

THE IMPACT OF JOB SATISFACTION ON JOB PERFORMANCE IN REMOTE WORK CONTEXTS: AN EMPIRICAL INVESTIGATION USING THE JD-R MODEL

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Abstract

The Fourth Industrial Revolution has propelled many employees to perform work from home (WFH), which has been enabled by rapid digital advancements and the integration of technology into daily workflows. This paper aims to explore the relationship between job satisfaction and job performance for employees working from home in Vietnam due to remote work policies implemented by European enterprises. Based on the Job Demands-Resources (JD-R) theory, the research model is proposed. Accordingly, hypotheses are developed, and this study applies a quantitative analysis with a research sample of 256 employees from European multinational enterprises now working remotely in Vietnam. The questionnaire includes close-ended questions sent to these employees via e-mail between January and June of 2023. The collected data are then processed and analyzed by SPSS v.22. The study applies Cronbach's Alpha as a tool for assessing the reliability or internal consistency of scales. The following is the exploratory factor analysis (EFA) and the regression analysis. The research findings indicate that higher job satisfaction levels are a significant predictor of higher perceived job performance when working fully remotely in Vietnam for European enterprises.

Implications for Central European audience: This study's insights on managing remote workforces in a developing country context can guide Central European enterprises in tailoring their remote work strategies when expanding their businesses into Southeast Asian countries such as Vietnam, where the trend of remote work is on the rise. It emphasizes the significance of comprehending local dynamics and meeting employee needs to improve job satisfaction and performance in remote work environments.

Keywords: job attitudes; job performance; job satisfaction; remote work; working from home

JEL Classification: J28, M54, O15

Introduction

The Fourth Industrial Revolution has propelled many employees into performing work from home (WFH), enabled by rapid digital advancements and the integration of technology into daily workflows. According to Steward (2000), employees have shifted to remote or home-based work, leading to a strong growth in online transactions. Besides, in some developed countries, this trend has long been applied to civil servants and government officials due to its undeniable benefits (Kwon et al., 2020). Another question arises as to whether these benefits can be applied to employees in developing countries.

The concept of working from home has rapidly become widespread globally, bringing about significant changes in perceptions of job satisfaction and work efficiency (Bloom et al., 2015; Smirnykh, 2023). Job satisfaction, which includes aspects such as worker comfort with their workspace, work-life balance, and the overall function of their job, is a crucial component of the WFH framework (Niebuhr et al., 2022). Additionally, an employee's capacity to adjust to remote working settings has a significant impact on how well they perform at work in a work from home setting (Debnath, 2023).

In European countries, the advent of Industry 4.0 has gradually increased the proportion of employees working from home “sometimes” or “regularly” in Germany and Central European countries remained lower than the European average. In European countries where teleworking is most common, such as Sweden or the Netherlands, the proportion of employees working at least partly from home is about three times higher than in Germany. This disparity is thought to be due not only to cross-national heterogeneity in industry composition and technical viability but also to cultural differences. Thus, Alipour et al. (2023) also questions why businesses in Germany specifically or in Central Europe in general have such a low rate of work from home.

The Fourth Industrial Revolution, characterized by advancements in automation and digital technology, has significantly influenced Vietnam's labor market, encouraging shifts toward digital work environments and remote operations (Tri & Nhe, 2021). The widespread adoption of Industry 4.0 technologies, including artificial intelligence and digital communication platforms, has increased remote work adoption in Vietnam, with many workers and firms recognizing its growing importance (Anh, 2022). This transition marks a pivotal move from traditional office work culture, highlighting the importance of assessing job satisfaction and performance efficiency in the new context. Additionally, a study conducted on remote workers in Vietnam during the pandemic reveals significant job satisfaction, demonstrating the connection between employment and demographic traits (Thi Kim Phung Dang, 2023). A survey by Q&Me also indicates that 70% of office employees in Vietnam shifted to working from home, with 41% completely transitioning to remote work. Among them, 34% feel very satisfied (scoring 9 or 10), emphasizing factors such as flexibility, relaxed mood, and self-management ability as the main reasons. In contrast, 29% express concerns (scoring 6 or lower), with difficulties related to the home working environment and operational issues (Q&Me, 2023).

The study of job satisfaction and job performance within the WFH environment can be integrated with familiar theories such as Herzberg's Two-Factor Theory, Maslow's Hierarchy of Needs, and Expectancy Theory. These theories provide a comprehensive framework for analyzing employee motivation, satisfaction, and efficiency in various work environments,

including remote work settings. Recent studies within the context of Industry 4.0 reveal that in an office environment, organizational cognitive support has a direct impact on work performance (Mingardi et al., 2020). Conversely, in the WFH context, this impact is indirect and mediated through job satisfaction and the level of job engagement. In Vietnam, a study conducted by Grove HR and YouGov reveals that 73% of Vietnamese workers prioritize work-life balance as the most important factor when considering a job offer. This shift in perspective indicates the significant impact of WFH on job satisfaction. Additionally, the pandemic has also altered the concept of the ideal workspace in Vietnam, with 40% of the workforce favoring a combination of office work and remote work in 2022. Consequently, there currently exists a gap in empirical research in Vietnam, particularly concerning studies that explore the relationship between job satisfaction and work performance in the context of working from home (WFH). This presents an opportunity for further research, aimed at gaining a deeper understanding of these relationships within the specific context of Vietnam.

The transition to the WFH model in Vietnam, significantly influenced by the ongoing digital transformation under Industry 4.0, has had a substantial impact on job satisfaction and work efficiency. Factors influencing this include the balance between work and life, technological support, and corporate culture. Notably, a hybrid model of office and remote work has become popular in Vietnam. A survey by Manpower Group indicates that 42% of Vietnamese workers prefer to WFH three to four days a week, but only 41% of employers agree to this hybrid model (Vietnam Briefing News, 2023). However, many workers wish to return to the office, missing interaction with colleagues and the structure provided by an office environment. This contrast requires businesses to be flexible in adapting and meeting the diverse needs of their workforce, and to reconsider strategies for an effective hybrid work model (Vietnam Briefing News, 2023). Additionally, challenges such as increased workload, the blurring of work-life boundaries, and mental health issues have also emerged. Approximately 78% of Vietnamese workers consider mental health an important factor in their job, highlighting the need for a work environment that supports emotional and mental well-being (Vietnam Briefing News, 2023). Furthermore, the demand for flexible working conditions is increasing, with 74% of employees favoring flexibility, especially in terms of commuting (Vietnam Briefing News, 2023).

Although studies from developed countries with modern infrastructure have highlighted difficulties associated with WFH, including reduced comfort and flexibility, limited concentration ability, fewer promotion opportunities, and diminished work motivation, these findings may not be entirely accurate when applied to the unique context of Central European enterprises in Vietnam. Due to distinct cultural characteristics and infrastructure, the impacts, and challenges of WFH among Central European enterprises in Vietnam may differ. Therefore, the purpose of this study is not only to explore this knowledge gap by investigating how job satisfaction affects the work performance of Vietnamese employees among Central European enterprises in the WFH context but also to deeply answer the questions above relating to WFH, job satisfaction, and job performance so that providing vital insights that are particularly useful for enterprises in Central Europe struggling with adapting to the new work landscape in developing countries.

The mixed empirical findings on job satisfaction and performance in remote work contexts suggest that the impact of job resources, such as flexibility and autonomy, is not uniform across different workforce demographics or stable across various cultural and economic settings. Therefore, drawing on the Job Demands-Resources (JD-R) Theory, this study examines how job resources in a work-from-home (WFH) environment influence job satisfaction and, in turn, enhance job performance, particularly in Vietnam's rapidly evolving digital landscape influenced by Industry 4.0. In exploring these dynamics, this study makes two key contributions. First, the study enriches the JD-R Theory by highlighting the nuanced role of job resources—such as flexibility and autonomy—in enhancing employee motivation and reducing strain in a remote setting. Our findings reinforce the theory's assertion that job resources foster a motivational process that directly improves performance, especially when employees work outside traditional office environments. Second, this study expands the geographical and contextual applications of the JD-R Theory by situating it in Vietnam's rapidly digitizing work landscape, largely shaped by European multinational enterprises. This Southeast Asian context provides unique insights into how WFH impacts job satisfaction and performance in developing countries with distinct economic, cultural, and technological conditions compared to Western nations. Consequently, the findings offer a valuable framework for multinational corporations, particularly those operating in emerging markets, to understand and leverage remote work strategies that improve both employee satisfaction and productivity.

The remaining of the study is structured as follows: the next section will mention the literature review theoretical background concerning work from home, job performance, and job satisfaction. Subsequently, the following section is the research methodology, results and discussion. Finally, is the conclusion and limitations, and avenues for further research.

1 Literature review and theoretical background

This section will be divided into three parts: (1) work from home; (2) job performance; and (3) job satisfaction. These sections will form the basis for generating hypotheses that this study will test and discuss.

1.1 Work from home

The concept of working from home, initially labeled “telecommuting” by Nilles (1988), has undergone various redefinitions over the past four decades. Working from home is defined as remote work that is enabled by technology and communication tools, eliminating the need for actual travel to workplaces (Weill & Olson, 1989; Gibson et al., 2002; Bello, 2018). From another point of view, Prodanova & Kocarev (2021) suppose that working from home refers to the use of modern technologies for working outside the traditional office.

According to Dingel and Neiman's (2020) analysis, 37% of US employment, including those in financial administration and educational services, might be done remotely. This research offers a comparative context for appreciating the potential of remote work in Vietnam. In addition, a study conducted in Germany by Alipour et al. (2020) found that 56% of occupations, mostly in highly digitalized industries, can be done remotely.

Two main issues from the literature on work-from-home jobs are explored in this study. As widely explored by Gajendran and Harrison (2007), Gimenez-Nadal et al. (2018), Hill et al. (2003), Paulin et al. (2017), Standen and Omari (1997), Suh and Lee (2017), and Wheatley

(2012), the first theme centers on the beneficial effects of working from home on job satisfaction. Businesses that permit their workers to work from home these days have improved work-life balance. As a result of this flexibility, workers typically react to their work with greater positivity and job satisfaction (Davidescu et al., 2021).

The second theme centers on the work-family interface, which has been extensively studied by Michael-Tsabari et al. (2020), Vitoria et al. (2022), and Marôco et al. (2022). According to Moens et al's report from 2022, working remotely has had a lot of benefits. Particularly, of 14,005 survey respondents, 65.7% said that working online improved their job satisfaction, 64.6% thought that there was a better balance between work and personal life, and 48.4% said that working from home lessened stress associated to their jobs. These encouraging results align with earlier studies as well. The OECD research (OECD, 2020) claims that by raising employee satisfaction, remote work has the potential to increase productivity for companies.

However, working from home also has distinct drawbacks, as Daft and Lengel (1986) and Gajendran and Harrison (2007) emphasize. One glaring drawback of working from home is the potential for worse interpersonal ties due to the lack of in-person encounters and richer communication between coworkers and remote workers. In contrast, Jaafar and Rahim (2022) show that telecommuters enjoy greater control over their schedules, which facilitates the balancing of work and personal obligations. Additionally, telecommuting may reduce stress and improve work-life balance, all of which can lead to improved job attitudes and performance. These contradictory results are best described by Gajendran and Harrison's (2007) term, "remote work paradox".

Consequently, the study explores these themes in the Vietnamese context with a particular emphasis on the relationship between job satisfaction and performance when working remotely. To properly understand the impact of remote work on job satisfaction and performance, we explore whether the following characteristics should be included as control variables: autonomy, stress, commitment, and gender. This method enables us to understand the subtleties and complexity of telecommuting, especially considering Vietnam's distinct sociocultural and economic. Thereby, the first hypothesis is as follows:

H1: Work from home has an impact on job satisfaction.

1.2 Job performance

Job performance is defined by Sonnentag and Frese (2002) as observable activities intended to accomplish organizational goals. Befort and Hattrup (2003) make the claim that job requirements, organizational goals, and missions are intrinsically linked to job performance, which is consistent with the topic of this study.

Baker et al. (2007) demonstrated from Australian data that working from home is influenced by a multitude of factors such as organizational structure, job nature, family circumstances, personal satisfaction, and self-assessed job performance. Timsal and Awais (2016) and James (2016) caution that remote work may not suit all employees, a consideration crucial in Vietnam's diverse workforce.

Based on the data from Australia, Baker et al. (2007) showed that a wide range of factors, including organizational structure, the nature of the work, family dynamics, personal satisfaction, and self-assessed job performance, affect the outcomes of working from home. Given Vietnam's diversified workforce, Timsal and Awais (2016) and PwC (2021) suggest that remote work may not be suitable for all employees.

According to the study by Moens et al. (2022), job performance is also enhanced through remote work. Specifically, 56.3% of the surveyed individuals admitted that working online helped them improve task completion efficiency. Additionally, 50.7% noted that working from home increased their ability to concentrate on their work. Bloom et al. (2015) conducted a randomized experiment at a Chinese travel agency, finding a 13% increase in job performance among telecommuters. This is corroborated by Choukir et al. (2022), all indicating a positive correlation between remote work and job performance, a trend we seek to examine in Vietnam.

The study by Moens et al. (2022) claims that working remotely improves job performance as well. More specifically, 56.3% of those polled acknowledged that working online increased their productivity. Furthermore, 50.7% of respondents said that being able to work from home improved their ability to focus on their task. In a randomized trial at a Chinese travel firm, Bloom et al. (2015) discovered that telecommuters performed 13% better at work. Choukir et al. (2022) have supported this, showing a favorable association between job performance and remote work—a tendency we aim to investigate in Vietnam. In contrast, Bailey and Kurland (2002) make the case that there may not always be long-term advantages to working remotely, which is something we take into account when evaluating the viability of remote work benefits in Vietnam. The study conducted by Danilova et al. (2023) among 1,183 respondents revealed that feelings of professional isolation have a negative impact on job effectiveness, even though the quality of home office setups and the accessibility and quality of communication through information and communication platforms positively impact work productivity.

According to Jamal et al. (2021), telecommuters experience less stress and less employee turnover, which are associated with higher levels of job satisfaction. Employee satisfaction levels may fall in contrast to the benefits of working remotely because of loneliness, unrecorded overtime, difficulties telling work from personal life, or awkward home workspaces. In general, depending on two important conditions, remote work can both improve and impede the effectiveness of business operations. Businesses should be aware that worker productivity can be influenced both directly and indirectly by the effectiveness, drive, and creativity of their workforce as well as by cost savings for innovation, productivity improvement, and reinvestment (Zöllner & Sulíková, 2021).

Incorporating these insights, the study proposes the second hypothesis to comprehensively understand how influences job performance in Vietnam's specific remote working conditions as follows:

H2: Work-from-home has an impact on job performance.

1.3 Job satisfaction

From a theoretical approach, Judge et al. (2001) identified five empirically plausible models to explain the satisfaction-performance relationship, while dismissing two models as

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implausible. These discarded models posited either a non-existent relationship between satisfaction and performance or suggested alternative conceptualizations of these constructs. The supported models include (a) satisfaction causing performance, aligning with Fishbein and Ajzen's (1975) theory of attitude-behavior relations; (b) performance leading to satisfaction, as confirmed by Locke (1970) and Lawler and Porter (1967); and (c) a reciprocal causal relationship between satisfaction and performance, as suggested by Wanous (1974). Historically, distinguishing these models has been challenging due to the cross-sectional nature of much satisfaction-performance data, which does not unequivocally demonstrate causation, as noted by Dudasova et al. (2023).

Moreover, Judge et al. (2001) proposed two alternative models in which the relationship between performance and satisfaction might be defined by exogenous variables. These models propose a misleading link, in which the apparent association between job performance and job satisfaction results from common causes rather than a direct causal mechanism, or a moderated relationship, dependent on specific conditional variables.

From an empirical approach, Riyanto et al. (2021) confirm that high job satisfaction positively impacts employee performance. In contrast, a lack of job satisfaction leads to reduced productivity and poor performance, as dissatisfied employees are less motivated to perform their duties optimally.

In the context of remote working in Vietnam, these theoretical models and empirical findings provide a framework to analyze how job satisfaction affects job performance. By understanding these relationships, we can better assess the unique dynamics of job satisfaction and performance among Vietnamese remote workers. Therefore, the next hypothesis is proposed as follows:

H3: Job satisfaction has an impact on job performance when working-from-home.

Table 1 | Summary of findings from previous research

Author and date	Findings
Work from home and Job satisfaction	
Smirnykh (2023)	In Russia, remote work (WFH) has a positive impact on job satisfaction in the labor market.
Debnath (2023)	Remote work positively impacts job satisfaction, especially for those working remotely in Bangladesh.
Sunita (2023)	The key factors in the “work from home” model affect job satisfaction among IT employees in Chennai, India, using a regression model.
Niebuhr et al. (2022)	In Germany, Health and job satisfaction are linked to elements related to the limited nature of work from home (WFH), such as technology functioning, the percentage of WFH work time, or experience with autonomy. For well-being and health, there needs to be a high level of automation and functional, adequate technical equipment.
Alassaf et al. (2023)	In Central European countries, 84.4% of remote workers were satisfied with working from home, but there was no significant difference between domestic and international remote workers in terms of satisfaction with the experience. experience working remotely; This satisfaction mainly comes from allocating available time to personal social activities.
Work from home and Job performance	
Anakpo et al. (2023)	The impact of WFH on employee job performance and efficiency depends on various factors, such as job nature, organizational characteristics, industry, and family environment.
Qu & Yan (2023)	In China, WFH affects labor productivity through job control and job demand, moderated by social support. This indicates that WFH leads to higher flexibility, and employees have more autonomy to work at any time during the day to complete tasks.
Yuliati et al. (2023)	In Indonesia, remote work has a significantly positive direct impact on job performance.
Job satisfaction and Job performance	
Ngo (2021)	Job satisfaction also positively impacts job performance In particular, job happiness mediates the relationship between workers' psychological capital and productivity on the job.
Rinny et al. (2020)	To improve job performance related to job satisfaction, enterprises can implement methods to enhance workplace satisfaction, such as individual interviews to assess and identify the level and causes of job satisfaction for teachers.
Ertekin & Avunduk (2021)	Research results show a positive but low-level correlation between aspects of job satisfaction measures and job performance measures. It is observed that job satisfaction and job performance vary among individuals depending on their socio-demographic characteristics. Additionally, the more satisfied employees are with their jobs, the higher their job performance.

Source: Authors' own elaboration

This study utilizes the Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2017) as the theoretical basis to propose a conceptual framework for investigating the relationship between working from home (WFH), job satisfaction, and job performance. The JD-R theory categorizes job characteristics into job demands and job resources. Job demands are defined as the physical, psychological, and contextual aspects of work that contribute to energy depletion and employee stress, leading to a health impairment process that reduces well-being and performance. Conversely, job resources are the physical, psychological, and contextual supports that facilitate goal achievement, fostering personal growth, learning, and development (Bakker & Demerouti, 2017). These resources initiate a motivational process, enhancing well-being and performance. The JD-R theory is a comprehensive framework applicable to various job characteristics of working from home (Taris & Schaufeli, 2015).

In this study, the JD-R theory provides a lens through which to examine the dual influences of WFH on job performance for employees via job satisfaction. The model posits that WFH positively impacts job performance through increased job satisfaction and a positive motivational state (Toscano et al., 2024). The interaction between job resources and job demands serves to mitigate burnout levels, ultimately fostering positive job outcomes such as job satisfaction and improved job performance (Bakker et al., 2004).

In light of the JD-R theory, the research model includes job satisfaction to understand the relationship between WFH and job performance (Figure 1).

2 Research methodology

In this research methodology section, the study will outline the procedures for data collection and processing to test the hypotheses presented.

2.1 Research methodology and data collection

This research applies the convenient sampling method. Thereby, the questionnaire is designed to gather information from Vietnamese employees about their job performance and satisfaction while working remotely. In addition, information about the characteristics of the employees, such as age, industry, employment status, etc., is also collected. The questionnaires are mainly sent to Vietnamese employees working remotely at European enterprises to collect data via email for convenience across cities and provinces in Vietnam between January and June of 2023. Bac Ninh province and Hanoi (the capital of Vietnam) are the most potential as these two cities have the highest number of Central European enterprises in Vietnam, according to data from the General Statistics Office of Vietnam.

To ensure a representative sample, the required sample size was estimated based on the guidelines by Tabachnick & Fidell (2013) in *Using Multivariate Statistics* (6th ed.). According to their recommendation, for surveys using Likert-type scales, the sample size should be calculated by multiplying the number of items by 5 to 10. Thus, given our survey with 12 items with 10 respondents per item, the minimum sample size was calculated as follows: $n = 12 \times 10 = 120$.

This approach ensures sufficient statistical power and reliability in the factor analysis and multivariate techniques used for data analysis.

According to the Ministry of Planning and Investment's report, as of June 2023, 26 European countries have invested in business enterprises operating in Vietnam. Based on a preliminary market analysis that identified approximately 150 eligible firms meeting the inclusion criteria—namely, firms that have received EU FDI, are actively operating, and maintain a sufficient proportion of work-from-home employees—the author employed a purposive sampling method to select 26 representative companies, each corresponding to one European country. Out of the initial pool of approximately 150 companies, those that satisfied the specific inclusion criteria were approached via email and follow-up phone calls. In total, 40 companies were contacted, and the final sample of 26 companies was chosen based on their responsiveness, operational stability, and representativeness in terms of size and sector diversity.

A total of 396 observations were then targeted for data collection. Subsequently, the author collaborated with the human resources departments of the selected companies to explain the study's objectives and to request assistance in providing information on Vietnamese employees currently working from home. The number of observations collected from each company was determined using proportional allocation based on the actual ratio of work-from-home employees to the total workforce within each firm. Within each company, a simple random sampling method—implemented via computer-generated random selection—was applied to identify the required respondents. To ensure quality control and representativeness, the selection process was cross validated with company records and industry databases, and in cases where a randomly selected individual declined to participate, the random selection procedure was repeated until the target number of observations was achieved.

This study primarily uses quantitative approaches, such as demographic and Likert-scale statement surveys, to fully capture factors associated with the job performance and satisfaction of employees who work remotely in European businesses in Vietnam. The questionnaire is designed based on five rating levels, including “strongly agree”, “agree”, “neutral”, “disagree”, and “strongly disagree”. These rating levels were utilized to facilitate respondents in providing feedback conveniently.

The content of the questionnaire has been designed and refined based on previous research (Hutajulu, 2021; Easton & Van Laar, 2018), and it has been modified to be appropriate for the Vietnamese remote work environment. A comprehensive thematic analysis was conducted on the questionnaire, involving both deductive and inductive coding techniques to discover themes and patterns. This study provided valuable insights into the dynamics of job satisfaction and performance among remote employees in Vietnam.

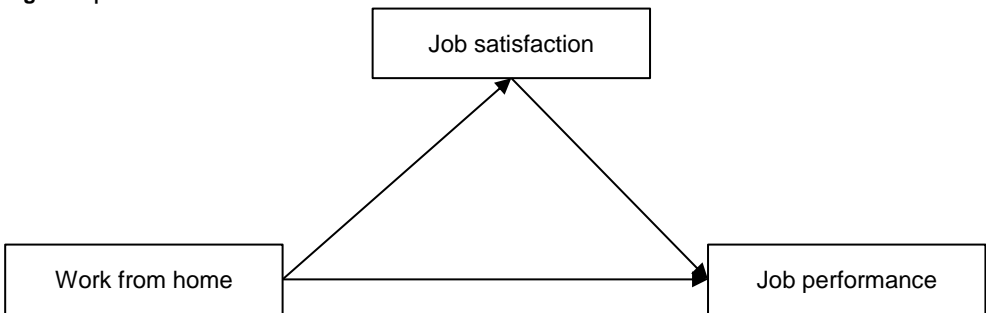
The questionnaires were distributed to 396 employees working for Central European enterprises in Vietnam, yielding 312 completed responses, resulting in a response rate of 78.78%. Among the respondents, 256 were deemed valid for further analysis based on the established inclusion criteria. Furthermore, the sample size of 256 respondents meets the minimum sample size requirement as outlined earlier, ensuring the adequacy of the sample for the subsequent statistical analysis.

The demographic characteristics of the final survey participants are presented in Table 2. The sample encompasses a diverse range of professions, age groups, genders, geographical locations, and industries.

2.2 Research analysis

The data collection process was carried out precisely and included careful checks for accuracy, cleansing, and classification. Using SPSS software v.22, the statistical analysis was carried out. The study employed a linear regression analysis to investigate the connections among job performance (*JP*), job satisfaction (*JS*), and work from home (*WFH*). By using regression coefficients, this approach offers a more comprehensive knowledge of how each independent variable affects the dependent variable. Descriptive statistical techniques were used in this analysis to summarize the data, together with initial factor analysis (EFA), regression analysis, and a reliability assessment of the questionnaire (Cronbach's Alpha) (see Figure 1).

Figure 1 | Theoretical framework



Source: Authors' own elaboration

3 Results and discussion

3.1 Demographic statics

The study used both offline and online means to conduct questionnaires between January and June of 2023. The survey was conducted during this period with 256 employees at European firms who were working from home.

The research's demographic data provides an insightful overview of the workforce that took part in the investigation. With 189 female participants (73.8%) compared to 67 male participants (26.2%), the gender distribution clearly favors women. The bulk of respondents are young, with 203 people (79.3%) being between the ages of 15 and 23. Age-related declines in representation are evident, with only 1 participant (0.4%) in the 51–59 age range (see Table 2).

According to the NACE classification used in European countries, the service sector holds a significant share in the business structure of the industrial park. Specifically, the education sector contributes 21.9% with 56 respondents, ranking first. This indicates that the industrial park provides a favorable environment for the development of educational facilities.

Besides, the information technology sector, with 156 respondents, accounts for a significant proportion of 60.9% of the total business. The following is the other services sector, with 44 respondents, accounting for 17.2% (refer to Table 2).

Table 2 | Demographics statistics

	Item	Frequency (N = 256)	Percentage (Total = 100%)
Gender	Male	67	26.2
	Female	189	73.8
Age	From 15 to 23	203	79.3
	From 24 to 32	26	10.1
	From 33 to 41	14	5.5
	From 42 to 50	12	4.7
	From 51 to 59	1	0.4
	Above 60	0	0
	Fields	Other services	21
	Education	56	21.9
	Limited to "Fabricated metal products"	1	0.4
	Other social services	13	5.1
	Engineering services	9	3.5
	Information technology	156	60.9

Source: Authors' own elaboration

Table 3 presents variables related to job performance (*JP*), job satisfaction (*JS*), and work from home (*WFH*). Each variable is accompanied by a scale and its respective source. Job performance includes aspects like task efficiency and handling challenges remotely. Job satisfaction encompasses skill enhancement and career development satisfaction. Work-from-home factors in support received and satisfaction with the remote job situation. Sources include Hutajulu (2021) and Easton & Van Laar (2018).

Table 3 | Final measurement scale

Variable	Scale	Source
Job performance (JP)		
<i>JP2</i>	I have identified methods to accomplish tasks efficiently while working from home.	Hutajulu (2021)
<i>JP3</i>	During the process of working remotely, I consistently ensure that tasks are completed smoothly, without encountering significant obstacles.	
<i>JP1</i>	I am confident in my ability to handle challenging situations that arise, even when working remotely from home.	
<i>JP4</i>	While working from home, I continually seek new methods to implement in my work.	
Job satisfaction (JS)		
<i>JS3</i>	I am encouraged to learn and enhance new skills.	Easton & Van Laar (2018)
<i>JS4</i>	I feel satisfied with the career development opportunities provided by my workplace.	
<i>JS2</i>	While working from home, I maintain the ability to work efficiently.	
<i>JS1</i>	I set specific goals to support the completion of my tasks in the context of working from home.	
Work from home (WFH)		
<i>WFH3</i>	During my time working from home, I have received necessary and flexible support from my superiors regarding equipment, aligning with my personal conditions.	Easton & Van Laar (2018)
<i>WFH4</i>	I am quite satisfied with my job, even in the circumstance of having to work-from-home.	
<i>WFH2</i>	Throughout the process of working from home, my superiors have always facilitated my ability to work with a flexible schedule, suitable for my personal needs.	
<i>WFH1</i>	My current work schedule is very compatible with my personal living conditions.	

Source: Authors' own elaboration

3.2 Reliability analysis results

Based on the research results, the variable has a Cronbach's Alpha coefficient of >0.6, and the total variable correlation coefficients are >0.3 indicating that the scale is eligible (refer to Table 4).

Table 4 | Cronbach's Alpha coefficients

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Work-from-home (WFH): Cronbach' Alpha = 0.692				
<i>WFH1</i>	10.474	4.540	0.490	0.62
<i>WFH2</i>	10.872	4.389	0.487	0.621
<i>WFH3</i>	11.288	4.585	0.390	0.685
<i>WFH4</i>	10.933	4.320	0.547	0.583
Job satisfaction (JS): Cronbach's Alpha = 0.750				
<i>JS1</i>	11.131	4.024	0.477	0.729
<i>JS2</i>	11.141	3.781	0.585	0.671
<i>JS3</i>	11.141	3.504	0.604	0.658
<i>JS4</i>	11.327	3.899	0.518	0.707
Job performance (JP): Cronbach's Alpha = 0.795				
<i>JP1</i>	11.099	4.238	0.572	0.762
<i>JP2</i>	10.862	4.473	0.623	0.737
<i>JP3</i>	10.814	4.158	0.657	0.718
<i>JP4</i>	10.734	4.382	0.576	0.758

Source: Authors' own elaboration

The Cronbach's Alpha ratings of 0.750 and 0.795 for the *Job Satisfaction* and *Job Performance* scales, respectively, indicate great internal consistency and good reliability. With an alpha of 0.692, the *Work from home* scale, however, is a little bit below the ideal dependability level and might use some further improvement. While both scales measure their components well overall, the study's overall validity may be improved by adjusting the work from home scale (see Table 5).

Table 5 | Factor analysis pattern matrix

Variable	Pattern Matrix ^a		
	Component		
	1	2	3
<i>JP2</i>	.813		
<i>JP3</i>	.810		
<i>JP1</i>	.743		
<i>JP4</i>	.685		
<i>JS3</i>		.878	
<i>JS4</i>		.702	
<i>JS2</i>		.691	
<i>JS1</i>		.560	
<i>WFH3</i>			.795
<i>WFH4</i>			.695
<i>WFH2</i>			.663
<i>WFH1</i>			.527

Source: Authors' own elaboration

The items pertaining to *job performance* have the highest loadings, with values ranging from 0.685 to 0.813, indicating a robust link between them. Items related to *job satisfaction* likewise have strong loadings on the second factor, ranging from 0.560 to 0.878. The third component exhibits moderate to significant loadings for the *work-from-home* items, ranging from 0.527 to 0.795. The uniqueness of the three constructs in the study is supported by this structure (see Table 5).

Table 6 | KMO and Bartlett's Test for factor analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.877
Bartlett's Test of Sphericity	Approx. Chi-Square	1204.687
	df	66
	Sig.	.000

Source: Authors' own elaboration

Table 6 presents the findings of the factor analysis's Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sample adequacy. The results of Bartlett's test show systematic correlations between the items that are appropriate for factor analysis, with a statistically significant result ($p < 0.001$). The sample adequacy for factor analysis is confirmed by the KMO value of 0.827, which is significantly higher than the advised 0.6.

Table 7 | Regression coefficient testing

Relationship	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-2.096	.288		-7.265	.000
H1: WFH → JS	.577	.078	.387	7.387	.000
Constant	1.732	.179		9.695	.000
H2: WFH → JP	.521	.048	.522	10.774	.000
Constant	3.626	.035		102.715	.000
H3: JS → JP	.247	.035	.369	6.987	.000

Source: Authors' own elaboration

The findings of the regression analysis are shown in Table 7, which provides important new information about the dynamics of job performance (JP), job satisfaction (JS), and working from home (WFH). First, a statistically significant positive coefficient ($B = 0.577$, $p < .000$) showing greater employment opportunities suggests that WFH has a positive impact on job satisfaction. So, hypothesis H1 is accepted. Furthermore, highlighting the capacity of remote work to enhance productivity, the study reveals a positive impact ($B = 0.521$, $p < 0.000$) between WFH and job performance. So, hypothesis H2 is accepted. Lastly, the study also shows a significant and positive relationship between job satisfaction and job performance ($B = 0.247$, $p < 0.000$). So, hypothesis H3 is accepted. Therefore, enhancing job satisfaction can be an effective strategy to boost job performance. These insights are extremely important for businesses, especially in the context of a rapidly changing modern working environment. The importance of WFH in business strategy is emphasized, and enterprises need to consider remote working as an effective option to improve employee satisfaction and productivity.

Table 8 | Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
JS → JP	.369 ^a	.136	.133	.62352
WFH → JS	.387 ^a	.150	.147	.61911

Source: Authors' own elaboration

Table 8 presents the regression model summaries for two relationships: Job Satisfaction and Job Performance ($JS \rightarrow JP$), and Work from Home and Job Satisfaction ($WFH \rightarrow JS$). The R values (0.369 for $JS \rightarrow JP$, and 0.387 for $WFH \rightarrow JS$) indicate weak to moderate positive correlations, with R^2 values of 0.136 and 0.150, suggesting that the independent variables explain about 13.6% and 15% of the variance in the dependent variables, respectively. The adjusted R^2 values slightly decrease, indicating a modest fit, while the standard errors (0.62352 and 0.61911) reflect moderate prediction accuracy.

3.3 Discussion and implications

Firstly, WFH has a positive impact on job satisfaction. This finding aligns with the Job Demands-Resources (JD-R) Theory, where WFH provides key job resources—flexibility and autonomy—that reduce strain and enhance satisfaction (Yucel, 2018). Job resources like flexible scheduling reduce the stress associated with commuting, enabling employees to focus on tasks, thereby enhancing overall job satisfaction (Amponsah-Tawiah et al., 2016).

In the Vietnamese context, office workers currently deal with a variety of everyday issues, including traffic congestion, a substandard public transportation system, and increasing petrol prices. Therefore, working from home is not only a growing trend of the Fourth Industrial Revolution but also an effective solution to address these challenges, but is also considered an effective solution to the problems mentioned above and help employees be more proactive and flexible with their work. From there, increase the level of job satisfaction. This result is supported by Jaafar & Rahim (2022) that employees among European enterprises in Vietnam are satisfied if they are supported when working from home. Before the Revolution of 4.0 industry, only about 12% of Germans worked from home. This figure increased to 35% in April 2020, at the beginning of the first lockdown (IAB-FORUM, 2020). Similarly, Lengen et al. (2021) also shows that 26.5% of German workers worked from home from March to April 2020. Thus, the rate of WFH doubled or nearly tripled compared to before the Revolution of 4.0 industry. However, the negative impact varied among individuals, with childless individuals, women with children, and men with children experiencing different levels of negative effects—among them, men with children were the least affected group in German (Möhring et al., 2021). To foster a healthy work-life balance, enterprises should implement policies like “no-email” hours to respect personal time. It is important to note the current legal regulations regarding remote work in each country. Employees need to be informed about the legal aspects as well as the labor agreements applicable to this model. For example, in France and Luxembourg, remote work is regulated by laws and specific labor agreements. One solution to limit overtime work and communication pressure is the “right to disconnect”—the right of employees to disconnect from work after working hours. This right has emerged in France and some other places. The French government has even enacted laws to protect the “right to disconnect” of workers by adopting a law “Adapting the Labour Law to the Digital Age” (Article L. 2242–8 of the French Labour Code) and Article 55(1) entering into force on January 1, 2017. Therefore, administrative and political authorities need to develop appropriate policies and laws to regulate this new working model, ensuring the rights of workers (Martin et al., 2022).

Secondly, working from home positively influences job performance. This outcome can be explained by common factors in the Vietnamese workplace. First, compared to working in an office, employees who work from home typically spend more time accomplishing nearly every goal that is set for them. Furthermore, they endeavor to demonstrate to their supervisor that they are capable of going farther and that they do not only stay at home to sleep or take care of personal matters. It is supported by Zöllner & Sulíková (2021) that when remote employees are provided with enough facilities and motivation, they will have

a better performance. Even though remote work increased quickly during the pandemic, some of the same obstacles that previously existed might still be a significant barrier to this model's general acceptance in European nations after the pandemic. The lack of information technology infrastructure, concerns about employees losing control, a worker's place in the professional hierarchy, the workforce's low level of digital proficiency, and discomfort with social connection from a distance are some of these challenges. Therefore, these factors may continue to strongly influence the trend of flexible working post-pandemic in the European region with following implications (1) 36% of jobs that can work remotely depend on whether the EU has good technical infrastructure at home or not; (2) One-third of jobs that can be worked remotely are occupations that require limited social interaction, so working remotely is ideal (Sostero et al., 2023). The adequacy of technological infrastructure is crucial for remote work among Vietnamese employees, as Vietnam does not have the same advantages as developed countries in terms of technology infrastructure. The availability and reliability of digital tools and internet connectivity are crucial factors. While less developed areas may face challenges that impact job satisfaction and performance, Vietnam's rapid digital transformation is increasingly making remote work more viable and satisfying. Central European enterprises should invest in high-speed internet initiatives, particularly in rural and underdeveloped areas, to bridge regional digital disparities. They should provide employees with modern digital tools like cloud computing services and advanced cybersecurity software. Subsidizing home office setups and offering IT support for remote workers can ensure that all employees, regardless of location, have equal access to necessary technologies.

Finally, when working from home, job satisfaction positively impacts job performance. JD-R theory highlights that satisfaction arising from job resources directly influences job performance, indicating a motivational process at work (Olafsen & Halvari, 2017). As WFH enables employees to balance work and life more effectively, it enhances their satisfaction and, subsequently, their job performance (Prodanova & Kocarev, 2021).

This result is supported by Riyanto et al. (2021). It means that adaptability and resilience play a crucial role in how they perceive and perform in remote work environments, impacting their job satisfaction and performance. Therefore, enterprises should offer continuous learning opportunities through online courses and webinars in areas like digital literacy, project management, and emerging industry trends. Establishing mentorship programs and peer learning groups can foster a culture of ongoing professional development. Regular skills assessment and providing resources for self-improvement will help employees adapt to the evolving demands of remote work. Besides, Vietnam's shift towards a knowledge-based economy and rapid economic growth are reshaping work dynamics. This transition influences the adoption of remote work, presenting new challenges and opportunities for job satisfaction and performance in the digital era. Remote work policies should be in sync with Central Europe's economic goals, such as promoting a knowledge-based economy. This involves creating remote internships and job opportunities in emerging sectors like green technology and digital arts. Collaboration with local governments to offer tax incentives for enterprises adopting remote work can further this alignment.

In summary, the findings from Vietnam's context highlight the intricate relationship between cultural, economic, managerial, and socio-economic factors in shaping job satisfaction and

performance in remote work settings. For operating enterprises in the evolving Vietnamese workplace, understanding, and addressing these multifaceted influences is crucial. Therefore, Central European enterprises should have policies that reflect the cultural and economic dynamics of the unique society of their area. Notably, many Central European businesses operate in Vietnam or employ Vietnamese personnel. Because of the cultural similarities between Vietnam and other Southeast Asian countries, policies that are effective in Vietnam can also be applied in similar cultural contexts in Southeast Asia. This alignment provides a strategic advantage in creating comprehensive and globally relevant remote work policies.

Conclusion and limitations

The study concludes by highlighting the complex relationship that exists between work from home policies, job performance, and job satisfaction in Central European businesses that are present in Vietnam. Customized policies that take into account the socioeconomic and cultural quirks of the area are essential as remote employment becomes more and more common. The results highlight the value of supportive measures when working remotely and the necessity for businesses to create a positive work environment and supply the required resources.

Moreover, the study found the positive impact of working from home on job performance among Central European enterprises in Vietnam, contingent upon adequate facilities and motivation. However, barriers such as technological infrastructure limitations and digital skills gaps persist, necessitating strategic investments in digital initiatives and IT support to enhance remote work capabilities. Furthermore, the direct correlation between job satisfaction and job performance underscores the significance of fostering adaptability and resilience among Vietnamese employees in Central European enterprises. Besides, continuous learning opportunities and alignment with Vietnam's knowledge-based economy are pivotal in ensuring employee satisfaction and performance in remote work settings. Therefore, Central European enterprises can leverage insights from this research to create comprehensive remote work policies that prioritize employee support, technological advancement, and professional development. Collaborative efforts with local authorities and strategic alignment with economic objectives can further enhance remote work initiatives' effectiveness and inclusivity in the evolving work landscape.

This study, while providing significant insights into job satisfaction and performance in remote working contexts in Vietnam, is not without its limitations. Firstly, the sample predominantly comprises younger employees, which may not accurately represent the entire workforce, especially those in more senior age brackets. Additionally, the concentration of respondents from specific regions and professions, such as the Northern region and business sector, limits the generalizability of the findings across all geographic and professional landscapes in Vietnam. Lastly, some possible interactions between home demands/resources, job demands/resources, and personal/demands resources have not been determined yet although these were not the aim of this study. Therefore, future research on job satisfaction and performance in remote work settings should consider a broader and more diverse demographic, including a wider age range and representation from various regions and industries in Vietnam. Future research might also study how

job/personal/home demands-resources might impact well-being and performance. In conclusion, this study is considered the beginning of many possible future research avenues.

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References

- Alassaf, P., El-assaf, B. M., & Szalay, Z. G. (2023). Worker's Satisfaction and Intention toward Working from Home—Foreign Non-EU Citizens vs. National Workers' Approach: Case Study of Central European Countries (Visegrád Group (V4)). *Administrative Sciences*, 13(3), 88. <https://doi.org/10.3390/admsci13030088>
- Alipour, J. V., Fadinger, H., & Schymik, J. (2020). *My home is my castle: The benefits of working from home during a pandemic crisis. Evidence from Germany* (ifo Working Paper No. 329). ifo Institute. <https://doi.org/10.1016/j.jpubeco.2021.104373>
- Alipour, J. V., Falck, O., & Schüller, S. (2023). Germany's capacity to work from home. *European Economic Review*, 151: 104354. <https://doi.org/10.1016/j.eurocorev.2022.104354>
- Amponsah-Tawiah, K., Annor, F., & Arthur, B. G. (2016). Linking commuting stress to job satisfaction and turnover intention: The mediating role of burnout. *Journal of Workplace Behavioral Health*, 31(2), 104–123. <https://doi.org/10.1080/15555240.2016.1159518>
- Anakpo, G., Nqwayibana, Z., & Mishi, S. (2023). The Impact of Work-from-Home on Employee Performance and Productivity: A Systematic Review. *Sustainability*, 15(5): 4529. <https://doi.org/10.3390/su15054529>
- Anh, T., Binh, T., Long, N., Ai, T., Tan, K., & Van, N. (2022). Strategic Vision for the Implementation of the Industrial Revolution 4.0 in the Vietnamese Context. *International Journal of Technology*, 13(5), 958-968. <https://doi.org/10.14716/ijtech.v13i5.5838>
- Bailey, D. E., & Kurland, N. B. (2002). A review of telework research: Findings, new directions, and lessons for the study of modern work. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 23(4), 383-400. <https://doi.org/10.1002/job.144>
- Baker, E., Avery, G. C., & Crawford, J. D. (2007). Satisfaction and perceived productivity when professionals work from home. *Research & Practice in Human Resource Management*. 15(1), 37-62. <http://hdl.handle.net/10453/6434>
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands–resources model to predict burnout and performance. *Human Resource Management*, 43(1), 83–104. <https://doi.org/10.1002/hrm.20004>
- Befort, N., & Hatrup, K. (2003). Valuing task and contextual performance: Experience, job roles, and ratings of the importance of job behaviors. *Applied HRM Research*, 8(1), 17-32

ARTICLE

- Bello, I. (2018). Analysis and intervention tarGetinG risks to the health and inteGriTy of Workers: latin american and caribbean exPeriences. *Revista Brasileira de Medicina do Trabalho*, 16(S1), 7-10. <https://doi.org/10.5327/Z16794435201816S1004>
- Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does working from home work? Evidence from a Chinese experiment. *The Quarterly journal of economics*, 130(1), 165-218. <https://doi.org/10.1093/qje/qju032>
- Choukir, J., Alqahtani, M. S., Khalil, E., & Mohamed, E. (2022). Effects of working from home on job performance: Empirical evidence in the Saudi context during the COVID-19 pandemic. *Sustainability*, 14(6), 3216. <https://doi.org/10.3390/su14063216>
- Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management science*, 32(5), 554-571. <https://doi.org/10.1287/mnsc.32.5.554>
- Danilova, K. B., Ulfsten, A., Eikebrokk, T. R., Iden, J., Johannessen, T. V. & Johanson, D. (2023). Explaining individual job performance in work from home (WFH) arrangements. *Information Technology & People*, 36(5), 1915-1938. <https://doi.org/10.1108/ITP-01-2021-0039>
- Davidescu, A. A. M., Apostu, S. A., Strat, V. A., Scrådeanu, A. I., Zgură, I. D., & Horga, M. G. (2021). The Impact of Teleworking on Romanian Employees' Job Satisfaction: Empirical Evidence Based on Multiple Correspondence Analysis (MCA) and Logistic Regression. *Amfiteatru Economic*, 23(58), 637-653. <https://doi.org/10.24818/EA/2021/58/637>
- Debnath, T. (2023). Work-From-Home Provides Benefits to Family and Workplace that Impact on Job Satisfaction: An Evidence from Bangladesh. *American Journal of Interdisciplinary Research and Innovation*, 1(3), 69-75. <https://doi.org/10.54536/ajiri.v1i3.1118>
- Dingel, J. I., & Neiman, B. (2020). How many jobs can be done at home?. *Journal of public economics*, 189: 104235. <https://doi.org/10.1016/j.jpubeco.2020.104235>
- Dudasova, L., Vaculik, M., Prochazka, J., Svitavska, P., & Patton, G. (2023). Causality of the satisfaction–performance relationship: A task experiment. *Europe's Journal of Psychology*, 19(3), 345-359. <https://doi.org/10.5964/ejop.4075>
- Easton, S., & Van Laar, D. (2018). User manual for the Work-Related Quality of Life (WRQoL) Scale: a measure of quality of working life. *University of Portsmouth*. <https://doi.org/10.17029/EASTON2018>.
- Ertekin, A. B., & Avunduk, Y. (2021). The Relationship between Job Satisfaction and Job Performance: A Study on Sports Industry. *Journal of Educational Issues*, 7(2), 133-145. <https://doi.org/10.5296/jei.v7i2.18949>.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior*. Addison–Wesley.
- Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: meta-analysis of psychological mediators and individual consequences. *Journal of applied psychology*, 92(6), 1524-1541. <https://doi.org/10.1037/0021-9010.92.6.1524>
- Gibson, J. W., Blackwell, C. W., Dominicis, P., & Demerath, N. (2002). Telecommuting in the 21st century: Benefits, issues, and a leadership model which will work. *Journal of Leadership studies*, 8(4), 75-86. <https://doi.org/10.1177/107179190200800>
- Gimenez-Nadal, J. I., Molina, J. A., & Velilla, J. (2018). The commuting behavior of workers in the United States: differences between the employed and the self-employed. *Journal of transport geography*, 66, 19-29. <https://doi.org/10.1016/j.jtrangeo.2017.10.011>

- Hill, E. J., Ferris, M., & Mårtinson, V. (2003). Does it matter where you work? A comparison of how three work venues (traditional office, virtual office, and home office) influence aspects of work and personal/family life. *Journal of vocational behavior*, 63(2), 220-241. [https://doi.org/10.1016/S0001-8791\(03\)00042-3](https://doi.org/10.1016/S0001-8791(03)00042-3)
- Hutajulu, R. S. (2021). Evaluating the impact of “work from home policy” on job performance (Study Case in Indonesia). *International journal of Indonesian society and culture*, 13(1). <https://doi.org/10.15294/komunitas.v13i1.28436>.
- IAB-FORUM (2020), *Homeoffice Braucht Klare Regeln*. Retrieved from <https://www.iab-forum.de/homeoffice-braucht-klare-regeln/>
- Jaafar, N. A., & Rahim, R. A. (2022). Telecommuting and employee productivity: Mediating role of work–family conflict and autonomy. *Proceedings*, 82(1): 84. <https://doi.org/10.3390/proceedings2022082084>
- Jamal, M. T., Alalyani, W. R., Thoudam, P., Anwar, I., & Bino, E. (2021). Telecommuting during COVID 19: A moderated-mediation approach linking job resources to job satisfaction. *Sustainability*, 13(20): 11449. <https://doi.org/10.3390/su132011449>
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127(3), 376-407. <https://doi.org/10.1037/0033-2909.127.3.376>
- Kwon, J. M., Lee, S. Y., Jeon, K. H., Lee, Y., Kim, K. H., Park, J., ... & Lee, M. M. (2020). Deep learning–based algorithm for detecting aortic stenosis using electrocardiography. *Journal of the American Heart Association*, 9(7): e014717. <https://doi.org/10.1161/JAHA.119.014717>
- Lawler, E. E., & Porter, L. W. (1967). The effect of performance on job satisfaction. *Industrial relations*, 7(1), 20-28. <https://doi.org/10.1111/j.1468-232X.1967.tb01060.x>
- Lengen, J. C., Kordsmeyer, A. C., Rohwer, E., Harth, V., & Mache, S. (2021). Soziale Isolation im Homeoffice im Kontext der COVID-19-Pandemie: Hinweise für die Gestaltung von Homeoffice im Hinblick auf soziale Bedürfnisse. *Zentralblatt Fur Arbeitsmedizin, Arbeitsschutz Und Ergonomie*, 71(2), 63-68. <https://doi.org/10.1007/s40664-020-00410>
- Locke, E. A. (1970). Job satisfaction and job performance: A theoretical analysis. *Organizational behavior and human performance*, 5(5), 484-500. [https://doi.org/10.1016/0030-5073\(70\)90036-X](https://doi.org/10.1016/0030-5073(70)90036-X)
- Marôco, A. L., Nogueira, F., Gonçalves, S. P., & Marques, I. C. (2022). Work-Family Interface in the Context of Social Responsibility: A Systematic Literature Review. *Sustainability*, 14(5): 3091. <https://doi.org/10.3390/su14053091>
- Martin, L., Hauret, L., & Fuhrer, C. (2022). Digitally transformed home office impacts on job satisfaction, job stress and job productivity. COVID-19 findings. *Plos one*, 17(3): e0265131. <https://doi.org/10.1371/journal.pone.0265131>
- Michael-Tsabarí, N., Houshmand, M., Strike, V. M., & Efrat Treister, D. (2020). Uncovering implicit assumptions: Reviewing the work–family interface in family business and offering opportunities for future research. *Family Business Review*, 33(1), 64-89. <https://doi.org/10.1177/089448651989978>
- Mingardi, M., Pluchino, P., Bacchin, D., Rossato, C., & Gamberini, L. (2020). Assessment of Implicit and Explicit Measures of Mental Workload in Working Situations: Implications for Industry 4.0. *Applied Sciences*, 10(18): 6416. <https://doi.org/10.3390/app10186416>

ARTICLE

- Moens, E., Lippens, L., Sterkens, P., Weytjens, J., & Baert, S. (2022). The COVID-19 crisis and telework: a research survey on experiences, expectations and hopes. *The European Journal of Health Economics*, 23(4), 729-753. <https://doi.org/10.1007/s10198-021-01392-z>
- Möhring, K., Naumann, E., Reifenscheid, M., Wenz, A., Rettig, T., Krieger, U., ... & Blom, A. G. (2021). The COVID-19 pandemic and subjective well-being: longitudinal evidence on satisfaction with work and family. *European Societies*, 23(S1), 601-617. <https://doi.org/10.1080/14616696.2020.1833066>
- Ngo, T. T. (2021). Impact of psychological capital on job performance and job satisfaction: A case study in Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(5), 495-503. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0495>
- Niebuhr, F., Borle, P., Börner-Zobel, F., & Voelter-Mahlknecht, S. (2022). Healthy and happy working from home? Effects of working from home on employee health and job satisfaction. *International journal of environmental research and public health*, 19(3): 1122. <https://doi.org/10.3390/ijerph19031122>
- Nilles, J. M. (1988). Traffic reduction by telecommuting: A status review and selected bibliography. *Transportation Research Part A: General*, 22(4), 301-317, [https://doi.org/10.1016/0191-2607\(88\)90008-8](https://doi.org/10.1016/0191-2607(88)90008-8)
- OECD (2020). *Productivity gains from teleworking in the post COVID-19 era: how can public policies make it happen?*. OECD Publishing.
- Olafsen, A., & Halvari, H. (2017). Motivational Mechanisms in the Relation between Job Characteristics and Employee Functioning. *The Spanish Journal of Psychology*, 20. <https://doi.org/10.1017/sjp.2017.34>
- Paulin, M., Lachance-Grzela, M., & McGee, S. (2017). Bringing work home or bringing family to work: Personal and relational consequences for working parents. *Journal of Family and Economic Issues*, 38, 463-476. <https://doi.org/10.1007/s10834-017-9524-9>
- Prodanova, J., & Kocarev, L. (2021). Is job performance conditioned by work-from-home demands and resources?. *Technology in Society*, 66: 101672. <https://doi.org/10.1016/j.techsoc.2021.101672>
- PwC (2021). *Vietnam digital readiness report: PwC Vietnam's survey on technology, jobs, and skills*. Retrieved from <https://www.pwc.com/vn/en/publications/vietnam-publications/digital-readiness.html>
- Q&Me (2023). *Remote work preference during Covid-19*. Retrieved from <https://qandme.net/en/report/remote-work-preference-during-covid-19.html>
- Qu, J., & Yan, J. (2023). Working from home vs working from office in terms of job performance during the COVID-19 pandemic crisis: evidence from China. *Asia Pacific Journal of Human Resources*, 61(1), 196-231. <https://doi.org/10.1111/1744-7941.12353>
- Rinny, P., Purba, C. B., & Handiman, U. T. (2020). The influence of compensation, job promotion, and job satisfaction on employee performance of Mercubuana University. *International Journal of Business Marketing and Management*, 5(2), 39-48.
- Riyanto, S., Endri, E., & Herlisha, N. (2021). Effect of work motivation and job satisfaction on employee performance: Mediating role of employee engagement. *Problems and Perspectives in Management*, 19(3), 162-174. [https://doi.org/10.21511/ppm.19\(3\).2021.14](https://doi.org/10.21511/ppm.19(3).2021.14)

- Smirnykh, L. (2023). Working from home and job satisfaction: evidence from Russia, *International Journal of Manpower*, 45(3), 539-561. <https://doi.org/10.1108/IJM-02-2023-0089>
- Sonnentag, S., & Frese, M. (2002). Performance concepts and performance theory. In S. Sonnentag (Ed.), *Psychological management of individual performance* (pp. 3–25). Wiley. <https://doi.org/10.1002/0470013419.ch1>
- Sostero, M., Milasi, S., Hurley, J., Fernandez-Macias, E., & Bisello, M. (2023). Teleworkability and the COVID-19 crisis: potential and actual prevalence of remote work across Europe. *IZA Journal of Labor Policy*, 13(1), 1-25. <https://doi.org/10.2478/izajolp-2023-0006>
- Standen, P., & Omari, M. (1997). *Homework and telework: a guide to best practice in human resource management*. Edith Cowan University.
- Steward, B. (2000). Changing times: The meaning, measurement and use of time in teleworking. *Time & Society*, 9(1), 57-74. <https://doi.org/10.1177/0961463X00009001004>
- Suh, A., & Lee, J. (2017). Understanding teleworkers' technostress and its influence on job satisfaction. *Internet research*, 27(1), 140-159. <https://doi.org/10.1108/IntR-06-2015-0181>
- Sunita, C. (2023). Work from Home and Job Satisfaction among IT Professionals in Chennai: An Empirical Analysis. *Quing: International Journal of Commerce and Management*, 3(1), 98-105. <https://doi.org/10.54368/qijcm.3.1.0017>
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson Education.
- Taris, T. W., & Schaufeli, W. B. (2015). The job demands–resources model. In S. Clarke, T. M. Probst, F. Guldenmund, & J. Passmore (Eds.), *The Wiley Blackwell handbook of the psychology of occupational safety and workplace health* (pp. 155–180). Wiley. <https://doi.org/10.1002/9781118979013.ch8>
- Thi Kim Phung Dang. (2023). Job satisfaction during Covid-19 social distancing: The case of teleworkers in Vietnam. *Central European Management Journal*, 31(2), 509-523. <https://scispace.com/pdf/job-satisfaction-during-covid-19-social-distancing-the-case-3lvgc098.pdf>
- Timsal, A., & Awais, M. (2016). Flexibility or ethical dilemma: an overview of the work from home policies in modern organizations around the world. *Human Resource Management International Digest*, 24(7), 12-15. <https://doi.org/10.1108/HRMID-03-2016-0027>
- Toscano, F., González-Romá, V., & Zappalà, S. (2024). The influence of working from home vs. working at the office on job performance in a hybrid work arrangement: A diary study. *Journal of Business and Psychology*, 40(2), 497–512. <https://doi.org/10.1007/s10869-024-09970-7>
- Tri, N., & Nhe, D. (2021). Impact of Industrial Revolution 4.0 on the Labor Market in Vietnam. *Research in World Economy*, 12(1). <https://doi.org/10.5430/rwe.v12n1p94>.
- Vietnam Briefing News (2023). *Vietnam's New Normal: The Hybrid Work Strategy*. Retrieved from <https://www.vietnam-briefing.com/news/vietnams-new-normal-hybrid-work-strategy.html/>.
- Vitoria, B. D. A., Ribeiro, M. T., & Carvalho, V. S. (2022). The work-family interface and the COVID-19 pandemic: A systematic review. *Frontiers in Psychology*, 13: 914474. <https://doi.org/10.3389/fpsyg.2022.914474>
- Wanous, J. P. (1974). A causal-correlational analysis of the job satisfaction and performance relationship. *Journal of Applied Psychology*, 59(2), 139-144. <https://doi.org/10.1037/h0036532>
- Weill, P., & Olson, M. H. (1989). An assessment of the contingency theory of management information systems. *Journal of management information systems*, 6(1), 59-86. <https://doi.org/10.1080/07421222.1989.11517849>

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- Wheatley, D. (2012). Good to be home? Time-use and satisfaction levels among home-based teleworkers. *New Technology, Work and Employment*, 27(3), 224-241. <https://doi.org/10.1111/j.1468-005X.2012.00289.x>
- Yucel, D. (2018). Job Autonomy and Schedule Flexibility as Moderators of the Relationship Between Work-Family Conflict and Work-Related Outcomes. *Applied Research in Quality of Life*, 14, 1393-1410. <https://doi.org/10.1007/S11482-018-9659-3>
- Yuliaty, L., Smith, P. A. W., & Prasetyaningtyas, S. W. (2023). The Influence of Flexible Working Hours, Work From Home, Work Stress, and Salary on Employee Performance at PT Armada Auto Tara during COVID-19 Pandemic. *Quantitative Economics and Management Studies*, 4(3), 402-413. <https://doi.org/10.35877/454RI.asci1619>
- Zöllner, K., & Sulíková, R. (2021). Teleworking and its influence on job satisfaction. *Journal of Human Resources Management Research*, 2021: 558863. <http://doi.org/10.5171/2021.558863>

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