# Flexible Working and IT employees' Job Satisfaction Before and During COVID-19

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# Abstract

The study examines the effect of five job satisfaction antecedents before and during COVID-19 among a group of IT employees. The examined antecedents are pay and promotion, work nature, work atmosphere and colleagues, job performance and flexible working, which has a central place in the study. The empirical data is collected through a quantitative research, based on a questionnaire executed consecutively in 2019 and 2021 with 126 and 149 participants respectively.

Results show that flexible working positively affects job satisfaction. Factors pay and promotion and work nature show a strong positive impact on employees' satisfaction, while the influence of work atmosphere and colleagues is insignificant. In both surveys, job performance has a negative impact on job satisfaction.

The research results introduce flexible working as a less studied satisfaction facet and can be used by technological companies for reducing turnover rates and finding new ways to keep their employees. Job satisfaction has been researched for almost a century, but flexible working has not received sufficient attention. The main contribution of the present work is the introduction of this concept as an important satisfaction facet for IT employees and measuring its influence before and during the pandemic.

**Keywords:** job satisfaction, flexible working, COVID-19, job performance, IT industry

JEL: J28, L86, O15

# 1. Introduction

'he world is evolving at an unprecedented pace - borders are shrinking, travelling from one point to another has never been easier and more accessible, technological development and digitalisation further shorten the distance between people. Yet, the global economy and labour market are also characterised by an increasing turnover of highly qualified staff. At the same time, companies increasingly start to embrace the idea that employees are their most valuable asset and that it is essential to keep their knowledge, experience and qualifications inside the organisations. This is especially important for companies in the Information Technology (IT) sector, which are among the largest consumers of knowledge workers and continuously have to deal with high turnover rates and deteriorating employee retention (Korsakienė et al., 2015).

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It is broadly recognised that employees' work behaviour is influenced by the level of their satisfaction, which generally affects the overall functioning of the organisations (Spector, 1997). Higher job satisfaction is directly related to lower turnover (Bakkal et al., 2019) and intentions to stay (Mardanov, 2020), lower absenteeism and higher employee engagement (Harter et al., 2002; Ogbuanya and Chukwuedo, 2017). Additionally, it is in a negative relationship with counterproductive work behaviour (Nemteanu et al., 2022). Satisfied employees report a higher level of personal and organisational commitment (Kamalanabhan et al., 2009; Yalabik et al., 2017) and improved performance (Judge et al., 2001; Platis et al., 2015; Yanchovska, 2021). Therefore, finding new ways to improve employee job satisfaction is critical, since on a global scale there is a shortage of highly qualified personnel, especially in the IT sector, where employees tend to be less loval to the organisations and their turnover rates are relatively higher (Korsakienė et al., 2015). Moreover, the proper understanding of job satisfaction determinants across workers and contexts is essential for building effective management tools and achieving the most strategic organisational goals (Andrade and Westover, 2020).

Job satisfaction is well established in literature as a concept, which encompasses the way employees perceive the diverse aspects of their work in different ways and with different feelings (Locke, 1976; Smith et al., 1969; Spector, 1997). The multifaceted nature of job satisfaction can be seen in the multiple models and theories that have been created during the years, among which are Herzberg's Two-Factor Theory (1959), Vroom's Expectancy Theory (1964), Hackman and Oldham's Job Characteristics

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Model (1974), Spector's 9-facet model (1985) and many others. The established research models and theories find their representation in multiple scales that have been created to measure job satisfaction (Yanchovska, 2022) like the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967), the Job Diagnostic Survey (JDS) (Hackman and Oldham, 1975), the Job Satisfaction Survey (JSS) (Spector, 1985) and the Job Descriptive Index (JDI) (Smith et al., 1969). In an attempt to explain the complex nature of job satisfaction, researchers propose various combinations of satisfaction facets including the work itself, the working conditions, the working atmosphere, leadership and supervision, the social relations, job security, recognition, opportunities for career advancement and compensation (Bednarska and Szczyt, 2015; Crespi-Vallbona and Mascarilla-Miró, 2018; Melnik and Maurer, 2006). However, flexible working and its influence on job satisfaction is not part of any of the above presented theoretical models and scales, which creates a gap in theory.

The COVID-19 crises brought a lot of challenges for employees and companies, imposing social isolation and leading to mental health problems like depression and anxiety (Bäuerle et al., 2020; Gonçalves et al., 2020; Staglin, 2020; Tuzovic and Kabadayi, 2021). Workers were forced to change their work habits, set up an appropriate workplace and deal with inadequate digital support, which lead to a number of negative consequences like role conflict and occupational discomfort (Kumar et al., 2021; Mahmood et al., 2021; Yu and Wu, 2021). Regardless of the numerous negative consequences, the pandemic has pushed digital transformation in many sectors, which made flexible working an essential factor for employee welfare. In the EU, flexible

working schemes have been established in many IT companies even before the pandemic, and employees accept them as an integral part of their work life (European Union, 2020). The research of Lodovici et al. (2021) shows that teleworking (a widespread type of work flexibility) is highest in financial services (93% of the employed could in principle telework), in the Information and communication technology (ICT) sector (79%), as well as in real estate, professional, scientific and technical activities, public administration and in the education sector (between 60-70%). Robertson and Mosier (2020) found that the COVID-19 pandemic has increased the number of people who are working remotely due to quarantines, which implemented different restrictions on movements and gatherings. Although work flexibility has been regarded as an essential factor for IT employees' wellbeing and a way to improve their work-life balance, its significance for employees' satisfaction has not received adequate attention in literature. A small number of studies report that the IT employees in general are satisfied with their flexible working environment (Felstead and Henseke, 2017; Fonner and Roloff, 2010; Smith et al., 2015), although some aspects of this environment may have negative effects (Golden and Veiga, 2005). Mihalca et al. (2021) state that job satisfaction can be predicted by different sets of individual and home/family factors during the pandemic, while Davidescu et al. (2021) claim that work flexibility has a significant impact on increasing employee satisfaction. Yet, it has not been evaluated in detail how the flexible job arrangements affect job satisfaction (Neirotti et al., 2019) and examining the association between flexible working and job satisfaction have an important practical implication.

In response to this gap, the main goal of the present study is to examine the effects of five antecedents and determinants of IT employees' job satisfaction (pay and promotion, work nature, work atmosphere and colleagues, flexible working and job performance) before and during the current pandemic situation, with a special accent on flexible working, which in the current study relates to the working hours and location and different instruments that improve employee work-life balance. The study aims to investigate if flexible working contributes to employees' job satisfaction and to reveal how it ranks among the other job satisfaction antecedents examined in the paper. The study tries to answer the following research questions:

- Does flexible working contribute to IT employees' job satisfaction along with the other satisfaction antecedents?
- Does the impact of the investigated satisfaction antecedents on job satisfaction differ before and during the pandemic?

The study is based on data from two consecutive surveys executed among a target group of approximately 250 employees, working in different IT companies. Most of the employees work and live in Bulgaria. A convenience sampling method was used to collect the research data. The first survey was conducted at the beginning of 2019 before the COVID-19 crisis and the second one was executed in the summer of 2021, capturing the impact of the pandemic on employees' well-being. Following the literature review, a conceptual model with five hypotheses is tested with the help of exploratory factor analysis and multiple regression. The main results show that in the two samples, three of the five satisfaction antecedents (work nature,

pay and promotion and flexible working) have a positive effect on IT employees' job satisfaction with different weight, work atmosphere and colleagues do not have a significant influence, while job performance has a significant negative effect in the first survey and a non-significant negative effect in the second one. The positive impact of flexible working on job satisfaction in both studies builds it as an influential satisfaction facet and offers a good basis to include it as an enhancement of the above mentioned satisfaction models. Furthermore, the results of the current study indirectly affirm task autonomy from Hackman and Oldham's Job Characteristics Model (1974) as an important satisfaction predictor, since remote work, which is considered a major element of job flexibility is found to increase workers' autonomy (Nemteanu et al., 2021).

### 2. Literature review

#### 2.1. Job satisfaction factors

Researchers have tried to determine the exact determinants of employees' satisfaction and there are multiple theories and models introduced during the years, which present a different view of the factors that influence it. According to Vroom's expectancy theory (1964), job dissatisfaction may occur when there is a disbalance between employees' expectations and what they get from the job. These expectations can be associated with many different work aspects or factors. In 1974 Hackman and Oldham presented a job satisfaction theory, called the Job Characteristics Model, applicable to any employee and position. This model contains five job characteristics that according to the authors have a direct influence on employee job satisfaction - skills variety, task identity, task significance, task autonomy and job Flexible Working and IT employees' Job Satisfaction Before and During COVID-19

feedback. Spector (1997), who defines job satisfaction as a combination of employees' overall perception of their work and their attitudes to specific labour related aspects or facets, has created a job satisfaction model, which initially contained nine satisfaction facets, but was later advanced and the number of factors was decreased to seven - salary, promotion opportunities, supervision, fringe benefits, co-workers, tasks and communication (Spector, 1985; Spector, 2020). Spector's model has been tested in numerous studies (Valaei and Rezaei, 2016; Yalabik et al., 2017).

Some authors follow Herzberg's twofactor theory (1959) and divide the factors into motivating and hygiene (Bezdrob and Šunje, 2021; Jan et al., 2016; Sypniewska, 2014). Weiss et al. (1967), the authors of one of the most popular scales for measuring job satisfaction - the MSQ, presented a model, which measures eight exogenous and 12 endogenous factors. In many studies, researchers utilise this approach and examine two main groups of satisfaction factors internal and external (Caycho-Rodríguez et al., 2020; Culibrk et al., 2018; George and Zakkariya, 2015; Mardanov, 2020; Mathieu and Babiak, 2016; Taba, 2018). External factors include elements such as pay and promotion, supervision, physical working conditions, working hours, job security and work nature, while internal factors include individuality, values and beliefs, sense of achievement, recognition. development, growth and advancement, etc. The JDI, one of the most frequently used scales for measuring job satisfaction, in addition to general satisfaction, measures satisfaction with five work-related factors - pay, opportunities for promotion, supervision, colleagues and work itself (Smith et al., 1969). These five factors are the ones

most examined and studied as satisfaction predictors and are the composite elements of many other scales like the ones introduced by Vitell and Davis (1990) and Sigueira (2008).

Some researchers limit their models and scales to a smaller number of facets (Fu et al., 2011), others try to include an exclusive list of elements of the working environment (Hofstede, 1980; Korsakienė et al., 2015; Warr, 2007). Regardless of the approach, none of the above-mentioned models and scales measure flexible working as a separate satisfaction facet, probably due to its recency and low relevance in many industries like agriculture, transportation and manufacturing, and consequently it has not received enough attention in the past.

# 2.2. Selecting the satisfaction antecedents

In addition to flexible working, which has a central place in the current study, the satisfaction predictors that were used in the research model have been carefully chosen. The three satisfaction facets - "pay and promotion", "work nature" and "work atmosphere and colleagues" have been selected for two main reasons. First, these factors are well established in literature, widely used in previous studies and part of the most popular satisfaction scales, which makes them essential and facilitates the comparison and analysis of the obtained results. Second, in order to observe the effect of COVID-19 on IT employees' job satisfaction, we chose these factors that were assumingly largely affected by the pandemic crisis.

The relationship between job satisfaction and job performance has been a subject of research among industrial psychologists for many years and it still raises a lot of interest, since authors report ambivalent results. During the pandemic, which imposed social isolation, changed substantially employees' work habits and caused a good amount of job insecurity and anxiety, job performance and how it would evolve in the new working conditions became a key factor for managers and companies. So, induced by the substantial research interest in the relationship between job satisfaction and job performance and the practical implication of this association, which rose during the pandemic, we decided to include job performance as a fifth job satisfaction antecedent and to examine its direct influence on IT employees' job satisfaction before and during COVID-19.

# 2.3. Flexible working

Flexible working is a relatively new concept, the popularity of which is growing fast, especially among high-tech companies and knowledge workers. It has many forms in terms of work time, work location, flexible contracts, outsourcing and functional flexibility (Vendramin et al., 2000). In the current study, work flexibility includes elements such as flexible working hours, ability to work from home or a remote location, programs that promote work-life balance, more days paid annual leave, etc. Some researchers use the term "teleworkability", which indicates the degree to which a job can be performed remotely (Lodovici et al., 2021). Raguseo et al. (2016) use the expression "smart work", which corresponds to a work practice that is characterised by spatial and temporal flexibility and is supported by technological tools. According to Kim and Oh (2015), this work setting provides employees with optimal working conditions and enables them to perform better. The research of Wheatley (2017) showed that flexible time, which is one aspect of flexible work arrangements,

has a positive effect on men's work-life, but could negatively impact the life satisfaction of women.

Some researchers argue that remote working, which is a main component of flexible working, leads to higher job satisfaction (Bellmann and Hübler, 2020; Felstead and Henseke, 2017; Torten et al., 2016), while others consider that working from home does not contribute to employee wellbeing due to different home obligations (Fonner and Roloff, 2010). Golden and Veiga (2005) found that remote work contributes to job satisfaction only to a certain point, after which increasing the amount of remote work leads to a decrease in job satisfaction. These ambiguous results may be due to the fact that researchers measure different elements under the umbrella term of "flexible working". Neirotti et al. (2019) distinguish two types of flexible work practices according to their aims: the accommodation of employees' personal lives (employment practice) and the operational reasons of a firm (work practice). They consider that only the employment practices contribute to higher job satisfaction, while the demanding nature of IT work may have a negative effect (Atanasoff and Venable, 2017). These two aspects of flexible working can explain the simultaneous identification of both positive and negative effects on employee's wellbeing in the condition of a pandemic (Belzunegui-Eraso and Erro-Garcés, 2020).

Most researchers suggest, however, that the advantages of flexible working are greater than the disadvantages in regard to job satisfaction (Smith et al., 2015). Performing the work tasks in non-work premises can enhance employees' flexibility with respect to when, where and how to work, which in turn increases their job satisfaction (Ninaus et al., 2021). Llave and Messenger (2018) also report Flexible Working and IT employees' Job Satisfaction Before and During COVID-19

that ICT workers usually show higher levels of job satisfaction if they have considerable control over where and when to work. The results of Neirotti et al. (2019) show that the use of flexible working practices positively impacts job satisfaction of employees who have chosen this way of working, as is the case with most of the IT professionals.

Crespi-Vallbona and Mascarilla-Miró (2018) report a positive influence of a satisfaction factor called "personal working conditions" on IT employees' general satisfaction. This factor is very similar to the employment practice of flexible working, since it covers employees' schedules and the balance between work, social and family life. Other studies show a positive association between work-life balance and employees' job satisfaction (Abdirahman et al., 2020; Alegre et al., 2016; Moro et al., 2021), as well as between psychological wellbeing, work-life balance and job performance (Haider et al., 2018). Having flexibility to plan their own work and to maintain a good work-life balance is especially important for IT employees, who often work under pressure (Bezdrob and Sunje, 2021). Based on the above, the first two hypotheses are defined as follows:

**H1a/b:** Flexible working will impact positively IT employees' general job satisfaction before (H1a) and during the pandemic (H1b).

#### 2.4. Pay and promotion opportunities

Pay and promotion opportunities often go hand in hand as two aspects of companies' compensation plans. These plans cover all monetary and non-monetary incentives that employees receive. The companies apply various types of compensations such as pay increments or bonuses (extrinsic), and promotion opportunities or job security

(intrinsic) and Wang, 2019). (Huang Nevertheless, some researchers use these two incentives as separate satisfaction facets. Some authors claim that pay is an important job satisfaction determinant (Bednarska and Szczvt, 2015; Culibrk et al., 2018), while for others its influence is observed to be rather short-term (Davidescu et al., 2021; McLean et al., 1996). In general, IT professionals worldwide hold some of the highest-paid positions (Bezdrob and Sunje, 2021). Therefore, it is not surprising that Erro-Garcés and Ferreira (2019) found that monthly earnings are statistically insignificant in predicting job satisfaction, although the salary change is positively associated and significant.

Career development, which refers to the individual growth and advancement, better social positions and the opportunity to take more responsibilities in the company (Robbins, 1998), is positively associated with employees' job satisfaction (Bednarska and Szczyt, 2015). Opportunities for career advancement are also often related to higher earnings. Therefore, combining extrinsic (pay) and intrinsic (promotion) benefits that impact employee's satisfaction may contribute to higher efficiency and commitment (Balducci et al., 2011). Following these considerations, the next two hypotheses are as follows:

**H2a/b:** Pay and promotion opportunities will influence positively IT employees' general job satisfaction before (H2a) and during the pandemic (H2b).

# 2.5. Work nature

The nature of work is one of the most important determinants of job satisfaction. Many studies from different cultural and industrial contexts show that job satisfaction increases when employees find their jobs interesting and meaningful (Hakanen et al., 2008; Hauff et al., 2015; Sousa-Poza and Sousa-Poza, 2000). The job position, which represents the essence of what employees do, was found to be among the factors that have the strongest influence on IT employees' iob satisfaction (Crespi-Vallbona and Mascarilla-Miró, 2018; Kowal and Roztocki, 2015). Satisfaction with the nature of one's work is also a key driver for all aspects of employee engagement (Yalabik et al., 2017). If employees really enjoy what they do, they will be more satisfied with their jobs, and much more inclined to compromise with other elements of the work environment. Based on that, two new research hypotheses are presented:

H3a/b: Work nature will have a positive impact on IT employees' general job satisfaction before (H3a) and during the pandemic (H3b).

# 2.5. Work atmosphere and colleagues

Work atmosphere that fosters collegiality and support may significantly impact employees' emotional state and their general satisfaction. Creating a supportive environment based on trust, respect and a positive work atmosphere is key for the health and prosperity of ICT companies (Lehner et al., 2013). It has been observed that aspects of the work environment, such as friendly colleagues willing to help when needed, have a significant effect on the way employees perceive their work (Yalabik et al., 2017). In a study among IT professionals in Poland, Kowal and Roztocki (2015) revealed a positive association between colleagues and job satisfaction. Good relationship with colleagues and teamwork has shown a positive impact on job satisfaction in a number of crosscultural studies on workers from different

industries (Andreassi et al., 2014; Hauff et al., 2015; Sousa-Poza and Sousa-Poza, 2000). Korsakienė et al. (2015) found that the good relationship with colleagues has the strongest impact on IT employees' decision to stay in the company, consequently reducing the turnover rates. The social influence of colleagues can potentially shape a person's perception, attitude and behaviour in the workplace (Takeuchi et al., 2011) and can be very beneficial for both employees and organisations. In this respect, the next group of hypotheses are:

H4a/b: Good work atmosphere and colleagues will influence positively IT employees' general job satisfaction before (H4a) and during the pandemic (H4b).

# 2.6. Job performance

The performance-satisfaction relationship has been a hot topic among researchers for many years. In an attempt to better understand the association between the two variables, scholars have developed various relationship models. In a large-scale metaanalysis, Judge et al. (2001) state that most of the researchers believe that the influence follows the direction from attitude (job satisfaction) to behaviour (job performance), but others have challenged this approach. The latter claim that good job performance may bring positive outcomes that would have a positive effect on employee job satisfaction. Following Vroom's Expectancy theory (1964), one would expect that job performance would influence job satisfaction through different desired outcomes, which employees expect to receive as a reward. Judge et al. (2001) found 10 studies in their meta-analysis that investigate the effect of job performance on job satisfaction only four of which reported a significant influence. Other authors show that Flexible Working and IT employees' Job Satisfaction Before and During COVID-19

there is a bilateral, simultaneously influential relationship between performance and satisfaction (Bakotić, 2016; Yang and Hwang, 2014). This leads to the last two research hypotheses:

H5a/b: Job performance will have a positive impact on IT employees' general job satisfaction before (H5a) and during the pandemic (H5b).

In line with the proposed hypotheses, the two models presented in Figure 1 will be tested.

# 3. Research methodology

# 3.1. Research design

The paper is based on a quantitative analysis of data from two identical surveys carried out consecutively in 2019 and 2021 within the same target group. A questionnaire has been specifically adapted to measure: 1) employees' general satisfaction; 2) four satisfaction facets and job performance and 3) a group of demographic variables. Consistent with a large number of previous studies (Alegre et al., 2016; Dolbier et al., 2005; Erro-Garcés and Ferreira, 2019; Oshagbemi, 1999), general job satisfaction is measured with a single question: "Considering all, rate your overall satisfaction with your current job."

For the purpose of the present study, flexible working consists of: 1) flexible working hours – the possibility to individually arrange one's working schedule in a convenient way, 2) work from home or work from anywhere, 3) opportunities to maintain a good work-life balance and 4) additional days of paid annual leave. The job satisfaction antecedents are measured as follows – pay and promotion by six items, work nature, work atmosphere and flexible working by three items each and job performance by five elements. All questions are evaluated through a 5-point Likert type

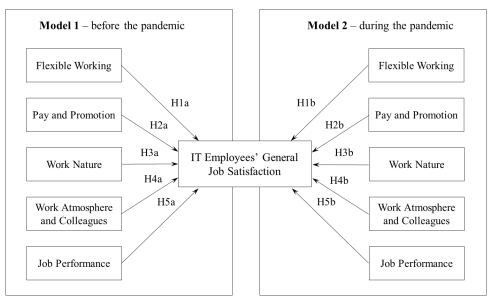


Figure 1. Conceptual models

scale, where 1 is the lowest rank and 5 is the highest. The questionnaire also contains several demographic questions, collecting information about respondents' gender, age, education, country of work and job tenure, measuring the time the employee has been in her/his current job. The questionnaire was created in English, first because this is the common working language in the IT sector and second, because the targeted employees live and work in 18 different countries. Before distribution, the questionnaire was tested among ten IT employees to verify its intelligibility, clarity and ease of use, as a result of which small changes were made.

# 3.2. Sampling and data collection

Approximately 250 IT employees were targeted to participate in the surveys. The participants were selected via a convenience sampling technique. To be selected, individuals had to be employed in the IT sector. Business owners and C-level managers were excluded from the study. Most of the participants in both surveys work and live in Bulgaria (respectively 72% in survey 1 and 67% in survey 2), but there were few respondents from other countries as well (Belgium, Finland, France, Italy, Lithuania, Poland, Slovakia, Sweden, Turkey, the Netherlands and the UK).

The questionnaire has been distributed electronically. The questionnaire has been distributed electronically. In the first round of the survey at the beginning of 2019, 126 people returned fully completed questionnaires and in the second round in 2021, the survey was fully completed by 149 respondents, which represents approximately 50% and 60% response rate. Full details about the demographic characteristics of the participants are presented in Table 1.

The two samples come from the same targeted population of IT employees. The comparison shows that the answers to five questions do not have equal variance and combining the samples into one is not

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| Su                | urvey 1    |         | Su                | irvey 2    |         |
|-------------------|------------|---------|-------------------|------------|---------|
| Demographic group | Percentage | N = 126 | Demographic group | Percentage | N = 149 |
| Gender            |            |         | Gender            |            |         |
| Female            | 34.1%      | 43      | Female            | 44.3%      | 66      |
| Male              | 65.9%      | 83      | Male              | 55.7%      | 83      |
| Age               |            |         | Age               |            |         |
| Up to 24 years    | 2.4%       | 3       | Up to 24 years    | 0%         | 0       |
| 25 – 34 years     | 34.9%      | 44      | 25 – 34 years     | 24.8%      | 37      |
| 35 – 44 years     | 41.3%      | 52      | 35 – 44 years     | 50.3%      | 75      |
| 45 – 54 years     | 12.7%      | 16      | 45 – 54 years     | 15.4%      | 23      |
| 55+               | 8.7%       | 11      | 55+               | 9.4%       | 14      |
| Education         |            |         | Education         |            |         |
| High school       | 11.9%      | 15      | High school       | 6.0%       | 9       |
| Bachelor's degree | 26.2%      | 33      | Bachelor's degree | 26.8%      | 40      |
| Master's degree   | 61.9%      | 78      | Master's degree   | 67.1%      | 100     |
| Country of work   |            |         | Country of work   |            |         |
| Bulgaria          | 72.2%      | 91      | Bulgaria          | 67.1%      | 100     |
| Other countries   | 27.8%      | 35      | Other countries   | 32.9%      | 49      |
| Job tenure        |            |         | Job tenure        |            |         |
| Up to 3 years     | 43.7%      | 55      | Up to 3 years     | 55.7%      | 83      |
| 4 – 7 years       | 22.2%      | 28      | 4 – 7 years       | 26.2%      | 39      |
| 8 – 11 years      | 18.3%      | 23      | 8 – 11 years      | 6.7%       | 10      |
| 12 – 15 years     | 10.3%      | 13      | 12 – 15 years     | 4.0%       | 6       |
| 16+               | 5.6%       | 7       | 16+               | 7.4%       | 11      |

recommended. This is further confirmed by the t-statistics (Appendix 1, Table C), which shows that the mean differences of three socio-demographic characteristics and two of the other questions are significant. Nevertheless, the data in the two samples is comparable since they are similar in size and the mean differences of all other items are not significant.

# 3.3. Analysis procedure

All data analyses are executed in SPSS version 25.0 and MS Excel. As a first step, exploratory factor analysis, using principal component analysis with Varimax rotation, was conducted to identify the satisfaction antecedents. The research scale was adapted specifically to suit the survey purposes and questions measuring flexible working are introduced for the first time. For this reason, before running the in-depth analysis the scale's validity, reliability and internal consistency were assessed through average

variance extracted (AVE), composite reliability (CR) and Cronbach's alpha tests. The research hypotheses were then tested in two multiple regressions, where the dependent variable was the general job satisfaction, and the satisfaction facets and job performance were the predictors.

# 4. Results

# 4.1. Results from the factor analyses

We used factor analysis to evaluate the satisfaction antecedents in the two surveys and five separate factors have been identified. In survey 1, five out of the 20 items were removed due to low communalities and loading values, likewise in survey 2, six of the elements were removed (Hair et al., 2006).

The analyses of the two factor models show quite satisfactory results. For study 1 and 2 respectively, the KMO measure of sampling adequacy are .781 and .802, Bartlett's test values are ( $\chi$ 2 (105) = 1175.96, p < .001) and

| Table 2. Survey 1 | : Results of rotated | l component matrix |
|-------------------|----------------------|--------------------|
|-------------------|----------------------|--------------------|

|                                                                                 | Survey                     | 1                    |                           |                          |                                       |
|---------------------------------------------------------------------------------|----------------------------|----------------------|---------------------------|--------------------------|---------------------------------------|
| Factor Elements                                                                 | F1<br>Pay and<br>promotion | F2<br>Work<br>nature | F3<br>Flexible<br>working | F4<br>Job<br>performance | F5<br>Atmosphere<br>and<br>colleagues |
| I am satisfied with my chances for promotion.                                   | .893                       |                      |                           |                          |                                       |
| My job offers good prospects for career<br>advancement.                         | .878                       |                      |                           |                          |                                       |
| Those who do well on the job stand a fair chance of being promoted.             | .843                       |                      |                           |                          |                                       |
| I feel satisfied with my chances for salary increases.                          | .835                       |                      |                           |                          |                                       |
| I am satisfied with the nature of my work.                                      |                            | .876                 |                           |                          |                                       |
| I find my job useful and meaningful.                                            |                            | .866                 |                           |                          |                                       |
| My job is enjoyable.                                                            |                            | .789                 |                           |                          |                                       |
| I am satisfied with the flexible working conditions on my job.                  |                            |                      | .892                      |                          |                                       |
| My working schedule fits in with my family and social commitments outside work. |                            |                      | .878                      |                          |                                       |
| My company has better flexible working conditions than other companies.         |                            |                      | .771                      |                          |                                       |
| How do you evaluate the overall quality of<br>your work?                        |                            |                      |                           | .862                     |                                       |
| How do you evaluate your overall<br>effectiveness?                              |                            |                      |                           | .841                     |                                       |
| How do you evaluate your overall<br>productivity?                               |                            |                      |                           | .791                     |                                       |
| I have friends at work.                                                         |                            |                      |                           |                          | .876                                  |
| I enjoy working with my co-workers.                                             |                            |                      |                           |                          | .833                                  |
| Eigenvalues                                                                     | 5.566                      | 2.108                | 1.928                     | 1.283                    | 1.092                                 |
| % of variance                                                                   | 37.1%                      | 14.1%                | 12.9%                     | 8.6%                     | 7.3%                                  |
| Total variance explained                                                        |                            |                      | 79.9%                     |                          |                                       |

( $\chi$ 2 (91) = 1025.67, p < .001) and the total explained variance is respectively 79.9% and 76.8%. The diagonals of the anti-image matrix are all above 0.5 and greater than other values of the respective columns, which shows good measures of sample adequacy. The determinants are different from zero (Determinant 1 = 0.00005180, Determinant 2 = 0.001), which means that there is no linear dependence in the correlation matrixes. The rotated matrix of the second survey provided four factors based on eigenvalues, but in order to properly compare the two studies, the value was manually set to five factors. The results of the two rotated component matrixes are presented in Tables 2 and 3. More details from the factor analysis of both surveys is included in Appendix 1 (Table A and Table B).

The first factor in the two factor analyses models does not account for more than 50% of the total variance (37.1% and 37.3% respectively), which shows that there is no danger of common method bias (Jordan and Troth, 2020). Additionally, Harman's one-factor test was performed, which also confirmed that common method bias is not a problem in both samples.

The discriminant and convergent validity of the items measuring the five factors formed in the factor analysis were assessed through

|                                                                                 | Survey                   | 2                          |                                       |                           |                      |
|---------------------------------------------------------------------------------|--------------------------|----------------------------|---------------------------------------|---------------------------|----------------------|
| Factor Elements                                                                 | F1<br>Job<br>performance | F2<br>Pay and<br>promotion | F3<br>Atmosphere<br>and<br>colleagues | F4<br>Flexible<br>working | F5<br>Work<br>nature |
| How do you evaluate your overall<br>productivity?                               | .869                     |                            |                                       |                           |                      |
| How do you evaluate the added value you bring to the organisation?              | .858                     |                            |                                       |                           |                      |
| How do you evaluate the overall quality of your work?                           | .798                     |                            |                                       |                           |                      |
| I feel satisfied with my chances for salary increases.                          |                          | .870                       |                                       |                           |                      |
| I am satisfied with my chances for<br>promotion.                                |                          | .830                       |                                       |                           |                      |
| am satisfied with the benefits package I receive.                               |                          | .802                       |                                       |                           |                      |
| I enjoy working with my co-workers.                                             |                          |                            | .788                                  |                           |                      |
| There is a culture of help and support in my organisation.                      |                          |                            | .766                                  |                           |                      |
| have friends at work.                                                           |                          |                            | .753                                  |                           |                      |
| I am satisfied with the dynamic work conditions of my job.                      |                          |                            |                                       | .848                      |                      |
| My working schedule fits in with my family and social commitments outside work. |                          |                            |                                       | .828                      |                      |
| My company has better dynamic work conditions than other companies.             |                          |                            |                                       | .712                      |                      |
| I find my job useful and meaningful.                                            |                          |                            |                                       |                           | .784                 |
| My job is enjoyable.                                                            |                          |                            |                                       |                           | .729                 |
| Eigenvalues                                                                     | 5.22                     | 2.106                      | 1.414                                 | 1.293                     | 0.714                |
| % of variance                                                                   | 37.3%                    | 15.0%                      | 10.1%                                 | 9.2%                      | 5.1%                 |
| Total variance explained                                                        |                          |                            | 76.8%                                 |                           |                      |

 Table 3. Survey 2: Results of rotated component matrix

AVE and CR, examining the degree of shared variance between the different elements. The results, presented in Tables 4 and 5, quite adequately meet the criteria set by Fornell and Larcker (1981). Cronbach's alpha test further confirms the validity and internal consistency of the research instruments, since the results for all factors are above the recommended value of 0.7 (Hair et al., 2006).

The first factor in survey 1 and the second in survey 2 was named "pay and promotion", a combination of the financial and career development incentives (Suliman and Iles, 2000). The second factor in the survey 1 is "work nature", which appears fifth in the factor analysis of survey 2. The third factor in survey 1 and the fourth factor in survey 2 is "flexible working", while the fourth factor in surveys 1 and the first factor in survey 2 is "job performance". The factor appearing last in the first survey, but third in the second one is "work atmosphere and colleagues". In order to conduct the correlation and the regression analyses, each of these factors was transformed as a new summated scale, representing the average of the values of the constituent variables (Hair et al., 2006).

# 4.2. Results from the correlation analyses

The mean values, standard deviations and correlations of the research variables are shown in Tables 6 and 7. The mean values comparative analysis reveals that IT

| Survey 1                         |                            |                   |                           |                          |                                       |  |  |
|----------------------------------|----------------------------|-------------------|---------------------------|--------------------------|---------------------------------------|--|--|
| Method                           | F1<br>Pay and<br>promotion | F2<br>Work nature | F3<br>Flexible<br>working | F4<br>Job<br>performance | F5<br>Atmosphere<br>and<br>colleagues |  |  |
| Average Variance Extracted (AVE) | 74.41%                     | 71.33%            | 72.03%                    | 69.20%                   | 73.06%                                |  |  |
| Composite Reliability (CR)       | .921                       | .882              | .885                      | .871                     | .844                                  |  |  |
| Cronbach's alpha                 | .922                       | .915              | .824                      | .812                     | .719                                  |  |  |

# Table 5. Survey 2: AVE, CR and Cronbach's alpha

| Survey 2                         |                          |                            |                                    |                           |                   |  |  |  |
|----------------------------------|--------------------------|----------------------------|------------------------------------|---------------------------|-------------------|--|--|--|
| Method                           | F1<br>Job<br>performance | F2<br>Pay and<br>promotion | F3<br>Atmosphere<br>and colleagues | F4<br>Flexible<br>working | F5<br>Work nature |  |  |  |
| Average Variance Extracted (AVE) | 70.94%                   | 69.63%                     | 59.16%                             | 63.72%                    | 57.30%            |  |  |  |
| Composite Reliability (CR)       | .880                     | .873                       | .813                               | .840                      | .728              |  |  |  |
| Cronbach's alpha                 | .844                     | .831                       | .766                               | .783                      | .860              |  |  |  |

Table 6. Surveys 1: Means, standard deviations and correlations

| Survey 1                               |      |       |        |        |        |        |       |
|----------------------------------------|------|-------|--------|--------|--------|--------|-------|
|                                        | Mean | SD    | JS     | F1     | F2     | F3     | F4    |
| General job satisfaction (JS)          | 3.79 | 0.803 |        |        |        |        |       |
| Pay and promotion (F1)                 | 3.18 | 1.059 | .535** |        |        |        |       |
| Work nature (F2)                       | 3.87 | 0.848 | .648** | .549** |        |        |       |
| Flexible working (F3)                  | 3.99 | 0.804 | .390** | .234** | .210*  |        |       |
| Job performance (F4)                   | 3.94 | 0.575 | .171   | .252** | .415** | .170   |       |
| Work atmosphere and<br>colleagues (F5) | 4.25 | 0.665 | .232** | .269** | .339** | .253** | .221* |

Notes: \*p < 0.05, \*\*p < 0.01

#### Table 7. Surveys 2: Means, standard deviations and correlations

| Survey 2                               |      |       |        |        |        |        |        |  |
|----------------------------------------|------|-------|--------|--------|--------|--------|--------|--|
|                                        | Mean | SD    | JS     | F1     | F2     | F3     | F4     |  |
| General job satisfaction (JS)          | 3.86 | 0.754 |        |        |        |        |        |  |
| Job performance (F1)                   | 3.81 | 0.662 | .221** |        |        |        |        |  |
| Pay and promotion (F2)                 | 3.20 | 0.968 | .619** | .121   |        |        |        |  |
| Work atmosphere and<br>colleagues (F3) | 4.04 | 0.724 | .529** | .329** | .339** |        |        |  |
| Flexible working (F4)                  | 3.91 | 0.761 | .532** | .278** | .367** | .363** |        |  |
| Work nature (F5)                       | 3.91 | 0.873 | .627** | .489** | .402** | .620** | .413** |  |

Notes: \*p < 0.05, \*\*p < 0.01

employees' job satisfaction has not changed much between 2019 and 2021. Employees continue to be quite satisfied with their jobs – in 2019 the mean value was 3.79 on a 5-point scale and 73.0% of the respondents were either satisfied or very satisfied with their jobs. During the second survey in 2021, the mean value of employee job satisfaction is 3.86 and 77.9% of the participants are generally satisfied or very satisfied with their jobs.

Employees also show a high level of satisfaction with the flexible working conditions in their jobs in both surveys. In survey 1 and 2 the mean values are 3.99 and 3.91 respectively and the percentage of respondents who have evaluated flexible working with a mark of 4 or higher is 62.6% in 2019 and 56.4% in 2021. The slightly lower evaluation of work flexibility in 2021 can be explained by the fact that at this point of time remote working was already part of the new normal and employees started to accept it as something granted. Nevertheless, in both time periods, results show unambiguously that IT employees are generally satisfied with the flexible working conditions in their jobs.

In both surveys, employees are most content with the work atmosphere and the relationship with their colleagues and least satisfied by their pay and promotion opportunities. The correlation analysis shows the presence of a strong positive correlation between all four satisfaction facets and employees' general satisfaction, while job performance is significantly correlated with satisfaction only in survey 2. Job satisfaction most strongly associated with the is factors work nature and pay and promotion opportunities. There is also a positive intercorrelation between the satisfaction factors.

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# 4.3. Results from the multiple regression

Following the conceptual models and using the data from the two surveys, two regression models were constructed to test the research hypotheses, where job satisfaction was presented as the output variable and the five factors as the explanatory variables. The outliers were removed in both models three in the first one and one in the second. Both regression models were significant and produced similar results. For survey 1, F  $(5,117) = 38.91, p < .001, R^2 = .624, R^2_{adi} =$ .608 and for survey 2, F (5,142) = 49.45, p < .001, R<sup>2</sup> = .635, R<sup>2</sup><sub>adi</sub> = .622. The values of VIF in the two models are less than 3 and the values of the two condition indexes are less than 30, which suggests that there is no multicollinearity concern. The other multiple regression prerequisites (linear relationship between the dependent and independent variables and lack of high correlations between them, normally distributed and independent residuals) were also tested and produced satisfactory results.

In the first sample, three of the satisfaction facets (work nature, flexible working and pay and promotion) and job performance explain almost 61% of the variance of employees' general satisfaction. Work nature has the strongest positive influence, followed by the factors flexible working and pay and promotion. Notably, job performance has a negative impact on employees' satisfaction in this survey. In the second sample, the same three satisfaction facets (work nature, flexible working and pay and promotion) explain 62% of the variance of employees' general satisfaction. This time, pay and promotion climbs the ranks and becomes the factor that most strongly affects job satisfaction, followed by work nature and flexible working. The

|                                   | Model          | 1                   | Мос            | del 2   |
|-----------------------------------|----------------|---------------------|----------------|---------|
|                                   | Standardised β | t                   | Standardised β | t       |
| Independent variables:            |                |                     |                |         |
| Work nature                       | .608**         | 8.238**             | .376**         | 5.096** |
| Flexible working                  | .271**         | 4.540**             | .191**         | 3.252** |
| Pay and promotion                 | .227**         | 3.293**             | .393**         | 6.759** |
| Job performance                   | 153*           | -2.431 <sup>*</sup> | 094            | -1.594  |
| Work atmosphere and<br>colleagues | 064            | -1.031              | .119           | 1.807   |
| Regression parameters:            |                |                     |                |         |
| $R^2$                             | .624           |                     | .6             | 35      |
| Adjusted R <sup>2</sup>           | .608           |                     | .6             | 22      |
| F-value                           | 38.90          | 6                   | 49.            | 452     |
| Number of observations            | 123            |                     | 14             | 48      |
| Durbin-Watson                     | 2.005          | 5                   | 1.8            | 320     |
| Std. Residuals MIN                | -2.67          | 5                   | -2.            | 559     |
| Std. Residuals MAX                | 2.222          | 2                   | 2.6            | 657     |

 Table 8. Multiple regression results

Notes: \*p < 0.05, \*\*p < 0.01. The dependent variable is general job satisfaction. The independent variables are presented with both the standardised regression coefficients ( $\beta$ ) and t values.

influence of job performance is insignificant in the second survey, even if it is again in a negative relationship with job satisfaction. In both surveys, the factor work atmosphere and colleagues does not show a significant impact on IT employees' job satisfaction.

The regression results indicate that pay and promotion opportunities, work nature and flexible working conditions have a strong impact on IT employees' general job satisfaction. Flexible working occupies respectively the second and the third place in models 1 and 2, which is compatible with a few results from previous studies. For example, in a meta-analysis Allen et al. (2015) found that remote work was positively associated with job satisfaction, however, the correlation was small (r = .09). Job performance has shown a significant negative influence on job satisfaction in one of the surveys. Surprisingly, the facet work atmosphere and colleagues does not have a significant impact on employees' satisfaction neither in sample 1, nor in 2. The results from the two regressions confirm hypotheses H1a and H1b, H2a and H2b, H3a and H3b, reject hypotheses H4a, H4b and H5b and partially confirm H5a. The significance of constant in the two models suggests that there are other factors, unexplored in the current study that have significant impact on the dependent variable.

# 5. Discussion

Even if job satisfaction has been vastly discussed and researched in literature as a means of improving employees' attitudes towards their jobs, and there are numerous models and scales that measure satisfaction, the role of flexible working as a factor influencing IT employees' job satisfaction has not been studied in detail. Flexible working, in the sense of flexible schedules, opportunity to work from any location, to have more days paid leave, maintaining a healthy worklife balance is essential for IT employees

who occupy intellectually challenging jobs and work in fast-changing technological environments, which are often very stressful and require continuous development of new skills and knowledge.

Meanwhile, the ICT industry is ranked as one of the largest in the world, with a market estimated to be five and a half trillion dollars in 2022 and almost six trillion in 2023 (Statista, 2022). In Bulgaria the ICT sector has marked an impressive development in the last years. It includes about 10,000 companies, most of them small and medium size. The share of high-growth enterprises in Bulgaria is particularly higher in the ICT (13,7%) (European Commission, sector 2020). By 2016, the proportion of ICT firms engaging in export activity had climbed to 70 % (European Commission, 2019). This technological segment is characterised by rapid market and technological changes, as well as a continuous innovation of products and services. A changing environment is part of IT workers' daily life, who need to update their professional qualifications and skills and often work under high pressure. Retaining highly gualified staff and maintaining a high level of satisfaction is among the main challenges for companies in this industry. A number of studies report the positive impact of different aspects of flexible working on the job satisfaction of employees in the sector (Crespi-Vallbona and Mascarilla-Miró, 2018; Llave and Messenger, 2018; Neirotti et al., 2019; Rusdha and Edirisooriya, 2021). This brings along substantial practical benefits since understanding better the concept of flexible working, its compound elements and its consequences can become an important instrument for managers and HR professionals.

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The results of the present study confirm the importance of flexible working as a job satisfaction predictor, which showed a significant influence in both data samples, collected before and after the pandemic outbreak. Flexible working arrangements allow employees to align their work schedules and responsibilities in a way that best matches their needs and expectations, give them a higher degree of autonomy and can enhance a better work-life balance. Flexible working, however, played a different role in employee life before and during the pandemic. In the first case, even if they were common for many companies in the IT sector, different flexible work arrangements were considered a benefit or an incentive, offered by some employers. After the pandemic outbreak, the role of flexible working changed from a privilege to a necessity. Some flexible work arrangements, like remote work, were imposed by governments in an attempt to prevent the spread of the virus, others, like flexible schedules, were imposed by the new situation in order to allow employees to simultaneously fulfil their work and family responsibilities. The results of the current research proved that in both cases, flexible working was positively associated with employee job satisfaction, which clearly shows that this factor is significant and should also be investigated in the future and tested in different industrial and cultural contexts.

Besides flexible working, both survey 1 and 2 confirmed that two of the three satisfaction facets have a positive effect on IT employees' job satisfaction. In survey 1, which was executed before the pandemic, the nature of work was the strongest predictor, which is in line with previous studies in the IT sector (Crespi-Vallbona and Mascarilla-Miró, 2018; Kowal and Roztocki, 2015). Having

an interesting and meaningful job makes employees more content with their work (Hakanen et al., 2008; Hauff et al., 2015). In survey 2, the factor pay and promotion opportunities has taken the lead. This can be partially explained by the Corona crisis, when people started to feel less secure about their jobs and become more conscious about their earnings. The factor pay and promotion was found to be positively associated with job satisfaction also by Erro-Garcés and Ferreira (2019). Furthermore, most of the participants in both surveys live and work in Bulgaria, an Eastern European country with a relatively low standard of living, which explains why pay and promotion are such an important job satisfaction determinant (Bednarska and Szczyt, 2015; Culibrk et al., 2018). On the other hand, career development opportunities are a key aspect for employees working in the IT sector, characterised by a high level of individualism, where IT employees are striving mainly for personal development and work flexibility (Golden and Veiga, 2005).

The negative influence of job performance on job satisfaction is an interesting outcome in both surveys, even if the result is significant only in study 1. Reviewing the mean values of job performance and employees' satisfaction with the pay and promotion opportunities (Tables 6 and 7), an imbalance can be noticed most of the respondents have given a high evaluation of their performance, but they do not seem very satisfied with the pay and development opportunities in their current jobs. Considering the substantial impact of pay and promotion on IT employees' general job satisfaction, especially during the pandemic, the negative impact of job performance on job satisfaction may be hidden in the gap between what employees earn versus what they think they deserve. This dependence was also observed in previous studies. For example, Lee et al. (2015) found that pay satisfaction influences the positive impact of job satisfaction on job performance. Taba (2018) reported that the external and internal remuneration systems have a strong direct effect on job performance, which in turn has a strong direct influence on employee job satisfaction. In addition, employees who perceive their performance as either overly negative or overly positive (as is the case in the current study) are found to have less satisfaction in their jobs (Heidemeier and Moser, 2019).

Contrary to expectations, the results from both surveys show that work atmosphere and colleagues does not have a direct impact on IT employees' general job satisfaction, even if in both samples employees appear to be mostly satisfied by the work environment and the relationship with their co-workers. This is an indication that even if the work atmosphere in the researched IT companies is sound and encourages teamwork, satisfaction or dissatisfaction with other factors like pay and promotion, work nature and flexible working conditions is more important for the overall employee contentment. It can also be assumed that pleasant work atmosphere and good relationship with colleagues is a work standard for the IT sector and employees may take it for granted and concentrate their attention on the other, more challenging factors.

#### 6. Conclusion

The goal of the present study was to examine five factors that influence the general job satisfaction of employees in the IT sector and to trace how their impact has changed during the COVID-19 crises, by comparing the results of two surveys

executed within the same target group before and during the pandemic. The highlight of the study is flexible working and its importance for the IT employee's satisfaction and welfare. The current paper builds on the concept of important satisfaction predictors for IT employees and stresses on its significance for other industries as well, as the pandemic has forced digital transformation in many sectors.

Through the factor analysis five factors were derived - flexible working, work nature, pay and promotion, work atmosphere and colleagues and job performance. The correlation analysis suggested a strong linear relationship between all main variables, while the influence of the demographic factors was insignificant. IT employees' job satisfaction has not changed much between normal 2019 and pandemic 2021 and employees appear to be quite satisfied with their current working conditions. In both surveys, respondents are most satisfied with the work atmosphere and the relationship with their colleagues and least satisfied by their pay and promotion opportunities.

The main results from the two surveys consistently show that work flexibility positively affects employees' general job satisfaction over time, establishing this factor as an important satisfaction predictor for employees in the IT sector. Factors work nature and pay and promotion also show a strong positive influence on IT employees' general satisfaction, while job performance was found to be negatively associated with job satisfaction. Work atmosphere and colleagues did not show a direct impact in neither survey. In survey 1, the strongest satisfaction predictor was work nature, while in survey 2, pay and promotion opportunities were the most influential factor.

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# 6.1. Theoretical and practical implications

The main theoretical contribution of the current paper is the introduction of flexible working as one of the satisfaction facets in the scale for measuring IT employees' job satisfaction. With this knowledge, companies may design more adequate corporate practices for retaining the highly skilled employees who are also difficult to replace and are the most valuable and scarce resource in the IT sector.

Therefore, the results of the present research paper are not only academically beneficial to introduce work flexibility as a less studied satisfaction facet, but also can be used by technological companies for reducing turnover rates and finding new ways to keep their top talents.

# 6.2. Limitations and future research

Even if the results of the present study are based on two separate surveys executed over a span of two years and there is a certain level of stability in the results, which reduces the chance for casual effects, the first limitation of the paper is based on the relatively small sample sizes. Verifying the conceptual model among larger groups of IT employees may provide additional insights and more credible results. The second limitation lies in the fact the survey data is based on respondents' self-evaluation, without interviewing their supervisors or examining the HR records, since such information is difficult to obtain. This limitation is partially mitigated by the common-method bias tests, which were performed before testing the research hypotheses. Additionally, the model uses a limited number of satisfaction factors and may omit important facets that may have a significant impact on the general satisfaction of IT employees. Finally, even

if multicollinearity was not a problem in any of the samples, it is worth mentioning that some items in the questionnaire measuring the satisfaction facets and the overall job satisfaction use similar wording, which may cause a small overlap between the research variables (dependent and independent). The current research presents some interesting results and insights, which call for more studies to explore the significance of flexible working across various industries, especially among those employing a large number of knowledge workers.

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### Articles

# Appendix 1

 Table A. Survey 1: Survey items, measurement, items loadings, communalities and Cronbach's alpha

| Factors and items                                                        | Mean | SD    | Items'<br>loading | Commu-<br>nalities | Cronbach's<br>alpha |
|--------------------------------------------------------------------------|------|-------|-------------------|--------------------|---------------------|
| F1. Pay and promotion                                                    |      |       |                   |                    | .922                |
| I am satisfied with my chances for promotion.                            | 3.18 | 1.113 | .893              | .874               |                     |
| My job offers good prospects for career advancement.                     | 3.35 | 1.202 | .878              | .847               |                     |
| Those who do well on the job stand a fair chance of                      | 3.30 | 1.140 | .843              | .818               |                     |
| being promoted.                                                          |      |       |                   |                    |                     |
| I feel satisfied with my chances for salary increases.                   | 2.87 | 1.246 | .835              | .758               |                     |
| F2. Work nature                                                          |      |       |                   |                    | .915                |
| I am satisfied with the nature of my work.                               | 3.94 | 0.870 | .876              | .884               |                     |
| I find my job useful and meaningful.                                     | 3.90 | 0.907 | .866              | .902               |                     |
| My job is enjoyable.                                                     | 3.75 | 0.971 | .789              | .842               |                     |
| F3. Flexible working                                                     |      |       |                   |                    | .824                |
| I am satisfied with the flexible working conditions                      | 4.21 | 0.842 | .892              | .829               |                     |
| on my job.                                                               |      | 0.012 |                   | .020               |                     |
| My working schedule fits in with my family and social                    | 3.98 | 0.980 | .878              | .790               |                     |
| commitments outside work.                                                |      |       |                   |                    |                     |
| My company has better flexible working conditions                        | 3.79 | 0.977 | .771              | .643               |                     |
| than other companies.                                                    |      |       |                   |                    |                     |
| F4. Job performance                                                      |      |       |                   |                    | .812                |
| How do you evaluate the overall quality of your work?                    | 4.03 | 0.606 | .862              | .775               |                     |
| How do you evaluate your overall effectiveness?                          | 3.91 | 0.704 | .841              | .743               |                     |
| How do you evaluate your overall productivity?                           | 3.89 | 0.707 | .791              | .691               |                     |
| F5. Work atmosphere and colleagues                                       |      |       |                   |                    | .719                |
| I have friends at work.                                                  | 4.17 | 0.811 | .876              | 0.810              |                     |
| I enjoy working with my co-workers.                                      | 4.33 | 0.691 | .833              | 0.773              |                     |
| Socio-demographic characteristics                                        |      |       |                   |                    |                     |
| Gender (1 – female; 2 – male)                                            | 1.66 | 0.476 | -                 | -                  | -                   |
| Age (up to 24, 25-34, 35-44, 45-54, 55+), from 1 to 5                    | 2.90 | 0.959 | -                 | -                  | -                   |
| Education (high school, Bachelor's degree, Master's degree), from 1 to 3 | 2.50 | 0.701 | -                 | -                  | -                   |
| Country of work (1 – Bulgaria, 2 – other countries)                      | 1.28 | 0.450 | -                 | -                  | -                   |
| Job tenure (up to 3, 4-7, 8-11, 12-15, 16+), from 1 to 5                 | 2.12 | 1.237 | -                 | -                  | -                   |

| Factors and items                                                                                                             | Mean         | SD             | ltems'<br>loading | Commu-<br>nalities | Cronbach's<br>alpha |  |
|-------------------------------------------------------------------------------------------------------------------------------|--------------|----------------|-------------------|--------------------|---------------------|--|
| F1. Job performance                                                                                                           |              |                |                   |                    | .844                |  |
| How do you evaluate your overall productivity?                                                                                | 3.74         | 0.815          | .869              | .788               |                     |  |
| How do you evaluate the added value you bring to the organisation?                                                            | 3.82         | 0.726          | .858              | .765               |                     |  |
| How do you evaluate the overall quality of your work?                                                                         | 3.87         | 0.732          | .798              | .758               |                     |  |
| F2. Pay and promotion                                                                                                         |              |                |                   |                    | .831                |  |
| I feel satisfied with my chances for salary increases.                                                                        | 3.06         | 1.209          | .870              | .806               |                     |  |
| I am satisfied with my chances for promotion.                                                                                 | 3.18         | 1.053          | .830              | .789               |                     |  |
| I am satisfied with the benefits package I receive.                                                                           | 3.35         | 1.090          | .802              | .756               |                     |  |
| F3. Work atmosphere and colleagues                                                                                            |              |                |                   |                    | .766                |  |
| I enjoy working with my co-workers.                                                                                           | 4.16         | 0.754          | .788              | .803               |                     |  |
| There is a culture of help and support in my organisation.                                                                    | 3.97         | 0.965          | .766              | .691               |                     |  |
| I have friends at work.                                                                                                       | 3.97         | 0.900          | .753              | .659               |                     |  |
| F4. Flexible working                                                                                                          |              |                |                   |                    | .783                |  |
| I am satisfied with the dynamic work conditions<br>on my job.                                                                 | 4.15         | 0.860          | .848              | .835               |                     |  |
| My working schedule fits in with my family and<br>social commitments outside work.                                            | 3.83         | 0.950          | .828              | .733               |                     |  |
| My company has better dynamic work conditions<br>than other companies.                                                        | 3.76         | 0.920          | .712              | .663               |                     |  |
| F5. Work nature                                                                                                               |              |                |                   |                    | .860                |  |
| I find my job useful and meaningful.                                                                                          | 4.07         | 0.847          | .784              | .870               |                     |  |
| My job is enjoyable.                                                                                                          | 3.74         | 1.009          | .729              | .830               |                     |  |
| Socio-demographic characteristics                                                                                             |              |                |                   |                    | -                   |  |
| Gender (1 – female; 2 – male)                                                                                                 | 1.56         | 0.498          | -                 | -                  | -                   |  |
| Age (up to 34, 35-44, 45-54, 55+), from 1 to 4                                                                                | 2.09         | 0.880          | -                 | -                  | -                   |  |
| Education (high school, Bachelor's degree, Master's degree), from 1 to 3                                                      | 2.61         | 0.601          | -                 | -                  | -                   |  |
| <b>Country of work</b> (1 – Bulgaria, 2 – other countries)<br><b>Job tenure</b> (up to 3, 4-7, 8-11, 12-15, 16+), from 1 to 5 | 1.33<br>1.81 | 0.471<br>1.193 | -                 | -                  | -                   |  |

# Table B. Survey 2: Survey items, measurement, items loadings, communalities and Cronbach's alpha

| Table C. | Independent sa | imples test |
|----------|----------------|-------------|
|----------|----------------|-------------|

|                                                                                               |                                       | Levene's<br>for Equal<br>Varianc | ity of |            | t       | -test for Equ | ality of Mean | s                                               |       |
|-----------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------|--------|------------|---------|---------------|---------------|-------------------------------------------------|-------|
|                                                                                               |                                       |                                  |        |            |         |               | Std. Error    | 95% Confidence<br>Interval of the<br>Difference |       |
|                                                                                               |                                       | F                                | Sig.   | t df       | tailed) | Difference    | Difference    | Lower                                           | Upper |
| Gender                                                                                        | Equal variances                       | 10.767                           | .001   | 1.721 273  | .086    | .102          | .059          | 015                                             | .218  |
| Age                                                                                           | assumed<br>Equal variances<br>assumed | 1.297                            | .256   | 7.306 273  | .000    | .811          | .111          | .592                                            | 1.029 |
| Education                                                                                     | Equal variances<br>assumed            | 7.424                            | .007   | 11.033273  | .000    | .881          | .080          | .724                                            | 1.039 |
| Years in current<br>position                                                                  | Equal variances<br>assumed            | 1.994                            | .159   | 2.090 273  | .038    | .307          | .147          | .018                                            | .596  |
| I am satisfied with what I'm paid for                                                         |                                       | 1.820                            | .178   | 1.193 273  | .234    | .151          | .127          | 098                                             | .400  |
| the work I do<br>I feel satisfied with<br>my chances for                                      | n Equal variances<br>assumed          | .095                             | .758   | -1.263273  | .208    | 187           | .148          | 480                                             | .105  |
| salary increases<br>I am satisfied with<br>the benefits                                       | Equal variances<br>assumed            | 1.509                            | .220   | .813 273   | .417    | .103          | .127          | 147                                             | .354  |
| package I receive<br>I am satisfied with<br>my chances for                                    | Equal variances<br>assumed            | .212                             | .646   | .010 273   | .992    | .001          | .131          | 256                                             | .259  |
| promotion<br>My job offers good<br>prospects for<br>career                                    | d Equal variances<br>assumed          | .117                             | .732   | 140 273    | .889    | 020           | .142          | 300                                             | .260  |
| advancement<br>Those who do wel<br>on the job stand a<br>fair chance of                       |                                       | .172                             | .679   | .491 273   | .624    | .067          | .136          | 201                                             | .334  |
| being promoted<br>I am satisfied with<br>the nature of my<br>work                             | Equal variances<br>assumed            | .033                             | .856   | 210 273    | .834    | 022           | .105          | 229                                             | .185  |
| I find my job usefu<br>and meaningful                                                         | Il Equal variances<br>assumed         | 1.836                            | .177   | -1.596 273 | .112    | 169           | .106          | 378                                             | .039  |
| My job is enjoyable                                                                           |                                       | .078                             | .780   | .065 273   | .948    | .008          | .120          | 229                                             | .244  |
| There is a culture<br>of help and support                                                     | Equal variances                       | .813                             | .368   | .521 273   | .603    | .059          | .112          | 163                                             | .280  |
| in my organization<br>I enjoy working wit                                                     |                                       | 1.138                            | .287   | 1.871 273  | .062    | .164          | .088          | 009                                             | .337  |
| my co-workers<br>I have friends at                                                            | assumed<br>Equal variances            | .107                             | .744   | 1.935 273  | .054    | .201          | .104          | 004                                             | .406  |
| work<br>I am satisfied with<br>the dynamic work<br>conditions on my<br>iob                    | assumed<br>Equal variances<br>assumed | .084                             | .772   | .504 273   | .614    | .052          | .103          | 151                                             | .255  |
| My working<br>schedule fits in<br>with my family and<br>social<br>commitments<br>outside work | Equal variances<br>assumed<br>I       | .040                             | .841   | 1.360 273  | .175    | .159          | .117          | 071                                             | .388  |

|                                                                                            |                             | Levene's           |      |                              |     |          |            |                                                 |       |       |
|--------------------------------------------------------------------------------------------|-----------------------------|--------------------|------|------------------------------|-----|----------|------------|-------------------------------------------------|-------|-------|
|                                                                                            |                             | for Equa<br>Varian |      | t-test for Equality of Means |     |          |            |                                                 |       |       |
|                                                                                            |                             |                    |      |                              |     | Sig. (2- |            | 95% Confidence<br>Interval of the<br>Difference |       |       |
|                                                                                            |                             | F                  | Sig. | t                            | df  | tailed)  | Difference | Difference                                      | Lower | Upper |
| My company has<br>better dynamic<br>work conditions<br>than other<br>companies             | Equal variances<br>assumed  | .337               | .562 | .239                         | 273 | .812     | .027       | .115                                            | 198   | .253  |
| Considering all.<br>rate your overall<br>satisfaction with<br>your current job             | Equal variances<br>assumed  | 1.191              | .276 | 696                          | 273 | .487     | 065        | .094                                            | 250   | .120  |
| How do you<br>evaluate the overa<br>quality of your wor                                    |                             | 6.508              | .011 | 2.025                        | 273 | .044     | .166       | .082                                            | .005  | .327  |
| How do you<br>evaluate your<br>overall<br>effectiveness                                    | Equal variances<br>assumed  | 1.389              | .240 | 1.652                        | 273 | .100     | .148       | .089                                            | 028   | .324  |
| How do you<br>evaluate your<br>overall productivity                                        | Equal variances<br>assumed  | 6.242              | .013 | 1.550                        | 273 | .122     | .144       | .093                                            | 039   | .327  |
| How do you<br>evaluate the added<br>value you bring to<br>the organization                 | Equal variances<br>dassumed | 1.046              | .307 | .074                         | 273 | .941     | .007       | .090                                            | 170   | .183  |
| How do you<br>evaluate your<br>proactiveness and<br>willingness to take<br>new initiatives |                             | .056               | .814 |                              |     | .441     | .082       | .106                                            | 127   | .290  |
| Considering all.<br>how do you<br>evaluate your<br>overall<br>performance                  | Equal variances<br>assumed  | 6.136              | .014 | 2.565                        |     |          | .205       | .080                                            | .048  | .362  |
| How do you think<br>your manager<br>would evaluate<br>your overall<br>performance          | Equal variances<br>assumed  | .001               | .976 | .212                         | 273 | .832     | .018       | .083                                            | 146   | .181  |