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Socio-demographic characteristics of employees and flexible work arrangements: Evidence from Serbia[1]

Socio-demografske karakteristike zaposlenih i fleksibilni aranžmani rada: Dokazi iz Srbije

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Abstract: The turbulent environment that influences the contemporary business has caused a reconfiguration of operations, where organizations have developed flexible work arrangements that involve the modification of traditional work. The goal of applying various forms of flexible work arrangements is to attract and retain talent, develop employee skills and capabilities, and become more innovative in terms of job organization. The aim of the research is to investigate differences in the use of flexible work arrangement according to socio-demographic characteristics of employees in the Republic of Serbia. The research was conducted on a sample of 582 employees, using the independent sample T-test and univariate analysis of variance (ANOVA) by using the IBM SPSS software for data processing. The research results indicated that there are statistically significant differences between employees who use flexible work arrangements according to gender, age, and level of education, and accordingly, the research hypothesis was confirmed. The scientific contribution is focused on a key segment related to the lack of scientific research on this topic in the Republic of Serbia and beyond. The results represent significant propositions for future research in this field and provide a basis for amending labor laws.
Keywords: Flexible work arrangements, socio-demographic characteristics, CRANET, Republic of Serbia
JEL classification: J1, J5, M10, M50

Сажетак: Турбулентно окружење које утиче на савремено пословање изазвало је промену операција, где

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су организације развиле флексибилне радне аранжмане који укључују модификацију традиционалног рада. Циљ примене различитих облика флексибилних радних аранжмана је привлачење и задржавање талената, развијање вештина и способности запослених, те постизање веће иновативности у организацији посла. Циљ истраживања је испитивање разлика у коришћењу флексибилних радних аранжмана према социо-демографским карактеристикама запослених у Републици Србији. Истраживање је спроведено на узорку од 582 запослена, користећи независни узорак Т-теста и униваријантну анализу варијансе (АНОВА) помоћу IBM SPSS софтвера за обраду података. Резултати истраживања су показали да постоје статистички значајне разлике између запослених који користе флексибилне радне аранжмане према полу, старости и нивоу образовања, и у складу с тим, хипотеза истраживања је потврђена. Научни допринос је фокусиран на кључни сегмент везан за недостатак научних истраживања на ову тему у Републици Србији и шире. Резултати представљају значајне предлоге за будућа истраживања у овој области и пружају основу за измене радног законодавства.
Кључне речи: Флексибилни радни аранжмани, социо-демографске карактеристике, Кранет, Република Србија
ЈЕЛ класификација: J1, J5, M10, M50

Introduction

In today's fast-paced and constantly changing business environment, organizations are continually seeking innovative strategies to remain competitive and efficient (Wilden & Gudergan, 2015). High-quality approach in human resource management and investment in employees lead to higher profitability and market value of the firm (Dženopoljac et al., 2023). One such strategy is the use of flexible work arrangements (Kalleberg, 2001), which are becoming increasingly prevalent across various industries. These arrangements, which include remote work, flexi-work, overtime, part-time jobs, etc., represent a significant shift from traditional work models (McNall, Masuda & Nicklin, 2009). They are designed not only to enhance employee satisfaction, which is still one of the most important employee attitudes (Kerekes et al., 2023), organizational commitment (Cvjetković & Cvjetković, 2023), and work-life balance, in terms of achieving satisfaction with the state, situation and experience in both spheres of life (Mladenović et al., 2023), but also to attract and retain top talent, boost productivity, and foster a more adaptive and resilient organizational culture (Berber et al., 2022).

The primary objective of this research is to investigate the differences in the use of flexible work arrangement, focusing on socio-demographic characteristics such as gender, age, and education level. Using the CRANET research methodology, this analysis aims to identify whether significant differences exist among various demographic groups that are provided to utilize flexible work arrangements.

This research addresses a critical gap in the current literature, given the limited scientific investigations on the socio-demographic dimensions of flexible work in Serbia and the broader region. By leveraging a robust sample of 582 employees and employing statistical tools such as the independent samples T-test and univariate analysis of variance (ANOVA), the study aims to determine whether there are statistically significant differences in the application of various forms of flexible work arrangements according to the socio-demographic characteristics of employees in the Republic of Serbia.

The results of this research are expected to have practical implications for both organizational policy-making and legislative frameworks. As companies increasingly recognize the value of flexibility in work arrangements, understanding the nuanced

differences across demographic groups can inform more tailored and effective human resource strategies. Additionally, these insights can contribute to the development of labor laws that better accommodate the needs of a diverse workforce.

Ultimately, this study aims to illuminate the ways in which flexible working arrangements can be optimized to support not only organizational goals but also the personal and professional growth of employees. Through a detailed analysis of socio-demographic characteristics, we aim to provide actionable recommendations for employers and policymakers to foster a more inclusive and dynamic work environment.

1. Theoretical background

Gašić (2023) emphasizes that flexible work arrangements (FWAs) represent a necessary phenomenon in today's digital society, where companies worldwide are compelled to change their behavior patterns due to various internal and external business influences. Some of these influences include IT development, globalization, various crises such as health (COVID-19 pandemic), economic, political (Russia-Ukraine conflict) crises, increasing competition in the labor market, etc. (Sinclair et al., 2020). These challenges can lead to significant implications for the labor market, which is evolving and thereby presenting new challenges in business. Organizations that aim to attract, motivate, and retain the best candidates employ various strategies to achieve these goals. One effective method through which companies can better manage their human resources is job redesign and implementation of flexible work arrangements (Kelliher & De Menezes, 2019, p. 4-6). Flexible work arrangements represent a mutually beneficial arrangement between employers and employees where both parties negotiate when, where, and how employees will work to meet the company's needs (Thompson, Payne & Taylor, 2015; Bjärntoft et al., 2020). Flexible working hours and remote work opportunities are seen as a part of elements contributing to work-life balance (Janošik et al., 2024).

The next table presents a depiction and explanation of 12 types of flexible work arrangements based on the research by Stavrou (2005) and the CRANET international research methodology (Berber & Slavić, 2019; Gašić & Berber, 2021). CRANET is the largest Human Resource Management network in the world and the only one that has been collecting comparative HRM data across different countries for over three decades. The research is conducted using a standardized questionnaire that covers key HRM activities, including an assessment of the implementation level of various forms of flexible working arrangements. Berber & Slavić (2019) conducted a factor analysis of 12 types of FWAs, and the analysis showed that 12 types of FWAs according to the CRANET research methodology can be classified in four groups.

Table 1: Types of flexible working arrangements according to the CRANET research methodology

Type of flexible work arrangements		
I	Weekend work	It implies that employees have the option to perform their work activities during weekends (Saturday and/or Sunday) (Weston et al., 2019; Austin-Egole, Iheriohanma & Nwokorie, 2020).
	Shift work	This pertains to the work schedule of employees who work in shifts or rotations outside the traditional 9 am – 5 pm timeframe. The implementation of such work arrangements is most commonly used in the manufacturing, hospitality, healthcare, and customer support sectors (Kerin & Aguirre, 2005; Stavrou & Kilaniotis, 2010).
	Overtime	This pertains to additional working hours that an employee works beyond regular working hours. Typically, this type of engagement is compensated at a higher rate than regular hours and is subject to the employment laws and regulations of the given country (Beckers et al., 2008; Junaidi et al., 2020).
II	Flexi-time	represents the ability of employees to determine the start and end of their working hours, as well as to adjust the total number of working hours (Vanajan, Bültmann & Henkens, 2020).
	Home-based work	refers to the ability for employees to perform their work activities from home instead of working from the company's office (Afrianty, Artatanaya & Burgess, 2022).
	Teleworking	is a work arrangement in which employees perform their tasks primarily from their homes or any location that is not a traditional office environment, i.e., not at the company's office (Saragih et al., 2021; Beckel & Fisher, 2022). Čudanov, Cvetković & Săvoiu (2022) highlight that remote work has gained significance due to the COVID-19 pandemic.
III	Compressed working week	refers to an alternative work schedule where employees perform their job activities in fewer days per week. For example, instead of working eight hours a day for five days a week, employees have the option to work longer hours over four days (Bolino, Kelemen & Matthews, 2021).
	Job share	represents a work arrangement in which two or more employees share the working hours and responsibilities of a single full-time position (Bhalla, 2016).
	Part-time job	refers to a work arrangement in which an employee works fewer hours compared to those with full-time employment. Employees engaged in this type of flexibility work less than 40 hours per week. The number of working hours usually varies depending on the industry, organizational needs, and employment contracts (Antunes et al., 2023).
IV	Fixed-term contract	are designed to meet the temporary or specific needs of the organization. This type of employment can last from a few weeks to several months or even years (Austin-Egole, Iheriohanma & Nwokorie, 2020).
	Temporary job	represents employment that pertains to a shorter period of work or non-permanent jobs. Organizations opt to engage temporary workers in specific circumstances to meet organizational labor needs (Horne & Soares, 2022).
	Annual hours contract	represents an employment contract in which the total number of hours that an employee must work annually to perform contract-defined activities is specified within the year (Berkery et al., 2017).

Source: Authors' research

Bontrager, Clinton & Tyner (2021) defined flexibility availability as a measure of how employees feel free to use formal or informal work models. Formal flexible work arrangements are typically documented and communicated to employees through the company's official policies. These arrangements encompass policies and programs implemented by companies to provide employees with ways to adjust work schedules, locations, or hours necessary to meet job requirements. Examples of formal flexible work arrangements include flexible working hours, compressed workweek, part-time work, remote work, and job sharing. Informal flexible work arrangements refer to flexibility forms not established through employment contracts or official organizational policies. They result from agreements between employers, employees, or teams based on needs and circumstances that may influence business operations. They don't involve strictly defined guidelines but offer flexibility in work arrangements. Informal flexible work arrangements depend on individual agreements and negotiations between employees and supervisors. Examples include flexi-time, as-needed work from home, and flexible breaks.

Wheatley's (2017) research suggests that flexi-time, the most common form of FWAs among men, have positive effects on alleviating the management of household responsibilities. It has been shown that men use temporary jobs and home-based work more, while women, due to limitations related to household obligations, are forced to use part-time work. Furthermore, different arrangements can have different outcomes for men and women. Peters et al. (2009) found that women report a better work-life balance if they have greater control over their working hours (Chung & Van der Lippe, 2020). Langner (2018) emphasizes that both men and women benefit from flexi-time. For women, the positive effect (salary) appears later, suggesting that, unlike men, they must first prove their commitment. The results suggest that men can use flexi-time to support their wives' careers. This measure may not necessarily be used unless needed (e.g., parenting).

Ciarniene & Vienazindiene (2018) found that representatives of the baby boom and Y generations are most satisfied with various flexible work arrangements, with women tending to use flexibility more than men, benefiting from improved work-life balance, health benefits, reduced stress, time and cost savings, and earning opportunities tailored to their needs. Dixon (2022, p. 52) highlights that the X and Y generations have distinct views on the benefits of various FWAs in terms of establishing work-life balance. Treuren & Anderson (2010) found that the Y generation evaluates flexible work arrangements better than employees belonging to the X and BB generations. Similarly, the X generation rated the variable of flexible work arrangements better than employees belonging to the BB generation and were confirmed in the variable balance between work and private life.

According to OECD findings by Thévenon, Adema, & Clarke (2016, p. 5), FWAs are most commonly available to and used by highly educated employees in top-tier jobs.

In empirical study by Gašić & Berber (2023) on a sample of 518 highly educated employees in the Republic of Serbia indicated the positive effects of FWAs on work engagement and intention to leave, as well as the mediating role of work engagement in the relationship between FWAs and turnover intention.

Based on previous research by authors on the topic of flexible work arrangements and differences between employees in terms of socio-demographic characteristics, a research hypothesis has been formulated to be tested in this study:

H_0: There are statistically significant differences in the level of implementation of flexible working arrangements based on the socio-demographic characteristics of employees in the Republic of Serbia.

2. Methodology

2.1. The questionnaire

An electronic version of the questionnaire was created using Google Forms. The questionnaire consisted of two parts. The first part pertained to socio-demographic characteristics, where respondents could indicate their gender, age group, and level of education. The second part of the questionnaire included nine questions where respondents could indicate the extent of their use of various forms of flexible work arrangements according to the CRANET research methodology (Slavić & Berber, 2023) on a scale from 1 to 5, with 1 representing the lowest level of the use and 5 representing the highest level of the use.

2.2. Sampling procedure

The data collection based on the created electronic questionnaire was conducted from September 2021 to September 2022, electronically due to the unfavorable epidemiological situation of the COVID-19 pandemic. The electronic version of the questionnaire was distributed via email addresses to individuals using flexible work arrangements, and the survey link was also posted on LinkedIn profiles for random sampling purposes. As stated earlier, an electronic version of the questionnaire was used where respondents were informed about the general research objectives and the security of collected data. Participants voluntarily agreed to participate in the mentioned research.

2.3. The sample

Based on the defined subject and research objectives, the sample includes employees from organizations operating in the territory of the Republic of Serbia. A total of 582 employees completed the questionnaire, of which 294 were men (50.5%) and 288 were women (49.5%). The sample is approximately balanced by gender, with a slightly higher percentage of men. Comparing the age structure, the largest number of respondents are in a group between 25 and 34 years old (n = 265; 45.5%), followed by those aged 35 to 44 (n = 173; 29.7%), between 45 and 55 years old (n = 58; 11.7%), less than 25 years old (n = 53; 9.1%), and the smallest number of respondents are older than 55 (n = 23;

4%). Based on the sample distribution, the sample primarily consists of a younger population that uses flexible work arrangements. Analyzing the level of education, it can be concluded that these are highly educated employees, with the largest number having completed Master studies (n = 283; 48.6%), followed by those holding a Bachelor degree (n = 173; 29.7%), Ph.D. studies (n = 59; 10.1%), Three-year vocational studies (n = 48; 8.2%), while the smallest number have completed Master (Serbian magistar) (n = 19; 3.3%).

Table 1: Sample characteristics

Gender	Number	Percent
Male	294	50.5%
Female	288	49.5%
Age	Number	Percent
Under 25	53	9.1%
25 – 34	265	45.5%
35 – 44	173	29.7%
45 – 55	68	11.7%
Over 55	23	4%
Level of education	Number	Percent
Three-year vocational studies	48	8.2%
Bachelor	173	29.7%
Master study	283	48.6%
Master (Serbian magistar)	19	3.3%
Ph.D. study	59	10.1%
Total	582	100%

Source: Authors research

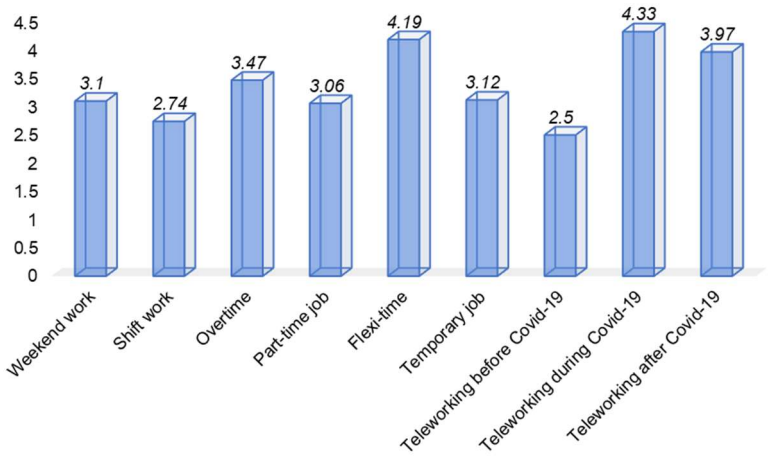
According to data from the Statistical Office of the Republic of Serbia, in the second quarter of 2022, the number of employed individuals was 2,310,035 (Републички завод за статистику, 2023). Considering the size of the target population in the 2022 research and the sample size formula developed by Cochran (1997), it is concluded that for the most commonly applied significance level of 5% and a confidence interval of 95%, a sample consisting of at least 385 employees in the Republic of Serbia can be considered sufficient for further analyses (Social Science Statistics, 2023). Based on the defined criteria and the collected sample, it can be concluded that this criterion has been met.

3. Results and discussion

After the sample was collected, the authors coded the data and conducted analysis using the IBM SPSS Statistics software. Within IBM SPSS, they performed analysis of socio-demographic characteristics, T-tests to compare the mean values of flexible working arrangement usage between males and females, and analysis of variance (ANOVA) to determine statistically significant differences based on age and educational level.

At the beginning of the analysis, the authors performed descriptive statistics to present the actual level of the usage of different FWAs in Serbia.

Figure 1: The level of the usage of different FWAs



Source: Authors' research

Based on the presented Figure 1, the highest level of implementation, when comparing different forms of flexible working arrangements excluding teleworking before, during, and after the Covid-19 pandemic, is flexi-time (4.19), followed by overtime (3.47), temporary job (3.12), part-time job (3.06), and weekend work (3.1). Comparing teleworking before, during, and after the Covid-19 pandemic, it can be concluded that the highest level of implementation was during the Covid-19 pandemic, followed by after (3.97), while the lowest level of implementation was before the Covid-19 pandemic (2.5). This indicates that due to the health crisis, companies faced significant business challenges and had to move to new ways of working, successfully adopting remote work. The positive data on remote work implementation after the Covid-19 pandemic suggests that companies have largely maintained this mode of work, slightly lower compared to the period during the Covid-19 pandemic but significantly higher than before pandemic.

To test the stated hypothesis, the authors conducted an independent samples t-test based on gender (male/female) and a univariate analysis of variance (ANOVA) based on age and education level.

Table 1: T- A test of the application of different forms of flexible work arrangements based on the gender of employees

Type of flexible work arrangements	Gender	N.	Mean	St. dev.	Sig. (2-tailed)
Weekend work	Male	294	3,28	1,51	**0.04**
	Female	288	2,92	1,51	
Shift work	Male	294	2,92	1,49	**0.006**
	Female	288	2,57	1,57	
Over time	Male	294	3,58	1,27	**0.042**
	Female	288	3,36	1,30	
Part-time job	Male	294	3,28	1,44	**0.000**
	Female	288	2,83	1,56	
Flexi-time	Male	294	4,34	0,93	**0.001**
	Female	288	4,04	1,23	
Temporary job	Male	294	3,27	1,39	**0.017**
	Female	288	2,98	1,48	
Teleworking before Covid-19	Male	294	2,51	1,25	0.797
	Female	288	2,49	1,33	
Teleworking during Covid-19	Male	294	4,28	0,96	0.203
	Female	288	4,38	1,05	
Teleworking after Covid-19	Male	294	3,98	0,99	0.934
	Female	288	3,97	1,15	

Source: Authors' research

Based on the conducted independent samples t-test, it was found that for certain forms of FWAs, there are statistically significant differences according to gender in the usage level. Men (M=3.28; SD=1.51) use ***weekend work*** more t (580) =2.92; p=0.004), compared to women (M=2.92; SD=1.51). The difference between mean values (mean difference = 0.37, 95% CI: 0.12 to 0.61) was small (η^2= 0.014). In the case of ***shift work***, men (M=2.92; SD=1.49) use this form of FWAs more t (577) =2.78; p=0.006 than women (M=2.57; SD=1.57). The difference between mean values (mean difference = 0.35, 95% CI: 0.10 to 0.60) was small (η^2 = 0.013), too. Men (M=3.58; SD=1.27) use ***overtime*** more as a form of FWAs t (580) =2.04; p=0.042 than women (M=3.36; SD=1.30). The difference between mean values (mean difference = 0.22, 95% CI: 0.01 to 0.43) was very small (η^2= 0.007). Men (M=3.28; SD=1.44) use ***freelance work*** as a form of FWAs more t(574)=3.54; p<0.001) than women (M=2.83; SD=1.56). The difference between mean values (mean difference = 0.44, 95% CI: 0.20 to 0.69) was small (η^2= 0.021). Men (M=4.34; SD=0.93) use ***flexi-time*** more t (535)=3.29; p=0.001) than women (M=4.04; SD=1.23). The difference between mean values (mean difference = 0.30, 95% CI: 0.12 to 0.48) was small (η^2= 0.018). In the case of ***temporary job***, men (M=3.27; SD=1.39) indicated that they use this form of FWAs more t (580)=2.40; p=0.017) than women (M=2.98; SD=1.48). The difference between mean values (mean difference = 0.29, 95% CI: 0.05 to 0.52) was small (η2= 0.01). Analysis using Levene's test revealed that the homogeneity of variance was violated for the following forms of

flexible work arrangements: shift work, part-time job, flexi-time, and teleworking after the COVID-19 pandemic.

Based on the review of previous research by the authors Wheatley (2017), Peters et al. (2009), Chung & Van der Lippe (2020) and Langner (2018), and the obtained results from a sample of 582 employees in the Republic of Serbia, it can be confirmed that there are statistically significant differences in the level of application of various forms of flexible work arrangements according to gender.

The next analysis pertains to a univariate analysis of variance (ANOVA) to determine statistically significant differences in the level of usage of different forms of FWAs according to the age of the respondents.

Table 1: Univariate analysis of variance (ANOVA) of the application of different forms of flexible work arrangements based on the age structure

Type of FWAs	Age	N.	M	SD	Levene's test *p*	ANOVA	Welch
Weekend work	Under 25	53	2.85	1.57	0.15	**0.002**	0.002
	25 – 34	265	2.88	1.46			
	35 – 44	173	3.34	1.58			
	45 – 55	68	3.56	1.43			
	Over 55	23	3.04	1.46			
Shift work	Under 25	53	2.85	1.71	**0.01**	0.027	**0.024**
	25 – 34	265	2.54	1.49			
	35 – 44	173	2.83	1.56			
	45 – 55	68	3.16	1.42			
	Over 55	23	2.96	1.64			
Overtime	Under 25	53	3.25	1.33	0.11	**0.008**	0.007
	25 – 34	265	3.36	1.31			
	35 – 44	173	3.61	1.24			
	45 – 55	68	3.87	1.13			
	Over 55	23	3.13	1.42			
Part-time job	Under 25	53	3.15	1.55	0.49	0.249	0.261
	25 – 34	265	2.92	1.57			
	35 – 44	173	3.10	1.45			
	45 – 55	68	3.37	1.48			
	Over 55	23	3.13	1.49			
Flexi-time	Under 25	53	4.21	1.03	**0.06**	0.005	**0.063**
	25 – 34	265	4.24	1.10			
	35 – 44	173	4.24	1.08			
	45 – 55	68	4.13	1.01			
	Over 55	23	3.35	1.40			
Part-time job	Under 25	53	3.30	1.39	0.44	**0.028**	0.019
	25 – 34	265	2.99	1.47			
	35 – 44	173	3.06	1.46			
	45 – 55	68	3.49	1.33			
	Over 55	23	3.65	1.23			
	Under 25	53	2.74	1.33	0.47	**0.000**	0.001
	25 – 34	265	2.45	1.27			

Teleworking before Covid-19	35 – 44	173	2.32	1.27			
	45 – 55	68	2.59	1.15			
	Over 55	23	3.61	1.41			
Teleworking during Covid-19	Under 25	53	4.40	0.95	0.72	0.305	0.311
	25 – 34	265	4.41	1.00			
	35 – 44	173	4.22	1.08			
	45 – 55	68	4.22	0.86			
	Over 55	23	4.35	1.07			
Teleworking after Covid-19	Under 25	53	3.94	1.23	**0.01**	0.242	0.270
	25 – 34	265	4.08	1.02			
	35 – 44	173	3.84	1.17			
	45 – 55	68	3.94	0.83			
	Over 55	23	3.91	1.24			

Source: Authors' research

Based on the conducted test of homogeneity of variances for different types of FWAs according to age, it can be concluded that for shift work, flexi-time, and teleworking after the COVID-19 pandemic, the homogeneity of variances is violated as the *p*-values < 0.05 (based on the mean). The ANOVA test determined that there are statistically significant differences for weekend work, overtime work, temporary work, and teleworking before the Covid-19 pandemic as the p-values < 0.05. The Welch's test indicates that there are statistically significant differences in the usage levels of shift work and flexi-time according to the age of employees, as the *p*-value < 0.05.

Based on the Games-Howell test, significant differences were identified in the use of various work arrangements across different age groups. Employees aged 25-34 utilize weekend work less (M = 2.88) compared to those aged 35-44 (M = 3.34) and 45-55 years (M = 3.56). Similarly, employees aged 25-34 engage less in shift work (M = 2.54) compared to those aged 45-55 years (M = 3.16). Regarding overtime, employees aged 25-34 (M = 3.36) participate less than those aged 45-55 years (M = 3.87). Conversely, employees aged 25-34 use flexi-time more frequently (M = 4.24) compared to those aged 45-55 years (M = 3.35). Before the Covid-19 pandemic, significant differences were observed in teleworking practices, with employees aged above 55 years (M = 3.61) using teleworking before Covid-19 pandemic more compared to those aged 25-34 (M = 2.45), 35-44 (M = 2.32), and 45-55 years (M = 2.59).

In the univariate analysis of variance (ANOVA) according to age structure, statistically significant differences were found in the application levels of weekend work, shift work, overtime work, flexi-time, and teleworking before the Covid-19 pandemic. Despite older employees using weekend work, shift work, overtime work, and teleworking before the Covid-19 pandemic more frequently compared to those aged below 25 and between 25 and 35 years, it is noteworthy that the sample size of older individuals is smaller, contributing to differences in application levels without implying that younger individuals use them more than older ones. Additionally, a significant

portion of older respondents work in educational institutions, mainly as professors accustomed to traditional work methods, and organizational changes driven by technology have prompted them to adapt to new ways of working.

Based on the review of previous research by the authors Ciarniene & Vienazindiene (2018), Dixon (2022, p. 52) and Treuren & Anderson (2010) and the obtained results from a sample of 582 employees in the Republic of Serbia, it can be confirmed that there are statistically significant differences in the level of application of various forms of flexible work arrangements according to age structure.

The following analysis pertains to univariate analysis of variance (ANOVA) to determine differences in the implementation of various forms of FWAs according to the level of education.

Table 1: Univariate analysis of variance (ANOVA) of the application of different forms of flexible work arrangements based on level of education

Type of FWAs	Level of education	N.	M	SD	Levene's test *p*	ANOVA	Welch
Weekend work	3-year vocational studies	48	2.65	1.51	**0.003**	0.002	**0.001**
	Bachelor	173	3.03	1.48			
	Master study	283	3.06	1.56			
	Master (Magistar in Serbian)	19	3.63	1.12			
	Ph.D. study	59	3.73	1.39			
Shift work	3-year vocational studies	48	2.04	1.57	0.067	**0.009**	0.015
	Bachelor	173	2.85	1.43			
	Master study	283	2.72	1.58			
	Master (Magistar in Serbian)	19	2.95	1.65			
	Ph.D. study	59	3.05	1.48			
Overtime	3-year vocational studies	48	2.96	1.44	0.129	**0.001**	0.002
	Bachelor	173	3.35	1.23			
	Master study	283	3.51	1.29			
	Master (Magistar in Serbian)	19	3.95	1.18			
	Ph.D. study	59	3.92	1.18			
Part-time job	3-year vocational studies	48	2.58	1.56	0.122	**0.016**	0.012
	Bachelor	173	3.00	1.50			
	Master study	283	3.05	1.54			
	Master (Magistar in Serbian)	19	3.37	1.54			
	Ph.D. study	59	3.56	1.32			
Flexi-time	3-year vocational studies	48	3.81	1.36	**0.000**	0.000	**0.002**
	Bachelor	173	4.02	1.12			
	Master study	283	4.34	1.04			
	Master (srb. magistar)	19	3.74	1.41			
	Ph.D. study	59	4.41	0.79			
Temporary job	3-year vocational studies	48	2.38	1.39	0.061	**0.001**	0.001
	Bachelor	173	3.10	1.41			
	Master study	283	3.16	1.48			
	Master (Magistar in Serbian)	19	3.53	1.39			
	Ph.D. study	59	3.51	1.18			

Teleworking before Covid-19	3-year vocational studies	48	2.40	1.33	0.758	0.105	0.127
	Bachelor	173	2.39	1.26			
	Master study	283	2.49	1.29			
	Master (Magistar in Serbian)	19	2.53	1.22			
	Ph.D. study	59	2.92	1.30			
Teleworking during Covid-19	3-year vocational studies	48	4.00	1.49	**0.000**	0.008	**0.025**
	Bachelor	173	4.18	1.08			
	Master study	283	4.43	0.91			
	Master (Magistar in Serbian)	19	4.53	0.70			
	Ph.D. study	59	4.47	0.70			
Teleworking after Covid-19	3-year vocational studies	48	3.48	1.47	**0.000**	0.001	**0.005**
	Bachelor	173	3.82	1.09			
	Master study	283	4.11	1.01			
	Master (Magistar in Serbian)	19	4.05	1.13			
	Ph.D. study	59	4.15	0.76			

Source: Authors' research

Levene's test indicated that the homogeneity of variance is violated for weekend work, flexi-time, and teleworking during and after the Covid-19 pandemic, as the p-values < 0.05 (based on the mean). ANOVA testing determined that there are statistically significant differences in shift work, overtime, part-time jobs, and temporary work, as the p-values < 0.05. The Welch test indicates that there are statistically significant differences in the implementation of weekend work, flexi-time, and teleworking during and after the COVID-19 pandemic based on the educational level of employees, as the p-values < 0.05

The Games Howel test indicated that in the case of ***weekend work***: employees with magister studies (M = 3.63) and doctoral degrees (M = 3.73) exhibit significantly higher utilization of weekend work compared to those with vocational studies (M = 2.65), four-year academic studies (M = 3.03), and master's degrees (M = 3.06). ***Shift work***: there are notable differences in shift work usage between employees with vocational studies (M = 2.04) and those with bachelor's degrees (M = 2.85) and doctoral degrees (M = 3.05), indicating varied preferences among education levels. ***Overtime***: individuals with magister studies (M = 3.95) and Ph.D. (M = 3.92) engage more in overtime compared to those with vocational studies (M = 2.96) and bachelor's degrees (M = 3.35) (p < 0.05). ***Part-time jobs***: employees with Ph.D. (M = 3.56) demonstrate higher involvement in part-time jobs than those with vocational studies (M = 2.58). ***Flexi-time***: differences in flexi-time usage are observed among education levels, with bachelor's degree (M = 4.02) showing lower utilization compared to master's (M = 4.34) and Ph.D. degree (M = 4.41). ***Temporary job***: vocational studies (M = 2.38) exhibit lower engagement in temporary job compared to bachelor's (M = 3.10), master's (M = 3.16), magister studies (M = 3.53), and Ph.D. (M = 3.51). ***Teleworking after Covid-19***: employees with master's (M = 4.11) and Ph.D. (M = 4.15) degrees demonstrate higher

teleworking engagement compared to vocational studies (M = 3.48) and bachelor's degrees (M = 3.82).

Based on the review of previous research by the authors Thévenon, Adema, & Clarke (2016, p. 5) and Gašić & Berber (2023), and the obtained results from a sample of 582 employees in the Republic of Serbia, it can be confirmed that there are statistically significant differences in the level of application of various forms of flexible work arrangements according to level of education.

Based on the conducted t-test of independent samples by gender and univariate analysis of variance (ANOVA) by age and education level, hypothesis H_0 is confirmed.

Conclusion

This study sheds light on the significant impact of flexible work arrangements on employees in the Republic of Serbia, highlighting variations in their adoption and effects across different socio-demographic groups. Employing a robust methodology that includes the CRANET research approach, independent samples T-tests (gender), and analysis of variance (ANOVA) (age and education level), we identified statistically significant differences in the utilization of FWAs among a sample of 582 employees in the Republic of Serbia.

Based on the results of the research, several practical recommendations can be made for organizations regarding FWAs: ***gender-specific policies***: given that men tend to use FWAs such as flexi-time, temporary jobs, and teleworking more than women, organizations should consider implementing gender-sensitive policies. This could include promoting flexible work options that cater to diverse household responsibilities and career paths. Companies should made proper analysis of their own employee structure and decide what type they should offer to different genders. ***Age-targeted strategies***: recognizing significant age-related differences in the use of FWAs, particularly with younger employees favoring flexibility like flexi-time over weekend and shift work, organizations should tailor their FWAs offerings accordingly. This might involve promoting flexible scheduling options that appeal to younger age groups while ensuring continuity with older employees who prefer teleworking. ***Education-based support:*** understanding that employees with higher education levels utilize weekend work and teleworking more frequently, organizations should provide targeted support and infrastructure for these groups. This could include advanced technological resources and policies that facilitate remote work and flexible scheduling. ***Promotion of work-life balance***: given the positive impact of FWAs on work-life balance reported by both genders, organizations should continue promoting the benefits of flexi-time and teleworking. This could enhance employee satisfaction and retention, particularly among highly educated employees in professional roles. ***Continuous monitoring and adjustment***: organizations should continuously monitor the usage and effectiveness of different arrangements. Adjustments in policies and practices may be necessary to ensure equitable access and benefit across diverse employee demographics. By implementing these recommendations, organizations can foster a supportive work environment that

accommodates varying employee needs and enhances overall productivity and satisfaction.

Limitations of the research relate to the sample used in the study and the analysis being conducted for only one country, without comparison to other countries, in only one period.

Recommendations for future research include analyzing organizational characteristics using the same methodology to determine if there are statistically significant differences based on organization size, the market they operate in, headquarters location, etc. It would also be beneficial to analyze a larger sample to ensure more relevant data. Another suggestion is to conduct a comparative analysis with other countries to compare the data.

References

Afrianty, T. W., Artatanaya, I. G., & Burgess, J. (2022). Working from home effectiveness during Covid-19: Evidence from university staff in Indonesia. *Asia Pacific Management Review, 27*(1), 50-57. Doi: https://doi.org/10.1016/j.apmrv.2021.05.002

Antunes, E. D., Bridi, L. R. T., Santos, M., & Fischer, F. M. (2023). Part-time or full-time teleworking? A systematic review of the psychosocial risk factors of telework from home. *Frontiers in psychology, 14*. Doi: https://doi.org/10.3389%2Ffpsyg.2023.1065593

Austin-Egole, I. S., Iheriohanma, E. B., & Nwokorie, C. (2020). Flexible working arrangements and organizational performance: An overview. *IOSR Journal of Humanities and Social Science (IOSR-JHSS), 25*(5), 50-59. Doi: https://doi.org/10.9790/0837-2505065059

Beckel, J. L., & Fisher, G. G. (2022). Telework and worker health and well-being: A review and recommendations for research and practice. *International Journal of Environmental Research and Public Health, 19*(7), 3879. Doi: https://doi.org/10.3390/ijerph19073879

Beckers, D. G., Van der Linden, D., Smulders, P. G., Kompier, M. A., Taris, T. W., & Geurts, S. A. (2008). Voluntary or involuntary? Control over overtime and rewards for overtime in relation to fatigue and work satisfaction. *Work & Stress, 22*(1), 33-50. Doi: https://doi.org/10.1080/02678370801984927

Berber, N., & Slavić, A. (2019). Flexible Working Arrangements ad Employee Turnover in the Central and Eastern Europe. *11th International Scientific Conference of the Faculty of management of the Cracow University of Economics "Knowledge-Economy-Society" - CFM 2019.* (стр. 35-46). Cracow, Poland: Cracow University of Economics. 35-46. ISBN: 978-83-7285-891-7

Berber, N., Gašić, D., Katić, I., & Borocki, J. (2022). The Mediating Role of Job Satisfaction in the Relationship between FWAs and Turnover Intentions. *Sustainability, 14*(8), 4502. Doi: https://doi.org/10.3390/su14084502

Berkery, E., Morley, M. J., Tiernan, S., Purtill, H., & Parry, E. (2017). On the uptake of flexible working arrangements and the association with human resource and organizational performance outcomes. *European Management Review, 14*(2), 165-183. Doi: https://doi.org/10.1111/emre.12103

Bhalla, J. (2016). Impact of flexible work arrangements on productivity in Indian IT sector: A study. *IPE Journal of Management, 6*(1), 80.

Bjärntoft, S., Hallman, D. M., Mathiassen, S. E., Larsson, J., & Jahncke, H. (2020). Occupational and individual determinants of work-life balance among office workers with flexible work arrangements. *International journal of environmental research and public health, 17*(4), 1418. Doi: https://doi.org/10.3390/ijerph17041418

Bolino, M. C., Kelemen, T. K., & Matthews, S. H. (2021). Working 9-to-5? A review of research on nonstandard work schedules. *Journal of Organizational Behavior, 42*(2), 188-211. Doi: https://doi.org/10.1002/job.2440

Bontrager, M., Clinton, M. S., & Tyner, L. (2021). Flexible Work Arrangements: A Human Resource Development Tool to Reduce Turnover. *Advances in Developing Human Resources, 23*(2), 124–141. doi: https://doi.org/10.1177/1523422320982930

Chung, H., & Van der Lippe, T. (2020). Flexible working, work–life balance, and gender equality: Introduction. *Social Indicators Research, 151*(2), 365-381. Doi: https://doi.org/10.1007/s11205-018-2025-x

Ciarniene, R., & Vienazindiene, M. (2018). Flexible work arrangements from generation and gender perspectives: Evidence from Lithuania. *Engineering Economics, 29*(1), 84-92. Doi: http://dx.doi.org/10.5755/j01.ee.29.1.19247

Cochran WG. (1997) Sampling Techniques. 3rd ed. New York: John Wiley & Sons.

Cvjetković, M., & Cvjetković, M. (2023). Influence of job satisfaction on employee organizational commitment in Serbian companies. *Ekonomija-teorija i praksa, 16*(4), 67-81. Doi: https://doi.org/10.5937/etp2304067C

Čudanov, M., Cvetković, A., Săvoiu, G. (2023). Telework Perceptions and Factors: What to Expect After the Covid-19. In: Mihić, M., Jednak, S., Savić, G. (eds) Sustainable Business Management and Digital Transformation: Challenges and Opportunities in the Post-COVID Era. SymOrg 2022. Lecture Notes in Networks and Systems, vol 562. Springer, Cham. Doi: https://doi.org/10.1007/978-3-031-18645-5_32

Dixon, L. (2022). *The different perceptions of flexible work arrangements between Millennials and Generation X at work* (Doctoral dissertation, Dublin, National College of Ireland).

Dženopoljac, V., Rastić, A., & Dženopoljac, A. (2024). The effect of intangible assets on Serbian firms' corporate financial performance. *Ekonomski horizonti, 26*(2), 165-182. Doi: https://doi.org/10.5937/ekonhor2402165D

Gašić, D. (2024). *Fleksibilni radni aranžmani u kontekstu savremenog poslovanja i uticaja na stavove i ponašanja zaposlenih u Republici Srbiji*. Doktorska disertacija. Subotica: Ekonomski fakultet u Subotici.

Gašić, D., & Berber, N. (2021). The influence of flexible work arrangement on employee behavior during the COVID-19 pandemic in the Republic of Serbia. *Management: Journal Of Sustainable Business And Management Solutions In Emerging Economies, 26*(3), 73-88. Doi: https://doi.org10.7595/management.fon.2021.0026

Gašić, D., & Berber, N. (2023). The Mediating Role of Employee Engagement in the Relationship between Flexible Work Arrangements and Turnover Intentions among Highly Educated Employees in the Republic of Serbia. *Behavioral Sciences, 13*(2), 131. Doi: https://doi.org/10.3390/bs13020131

Horne, R., & Soares, S. S. D. (2022). 3 Temporary workers and COVID-19: Currents below a calm sea. *World Employment and Social Outlook*, *2022*(1), 77-95.

Janošik, M., Đukić, T., & Mladenović, M. (2024). Evaluating the Impact of Motivation Factors on Employee Organizational Behavior Using the PIPRECIA-S Method. Journal of Process Management and New Technologies, 12(3-4), 13–29. Doi: https://doi.org/10.5937/jpmnt12-52003

Junaidi, A., Sasono, E., Wanuri, W., & Emiyati, D. (2020). The effect of overtime, job stress, and workload on turnover intention. *Management Science Letters, 10*(16), 3873-3878. Doi: http://dx.doi.org/10.5267/j.msl.2020.7.024

Kalleberg, A. L. (2001). Organizing flexibility: The flexible firm in a new century. *British journal of industrial relations*, *39*(4), 479-504. Doi: https://doi.org/10.1111/1467-8543.00211

Kelliher, C., & De Menezes, L. M. (2019). *Flexible working in organisations: A research overview*. Routledge, New York, USA. ISBN: 978-1-351-12834-6 (ebk)

Kerekes, K., Zaharie, M. A., & Rațiu, P. I. (2023). The analysis of work characteristics leading to high job satisfaction in Romania. *Anali Ekonomskog fakulteta u Subotici, 59*(50), 3-17. Doi: https://doi.org/10.5937/AnEkSub2300027K

Kerin, A., & Aguirre, A. (2005). Improving health, safety, and profits in extended hours operations (shiftwork). *Industrial Health, 43*(1), 201-208. Doi: https://doi.org/10.2486/indhealth.43.201

Langner, L. A. (2018). Flexible men and successful women: The effects of flexible working hours on German couples' wages. *Work, employment and society, 32*(4), 687-706. Doi: https://doi.org/10.1177/0950017017708161

Mladenović, M., Krstić, B., & Simonović, Z. (2023). Conceptualization of index methodology for measuring manager's satisfaction with their job, private life and work/life balance. *Ekonomika, 69*(4), 1-17. Doi: https://doi.org/10.5937/ekonomika2304001M

McNall, L. A., Masuda, A. D., & Nicklin, J. M. (2009). Flexible work arrangements, job satisfaction, and turnover intentions: The mediating role of work-to-family enrichment. *The Journal of psychology*, *144*(1), 61-81. Doi: https://doi.org/10.1080/00223980903356073

Peters, P., Den Dulk, L., & Van Der Lippe, T. (2009). The effects of time-spatial flexibility and new working conditions on employees' work–life balance: The Dutch case. *Community, Work & Family*, *12*(3), 279-297. Doi: https://doi.org/10.1080/13668800902968907

Saragih, S., Setiawan, S., Markus, T., & Rhian, P. (2021). Benefits and challenges of telework during the covid-19 pandemic. *International Research Journal of Business Studies, 14*(2), 129-135. Doi: https://doi.org/10.21632/irjbs

Sinclair, R. R., Allen, T., Barber, L., Bergman, M., Britt, T., Butler, A., ... & Yuan, Z. (2020). Occupational health science in the time of COVID-19: Now more than ever. *Occupational health science*, 4, 1-22. Doi: https://doi.org/10.1007/s41542-020-00064-3

Slavić, A. & Berber, N. (2023). *Upravljanje ljudskim resursima u Srbiji 2021/2022*. Subotica: University of Novi Sad. Faculty of Economics in Subotica. Retrieved from: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ef.uns.ac.rs/cranet/download/Cranet_2022_Srbija_izvestaj.pdf

Social Science Statistics (2023). *Sample Size Calculator*. Retrieved from: https://www.socscistatistics.com/tests/samplesize/default.aspx

Statistical Office of the Republic of Serbia. (2023. January 30). *Registered employment, 2022.* Retrieved from: https://publikacije.stat.gov.rs/G2023/Html/G20231025.html

Stavrou, E. T. (2005). Flexible work bundles and organizational competitiveness: A cross-national study of the European work context. Journal of Organizational Behavior: *The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 26*(8), 923-947. Doi: https://doi.org/10.1002/job.356

Stavrou, E., & Kilaniotis, C. (2010). Flexible work and turnover: An empirical investigation across cultures. *British Journal of Management, 21*(2), 541-554. Doi: https://doi.org/10.1111/j.1467-8551.2009.00659.x

Thévenon, O., Adema, W., & Clarke, C. (2016). Be Flexible! Background brief on how workplace flexibility can help European employees to balance work and family.*Social Policy Division, Directorate for Employment, Labour and Social Affairs, OECD. Paris*

Thompson, R. J., Payne, S. C., & Taylor, A. B. (2015). Applicant attraction to flexible work arrangements: Separating the influence of flextime and flexplace. *Journal of Occupational and Organizational Psychology, 88*(4), 726-749. Doi: https://doi.org/10.1111/joop.12095

Treuren, G., & Anderson, K. (2010). The employment expectations of different age cohorts: Is generation Y really that different?. *Australian Journal of Career Development, 19*(2), 49-61. Doi: https://doi.org/10.1177/103841621001900207

Vanajan, A., Bültmann, U., & Henkens, K. (2020). Health-related work limitations among older workers—the role of flexible work arrangements and organizational climate. *The Gerontologist, 60*(3), 450-459. Doi: https://doi.org/10.1093/geront/gnz073

Weston, G., Zilanawala, A., Webb, E., Carvalho, L. A., & McMunn, A. (2019). Long work hours, weekend working and depressive symptoms in men and women: findings from a UK population-based study. *J Epidemiol Community Health, 73*(5), 465-474. Doi: https://doi.org/10.1136/jech-2018-211309

Wheatley, D. (2017). Employee satisfaction and use of flexible working arrangements. *Work, employment and society, 31*(4), 567-585. Doi: https://doi.org/10.1177/0950017016631447

Wilden, R., & Gudergan, S. P. (2015). The impact of dynamic capabilities on operational marketing and technological capabilities: investigating the role of environmental turbulence. *Journal of the academy of marketing science*, *43*, 181-199. Doi: https://doi.org/10.1007/s11747-014-0380-y