from home),

- the employer is mostly a foreign-owned company employing more than 250 people,
- the stakeholders consider the management to be more prepared to handle communication in the given situation than those who have been working from home for a shorter period of time,
- the introduction of new communication platforms caused fewer problems,
- they feel the lack of informal professional information less,
- they consider their own work performance to be better, they report an increase in performance in HTB compared to their performance in OBW,
- they find their work less difficult,

- the majority of them would be happy with the possibility of remote work even after the restrictions are over, and would less like to return to OBW,
- at the same time, they feel that they are more distanced from their colleagues.

We found that those who have been working from home for less than 6 months compared to those who have been telecommuting for at least 6 months

- think more firmly that management could do a lot to improve internal communication,
- tend to think that knowledge sharing and the exchange of innovative ideas are negatively affected by telework,
- consider personal communication to be less replaceable with technological solutions.

An explanation of these can be found in the text notes:

- Online meetings become regular.
- Communication with professional content will be regular in the framework of continuing education. The importance of this is confirmed by the research of Cooper and Kurland (2002). Their qualitative study revealed that telecommuters experienced more professional isolation when they missed opportunities to engage in developmental activities at work.
- The system of social support is introduced: management initiates a wide range of interactions between colleagues. Our respondents named a wide range of such possibilities (V.o. Wang et al., 2021) Teleworkers who received more social support from supervisors and organization reported less social isolation, psychological strain, and heightened job satisfaction (Baker et al., 2006; Bentley et al., 2016). Bentley et al. (2016) also found indirect effects of social support from supervisors and the organization on psychological strain and job satisfaction via reducing social isolation in remote working practices. "Even limited social support can have strong positive spillover effects when social resources people pursue are hard to obtain" (Wang et al., 2021, p. 23).
- The impact of this on well-being is shown in our research in that employees who have been working in HBT for more than half a year reported satisfaction with HBT in more cases than those who spent less than half a year in HBT.
- The performance of those who have worked in this way for the rest of the time has declined less, and they are less likely to return to office presence work than those who have been working in this form for less than 6 months. Of those who have been working from home for a long time, nearly 60% said that they would be happy if their employer made it possible to work from home permanently, compared to only 38% of those who have been working from home for a shorter time.

6. Conclusion

As a result of the COVID-19 pandemic, internal organizational communication has changed with mass transition to HBT. All of this has urgently drawn attention to the indispensability of digital literacy, which is not only essential from the point of view of HBT, but also to keep up with the general development of technology (Balázs et al., 2020; Mazurchenko & Zelenka, 2022).

Different occupational groups experience positive and negative changes differently. In our research, the "situational advantage" of IT professionals in coping with HBT communication tasks proves that continuous further education in the field of IT and digital

culture is in the basic interest of companies. This is also required by the spread of HBT and the challenges of Industry 4.0.

The lack of necessary work related information can weaken work efficiency. Since the acquisition of information is time-consuming, it is an important task for managers to make all of the required information available for employees working in HBT.

When examining the time factor, it can be concluded that those working from home for more than 6 months adapted to the new situation more successfully, had fewer negative feelings, and their work became less difficult. The longer the employee spends in HBT, the more experience they have with HBT communication and the less they perceive the changes in communication to be negative.

A significant number of employees wish to be able to work from home. Ensuring this can be an important labour retention factor and even a competitive advantage.

The spread of HBT can have both positive and negative effects on the worker's well-being and work performance. With the decrease of personal meetings, employers must offer a solution to the mental difficulties that arise as a consequence of working alone at home, e.g. professional training of employees, promoting a mindset of upskilling, community support or partly working from home (companies allow this to be shared in several ways).

Below, we summarize the verification of the hypotheses (*Table 3.*)

Table 3. Verification of the hypotheses

	Hypothesis	Verification	Thesis
H0	With the transition to HBT, internal organizational communication changes.	verified	With the transition to HBT, internal organizational communication changes.
H1	Due to the transition from OBW to HBT, negative phenomena must also be dealt with.	verified	Due to the transition from OBW to HBT, negative phenomena must also be dealt with.
H1a	It is difficult to cope with IT applications.	partially verified	The difficulty of coping with IT applications is different for each occupational group.
H1b	Obtaining the information necessary for work is more difficult in the case of HBT than under OBW conditions.	verified	Obtaining the information necessary for work is more difficult in the case of HBT than under OBW conditions.
H1c	In the case of HBT, spontaneous learning and knowledge sharing are impaired.	partially verified	A high proportion (49-57%) of the respondents indicated the loss of the opportunity to learn spontaneously from each other
H2	There are also positive communication effects due to the transition from OBW to HBT.	verified	There are also positive communication effects due to the transition from OBW to HBT.
H2a	It is positive in HBT that the employee is freed from frequent interruptions of work due to co-workers' interactions, unnecessary chats, and unpleasant communication behaviour of the boss.	partially verified	Some of the respondents do not consider the "chattering" of co-workers as a condition that interferes with communication.

H2b	Due to the elimination of interfering communication, work performance in HBT increases.	partially verified	HBT workers for more than 6 months report an increase in performance in HTB compared to their performance in OBW. The work performance is influenced by other factors, such as preparation for HBT work.
H3	Different occupational groups experience positive and negative changes differently.	verified	Different occupational groups experience positive and negative changes differently.
H4	The longer the employee spends in HTB, the more experience they have with HBT communication and the less they perceive the changes in communication to be negative.	verified	The longer the employee spends in HTB, the more experience they have with HBT communication and the less they perceive the changes in communication to be negative.

Source: *Own compilation*

Limitations of research

The survey was conducted at Hungarian companies that are not identifiable to us.

The six-month HBT time limit was arbitrarily drawn, based on the fact that according to the Labour Code, employers (usually) enter into a trial period contract with newly hired employees for a period of 3 months, which can be increased to a maximum of 6 months according to the collective agreement. According to our assumption, the time required for "training" lies behind this provision. We did not collect data on whether there is a numerical boundary in the change of the determining factor, or whether communication and its consequences are gradually transformed.

The two factors we examined (occupation and time) stand out from the many factors influencing HBT. Therefore, our conclusions regarding performance are to be treated with reservations, since they do not take into account many influencing parameters of the company (industry, size, IT readiness, etc.) and also exclude the characteristics of the individual (gender, age, personality, etc.). At the same time, attention is directed to aspects that can be well planned and managed well by company management.

References

- Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How Effective Is Telecommuting? Assessing the Status of Our Scientific Findings. *Psychological Science in the Public Interest*, 16(2), 40-68. <https://doi.org/10.1177/1529100615593273>
- Astroza, S., Tirachini, A., Hurtubia, R., Carrasco, J. A., Guevara, A., Munizaga, M., Figueroa, M., & Torres, V. (2020). Mobility changes, teleworking, and remote communication during the COVID-19 pandemic in Chile. Findings. <https://doi.org/10.32866/001c.13489>
- 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 Behavior*, 23, 383-400. <https://doi.org/10.1002/job.144>
- Baker, D. P., Day, R., & Salas, E. (2006). Teamwork as an essential component of high-reliability organizations. *Health Services Research*, 41(4), 1576-1598. <https://doi.org/10.1111/j.1475-6773.2006.00566.x>

- Balázs, L., Rajcsányi-Molnár, M., András, I., & Sitku, K. (2020). Social Responsibility in Higher Education: A Hungarian Best Practice. *Civil Szemle*, 17(Special Issue I. Education, Digitalisation, Civil Society), 155-173. https://epa.oszk.hu/04100/04123/00005/pdf/EPA04123_civil_szemle_2020_ksz_155-174.pdf
- Bencsik, A., & Juhasz, T. (2023). Impact of technostress on work-life balance. *Human Technology*, 19(1), 41–61. <https://doi.org/10.14254/1795-6889.2023.19-1.4>
- Bentley, T. A., Teo, S. T. T., McLeod, L., Tan, F., Bosua, R., & Gloet, M. (2016). The role of organisational support in teleworker wellbeing: A socio-technical systems approach. *Applied Ergonomics*, 52, 207-215. <https://doi.org/10.1016/j.apergo.2015.07.019>
- Bilan, Y., Oliinyk, O., Mishchuk, H., & Skare, M. (2023). Impact of information and communications technology on the development and use of knowledge. *Technological Forecasting and Social Change*, 191, 122519. DOI: 10.1016/j.techfore.2023.122519
- Clear, F., & Dickson, K. (2005). Teleworking practice in small and medium-sized firms: management style and worker autonomy. *New Technology Work and Employment*, 20(3), 218-233. <https://doi.org/10.1111/j.1468-005X.2005.00155.x>
- Cooper, C. D., & Kurland, N. B. (2002). Telecommuting, professional isolation, and employee development in public and private organizations. *Journal of Organizational Behavior*, 23, 511-532. <https://doi.org/10.1002/job.145>
- Cornelissen, J. P. (2020). *Corporate communication: A Guide to Theory and Practice* (6. ed.). SAGE.
- Davidavičiene, V., Rymaniak, J., & Lis, K. (2023). Remote workplaces as a determinant of working conditions in education during COVID-19. *Economics and Sociology*, 16(1), 123-138. doi:10.14254/2071-789X.2023/16-2/8
- 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/su12156086>
- DeFilippis, E., Impink, S. M., Singell, M., Polzer, J. T., & Sadun, R. (2020). Collaborating during coronavirus: The impact of COVID-19 on the nature of work (NBER Working Paper No. 27612). <https://doi.org/10.3386/w27612>
- Etheridge, B., Wang, Y., & Tang, L. (2020). Worker productivity during lockdown and working from home: Evidence from self-reports (ISER Working Paper Series).
- European Parliament's committee on Employment and Social Affairs. (2021). (M. S. Lodovici, Ed.). IRS. <https://doi.org/10.2861/691994>
- Fay, M. J., & Kline, S. L. (2011). Coworker Relationships and Informal Communication in High-Intensity Telecommuting. *Journal of Applied Communication Research*, 39(2), 144-163. <https://doi.org/10.1080/00909882.2011.556136>
- Fonner, K. L., & Roloff, M. E. (2010). Why Teleworkers are More Satisfied with Their Jobs than are Office-Based Workers: When Less Contact is Beneficial. *Journal of Applied Communication Research*, 38(4), 336-361. <https://doi.org/10.1080/00909882.2010.513998>
- Galanti, T., Guidetti, G., Mazzei, E., Zappala, S., & Toscano, F. (2021). Work From Home During the COVID-19 Outbreak The Impact on Employees' Remote Work Productivity, Engagement, and Stress. *Journal of Occupational and Environmental Medicine*, 63(7), 426-432. <https://doi.org/10.1097/Jom.0000000000002236>
- Gibbs, M., Mengel, F., & Siemroth, C. (2021). Work from home & productivity: Evidence from personnel & analytics data on IT professionals. University of Chicago, Becker Friedman

- Institute for Economics Working Paper(Chicago Booth Research Paper No. 21-13).
<http://dx.doi.org/10.2139/ssrn.3841567>
- Ginevičius, R., Trišč, R., Remeikienė, R., Zieľińska, A., & StrikaitėLatušinskaja, G. (2022). Evaluation of the condition of social processes based on qualimetric methods: The COVID-19 case. *Journal of International Studies*, 15(1), 230-249. doi:10.14254/2071-8330.2022/15-1/15
- Golden, T. D., & Gajendran, R. S. (2019). Unpacking the Role of a Telecommuter's Job in Their Performance: Examining Job Complexity, Problem Solving, Interdependence, and Social Support. *Journal of Business and Psychology*, 34(1), 55-69. <https://doi.org/10.1007/s10869-018-9530-4>
- Golden, T. D., Veiga, J. F., & Dino, R. N. (2008). The Impact of Professional Isolation on Teleworker Job Performance and Turnover Intentions: Does Time Spent Teleworking, Interacting Face-to-Face, or Having Access to Communication-Enhancing Technology Matter? *Journal of Applied Psychology*, 93(6), 1412-1421. <https://doi.org/10.1037/a0012722>
- Guo, Y. (2017). The Influence of Social Support on the Prosocial Behavior of College Students: The Mediating Effect Based on Interpersonal Trust. *English Language Teaching*, 10(12), 158-163. <https://doi.org/10.5539/elt.v10n12p158>
- Harris, L. (2003). Home-based teleworking and the employment relationship - Managerial challenges and dilemmas. *Personnel Review*, 32(4), 422-437. <https://doi.org/10.1108/00483480310477515>
- Herman, M. (2022). Why is Internal Communication Important for your Business? <https://www.lumapps.com/internal-communication/internal-communications-benefits/>
- Huws, U., Podro, S., Gunnarsson, E., Weijers, T., Arvanitaki, K., & Trova, V. (1996). Teleworking and Gender. Institute for Employment Studies. University of Sussex.
- Iscan, O. F., & Naktiyok, A. (2005). Attitudes towards telecommuting: the Turkish case. *Journal of Information Technology*, 20(1), 52-63. <https://doi.org/10.1057/palgrave.jit.2000023>
- Jurek, P., Korjonen-Kuusipuro, K., & Olech, M. (2021). When technology use causes stress: Challenges for contemporary research. *Human Technology*, 17(3), 190–196. <https://doi.org/10.14254/1795-6889.2021.17-3.1>
- Konczosné Szombathelyi, M., Waldbuesser, P., & Tench, R. (2015). Digital age: Information and communication technologies, tools and trends for communication management 2015 6th IEEE International Conference on Cognitive Infocommunications (CogInfoCom), <https://doi.org/10.1109/CogInfoCom.2015.7390596>
- Kuroda, S., & Yamamoto, I. (2018). Good boss, bad boss, workers' mental health and productivity: Evidence from Japan. *Japan and the World Economy*, 48, 106-118. <https://doi.org/10.1016/j.japwor.2018.08.002>
- Lal, B., & Dwivedi, Y. K. (2009). Homeworkers' usage of mobile phones; social isolation in the home-workplace. *Journal of Enterprise Information Management*, 22(3), 257-274. <https://doi.org/10.1108/17410390910949715>
- Lengen, J. C., Kordsmeyer, A.-C., Rohwer, E., Harth, V., & Mache, S. (2021). Soziale Isolation im Homeoffice im Kontext der COVID-19-Pandemie: Hinweise für die Gestaltung von Homeoffice im Hinblick auf soziale Bedürfnisse. *Zentralblatt Fur Arbeitsmedizin, Arbeitsschutz Und Ergonomie*, 71(2), 63-68. <https://doi.org/10.1007/s40664-020-00410-w>
- Madlock, P. E. (2013). The influence of motivational language in the technologically mediated realm of telecommuters. *Human Resource Management Journal*, 23(2), 196-210. <https://doi.org/10.1111/j.1748-8583.2012.00191.x>

- Mazurchenko, A., & Zelenka, M. (2022). Employees' Digital Competency Development in the Construction and Automotive Industrial Sectors. *Central European Business Review*, 11(1), 41-63. <https://doi.org/10.18267/j.cebr.284>
- Mishchuk, H., Bilan, Y., & Mishchuk, V. (2023). Employment risks under the conditions of the Covid-19 pandemic and their impact on changes in economic behaviour. *Entrepreneurial Business and Economics Review*, 11(2), 201-216. <https://doi.org/10.15678/EBER.2023.110211>
- Nguyen, M. H., & Armoogum, J. (2021). Perception and Preference for Home-Based Telework in the COVID-19 Era: A Gender-Based Analysis in Hanoi, Vietnam. *Sustainability*, 13(6), 3179. <https://doi.org/10.3390/su13063179>
- Parker, S. K. (2014). Beyond Motivation: Job and Work Design for Development, Health, Ambidexterity, and More. *Annual Review of Psychology*, 65, 661-691. <https://doi.org/10.1146/annurev-psych-010213-115208>
- Raišienė, A. G., Rapuano, V., Dóry, T., & Varkulevičiūtė, K. (2021). Does telework work? Gauging challenges of telecommuting to adapt to a “new normal”. *Human Technology*, 17(2), 126–144. <https://doi.org/10.14254/1795-6889.2021.17-2.3>
- Teodorovicz, T., Sadun, R., Kun, A. L., & Shaer, O. (2022). How does working from home during COVID-19 affect what managers do? Evidence from time-Use studies. *Human-Computer Interaction*, 37(6), 532-557. <https://doi.org/10.1080/07370024.2021.1987908>
- Van Riel, C. B., & Fombrun, C. J. (2007). *Essentials of corporate communication: Implementing practices for effective reputation management*. Routledge.
- Vyas, L., & Butakhieo, N. (2021). The impact of working from home during COVID-19 on work and life domains: an exploratory study on Hong Kong. *Policy Design and Practice*, 4(1), 59-76. <https://doi.org/10.1080/25741292.2020.1863560>
- Wang, B., Liu, Y. K., Qian, J., & Parker, S. K. (2021). Achieving Effective Remote Working During the COVID-19 Pandemic: A Work Design Perspective. *Applied Psychology-an International Review-Psychologie Appliquee-Revue Internationale*, 70(1), 16-59. <https://doi.org/10.1111/apps.12290>
- Wiesenfeld, B. M., Raghuram, S., & Garud, R. (1999). Communication Patterns as Determinants of Organizational Identification in a Virtual Organization. *Organization Science*, 10(6), 777-790. <https://doi.org/10.1287/orsc.10.6.777>
- Wiesenfeld, B. M., Raghuram, S., & Garud, R. (2001). Organizational identification among virtual workers: the role of need for affiliation and perceived work-based social support. *Journal of Management*, 27(2), 213-229. <https://doi.org/10.1177/014920630102700205>
- Xiao, Y. J., Becerik-Gerber, B., Lucas, G., & Roll, S. C. (2021). Impacts of Working From Home During COVID-19 Pandemic on Physical and Mental Well-Being of Office Workstation Users. *Journal of Occupational and Environmental Medicine*, 63(3), 181-190. <https://doi.org/10.1097/Jom.0000000000002097>