
Remote Work Efficiency and Work Satisfaction Among Specialists

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Abstract:

Purpose: The aim of the survey conducted on a group of 469 IT specialists of Polish nationality, working in enterprises in Poland was to learn about the links between the effectiveness of remote work and job satisfaction.

Design/Methodology/Approach: Taking into account human capital management approach the main research methods which were used in the study were literature review, diagnostic survey research and basic statistical analysis. The study was conducted on the basis of a survey questionnaire, using the translational method - the classic survey questionnaire technique was digitized and transferred to the Internet. The research results were presented in cross-sectional approaches, which include specifics by gender, age, total work experience, income level, and work organization factors like type of employment contract, position held, place of work, size of the enterprise, location, type of capital, influence the effectiveness and satisfaction of remote work.

Findings: The results obtained indicated a positive correlation between the effectiveness of IT specialists' remote work and their job satisfaction.

Practical Implications: Most IT professionals perform their work remotely, usually working on two - four projects at the same time. The effectiveness of their work depends both on their personal adaptation to the requirements of individual projects, on the computer hardware and software, and on the constant updating of their knowledge, due to the high dynamics of development of the IT industry.

Originality/Value: Job satisfaction depends on needs of IT specialists satisfied by the hardware and software they work on, as well as on the quality of communication with their superiors.

Keywords: Remote work, efficiency, work satisfaction, IT.

JEL codes: J24: Human Capital; Skills; Occupational Choice; Labor Productivity; J28: Safety; Job Satisfaction; Related Public Policy; M12:Personnel Management; M15: IT Management.

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1. Introduction

1.1 Remote work

The concept of remote work is relatively often used in terms such as telework, work from home or work from anywhere (Popovici and Popovici, 2020). It is referred to a home office, which literally means "home office" (Dolot, 2021). In the literature some authors emphasize that remote work does not mean the same as the telework. Ewelina Zander-Zięcina (Zander-Zięcina, 2020), referring to the Labor Code, points out that telework primarily concerns how the results of work are delivered by an employee who performs his professional tasks outside the company's headquarters, e.g. sending information to the supervisor or employer via e-mail. electronically via fax or e-mail.

We may define remote work as performed partially or entirely in the other place than the actual workplace. Remote work may be performed from any location that is an alternative to the place where the employee usually fulfills his professional duties, taking into account his profession and the form of employment.

The concept of telework was the first time defined by Jack Nilles (Bailey and Kurland, 2002). He pointed out that that is work which did not require the physical movement of people performing it and the results of which can be transferred using IT techniques, i.e., via telecommunications and computers (Dolot, 2021). The increase in remote work occurred at the beginning of the 21st century, which was related to technological progress that made it easier to perform work outside the workplace (Choudhury, 2020).

The definition of remote work is a subject to considerable modification and can be described from at least four perspectives: employee, employers, legal and business. From the perspective of applicable law, it was defined in the Covid Act (Act of March 2, 2020 on special solutions related to the prevention, counteracting and combating of COVID-19, other infectious diseases and crisis situations caused by them - Journal of Laws 2020, 374).

Article 3, paragraph 1 states that in order to counteract COVID-19, the employer may instruct the employee to perform work specified in the employment contract, for a fixed period of time, outside the place of permanent performance (remote work). Therefore, in order to consider work as remote work, it is necessary for the employer to instruct the employee to perform work outside the place of permanent performance. The employer must also specify the time during which the employee should work remotely.

In this meaning, remote work is not the same as telework as defined in the Labor Code. Telework, defined in Art. 67 5 § 1 is work regularly performed outside the workplace using IT communication within an understanding of electronic services.

Remote work is not the same as telework. This is a broader concept; its definition was introduced into Polish legislation in March 2020. Article 3 of the Act of March 2, 2020 on special solutions related to prevention and counteracting and combating COVID 19, other infectious diseases and crisis situations caused by them (Dziennik Ustaw z 2020 roku poz. 374) indicates that: Remote work involves performing work outside the place of permanent performance at the employer's request, for the time indicated by the employer, to the extent indicated in the employment contract.

As part of "organizational adaptation"(Goodstein, 1994), the flexibility associated with remote working allows a larger group of people to be involved in specific projects within a company or institution at a given point in time to improve the quality and productivity of results in the best interest of all (Rysavy and Michalak, 2020).

- Remote workers are increasingly empowered and convinced to collaborate remotely using a variety of technological tools (Abboud, 2020).
- Thanks to remote work, multidimensional work can be broken down into smaller, more manageable units of work (Donnelly and Johns, 2021). Employees who would otherwise not have the opportunity to take initiative benefit from improved management skills in these smaller groups.
- When the boundaries between remote workers' work and personal lives begin to blur, mental well-being is at risk. An example of this is when their family members believe they are working 24/7 or when they believe they are away from home even though they are present. Additionally, employees often have impromptu "after-hours" meetings that disrupt family time (Hamann, Schiemann, Bellora, and Guenther, 2013).

These two problems are some of the biggest problems remote workers face today. This is because when people work from home, they lose the element of social interaction that they enjoy at work. This is a problem both for the organization and for the emotional health of remote workers, because working from home makes remote workers feel more lonely, and this loneliness is associated with lower employee productivity. Increased isolation also makes employees feel less part of the organization, which lowers employee retention because it makes them more likely to leave.

Overcoming obstacles to social contacts while working remotely. Open communication is essential for a remote team to be successful. Empirical research has shown that a breakdown in communication causes a decline in trust. Managers do not trust their employees, they hide important information from them, which limits communication and, consequently, reduces trust. Also contributing to a lack of trust, micromanagement by managers and overworked employees is the fact that a lack of open communication prevents managers from recognizing when their employees are working hard.

Employers must actively promote and generate social connections to solve these problems. To ensure that everyone is aware of the situation, it is crucial to keep the lines of communication open with colleagues. This way, no one will feel excluded and trust will begin to grow. At the same time, developing deeper connections, perhaps even friendships, is crucial for a happy and motivated remote workforce.

The IT industry is moving away from fully remote work, which is confirmed by Awarason data. They show that in the next 12 months, every fourth company will invite IT specialists to their offices in a hybrid model, while so far as many as 2/3 have given employees the freedom to choose their workplace. However, Microsoft data shows that globally more than half of companies plan to introduce 100% work from the company's headquarters (<https://awareson.com/przyszlosc-pracy-zdalnej-w-branzy-it-nadchodzi-nowa-hybrydowa-rzeczywistosc/>, 2024).

The increase in the number of hybrid offers may indicate that there is a renewed need to engage employees in office life, which allows for greater identification with the organization and triggers creativity. Many employers are convinced that innovation requires a freer exchange of experiences and ideas, and a new idea can only be born in a group.

At the headquarters of an organization, it is easier to exchange information between different project teams, and online meetings do not provide as much freedom as, for example, an idea expressed during a meeting in a conference room. When working remotely, employee motivation decreases and turnover increases. Leaders confirm that during the pandemic, people were hired at random and did not plan the division of tasks efficiently. This has led to overemployment, i.e., working several jobs, and now makes management difficult (<https://awareson.com/przyszlosc-pracy-zdalnej-w-branzy-it-nadchodzi-nowa-hybrydowa-rzeczywistosc/>, 2024).

IT companies are a rapidly growing industry and may offer additional benefits in return for returning to offices, such as a shorter working week or additional paid leave. To achieve the best results in hybrid work, it will be crucial for employers to adapt to the changing expectations of employees (<https://awareson.com/przyszlosc-pracy-zdalnej-w-branzy-it-nadchodzi-nowa-hybrydowa-rzeczywistosc/>, 2024).

1.2 Efficiency

The problem with defining effectiveness is the existence of many synonyms of this concept in the literature on the subject. There are many synonymous terms related to effectiveness, e.g., effectiveness, efficiency, effectiveness, performance, which makes it difficult to clearly define effectiveness and understand it. Distinguishing organizational effectiveness from its results (organizational performance) is problematic, especially in strategic management, where various authors (March and Sutton, 1997) use this concept interchangeably, describing it (Hamann, Schiemann,

Bellora, and Guenther, 2013) through three dimensions, i.e., profit, company growth and market value of the company.

Some authors (Henri, 2004) treat these concepts as complementary, where organizational effectiveness is perceived as the result of organizational activities, and measurement of organizational achievements (performance) is a tool for assessing effectiveness. Efficiency is an economic activity performed efficiently, i.e., effectively and economically (Gasparski, 2008).

Efficiency in a narrower context is identified with economy, and in a broader context with effectiveness, advantageousness and economy (Nowosielski, 2008). Some authors still perceive the essence of effectiveness in the behavioral sense, when the goals of the organization and the individual are perfectly integrated.

This state indicates a potentially high level of effectiveness, because the individual will try to give his all to achieve the organization's goals (Nowosielski, 2008). Efficiency is also equated not only with efficiency, but also with productivity. According to Pritchard (1990), productivity will be defined differently for individual disciplines and groups of researchers; e.g., according to industrial engineers, these will be the results of the system (operation of machines, processes) divided by the inputs introduced into this system.

1.3 Job Satisfaction

The specificity of a professional career in the IT services sector results from frequent changes of place of employment, searching for new stimulation and higher remuneration, high attachment to the profession but low attachment to the organization.

Job satisfaction is simply defined as the degree to which the organization meets our needs and expectations. This concept is associated with a state of balance between the employee's needs and expectations towards work and their satisfaction. Job satisfaction is a function of the balance between human resources invested in work, e.g. time, education, experience, commitment, and what one receives in return, e.g. remuneration, promotion, training opportunities, relationships with co-workers.

G. Bartkowiak treats professional satisfaction as an element of a broader sense of motivation or human well-being, constituting the result of already met needs and aspirations as well as unmet needs (Bartkowiak, 2009). According to D. Schultz and S. Schultz, job satisfaction consists of positive and negative feelings and attitudes towards work (Schultz and Schultz, 2002).

H. Bortnowska and J. Stankiewicz assumed that job satisfaction is a positive or negative attitude towards work, the company and co-workers, resulting from employees making comparisons between their expectations and what they received

in exchange for their work (Bortnowska and Stankiewicz, 2005). Research has confirmed that frequent job changes in IT actually occur and are specific to this industry. A consistent assessment of employers basically leaves no doubt in this aspect - IT employees migrate between employers/projects and it happens so often that it is strongly noticed by employers.

What development means for employees in the opinion of employers is also a problem for the employer (frequent changes mean the need to conduct continuous recruitment, search for specialists, introduce new employees, etc.) (Kowalczyk – Kroenke, 2021).

Many studies conducted in service enterprises have confirmed that job satisfaction is an important creator of employee behavior that goes beyond formal requirements, e.g., altruism, commitment to work, attachment to the organization (outside the IT industry), individual initiative, conscientiousness or perseverance.

Lack of satisfaction affects the occurrence of behaviors such as absenteeism, wasting time, embezzlement, low quality of work, mental and physical health (Bednarska, 2016). Employees who perceive their work environment as satisfying are more loyal and productive, and their attitudes and behaviors have a positive impact on customers (Nieżurawski and Witkowski, 2007). A satisfied employee is understanding and more polite towards co-workers and customers. This affects creativity and optimism as well as openness to contacts with other people (Kulikowski, 2016).

2. Research Methodology

In the post-Covid-19 era, when we see more and more remote job offers in various professions and industries, a question should be asked: How is the effectiveness of remote work among employees? Are employees satisfied with their IT-based work? How do psychodemographic factors (age, gender, education) influence the effectiveness of remote work and job satisfaction among people from the IT industry? How do work organization factors (type of employment contract, size of the enterprise, etc.) influence the effectiveness and satisfaction of remote work?

The following hypotheses were adopted in the presented research:

- *H1: Psychodemographic factors: gender, age, total work experience, experience in the current workplace, period of work with IT, education, influence the effectiveness of remote work.*
- *H2: Organizational factors: type of employment contract, position held, income, place of work, size of the enterprise, location, type of capital, influence the effectiveness of remote work.*
- *H3: Psychodemographic factors: gender, age, total work experience, experience in the current workplace, period of work with IT, education, influence satisfaction with remote work.*

- *H4: Organizational factors: type of employment contract, position held, income, place of work, size of the enterprise, location, type of capital, influence satisfaction with remote work.*

In order to collect empirical data, the diagnostic survey method and survey technique were used. Items for the survey in the area of work effectiveness were used from the E-Work Life Scale tool, which was constructed by Grant, Wallace, Spurgeon, Tramontano, and Charalampous, (2018). 16 items were used that obtained the highest factor loading in these authors' analyses. To collect data on job satisfaction with the use of IT, selected items from the Technostress on End-User Satisfaction and Performance tool constructed by the authors Tarafdar, Tu, and Ragu-Nathan, (2010) were used. This tool used 8 items that referred to such aspects of job satisfaction with the use of IT as satisfaction of: Content, Accuracy, Output, Easy of Use and Timeliness.

Questions and answers were provided in writing, without direct contact between the subject and the researcher. The research was carried out using the translational method - the classic survey questionnaire technique was digitized and transferred to the Internet.

The data was collected using the e-mail survey technique, maintaining anonymity and voluntary participation in the research. The sample was selected in a non-random, purposeful manner, taking into account the criterion: remote work. Due to the structure of the survey, which excluded studies that did not meet the criterion, all collected questionnaires were correctly completed and were used in the research.

3. Results

The research covered 469 employees of IT companies who worked remotely. Detailed characteristics are presented in table 1.

Table 1. Characteristics of the study group (N=469)

Independent Variables	Categories	<i>N</i>	<i>%</i>
Psychosocial factors			
Sex	male	260	55
	female	209	45
Age	18-24	181	38
	25-34	139	30
	35-44	73	15
	45-54	59	12
	55-65	17	5
Total Seniority	till 1 year	98	21
	1-3	126	27
	4-6	110	23
	7-10	60	13
	11-15	40	8

	16 years and more	35	8
Current Service	till 1 year	161	34
	1-3	127	27
	4-6	92	20
	7-10	41	9
	11-15	30	6
	16 years and more	18	4
IT Experience	till 1 year	89	19
	1-3	131	28
	4-6	115	24
	7-10	75	16
	11-15	37	8
	16 years and more	22	5
Education	High school	156	33
	Bachelor Degree	158	34
	Master Degree	155	33
Income	to 3500pln	124	26
	3500 - 5000pln	136	29
	5000 - 6500pln	93	20
	6500 - 8000 pln	67	14
	8000pln and more	49	11
Organization of work facotrs			
Employment Contract	Full time	303	65
	Part time	166	35
Place of work	At firm building	256	54
	Remotely from home	86	19
	Remotely from different places (excluding home)	43	9
	hibryd	84	18
Employment in hierarchy	superior	376	80
	subordinate	93	20
Enterprise Size	1-person business activity	19	4
	Up to 10 employees	89	19
	10-50 employees	149	32
	50-250 employees	105	22
	250-500 employees	46	10
	Over 500 employees	61	13
Location Type	in one place	225	48
	branches	199	42
	network of branches	45	9
Enterprise Capital	Polish	307	66
	Foreign	81	17
	mixed	81	17

Source: Own study based on empirical research.

All data from items regarding work efficiency and satisfaction were not normally distributed. The K-S test showed a value of $p < 0.01$ in each item of our tool regarding efficiency and satisfaction. The α -Cronbach reliability coefficient for

individual items regarding efficiency was 0.71 – 0.74, and for items relating to satisfaction 0.84 – 0.85, for $p < 0.05$. The Mann-Whitney U test and the Kruskal-Wallis test were used to analyze the significance of differences, and the Spearman's Rho test was used to examine correlations.

The effectiveness of remote work using IT was examined in terms of: its impact on non-work life, productivity, organizational trust, flexibility and innovation. The analysis of the obtained data in terms of the impact of psychodemographic variables on the effectiveness of remote work showed that gender and education do not affect the effectiveness conditioned by the impact of remote work on non-work life.

The data showed that with age, people feel less that remote work takes away their time for family and friends (Table 2), while the total length of service does not affect effectiveness in the aspect of work-home balance.

In turn, the longer the length of service in the current place of employment, the less employees think about working outside it and the less they feel that remote work takes away their time for family and friends. Moreover, the longer the experience of using IT at work, the less the feeling that remote work takes away from time for family and friends.

The influence of work organization variables on efficiency in terms of the impact of remote work on professional life also showed certain dependencies. Due to the type of employment contract, employees on temporary contracts feel more that remote work takes away the time they would like to spend with family or friends than employees on permanent contracts ($Z = 2.18$; $p < 0.05$).

In turn, those working on permanent contracts feel more that remote work impoverishes their social life than employees on temporary contracts ($Z = -2.03$; $p < 0.05$). In turn, employees in non-managerial positions feel more that remote work takes away their time for family and friends ($Z = 4.21$ $p < 0.001$), impoverishes their social life ($Z = 2.15$; $p < 0.05$), that the demands placed on them by remote work are much greater ($Z = 2.35$; $p < 0.05$).

In turn, people working in managerial positions are more satisfied with the work-life balance when they work remotely ($Z = -2.02$; $p < 0.05$). Due to the place of work, people working remotely from home ($Z = 2.90$; $p < 0.05$) and hybrid ($Z = 4.11$; $p < 0.001$) feel more that remote work takes away from their time for family and friends than those working on the company's premises.

Also, employees working remotely from home ($Z = 4.14$; $p < 0.001$), other places ($Z = 3.45$; $p < 0.001$) and hybrid ($Z = 4.60$; $p < 0.001$) were more likely to think about problems related to with work in their free time than employees working on the company's premises. Employees working remotely from home ($Z = 5.62$; $p < 0.001$),

from other places ($Z = 2.79$; $p < 0.05$) and hybridly ($Z = 6.41$; $p < 0.001$) were more satisfied work-home balance than those working on-site.

Similarly, compared to people working on-site, employees working outside the organization, remotely from home ($Z = 3.78$; $p < 0.001$), from different places ($Z = 2.77$; $p < 0.05$) and hybridly ($Z = 4.78$; $p < 0.001$), they believe that constant access to remote work is very tiring. Also employees working outside the company: remotely from home ($Z = 4.42$; $p < 0.001$), from various places ($Z = 3.73$; $p < 0.001$) and hybrid ($Z = 5.55$; $p < 0.05$) they felt the burden of the demands of remote work more compared to those working on-site.

Employees working outside the company: remotely from home ($Z = 2.89$; $p < 0.05$), from different locations ($Z = 4.06$; $p < 0.05$) and hybridly ($Z = 4.58$; $p < 0.05$), feel more that remote work impoverishes their social life than those working in-house in the company. Due to the location of the company, people working in branches felt the burden of remote work requirements more ($Z = 2.61$; $p < 0.05$) than employees of organizations located in one place.

Due to the company's capital, employees from companies with mixed capital ($Z = 2.46$; $p < 0.05$) felt more positively about the work-home balance than those working in companies with foreign capital. In turn, the higher the income, the greater the satisfaction with the work-home balance and the less the feeling of the burden of remote work, that it takes away time from the family or thinking about professional problems outside of work (Table 2).

The size of the company affects the feeling of hardness of remote work, the feeling of lack of time for family, greater fatigue; the larger the company, the more employees experience the negative impact of remote work on their non-work life (Table 2). The effectiveness of remote work using IT was examined in terms of its impact on productivity. The analysis of the obtained data in terms of the impact of psychodemographic variables on the effectiveness of remote work showed that gender and education do not affect productivity in remote work.

The obtained results indicate that age, total work experience, work experience in the current location and the period of using IT at work do not affect productivity in remote work.

The impact of work organization variables on employee productivity was also analyzed. Due to the type of employment contract, employees with permanent contracts feel more that, despite obstacles at work caused by family behavior, they still maintain high quality of remote work ($Z = -3.02$; $p < 0.01$).

In turn, employees in managerial positions believe that when working remotely, they can concentrate better on their tasks ($Z = -2.27$; $p < 0.05$) than subordinate employees. Due to the place of work, people work remotely from home ($H = 6.42$; $p < 0.001$),

from various places (H=3.57; p<0.01). and hybrid (H= 5.67; p<0.001) **believe that** thanks to remote work they can concentrate on tasks better than people working on-site. Also employees working remotely from home (H= 5.66; p<0.001), other places (H= 2.96; p<0.05) and hybrid (H= 5.67; p<0.001) believe that Thanks to remote work, they perform their tasks more effectively.

Table 2. Correlations of psychodemographic and work organization variables with the effectiveness and satisfaction of remote work in the opinion of IT industry employees (p<0,05)

Nr	Item	Age	Total Seniority	Current Service	IT experience	Income	Entrepreneurship size
EFFECTIVENESS							
Work-Life Interference							
1.	My e-working takes up time that I would like to spend with my family/friends or on other non-work activities	- 0,09	-	- 0,11	- 0,12	- 0,15	0,12
2.	When e-working remotely I often think about work-related problems outside of my normal working hours	-	-	- 0,10	-	- 0,17	0,12
3.	I am happy with my work life balance when e-working remotely	-	-	-	-	0,23	-
4.	Constant access to work through e-working is very tiring	-	-	-	-	- 0,12	0,10
5.	I feel that work demands are much higher when I am e-working remotely	-	-	-	-	- 0,14	0,10
6.	My social life is poor when e-working remotely	-	-	-	-	- 0,11	0,10
Productivity							
7.	When e-working I can concentrate better on my work tasks	-	-	-	-	0,28	-
8.	E-working makes me more effective to deliver against my key objectives and deliverables	-	-	-	-	0,21	-
9.	If I am interrupted by family/other responsibilities whilst e-working from home, I still meet my line manager's quality	-	-	-	-	0,24	-

10.	expectations My overall job productivity has increased by my ability to e-work remotely/from home	-	-	-	-	0,22	-
Organisational Trust							
11.	My organisation provides training in e-working skills and behaviours	-	-	-	-	0,19	-
12.	My organisation trusts me to be effective in my role when I e-work remotely	-	-	-	-	0,25	-
13.	I trust my organisation to provide good e-working facilities to allow me to e-work effectively	-	-	-	-	0,20	-
Flexibility							
14.	My supervisor gives me total control over when and how I get my work completed when e-working	-	-	-	-	0,26	-
15.	My work is so flexible I could easily take time off e-working remotely, if and when I want to	-	-	-	-	0,19	-
16.	My line manager allows me to flex my hours to meet my needs, providing all the work is completed	-	-	-	-	0,19	-
WORK SATISFACTION							
17.	The system provides the precise information I need.	-	-	-	-	-	0,12
18.	The system provides reports that seem to be just about exactly what I need.	-	-	-	-	-	-
19.	The system provides me with sufficient information.	-	-	-	-	-	0,20
20.	I am satisfied with the accuracy of the system.	-	-	-	-	-	-
21.	I think the output is presented in a useful format.	-	-	-	-	-	0,20
22.	The information provided by the system is clear.	-	-	-	-	-	0,11
23.	The system is user friendly.	-	-	-	-	-	-
24.	I get the information I need in time.	-	-	-	-	-	-

Source: Own study based on empirical research.

Employees working remotely from home ($H= 5.91$; $p<0.001$) and hybrid ($H= 6.27$; $p<0.001$) believe that despite family disruptions, their work performed remotely does not lose quality.

Similarly, compared to people working on-site, employees working outside the organization, remotely from home ($H= 6.60$; $p<0.001$), from different places ($H= 3.63$; $p<0.01$) and hybridly ($H = 7.97$; $p<0.001$), they believe that their efficiency has increased thanks to remote work.

Due to the location of the company, employees of chain companies are more convinced ($H= 2.45$; $p<0.001$) than those working in companies located in one place or in branches that, despite behavioral disturbances from the family, they can still maintain good quality your work.

Due to the company's capital, employees from companies with foreign capital ($H= 2.57$; $p<0.05$) are more convinced that the possibility of working remotely from home increased their productivity than employees of companies with Polish and mixed capital.

In turn, the higher the income, the greater the feeling that when working remotely you can focus better on your tasks (Table 2), achieve your goals more effectively, maintain the quality of work despite family disruptions, and the belief that the possibility of working remotely from home has contributed to efficiency increase. The size of the company does not affect the productivity of employees working remotely in the IT industry.

The effectiveness of remote work using IT was examined in terms of organizational trust. The analysis of the obtained data in terms of the impact of psychodemographic variables on the effectiveness of remote work showed that gender does not affect employees' sense of organizational trust. In turn, people with a master's degree are most convinced that the organization trusts them in reliably and productively performing tasks at a remote workplace ($H= 2.64$; $p<0.05$).

The obtained results indicate that age, total work experience, work experience in the current location and the period of using IT at work do not affect productivity in remote work.

Another aspect of the analysis of the effectiveness of remote work was organizational trust analyzed in the context of work organization variables. Due to the type of employment contract, employees on permanent contracts feel more that the organization trusts them to work effectively at their remote work stations ($Z=-2.06$; $p<0.05$) than employees on temporary contracts.

However, the type of position held does not affect the feeling of organizational trust among the surveyed employees. Due to the place of employment, employees

working remotely from home ($H= 4.81$; $p<0.001$) and hybrid ($H= 6.81$; $p<0.001$) are more likely to participate in training on acquiring skills and behaviors in remote work than those working from different places. Similarly, employees working remotely from home ($H= 6.66$; $p<0.001$) and hybrid ($H= 6.70$; $p<0.001$) are more convinced that the organization trusts them to reliably perform remote work than those working from different places.

Also, these two groups of employees are more convinced that the organization will provide them with appropriate facilities to perform their work effectively (those working from home ($H= 5.97$; $p<0.001$) and hybrid ($H= 6.16$; $p<0.001$) than those working from different places.

Due to the location of the company, employees of companies from branches are more convinced ($H= 2.81$; $p<0.05$) that the company will provide them with training in which they will learn how to work remotely than those working in companies located in one place or network.

In turn, the type of capital does not affect organizational trust, which is related to the effectiveness of remote work. In turn, the higher the income, the greater the sense of organizational trust among remote employees that the organization will provide them with appropriate training and facilities to perform remote work, and that it trusts them to perform their remote work reliably (Table 2). Company size does not impact the organizational trust experienced by remote workers.

The effectiveness of remote work using IT was also examined in terms of flexibility/adaptability. The analysis of the obtained data in terms of the impact of psychodemographic variables on the effectiveness of remote work showed that gender does not affect the ease of adaptation.

Due to the level of education, people with a master's degree experience more flexibility from their superiors when it comes to planning and ending remote work ($H= 2.46$; $p<0.05$) than people with higher vocational or secondary education. The obtained results indicate that age, total work experience, work experience in the current location and the period of using IT at work do not affect flexibility in remote work.

Another aspect of analyzing the effectiveness of remote work was employee flexibility. Due to the type of employment contract, employees on permanent contracts feel more flexible about the remote work they perform ($H= 2.60$; $p<0.01$) than employees employed temporarily. People in non-managerial positions ($H= 2.21$; $p<0.05$) also feel more flexibility in their workplace than in managerial positions.

Due to the place of employment, employees working remotely from home ($H= 5.23$; $p<0.001$) and hybrid ($H= 6.25$; $p<0.001$) are more likely to be left in control of

ending their remote work. Similarly, people working remotely from home ($H= 4.91$; $p<0.05$) and hybrid workers ($H= 6.41$; $p<0.05$) experience flexibility in their work and the ability to take a break when they need it than those working from home. different places. And also these two groups: those working remotely from home ($H= 4.59$; $p<0.05$) and hybrid workers ($H= 6.10$; $p<0.05$) experience that their superior provides them with what they need and allows them to flexible working hours.

The company's location does not affect the flexibility of remote workers. In turn, those who work in enterprises with foreign capital experience satisfaction of their needs by their superiors and the possibility of flexible breaks at work ($H= 3.58$; $p<0.05$) more than employees of companies with Polish and mixed capital.

The data obtained indicate that the higher the income, the greater the flexibility at work (Table 2): the supervisor agrees to the time of starting and ending work, tries to meet work-related needs, and gives the opportunity to take breaks independently when necessary. The size of the company does not affect the flexibility of remote work.

The subject of the presented research was also satisfaction with remote work using IT tools. The analysis of the obtained data in terms of the impact of psychodemographic variables on job satisfaction showed that men are more satisfied with receiving reports that contain accurate data ($Z= -2.16$; $p<0.05$) than women. The analysis showed that the level of education does not affect satisfaction with remote work using IT tools.

The results obtained indicate that with age, the satisfaction with receiving the necessary information (Table 2), accurate and accurate, in a useful and understandable format decreases slightly. Due to the total length of service, employees value the usefulness of the format of the information received less (Table 2).

Due to the length of employment due to the current place of employment, the longer they work, the less satisfied employees are with: receiving exactly the information they need, relevant and accurate information, in a useful format, understandable and in a user-friendly system (Table 2). The length of time using IT at work does not affect satisfaction. The level of income affects the satisfaction with receiving information that is accurate, accurate and precise (Table 2).

Enterprise size has a positive impact on job satisfaction through IT technology. This applies to: receiving currently needed information, receiving reports needed for work, accurate and precise information, accurate and understandable.

The analysis of the presented data also included satisfaction with remote work performed using IT. Due to the type of employment contract, employees on permanent contracts are more satisfied with receiving the information they exactly

need ($Z = -2.77$; $p < 0.05$), with the accuracy and precision of information received via IT ($Z = -3.02$; $p < 0.05$), and user-friendly IT ($Z = -2.44$; $p < 0.05$) than employees on temporary contracts.

Employees in non-managerial positions are more satisfied with receiving exactly the information they need ($Z = 3.00$; $p < 0.01$), the clarity of the information provided ($Z = 2.17$; $p < 0.05$) and a friendly IT system ($Z = 2.18$; $p < 0.05$) than employees in managerial positions.

Due to the place of employment, employees working from different places are more satisfied with receiving accurate information they need ($Z = 2.80$; $p < 0.05$) than those working remotely from home and hybrid.

The company's location does not affect the satisfaction of IT employees working remotely. In turn, those who work in enterprises with foreign capital are more satisfied with receiving the accurate information they need on time ($H = 2.68$; $p < 0.05$), with the accuracy of the information ($H = 2.73$; $p < 0.05$) than employees from enterprises with Polish or mixed capital.

4. Conclusions

The analysis of the conducted research has shown that both the effectiveness and satisfaction with remote work depend largely on the way the work is performed: whether it is performed remotely from home or from another place, or hybridly, or e.g., from the company's headquarters. In addition, work organization conditions such as the type of employment contract, the position held, often income, and sometimes the location of the company or its capital also partially affect the effectiveness of remote work and job satisfaction. Psychosocial variables have a lesser impact on efficiency and job satisfaction, although sometimes age is important.

The presented research is of a pilot nature; the authors wanted to identify the conditions of the remote work environment, which is increasingly offered on the labor market. In the future, research should be deepened and expanded to include more detailed questions, especially regarding the place of work.

Employers use e-work to save the costs of remote work and increase productivity, while maintaining a high level of employee well-being.

Research indicates that the increase in access to work thanks to the use of technology, e.g. smartphones, has increased the intensity of work and may lead to increased levels of stress, which translates into lower levels of satisfaction and job satisfaction. To prevent threats to employees, it is necessary to build new e-work competencies. Employees will develop stress resistance, which will translate into greater commitment and higher productivity of remote workers.

The COVID-19 epidemic has accelerated the transformation process related to technological changes in remote work. The benefits resulting from the development of information technology provide tools for the employer and employee for greater effectiveness, while showing areas requiring improvement in the form of training (Grant, Wallace, Spurgeon, Tramontano, Charalampous, 2019; Grant, Wallace, Spurgeon, Tramontano, Charalampous, 2018; Tarafdar, Tu, Ragu-Nathan, 2010–11, Tramontano, Grant, Clarke, 2021).

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