



26th International Scientific Conference
**Strategic Management and Decision Support Systems
in Strategic Management**

21st May, 2021, Subotica, Republic of Serbia

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EMPLOYEES DEMOGRAPHIC CHARACTERISTIC'S IMPACT ON THE REMOTE WORKING PERCEPTION

Abstract: Current business environment all over the world is affected by Covid-19 pandemic, which forces companies to introduce new concepts of work design in order to protect employees and ensure business continuity. Focus is shifted from physical presence and work environment, to achieving set goals through the remote working. Such working model implementation takes certain period of adaptation, bringing, at the same, certain side effects: increased stress, loneliness, social distancing, losing the border between professional and private life, etc. Demographic characteristics itself influence the perception of remote working, which is the subject of this research among companies operating in Serbia. The paper is based on the results of the research conducted through a survey among employees of the companies operating in various sectors in the Republic of Serbia. T-tests and the ANOVA test were used to determine the influence of the demographic characteristics of the respondents on their perception of remote working. The aim of the paper is to point out the challenges faced by the companies from different industries during remote working implementation having in mind diverse categories of employees and in the situation where remote working is a necessary response of companies to the current pandemic caused by the Covid-19 virus. Based on the obtained results, the purpose of this paper is to provide guidelines for easier remote working implementation taking care of diverse employees' categories.

Key words: remote working, work design, demographic characteristic, human resource management, Covid-19

1. INTRODUCTION

With the advent of new information and communication technologies (ICT), and above all with the widespread possibility of access to high-speed Internet, teleworking has become increasingly important and therefore attracts special attention of the academic and professional public in the past few years. Working from home is described as a flexible way of organizing business activities, outside offices and production facilities, where the employee has no personal contact with associates, but is able to communicate with them using modern technologies (Di Martino and Wirth, 1990, pp. 529– 554).

During the emergence of remote working in the United States (USA) in the 1970s, it was found that such a redesign of work could bring numerous benefits to both employees and the companies in which it is applied. It was considered that 1 out of 7 employees in urban areas would accept teleworking, which would have a direct consequence of a reduction in imports of oil and petroleum products, in the conditions of the oil crisis. However, after the initial success, the trend of remote work application was significantly below expectations (Tavares, 2015, 1-28). After the global pandemic caused by the Covid-19 virus in January 2020, countries around the world were forced to take numerous measures in order to suppress the resulting pandemic. The measures mostly referred to the ban on movement and travel, then to staying in larger groups, keeping a distance, closing catering facilities, as well as many other activities. In response to the resulting

pandemic and the measures taken to struggle it, many companies around the world have been forced to provide an appropriate organizational response to ensure business continuity. In the stated conditions, remote work was imposed as inevitability, all with the aim of protecting the health of employees and continuing to perform business activities, ie maintaining continuity in business.

The implementation of work from home, in regular business conditions, brings numerous benefits for both employees and companies, the most important of which are: cost reduction, flexibility, increased job satisfaction, increased productivity, reduced absenteeism, employee protection and business continuity (Lipnjak , 2012, pp. 23). However, in addition to these benefits, remote working brings a number of challenges, such as increased stress levels, loneliness, the problem of knowledge transfer, delaying obligations that must be done, as well as many others (Grant, Wallace, & Spurgeon, 2013, p. 531).

The subject of research in the article is the analysis of the impact of demographic characteristics on the perception of teleworking in companies operating in the Republic of Serbia. According to the subject of the research, the aim of the paper is to point out the challenges that companies from different industries face when implementing teleworking in relation to different categories of employees. The paper presents the results of a survey conducted through a survey in which employees of companies from different sectors operating in the Republic of Serbia participated. The t-test and the ANOVA test were used to determine the influence of the demographic characteristics of the respondents on their perception of teleworking.

2. LITERATURE REVIEW AND CURRENT TRENDS

For many companies, remote working is a strategic transformation in terms of work redesign and business process change. When working remotely, the emphasis has shifted from physical presence in the office, to evaluating the results of employees. Successful implementation of remote working requires an adequate leadership style, as well as an appropriate organizational culture in order to support such a business concept. After the onset of the pandemic, remote working is a completely new experience for many companies, without the possibility of adequate prior preparation. However, there is a significant difference in the implementation of work from home in different countries and industries, both before and after the pandemic.

There are three types of remote working (Perez, Sanchez, & Carnicer, 2002, p. 775): work from home, work from satellite offices, and mobile work. Work from home refers to employees who do not always, but mostly work from home. It is important to note that self-employed people who do not have their own headquarters and contact with other colleagues are not considered home workers. Home workers are employees who, with the use of modern IC technologies, communicate with their headquarters and colleagues, most often by phone, e-mail and / or modern communication platforms. In the case of satellite offices, employees have the opportunity to work both from home and from regular offices. The offices are equipped by the company and there is administrative support available. Unlike satellite workers, mobile workers are mostly on the road. Mobile workers use modern channels of communication with colleagues, customers and clients when working from home, while on the road and/or in a means of transport. The most common examples of mobile workers are bank managers, sales or investment managers. Based on the above differentiation, it can be concluded that workers who work remotely in a pandemic are included in the category of workers from home, because they perform business activities outside the office, using modern IC technologies for communication.

Successful implementation of remote working requires an adequate organizational response to certain important questions and factors, such as: how work activities will be organized, how business processes are organized, teamwork, organizational culture, rules and procedures, ways of communication and more (Elshaiekh et al ., 2018, p.3). A study by Nicholas Bloom and James Liang in 2014, which looked at employees who had the opportunity to work from home for nine months compared to their office colleagues, concluded that employees who worked from home, not only were they more satisfied but they also showed a significantly higher level of productivity, compared to their colleagues working from the office (Bloom, N., 2014, p. 28). According to a Eurofund survey, most respondents who worked from home during the pandemic rated such an experience as positive, while three-quarters of respondents said they would continue to work from home occasionally after the end of the Covid-19 virus pandemic. However, according to the study, most respondents said they would like to be able to combine work from home and office, while fewer opinions that they would continue to work entirely from home only (<https://www.eurofound.europa.eu/data/covid-19/working-teleworking>, accessed 17.04.2021).

Research shows that after the outbreak of the pandemic, almost 40% of employees at the EU level worked from home. Observed by EU countries, almost 60% worked from home in Finland, the Netherlands and Luxembourg, while the lowest percentage is in Romania where it is just under 20%, followed by Hungary, Croatia and Bulgaria and just under 30%. During a pandemic, the highest percentage of remote workers is with highly educated workers, while the lowest

percentage is with production workers. The highest percentage of remote workers is present in the services sector, and the lowest in the industrial sector (Sostero, Milasi, Hurley, Macías and Bisello 2020). A survey conducted in the United States shows that almost half of all employees switched to remote working during the pandemic, while in February-May 2020 alone, over one third of all employees became remote workers (Brynjolfsson, et al., 2020, page 24).

However, the implementation of remote working requires caution, because the positive effects of such a concept of work are accompanied by certain challenges and negative effects that employees and companies face. Particular attention should be paid to employees who previously spent a lot of time away from home due to business activities, because this category of workers represents a completely new challenge in the form of establishing a relationship between private and business life when working from home (Crosbie and Moore, 2004, p. 229). Also some of the challenges of remote working that employees face are increased level of conflict, longer working hours, stagnation in advancement, feeling of loneliness and social isolation and others (Dockery and Bawa, 2014, p. 166).

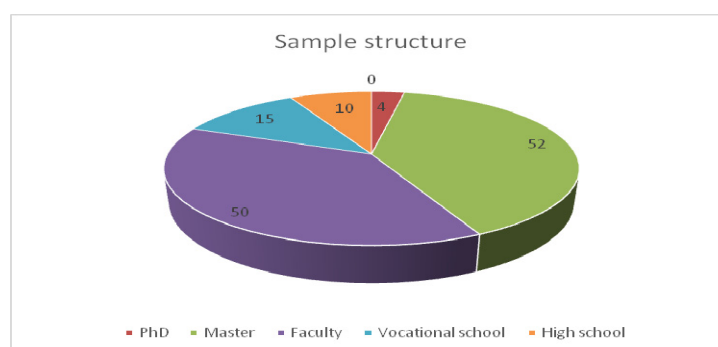
In addition to the necessary organizational response by companies, employees must also be aware of the challenges and manage business engagement when working remotely. Employees must be aware of how remote working can affect their careers, training and advancement, as well as working hours, flexibility and work-life balance. Adequate management of these factors, to a large extent, contributes to the successful implementation and increase the efficiency of remote working (Troup and Rose, 2012, p. 486).

Taking into account the growing trend of implementation of remote working, as well as the necessity of its implementation in a pandemic, the research conducted for this paper refers to the analysis of demographic characteristics and perception of telework in companies operating in the Republic of Serbia, as one of the key determinants for the successful implementation of such work engagement. The aim is to provide guidance to companies to create an appropriate organizational response in relation to different categories of employees, in order to maximize the positive and manage the negative effects, which are listed as possible consequences of such a concept of work design.

3. EMPIRICAL RESEARCH

For the purposes of the paper, an original survey was conducted on a sample of companies operating in the Republic of Serbia through an anonymous questionnaire filled out by employees in domestic, state and multinational companies. The aim of the research is to examine the perceptions of employees to work remotely depending on different demographic characteristics, such as gender, age and education. Respondents who participated in the survey were asked to respond to each statement by the degree of agreement with the stated position, choosing one of the following options: 1 - I strongly disagree, 2 - I mostly disagree, 3 - Neither agree nor disagree, 4 - I mostly agree or 5 - I totally agree. This scale is a five-point Likert scale. In addition to the statements, the questionnaire also contains questions related to demographic data: gender, age, level of education, company in which they are employed, information on remote working before and during the pandemic. The collected data were analyzed using the SPSS software package. The t-test and the ANOVA test were used to determine the influence of the demographic characteristics of the respondents on their perception of remote working.

The research sample consists of 131 respondents who are employed in domestic, state and multinational companies in the Republic of Serbia, provided that they worked from home during the pandemic. The questionnaire consisted of 10 statements, and respondents were asked to answer each of them. The statements used are classified into two categories: characteristics of remote working (first 5 statements) and challenges of remote working (other 5 statements), respectively. Of the total number of respondents, 72 are male, while 59 are female. The level of education of the respondents is given in the following chart.



Picture 1: The level of education of the respondents
Source: Author's research

Of the total number of respondents, 80% have a university degree, master's degree or doctorate, while the remaining number of respondents have a lower level of education. There are 26 respondents under the age of 30, 75 respondents from the age of 31-40, 23 respondents from the age of 41-50, and 7 respondents over the age of 50. Out of the total number, 62 respondents do not have children, then 62 respondents have children of preschool and/or school age, while 7 respondents have adult children. Before the pandemic caused by the Covid-19 virus, 40 respondents, or 30% of the number of respondents, had the opportunity to work remotely, while the remaining 91 respondents did not have that opportunity. Out of the total number of respondents, 8 work in a domestic, 4 in a state, while 119 respondents work in a foreign or multinational company.

To measure the reliability of the applied scale, the Cronbach's Alpha coefficient, which represents the reliability coefficient, was used. In the research of remote work for 10 mentioned items, the Cronbach's alpha coefficient of 0.780 was measured, which suggest the satisfactory reliability of the statements used.

The items used in the survey and the values of the independent sample t-test analysis are given below.

Table 1: Items and t-test results: gender of respondents

Items	Gender	Mean	St. dev.	Levene's Test - Sig.	p
During the period of working from home, people I worked with were friendly.	Female	4,46	0,678	0,416	0,016**
	Male	4,14	0,793		
My supervisor allows for flexibility in my working arrangements to enable me to handle my family responsibilities.	Female	3,93	1,127	0,091	0,049**
	Male	3,51	1,256		
During the period of working from home, I had considerable autonomy in determining how I did my job.	Female	4,08	0,915	0,057	0,041**
	Male	3,71	1,131		
Providing daily reports.	Female	2,37	1,425	0,753	0,417
	Male	2,57	1,33		
Clocking in/out via APPs such as mail, sms, viber etc.	Female	1,61	1,145	0,543	0,828
	Male	1,57	0,99		
I have trouble concentrating.	Female	3,93	1,216	0,449	0,004***
	Male	3,31	1,206		
I do not fully enjoy my work because I worry about my home situation.	Female	2,22	1,247	0,655	0,356
	Male	2,42	1,172		
I felt close to others (reverse coded).	Female	3,05	1,238	0,607	0,774
	Male	3,11	1,157		
I felt isolated from others.	Female	2,92	1,236	0,879	0,44
	Male	2,75	1,196		
Communication in this group was very open.	Female	4,08	0,857	0,384	0,17
	Male	3,85	1,07		

Notes: p<0,01***; p<0,05**; p<0,1*

Source: Author's research

Table 1 shows the mean values and standard deviation for each items divided into groups of respondents by gender, ie male or female. The last 2 columns contain the t-test results. Since the value of Levene's Test – Sig. for all statements is above 0.05, means that the assumption of equal variances of 2 groups of respondents is satisfied. Out of 10 observed items, it was determined that in 4 statements there is a statistically significant difference between women and men. These 4 statements are shown in Table 1, where the mean value of the difference between the two groups is presented, as well as the lower and upper limit of the interval which with a probability of 95% contains the actual magnitude of that difference.

The presented values of the t-test, as well as the differences between the mean values in the statements for the relationship with colleagues, flexibility and autonomy, as well as problems with concentration when working remotely, show that there is a statistically significant difference in the observed statements in each of the 2 groups, the female and male respondents. As the mean values are more favorable for all four items and there is a higher degree of agreement among the female part of the respondents, it can be concluded that in the sample, there is a higher degree of flexibility and autonomy among the female group of respondents, and also this group to a greater extent manages to use the

benefits caused by remote working, as a new paradigm of work engagement. Also, the female group of respondents has better communication with colleagues and fewer problems with concentration when working remotely.

In order to determine the influence of respondents' age on their perception of remote working, the ANOVA test was used. Below are the values of the ANOVA test in relation to three age groups of subjects: subjects less than 30 years, then 31-40 years and a group of subjects over 41 years.

Table 2: Items and ANOVA test results: age of respondents

Items	<30 years vs. 31-40 years	< 30 years vs. > 41 years	31-40 years vs. > 41 years
During the period of working from home, people I worked with were friendly.	0,193	0,159	0,894
My supervisor allows for flexibility in my working arrangements to enable me to handle my family responsibilities.	0,012**	0,036**	1
During the period of working from home, I had considerable autonomy in determining how I did my job.	0,152	0,082*	0,757
Providing daily reports.	0,487	0,01**	0,038**
Clocking in/out via APPs such as mail, sms, viber etc.	0,309	0,013**	0,126
I have trouble concentrating.	0,104	0,825	0,329
I do not fully enjoy my work because I worry about my home situation.	0,085*	0,104	0,956
I felt close to others (reverse coded).	0,14	0,215	0,997
I felt isolated from others.	0,777	0,919	0,972
Communication in this group was very open.	0,81	0,512	0,752
Notes: p<0,01***, p<0,05**, p<0,1*			

Source: Author's research

Table 2, in addition to the statements used in the survey, contains the results of the ANOVA test. As the value of p in Leven's test is less than 0.05 for statements related to flexibility and work at home during work from home, ie reporting to a superior at the end of the day, Welch test was used and then Games-Howell test to determine the exact differences between groups. In other cases, the value of the ANOVA test, ie the Tukey test, was observed to determine the differences between the groups. Based on the obtained results of the ANOVA test, it can be concluded that there is a statistically significant difference between the mean values of the used items in the three statements. In the case of statements related to the flexibility of telework and work at home, there is a statistically significant difference among respondents up to 30 years of age compared to respondents aged 31-40, as well as over 41 years. Analyzing the mean values and standard deviations of the above items, it is observed that the highest level of agreement in respondents up to 30 years (mean 4.27 and SD 0.962), while a significantly lower level of agreement in respondents aged 31-40 years (mean 3.56 and SD 1,287) and in subjects over 41 years of age (mean 3.57 and SD 1.104). The presented results show that the younger population of respondents in the sample, ie respondents up to 30 years of age, managed to adapt to the paradigm of remote working and use the flexibility of this way of working, unlike the older groups of respondents. A statistically significant difference between different age groups of respondents appears in the statements related to the reports on work when working remotely. This difference occurs in respondents up to 30 and over 41 years, as well as between respondents from 31-40 and over 41 years. Looking at the mean of the analyzed groups for this item, which are 2.04 in respondents up to 30 years, then 2.39 in respondents 31-40 years and 3.10 in respondents over 41 years, and the corresponding SD, we see that the most favorable attitude in the youngest groups of respondents, then slightly less favorable in respondents 31-40 years, while significantly less favorable in respondents over 41 years. This speaks in favor of the fact that the younger group of respondents positively perceives the redesign of the work created during the implementation of telework, while the older respondents rely on traditional ways of doing business. The last statistically significant difference occurs in the attitude related to reporting to a superior, as an integral part of the activities when working remotely, in the group of respondents up to 30 years and over 41 years. This supports the previously concluded

conclusion that younger respondents view remote work through a different prism of work engagement compared to older respondents who rely on traditional types of business processes, reporting and control.

In order to determine the influence of the level of education of the respondents on their perception of remote work, the ANOVA test was also used. Below are the values of the ANOVA test in relation to the three levels of education of the respondents: with high school or college (Group 1), with the faculty (Group 2) and with the master's / doctorate (Group 3).

Table 3: Items and ANOVA test results: level of education

Items	Group 1 vs. Group 2	Group 1 vs. Group 3	Group 2 vs. Group 3
During the period of working from home, people I worked with were friendly.	0,994	0,664	0,596
My supervisor allows for flexibility in my working arrangements to enable me to handle my family responsibilities.	0,915	0,995	0,921
During the period of working from home, I had considerable autonomy in determining how I did my job.	0,949	0,884	0,979
Providing daily reports.	0,016**	0,023**	0,972
Clocking in/out via APPs such as mail, sms, viber etc.	0,037**	0,996	0,032**
I have trouble concentrating.	0,322	0,521	0,887
I do not fully enjoy my work because I worry about my home situation.	0,885	0,82	0,988
I felt close to others (reverse coded).	0,813	0,895	0,974
I felt isolated from others.	0,616	0,952	0,696
Communication in this group was very open.	0,985	0,977	0,888
Notes: p<0,01***; p<0,05**; p<0,1*			

Source: Author's research

Table 3 shows the results of the ANOVA test in relation to the three groups of levels of education of the respondents. A statistically significant difference between the mean values of the dependent variable is present in the statements related to work reports, as an integral part of telework, in group 1 compared to group 2 and group 2 compared to group 3 of respondents. The analysis of mean and SD groups for the mentioned statement leads to the conclusion that for higher levels of education the level of agreement is more favorable, ie the respondents agree to a lesser extent that work reports are an integral part of remote work. It should be noted that the nature and manner of performing work differ between employees with different levels of education, so that respondents have a greater degree of freedom with a higher level of education, which positively affects the way superiors report when working remotely. However, taking into account the statistical significance of the statements for reporting to the superior, regarding the comparison of groups 1 and 2, ie groups 2 and groups 3, their mean (group 1: 1.36, group 2: 1.94 and group 3: 1.38) and SD (group 1: 0.638, group 2: 1.361 and group 3: 0.799), indicates that the lowest and highest levels of education have the highest degree of freedom when reporting to a superior, while group 2 of respondents has a much more unfavorable attitude when it comes to reporting to a superior. It is important to note that the research also includes employees from state-owned companies, which are not characterized by the highest levels of education, and where the work redesign and organizational culture is carried out much more slowly than is the case with private and foreign companies.

4. DISCUSSION AND FUTURE RESEARCH

In accordance with the presented trend, in Serbia, the largest number of teleworkers belongs to the group of highly educated staff. The initial assumption that there is a significant difference in the perception of remote work in relation to gender, age and education of employees proved to be justified in the analyzed sample, which confirms the p values for

certain statements in the conducted tests. Based on the results of the t-test, it can be concluded that, in the sample, there is a greater degree of autonomy and flexibility in the female group of respondents. It is important to note that the female group of respondents has better communication with colleagues when working from home than the male group. The results of the ANOVA test show that there is a significantly more favorable perception of remote working in a younger group of respondents, which is reflected in the positive attitudes regarding flexibility, autonomy and control by superiors when working remotely. Also, a significantly higher degree of autonomy in organizing business activities when working remotely is present among respondents with higher levels of education, while the faculty-educated group of respondents has a less favorable attitude regarding the obligation to report to their superiors compared to respondents with high school or master's / doctorate.

Future research should focus on providing guidelines for minimizing and/or eliminating the negative effects of remote working so that companies can reap the benefits for both business and employees. Research shows that the positive trend of remote working will continue after the end of the Covid-19 virus pandemic, with both companies and employees finding a way to adequately manage the challenges of teleworking.

5. CONCLUSION

Remote working is a necessary organizational response to the emergence of a pandemic caused by the Covid-19 virus. Without the possibility of prior preparation, the implementation of telework for many companies posed a significant challenge to which it was necessary to provide an adequate organizational response. However, a number of variables affect the success of the implementation of remote work, the most important of which are organizational design and culture, the way business processes are organized, evaluation of results and controls. The results presented in this paper clearly show that different demographic characteristics have a significant impact on the perception of the some remote work elements and that it is necessary to manage it in order to maximize the positive and minimize and/or eliminate the negative effects of remote working. Based on the presented results, both companies and employees must provide a clear organizational response, in order to improve the perception of telework among employees, whose trend will continue in the future. Companies need to provide the necessary support to older and less educated employees in order to adapt to the concept of remote working, while employees need to be aware of the challenges of such work and adapt to the new conceptual framework of job design and culture.

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