Enhancing Work Engagement and Job Satisfaction: An Empirical Study on the Impact of Role Stress, Person-Organization Fit, and Fun at Work

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Abstract. This research examines the factors that lead to work engagement and job satisfaction among 410 public sector managers in the context of Vietnam National University Ho Chi Minh City and the country's changing socioeconomic environment. The study uses a quantitative methodology with a cross-sectional design and analyzes the impact of role ambiguity, role conflict, person-organization fit, and fun at work on work engagement, and consequently on job satisfaction, using PLS-SEM. The results show that while role conflict and role ambiguity have contrasting effects on work engagement, person-organization fit and fun at work both significantly enhance it. This, in turn, fosters job satisfaction. The study underscores the importance of creating a supportive and enjoyable workplace, aligning individual values with organizational goals, and minimizing role conflict to increase work engagement and job satisfaction. By presenting empirical findings from a developing country, this research contributes to the current body of knowledge and provides actionable recommendations for educational administrators seeking to motivate and satisfy their managerial staff. The study acknowledges limitations, which include the reliance on self-reported data and its cross-sectional design, and suggests areas for future research.

Keywords: Job satisfaction, Person-organization fit, Role conflict, Educational manager, Vietnam.

1. Introduction

The public sector faces various challenges in this period of economic crises, social revolution, and technological innovation. One of the most difficult tasks is attracting, keeping, and developing extraordinary human resources capable of providing high-quality public services and contributing to the common good (Azeez, 2017). As a result, human resource management (HRM) has emerged as a strategic goal for government organizations, particularly in terms of improving employee happiness and performance (Kim et al., 2013; Leisink et al., 2021). There is a lack of research specifically examining crisis situations in the educational sectors of developing countries such as Vietnam despite the significant amount of literature discussing the impact of HRM on job satisfaction and engagement.

The objective of this study is to examine the impact of role stress, person-organization fit, and fun at work on work engagement and job satisfaction among educational managers in Vietnamese public universities. These factors are essential due to the changing challenges in human resource management, such as the requirement for adaptable work schedules and the promotion of employee resilience (Hamouche, 2021; Siyal et al., 2020). These difficulties need creative and strategic HRM techniques to assist public organizations in dealing with the crisis and planning for the future. This is especially pertinent for public universities, which are vital components of the public sector due to their provision of education, research, and social services. Nonetheless, public universities face numerous obstacles, including limited resources, low autonomy, and intense competition (Leisink et al., 2021). These obstacles can impact the well-being and productivity of faculty members at public universities. Work engagement and job satisfaction are two significant indicators of faculty well-being and performance. Work engagement is the degree to which employees are physically, mentally, and emotionally involved in their work responsibilities. Faculty members who are enthusiastic, committed, and absorbed in their work tend to perform better, innovate more, and provide greater job satisfaction (Bakker & Demerouti, 2008; Schaufeli et al., 2006). Job satisfaction refers to the extent to which employees have positive, affective and evaluative responses to their work and work environment. Employees who are content with their work conditions, compensation, and interpersonal relationships tend to be more devoted, loyal, and productive (Spector, 1997). Work engagement and job satisfaction are not, however, inert, or isolated phenomena. They are affected by a variety of individual and organizational factors. Some of these factors include role stress, fun at work, and person-organization fit. A recent study found that public sector employees have higher levels of job satisfaction than private ones across 37 countries (Andrade & Westover, 2022). This indicates that the public sector may offer some advantages over the private sector in terms of social impact, benefits, and work conditions.

Role stress refers to the degree to which personnel experience role conflict and role ambiguity in their work roles. Role conflict occurs when employees are confronted with incompatible or contradictory expectations from various sources, such as supervisors, coworkers, or customers. Role ambiguity occurs when employees lack clarity regarding their objectives, responsibilities, and performance standards. Both role conflict and role ambiguity can have a negative impact on the well-being and performance of faculty because they generate uncertainty, frustration, and anxiety (Rizzo et al., 1970; Khan et al., 2021). Previous study (Ma et al., 2021) has demonstrated that role stress is negatively associated with work engagement and job satisfaction among faculty members at public universities. Employees derive satisfaction from their assigned duties and interpersonal engagements with their coworkers in the presence of a lighthearted and enjoyable work environment. According to Tews et al. (2013), this experience of enjoyment not only enhances individuals' levels of engagement and satisfaction in their work, but also fosters positive emotions, fosters stronger connections among team members, and mitigates stress. Elazzazy (2023) has revealed that an enhanced work environment that fosters support can significantly augment employee satisfaction, hence resulting in improved overall performance. Moreover, the experience of enjoyment has the potential to enhance one's internal drive, stimulate innovative thinking, and foster a stronger sense of dedication towards both one's work and the organization. The existence of a positive correlation between enjoyment and job satisfaction has been

demonstrated in research conducted with individuals employed in the public sector (Tews et al., 2013). According to Ghimire et al. (2023), the provision of flexibility in order to assist employees in achieving a balance between their professional and personal obligations has the potential to enhance job satisfaction and potentially enhance their overall performance. Additionally, person-organization fit refers to the degree of congruence or compatibility between an employee's values, objectives, and personality and those of the organization. Person-organization fit can increase work engagement and job satisfaction by enhancing employees' identification with the organization, sense of belonging, and mission alignment (Kristof-Brown et al., 2005). The perception that an organization is a desirable place to work can reduce employees' intentions to leave their jobs (Cable & DeRue, 2002). Previous study has shown that person-organization fit is positively associated with work engagement and job satisfaction among public employees (Ma et al., 2021).

The COVID-19 pandemic has been a defining global catastrophe, affecting many areas, including education in Vietnam. This unique circumstance needed a quick and adaptable reaction from educational institutions, particularly those in higher education. Tran & Jordan's (2022) research emphasizes the significant change to online and hybrid learning environments, as well as the resulting impact on teaching and learning methods. These changes have had a substantial impact on the labor market in Vietnam's educational sector, shifting demand for specific talents and generating a competitive job landscape. According to Mao et al. (2022), the pandemic has resulted in decreased recruiting demand and an increase in job applicants, increasing the issues in the educational employment market. This scenario is exacerbated by the necessity for educators and support staff to tailor their expertise to the changing needs of remote and hybrid education. Furthermore, the pandemic's broader economic impact has put additional strain on the labor market, with ramifications for employment stability and prospects in schooling. In light of these challenges, there is a pressing need to conduct an inquiry into the factors that contribute to work engagement and job satisfaction within the public sector of Vietnam. The ongoing global pandemic has posed a multitude of obstacles for public institutions in their efforts to efficiently oversee human resources. Furthermore, Vietnam has experienced substantial economic and social transformations in recent times, resulting in notable effects on the composition, roles, and effectiveness of the public sector.

The GDP growth rates of the nation have been experiencing significant fluctuations, indicating economic volatility. It peaked at 7.4% in 2019 but dropped sharply to 2.9% in 2020 and 2.6% in 2021 due to the pandemic. However, it rebounded to 8% in 2022, as reported by the World Bank in 2022. This economic instability has led the public sector to re-evaluate and adapt its economic management and development strategies, with a focus on stabilizing and revitalizing the national economy. These changes have resulted in extensive adaptations in their strategies, including adjustments in fiscal policies and the implementation of innovative approaches in human resource management. These modifications are necessary to effectively address evolving needs and take advantage of new opportunities for long-term growth and stability. To develop effective HR policies and procedures, it is crucial to have a comprehensive understanding of how role tension, job satisfaction, and person-organization fit impact employee well-being and commitment in the public sector. In public universities, the quality of HRM has a significant impact on educational outcomes and institutional effectiveness. Therefore, it is necessary to take a more detailed and contextually aware approach to HR management in public universities by carefully analyzing how current literature addresses these ever-changing economic and social challenges. This approach seeks to handle and utilize the intricacies of the public sector environment effectively to improve both organizational and employee performance.

2. Literature Review

2.1. Job satisfaction

Job satisfaction has long been acknowledged as a crucial aspect of any organization. Locke (1976) defined job satisfaction as the affective well-being of an individual as a consequence of their job

evaluation or work experience. Ivancevich et al. (1997) identified personal-organizational compatibility and career prospects as additional factors that contribute to job satisfaction. Job satisfaction is a multi-dimensional construct that includes various aspects of an individual's work and work environment, such as pay, benefits, workload, co-workers, management, work-life balance, organizational culture, and leadership behavior (Bellmann & Hübler, 2021; Davidescu et al., 2020; Inegbedion et al., 2020; Tran, 2021; Wu et al., 2021). Numerous studies have shown a positive correlation between job satisfaction and job performance (Fu & Deshpande, 2013), as well as mental and physical health, productivity, and work motivation (Tarigan et al., 2015; Yucel & Beksel, 2012). Today's businesses understand the importance of job fulfillment to employee loyalty. Highly contented employees are more likely to be committed to their work and loyal to their organization, resulting in reduced recruitment, selection, and training expenses. Given the significance of employment satisfaction, it is unsurprising that research on the subject has persisted over time, from early studies by Ivancevich et al. (1997) and Locke (1976) to more recent works by Bellmann & Hübler (2021), Tran (2021), and Wu et al. (2021). Overall, the evidence indicates that employment satisfaction is essential for any organization that endeavors to attract and retain highly motivated and productive workers.

Job satisfaction is a vital element in the public sector, having a significant influence on the productivity and performance of employees. It is crucial for the effective functioning of organizations to have higher organizational performance and lower turnover rates (Gkliati & Saiti, 2023; Islam, 2023). Strategic human capital management (SHCM) affects job satisfaction by taking into account the indirect connections to voluntary employee turnover (Wesemann, 2023). Job satisfaction may be less affected by certain aspects of job quality, such as stability, because the public sector is often seen as more stable (Puente, 2023). On the other hand, both public and private organizations benefit from public service motivation (PSM), which positively influences job-related outcomes like job satisfaction and organizational commitment (Park, 2023). These findings indicate that internal motivational factors have a substantial impact on determining job satisfaction within the public sector.

Upon conducting a comprehensive analysis of the existing literature pertaining to job satisfaction within the educational sector, it has been observed that a number of research carried out within the higher educational institutions and universities have provided valuable and enlightening insights. The research conducted by Afaq et al. (2022) provides insights into the favorable outcomes associated with the improvement of job security, compensation, and working circumstances for academic personnel, specifically in relation to their job satisfaction. These enhancements not only enhance the levels of satisfaction among educators but also add to the well-being of pupils and enhance the status of instructors. Simultaneously, Sadiq et al. (2022) conducted an investigation into multiple dimensions of job satisfaction, encompassing factors such as compensation, career advancement opportunities, supplementary perks, performance-based incentives, working conditions, interpersonal relationships with colleagues, the inherent nature of the job, and communication channels. The results of their study highlight a notable and favorable association between these factors and the overall well-being of educators. In their study, Kumari et al. (2022) provided support for the claim that the level of job satisfaction experienced by mentees had a positive influence on their job performance in the educational context of Pakistan. The aforementioned claim is supported by Kumar's (2022) findings, which demonstrate a significant predictive association between the job satisfaction of teachers and their job performance. This link is further influenced by the mediating factor of subjective well-being. Finally, Yuan et al. (2022) offered a more comprehensive viewpoint by recognizing remuneration, employment stability, and sufficient and suitable compensation as crucial determinants of job satisfaction. The convergence of these observations highlights the complex nature of job satisfaction and its impact on the performance of individuals and organizations in the educational sector.

2.2. Hypothesis development

2.2.1. Work engagement and job satisfaction

Work engagement is defined as a satisfying, work-related mental state characterized by three central elements: vigor, dedication, and absorption (Gómez-Salgado et al., 2021). Work engagement is a positive, fulfilling, and vital state of mind in relation to one's work, characterized by high levels of energy, commitment, and involvement, according to a recent study by Orgambidez & Benitez (2021). In another previous study, Garca-Sierra et al. (2016) define vigor as the resolve to exert effort in one's work, dedication as the passion for active involvement, and absorption as the intense concentration and immersion in one's profession. Multiple factors can influence employee engagement at work, including job characteristics, professional capabilities such as autonomy, role clarity, and professional identity, and the organizational climate, which includes structural empowerment and leadership (Keyko et al., 2016). Personal assets, such as psychological or relational abilities, and job assets, including work volume, interpersonal relationships, work organization, and work environment, also play an important role. Schaufeli and Bakker (2004) elucidate that work engagement is characterized by high levels of concentration and a sense of enthusiasm. It shapes attitudes toward work, motivates individuals to perform with vigor, and encourages them to embrace new responsibilities within their roles.

Research has recently focused on the study of work engagement in the public sector. This critical area of study examines factors including leadership styles, organizational agility, public service motivation, and the influence of workplace factors on employee engagement. Thanh & Quang (2022) conducted a study in Vietnam's public sector to investigate the correlation between different leadership styles (transformational, transactional, and laissez-faire) and employee engagement. Their research offers valuable insights into the dynamics of engagement. In their study, Ludviga & Kalvina (2023) specifically examined the concept of organizational agility in the context of the COVID-19 crisis. They emphasized the significance of strategic agility in promoting work engagement and well-being amidst difficult circumstances. In their study, Ding & Wang (2023) performed a meta-analysis to examine the correlation between public service motivation and work engagement in different cultures. They specifically focused on the influence of motivation in stimulating engagement among civil servants. In their study, Alnuaimi (2022) examined how workplace factors affect employee engagement in the public sector of the United Arab Emirates. The study provides practical recommendations for improving engagement levels. Eze et al. (2023) examined the involvement of healthcare professionals in both public and private sectors, providing insights into the consequences of dual practice on the public healthcare system. Finally, Delle et al. (2022) examined how psychological ownership and self-regulatory focus behavior impact work engagement among public sector employees in Ghana, offering significant insights for effectively managing employee engagement.

When employees are actively engaged in decision-making processes, they are less likely to perceive organizational change as threatening (Fenton-O'Creevy, 2001) because this involvement enables them to anticipate future events. Recent research, including that of Garg et al. (2018), has demonstrated a positive correlation between work engagement and job satisfaction, highlighting the significance of this construct. In addition, Chan (2019) research demonstrates that work engagement acts as a mediator in the relationship between leadership style and job satisfaction, further emphasizing its central role in workplace dynamics. Thus, the authors proposed the following theory:

H1: Work engagement is positively related to job satisfaction.

2.2.2. Work engagement and Person-organization fit

McCulloch & Turban (2007) define personal-organizational fit (P-O fit) as the alignment between an individual's disposition and the characteristics of an organization. According to Chatman (1989), P-O fit is the congruence between an individual's norms and values and those of their organization. This congruence highlights the significance of shared values between employees and their respective organizations. Alniacik et al. (2013) and Van Vianen (2000) have documented the positive effects of P-O fit on a variety of organizational outcomes, including an increase in organizational commitment, an improvement in production quality, and a decrease in staff turnover. P-O fit emphasizes the significance of congruence between individual and organizational values, which is frequently synonymous with

organizational culture (Chatman, 1989). Numerous studies have focused on the significance of organizational culture and its alignment with individual values, i.e., P-O fit. Hofstede's 1984 seminal work on culture is a touchstone in this discipline. Hofstede concluded, based on a global sample, that organizational cultures are frequently shaped by the societies in which they operate. He further classified businesses according to cultural dimensions such as process/results orientation, employee/job focus, grassroots/professional level, open/closed systems, loose/tight controls, and standard/pragmatic procedures (Hofstede, 1997). In a similar manner, Cameron & Quinn (1999) proposed a four-fold organizational culture framework: clan, adhocracy, market, and hierarchy. These cultural types exemplify the equilibrium between adaptability and stability, external focus and internal integration, and control and flexibility. This study highlights the significance of P-O compatibility in fostering productive, harmonious, and effective work environments.

P-O fit has been demonstrated to have positive effects on a variety of organizational outcomes, including performance, satisfaction, commitment, and intention to leave (Kodden, 2020; Vila-Vázquez et al., 2020). Work engagement is one of the mechanisms that can explain the positive effect of P-O fit. Work engagement is the degree to which employees are involved, ardent, and committed to their jobs (Bakker & Demerouti, 2008). According to the theory of Ehrhart & Ziegert (2005), P-O fit can increase work engagement by giving employees a sense of purpose and psychological attachment to their work and organization. When employees perceive a high level of fitness with their organization, they are more likely to identify with its values and objectives, feel supported and valued by their supervisors and peers, and experience a sense of belonging and empowerment. These factors can increase work engagement by fostering intrinsic motivation, positive affect, and vitality (Kodden, 2020; Vila-Vázquez et al., 2020). In turn, work engagement can increase employees' propensity to go above and beyond their formal job requirements, cooperate with others, and contribute to the success of the organization (Bakker & Demerouti, 2008; Grant & Patil, 2012). Therefore, we proposed:

H2: P-O fit is positively related to work engagement.

2.2.3. Work engagement and Fun at work

Joy or fun at work is typically defined as any social interaction, interpersonal relationship, or work task that produces amusement, delight, or happiness. Tews et al. (2014) identify three essential aspects of workplace enjoyment: (1) engaging activities, (2) social rapport with coworkers, and (3) managerial support for fostering enjoyment. Engaging activities refer to a variety of social and group initiatives facilitated by organizations to increase employee satisfaction (Ford et al., 2003; Karl et al., 2005). Interactions with coworkers are characterized by cordial, sociable, and amicable relationships (Chiaburu & Harrison, 2008), whereas managerial support for fun indicates the extent to which leaders permit and encourage a fun-filled work environment (Tews et al., 2014). Based on this, Chan (2010) has proposed four robustly theorized dimensions of workplace fun: (1) employee-centric fun, (2) manager-driven fun, (3) socially-focused fun, and (4) strategically-focused fun. In addition, recent research has uncovered a variety of positive outcomes associated with workplace enjoyment. These include enhanced job satisfaction (Chan & Mak, 2016; Choi et al., 2013), improved performance (Choi et al., 2013; Tews et al., 2013), increased engagement and cohesion (Becker & Tews, 2016; Tews et al., 2015), better team performance (Han et al., 2016), increased trust in management (Chan & Mak, 2016), and lower turnover rates (Tews et al., 2014; Tews et al., 2013). These findings highlight the importance of amusement in fostering a positive, productive, and fulfilling workplace.

The extent to which personnel experience delight, satisfaction, and positive emotions at work (Michel et al., 2019). Various activities, such as games, celebrations, amusement, recognition, and social interactions, can promote workplace enjoyment (Nelson & Tamayo, 2021). It has been suggested that having fun at work has a positive effect on work engagement, which is the psychological condition of being completely involved, enthusiastic about, and committed to one's work (Bakker & Demerouti, 2008). According to Schaufeli & Bakker (2004), employee engagement is a vital driver of employee

performance, creativity, and well-being. Several theoretical perspectives can explain the relationship between workplace enjoyment and work engagement. First, workplace enjoyment can increase employees' intrinsic motivation by increasing their interest, enjoyment, and challenge in their work (Ryan & Deci, 2000). Intrinsic motivation can increase engagement at work by making workers more self-directed, independent, and competent (Bakker & Demerouti, 2008). Fun at work can promote positive affect by evoking positive emotions such as pleasure, joy, and exhilaration. Positive affect can promote work engagement by broadening the cognitive and behavioral resources of employees, enhancing their resilience and coping skills, and fostering their psychological well-being (Bakker & Demerouti, 2008). Thirdly, workplace enjoyment can strengthen social bonds by fostering a sense of belonging, trust, and support among colleagues (Baumeister & Leary, 1995). By providing employees with social resources that can mitigate against stressors, increase their sense of meaning and purpose, and facilitate their learning and development, social bonds can promote work engagement (Bakker & Demerouti, 2008). Therefore, it can be argued that having enjoyment at work has a positive effect on employee engagement by increasing intrinsic motivation, positive affect, and social bonds. Thus, we proposed:

H3: Fun at work is positively related to work engagement.

2.2.4. *Work engagement and Role stress*

The concept of role stress, which was first introduced by Kahn et al. (1964), has been identified as a significant cause of workplace dilemmas as well as physical and mental health problems experienced by employees (Ganster & Schaubroeck, 1991; Jackson & Schuler, 1985). Rizzo et al. (1970) and Tubre (2000) have distinguished two categories of role stress: role conflict and role ambiguity. Role conflict occurs when an employee is confronted with incompatible expectations from multiple sources, whereas role ambiguity occurs when an employee lacks a clear comprehension of how to perform their job responsibilities effectively. Jackson and Schuler (1985) define role ambiguity as the degree to which an employee is uncertain about their employment requirements and the duties they are expected to perform. When employees lack clarity regarding their responsibilities, they may not know what to expect, what to do, how to do it, or with whom to collaborate. In contrast, role conflict is the degree to which an employee is confronted with contradictory demands, requirements, or information (Jackson & Schuler, 1985). For example, an employee may receive the same assignment from multiple supervisors, but each supervisor may have different expectations or orientations for the assignment, making it difficult for the employee to simultaneously meet all requirements. Understanding the effects of role stress and its subtypes can help organizations better manage employee burdens and expectations, resulting in a more productive and healthful workplace.

Work engagement has been associated with a variety of positive outcomes, including increased performance, commitment, and well-being (Bakker & Demerouti, 2008). However, various factors in the workplace, such as role tension, may also influence employee engagement. (Kahn et al., 1964) Role stress refers to the adversities and unpredictability that employees face when attempting to fulfill their role expectations. Role ambiguity and role conflict are two typical forms of role stress. Role ambiguity occurs when employees have insufficient information to adequately perform their tasks or when performance evaluation methods are unclear (Rizzo et al., 1970). Role conflict occurs when there are contradictory or incompatible expectations from various sources, such as superiors, peers, or customers (Katz & Kahn, 1978). Both role ambiguity and role conflict may have negative effects on employee engagement because they generate obstacles and challenges that impede employees' involvement and enthusiasm at work. For instance, recent study of Zahari & Kaliannan (2023) discovered that role ambiguity and role conflict were among the most significant predictors of work engagement in the public sector. Therefore, we proposed the following hypotheses:

H4. Role ambiguity negatively affects work engagement.

H5. Role conflict negatively affects work engagement.

3. Methodology

3.1. Variable Measurement

All of the measurement items in this study are adopted from prior research. First, we adopted a three-item scale to measure job satisfaction (Potipiroon & Ford, 2017), which included the statement "I am pretty content with my present job." (JS1); "I am typically excited about my job." (JS2); and "I get tremendous delight in my job "(JS3). In previous studies, this scale demonstrated strong reliability with a Cronbach's alpha of 0.8. Second, we used eight items to evaluate work engagement (Chan, 2019), such as "I am bursting with enthusiasm at work." (WE1); "I experience vitality and strength while doing my duties." (WE2); "I am motivated by my work." (WE3); "When I get up in the morning, I have the desire to go to work." (WE4); "When I am working diligently, I am content." (WE5); "I am pleased with the job I do." (WE6); "I often lose track of time at work." (WE7); "I am fully engaged in my task." (WE8). Chan's study reported a Cronbach's alpha of 0.85 for this scale, indicating high internal consistency. Third, we adopted three items to measure P-O fit (Cable & Judge, 1996; Jehanzeb & Mohanty, 2018), such as "I believe that my principles are relevant to the firm and its current workers." (PO1); "My ideals correspond with those of the organization's present personnel." (PO2); and "This organization's values and 'personality' mirror my own." (PO3). These studies have shown that the scale has a reliability coefficient exceed 0.8, and has been validated in diverse cultural settings, supporting its cross-cultural applicability. Fourth, Fun at work (Chan, 2019), was measured using three items, including "This is an enjoyable workplace." (FAW1); "I smile often at work." (FAW2); "Occasionally, I feel as if I'm playing rather than working." (FAW3). This scale has been shown in Chan's study to have a Cronbach's alpha of 0.93, indicating good reliability, and its construct validity has been affirmed through its correlation with positive workplace outcomes. Fifth, role ambiguity (Rizzo et al., 1970), was assessed by using a six-item scale, such as "I am uncertain about the extent of my authority." (RA1); "My job lacks clearly defined goals and plans." (RA2); "I do not know if I have allocated my time well." (RA3); "I am unsure about my responsibilities." (RA4); "I'm uncertain of what others expect of me." (RA5); "The tasks I must perform are not well stated." (RA6). Finally, role conflict (Rizzo et al., 1970), was adopted by using a five-item scale, such as "I am required to perform tasks that need to be carried out differently." (RC1); "I work with two or more groups whose operations are notably dissimilar." (RC2); "Two or more individuals have made irreconcilable demands." (RC3); "I engage in issues that are likely to be acceptable by some but rejected by others." (RC4); and "I am engaged in pointless activities." (RC5). These scales have been used widely in other later study. For example, in a later study by Maden-Eyiusta (2019), the alpha values for role conflict and ambiguity were found to be 0.73 and 0.82, respectively, demonstrating strong internal consistency and further affirming their utility in diverse research contexts.

3.2. Data collection and sampling technique
Vietnam National University Ho Chi Minh City (VNUHCM) and its constituent institutions (University of Technology (UT), University of Science (US), University of Social Sciences and Humanities (USSH), International University (IU), University of Information Technology (UIT), University of Economics and Law (UEL), and An Giang University (AGU) were the focus of the study. The period of data capture occurred during the academic year 2023/2024, from March to May. The researchers utilized a method of purposive sampling to select study participants. The sampling method was chosen because of its high effectiveness in ensuring that the participants are knowledgeable and responsible for influencing work engagement and job satisfaction in their respective domains. The participants were selected based on their managerial role, with a focus on those who have direct interaction with faculty and administrative policies. This approach enabled us to explore the factors influencing work engagement and job satisfaction in the context of higher education management in a more focused way. To assure the veracity of the results, direct distribution of paper-based surveys to respondents was employed.

However, because it was difficult to contact some managers in person, the questionnaires were also disseminated online and sent via email to those individuals. This two-pronged approach to data collection enabled the authors to reach a larger and more diverse participant pool. To ensure the equivalence and comparability of data collected through these distinct modes, several strategies were implemented. Initially, it is important to note that both the paper-based and online surveys were intentionally created to have the same content and layout. The consistency ensured that there were minimal variations in how respondents interpreted the questions, thereby preserving the accuracy and reliability of the data across various formats. Prior to implementation, the survey underwent a pre-testing phase with a select group of university managers to verify the clarity of instructions and the consistent interpretation of items in both formats. In addition, the online distribution of surveys incorporated techniques to prevent multiple submissions from the same respondent and to guarantee the security of data and the anonymity of respondents, replicating the level of confidentiality provided by paper-based surveys.

The study examined hypotheses using Structural Equation Modeling (SEM). Typically, SEM is one of the most effective techniques for evaluating cause-and-effect relationships involving multiple equations. In addition, Partial Least Square Structural Equation Modelling (PLS-SEM) is utilized in this investigation. This procedure is appropriate for analyzing a model with multiple contemporaneous connections. The PLS-SEM is undergoing substantial development in a number of social sciences, including business research, marketing, and economic management. Given the model's complexity and the paucity of well-established literature, PLS-SEM is a suitable option (Peng & Lai, 2012). Moreover, because some social science research lacks distributional assumptions, PLS-SEM is clearly advantageous (Hair et al., 2019). PLS-SEM is more robust to non-normally distributed data than CB-SEM because it does not rely on the assumption of multivariate normality. PLS-SEM has been shown to produce accurate results even when data does not satisfy the assumption of multivariate normality, making it a valuable instrument for data analysis in such cases (Henseler et al., 2015). PLS-SEM can analyze data with asymmetrical distributions, outliers, and variables that are not independently and identically normally distributed (Hair et al., 2010). In addition, SmartPLS 4, software that supports the PLS-SEM procedure, was used to investigate the relationships between variables in this study. The Consistent PLS-SEM Algorithm was employed as primary algorithm, with default configurations, including Default initial weights, a maximum of 3000 iterations, and the Path weighting scheme. For bootstrapping calculations, we kept the default settings, using 500 samples for a two-tailed test at a significance level of 0.05.

3.3. Sample Description

This study was carried out in the public sector, specializing in the education industry. The author tried to reach high-level employees at the Vietnam National University Ho Chi Minh City. 490 questionnaires were distributed. Some of the respondents were hard to reach due to their positions. By our best effort, 410 questionnaires were collected as official data and were used for analysis (83.67% response rate). 63,41 percent of the responders are male, while 36,59 percent are female. Of all the respondents, 250 managers (60,98 percent) are Deputy Head of Department, while 160 (39,02 percent) are Head of Department. It is important to note that non-response bias is a potential concern in any survey research and can impact the validity of the results (Couper, 2000). To mitigate this, comparisons between the characteristics of the respondents and non-respondents were conducted, including gender, age, and position. The results showed no significant differences between the two groups, suggesting that non-response bias did not significantly impact the results of the study.

4. Findings and Discussion

4.1. Evaluation of measurement model

Using a variety of techniques, the authors assessed the structural analysis. First, Cronbach's Alpha is computed; all values are greater than 0.7, indicating the dependability of the construct. Each variable's composite reliability is also greater than 0.7, indicating a high degree of internal consistency (Hair et al., 2010). The Average Variance Extracted (AVE) must be greater than 0.50 for convergent validity, which evaluates whether latent components are adequately represented by their observable variables. As demonstrated in Table 1, all AVEs exceed the criterion, confirming the convergent validity (Hair et al., 2010) and indicating that each construct explains at least fifty percent of the variance of the items comprising the construct. In addition, all variables have peripheral loadings greater than 0.7, which corresponds to the theoretical condition and improves the reliability of the scale (Henseler et al., 2012).

Table 1. Model measurement results

Variables	Items	Loadings	Cronbach's Alpha	Rho_A	Composite Reliability	AVE
Thresholds			≥ 0.700	≥ 0.7	≥ 0.7	≥ 0.500
P-O Fit	PO1	0.828	0.804	0.811	0.806	0.581
	PO2	0.700				
	PO3	0.753				
Job Satisfaction	JS1	0.672	0.753	0.757	0.754	0.506
	JS2	0.693				
	JS3	0.764				
Work Engagement	WE1	0.695	0.895	0.897	0.894	0.514
	WE2	0.692				
	WE3	0.734				
	WE4	0.760				
	WE5	0.675				
	WE6	0.656				
	WE7	0.761				
	WE8	0.755				
Fun At Work	FAW1	0.823	0.806	0.810	0.807	0.583
	FAW2	0.718				
	FAW3	0.745				
Role Conflict	RC1	0.844	0.909	0.912	0.909	0.667
	RC2	0.753				
	RC3	0.765				
	RC4	0.903				
	RC5	0.809				
Role Ambiguity	RA1	0.819	0.918	0.920	0.916	0.650
	RA2	0.817				
	RA3	0.844				
	RA4	0.762				
	RA5	0.779				
	RA6	0.816				

Source: Authors (2024)

Cross-loadings are used to investigate the statistical difference between the two concepts in order to determine their discriminant validity. All components within a structure must have outer loadings greater than cross-loadings with another one (Hair Jr. et al., 2021). The constraints of this criterion are met by all cross-loading values. According to the Fornell-Larcker condition, either the square root of the AVE of a variable must be greater than its highest correlation coefficient with other variables, or the AVE must be greater than the square of its highest correlation coefficient (Hair et al., 2010). All measurements in Table 2's results satisfy this requirement.

Table 2. Fornell Larcker criteria

	FAW	JS	PO	RA	RC	WE
FAW	0.763					
JS	0.306	0.711				
PO	0.310	0.351	0.762			
RA	-0.303	-0.322	-0.421	0.806		

RC	-0.297	-0.315	-0.323	0.536	0.817	
WE	0.357	0.295	0.391	-0.368	-0.432	0.717

Source: Authors (2024)

Heterotrait-Monotrait ratios (HTMT) were utilized to assess discriminant validity, the mean score among all item correlations across components compared to the mean of the average correlations for items used to measure the same component. Using the HTMT as a criterion, it is suggested to compare data to a 0.85 cutoff (Kline, 2011). If the HTMT value exceeds this threshold, discriminant validity is compromised. According to Table 3, all indices are less than 0.85, indicating that the discriminant validity of this model is well-established.

Table 3. Heterotrait-Monotrait Ratio (HTMT)

	FAW	JS	PO	RA	RC	WE
FAW	-					
JS	0.306	-				
PO	0.308	0.350	-			
RA	0.304	0.323	0.422	-		
RC	0.297	0.312	0.319	0.537	-	
WE	0.355	0.295	0.392	0.367	0.429	-

Source: Authors (2024)

VIF was utilized to determine the presence of multicollinearity and common method bias. According to Kock (2015), a VIF value greater than 3.3 is regarded as an indication of problematic multicollinearity and a potential indicator of common method bias in a model. As demonstrated in Table 4, there is no significant risk of common method bias in the current research. The VIF values for all model factors are less than 3, which is considered an acceptable multicollinearity threshold. This indicates that the model variables are not highly correlated, and there is no evidence of systematic measurement error or bias in the data. This, in turn, increases confidence in the validity of the study's findings and its conclusions.

Table 4. VIF values

	FAW	JS	PO	RA	RC	WE
FAW						1.180
JS						
PO						1.280
RA						1.570
RC						1.460
WE		1.000				

Source: Authors (2024)

4.2. Evaluation of structural model and research findings

Hypothesis testing was conducted to evaluate the correlation between variables. All hypotheses were confirmed with statistically significant p-values (<0.05), except for H4. Specifically, work engagement (WE) has a significant and positive impact on job satisfaction (JS). The path coefficient ($\beta = 0.295$, p = 0.000) supports H1, indicating that enhancing work engagement can lead to significant improvements in job satisfaction, potentially boosting overall organizational productivity and employee well-being. Furthermore, when employees perceive a strong alignment with the organizational values and goals, their engagement levels significantly increase as indicated in H2 ($\beta = 0.214$, p = 0.002) for perceived organizational support (PO). This finding highlights the importance of developing an organizational culture that aligns with employees' personal values. Similarly, creating a pleasant work environment has a positive impact on work engagement, confirming H3 ($\beta = 0.188$, p = 0.003) for family-friendly atmosphere at work (FAW). Organizational policies that encourage job enjoyment and satisfaction are strategic elements in improving employee performance. However, H4, which suggested that role

ambiguity has a negative effect on work engagement, did not receive support (β = -0.079, p = 0.287). Nevertheless, H5 was supported (β = -0.265, p = 0.000), indicating that job insecurity has a negative impact on work engagement.

It is an interesting finding that role ambiguity does not have a significant impact on work engagement, as indicated by the lack of statistical significance for H4. This suggests that the managers who were studied did not experience a decrease in work engagement due to role ambiguity. One possible explanation for this discovery is that managerial positions require a high level of flexibility and proficiency in resolving issues, which may help reduce the negative consequences typically associated with role ambiguity. In educational settings, such as Vietnam National University Ho Chi Minh City, managers are often familiar with dealing with uncertain situations as part of their daily duties.

Table 5. Path Coefficients

	Coefficient (β)	P-Values	Result
H1. WE -> JS	0.295	0.000	Accepted
H2. PO -> WE	0.214	0.002	Accepted
H3. FAW -> WE	0.188	0.003	Accepted
H4. RA -> WE	-0.079	0.287	Rejected
H5. RC -> WE	-0.265	0.000	Accepted

Source: Authors (2024)

The R-squared values obtained from our model indicate that our model explains 29.4% of the variance in work engagement (WE) and 8.7% of the variance in job satisfaction (JS). These values suggest that significant predictors, such as PO and FAW, have a notable impact on work engagement. However, a broader range of factors influences job satisfaction, indicating a more complex relationship. Although job satisfaction has limited explanatory power, it is still important to acknowledge, as emphasized by Onyutha (2020), that a low R-squared value can still indicate an effective model in social science research, particularly when studying complex behavioral outcomes. Moreover, according to Rights & Sterba (2019), a low R-squared value does not necessarily reduce the usefulness of the model for testing theories. This highlights the significance of our results in advancing theoretical knowledge and providing guidance for practical HR interventions. Therefore, despite having lower R-squared values, the results are still significant for creating extensive HR strategies that encompass a broader range of factors, such as organizational policies, employee recognition, and compensation strategies, in order to effectively improve job satisfaction in educational management settings. To build on these insights, future research could include more variables such as organizational justice and corporate social responsibility, which, as indicated by a recent study by Syaifuddin et al. (2023), play a critical role in enhancing job satisfaction. Including these factors may provide a deeper understanding of the complex dynamics that influence job satisfaction and could lead to more effective strategies for improving employee engagement and satisfaction across various organizational settings.

Table 6. R-Square

Variable	R Square	R Square Adjusted
Job Satisfaction	0.087	0.085
Work Engagement	0.294	0.287

Source: Authors (2024)

4.3. Findings and discussion

First, this study investigates the relationship between work engagement and job satisfaction among Vietnamese university managers. Work engagement and job satisfaction are important outcomes for managers, as they influence their performance, commitment, and retention (Bakker et al., 2011; Garg et al., 2018; Harter et al., 2002). Work engagement and job satisfaction are positively correlated, and a variety of variables, including work-life balance, organizational culture, leadership style, and employee empowerment, can influence this relationship (Aboramadan et al., 2021; Khan et al., 2021). This study contributes to the literature on work engagement and job satisfaction by providing empirical evidence from a developing country's higher education sector. The results indicate a positive and significant

relationship between work engagement and job satisfaction among university administrators in Vietnam. The findings have practical implications for university leaders and policymakers who seek to cultivate a culture of engagement and contentment among university administrators.

In line with prior research (Kodden, 2020), this paper examines how P-O fit, the congruence between individual and organizational characteristics, influences work engagement, a positive psychological state of work involvement and commitment. Thus, P-O fit can be regarded as a distal organizational resource that encourages employee motivation and long-term performance. When employees perceive a high level of P-O fit, they are more likely to feel a sense of belonging, significance, and purpose in their work, which increases their work engagement (Kodden, 2020). In contrast, when employees perceive a low level of P-O fit, they are more likely to experience alienation, frustration, and conflict at work, thereby decreasing their work engagement (Kao et al., 2021). The primary argument for the positive effect of P-O fit on employee engagement is Schneider's (1987) attraction-selection-attrition (ASA) model. Individuals are attracted to organizations whose values and goals align with their own, and organizations select employees who are compatible with their culture and mission, according to this paradigm. Therefore, employees who remain within a company tend to share similar characteristics and preferences. This creates a sense of belonging, identification, and commitment among employees, thereby increasing their dedication to the workplace. Moreover, employees who are a good fit for the organization are more likely to receive positive feedback, recognition, and support from their supervisors and colleagues, which can boost their work engagement. Theoretically, this finding suggests that P-O fit can generate a positive spiral of mutual reinforcement between employees and the organization, thereby augmenting work engagement and performance. The practical implication is that organizations should engage and retain employees who share their values and objectives, as well as communicate them in a clear and consistent manner. As a result, employees will experience greater alignment, engagement, and loyalty.

In addition, this paper's findings support the notion that having enjoyment at work has a positive effect on work engagement, which is consistent with prior research (Georganta & Montgomery, 2022; Tews et al., 2013). This indicates that having joy at work can be a valuable job resource that boosts employee motivation, well-being, and performance. However, this paper also acknowledges that fun at work is not a one-size-fits-all concept and that, depending on the context and the individual, various forms of fun may have varying effects on work engagement. For instance, organic workplace fun may be more beneficial for employee engagement than organized or managed workplace fun, as it reflects the spontaneous interactions among employees that foster trust and social support (Georganta & Montgomery, 2022). Furthermore, enjoyment at work may be more effective for work engagement when it is aligned with organizational culture and values and when it is perceived as supportive and voluntary as opposed to coercive or obligatory (Tews et al., 2013). Additionally, recent study by Huynh & Nguyen (2023) suggests that employees' Dark Triad traits can influence how fun at work is perceived, impacting engagement levels differently across individuals. Therefore, future research should investigate the moderating factors, such as trust, organizational support, employee preferences, and cultural differences, that influence the relationship between enjoyment at work and work engagement. Additionally, examining the potential negative or unintended consequences of having fun at work, such as distraction, conflict, tension, and diminished professionalism (Michel et al., 2019), can provide a more comprehensive understanding of the role of amusement in organizational psychology. Researchers and practitioners can enhance strategies to foster a conducive and engaging workplace environment by considering these dynamics.

In the context of educational managers in Vietnam's public sector, role conflict has a negative influence on work engagement, whereas role ambiguity has no effect. Role stress occurs when employees encounter role ambiguity and/or role conflict in the course of their employment (Spector, 1997). Role ambiguity occurs when employees lack the information necessary to carry out their duties effectively or when performance evaluation methods are unclear (Ehrhart & Ziebart, 2005). When the expectations of peers, supervisors, or clients are contradictory or ambiguous, role conflict occurs (Maden-Eyiusta, 2021). According to the job demands-resources paradigm (Bakker & Demerouti, 2007), role stress is a

type of job demand that can deplete employees' energy and resources, resulting in lower levels of work engagement. However, the effect of role stress on work engagement may depend on the type and intensity of role stress, as well as individual and contextual factors that may mitigate or exacerbate its effects (Kao et al., 2020). Role conflict may have a negative impact on employee engagement if coworkers, supervisors, or clients have contradictory or ambiguous expectations for their job performance (Maden-Eyiusta, 2021). Employees in the Vietnamese public sector, particularly in the field of education, may experience high levels of role conflict as a result of the multiple and diverse roles and responsibilities they must fulfill, such as teaching, conducting research, managing, and serving the community. Conflicting demands and constraints from various stakeholders, such as the Ministry of Education and Training, the university leaders, the faculty members, and the students, may erode employees' sense of autonomy and control over their work if they are impacted by role conflict. Role conflict may also reduce employee motivation and performance, as they may be unable to effectively prioritize or balance their tasks (Thanh et al., 2022). In addition, employees in the public sector may have low levels of leadership support and co-worker support, which are essential factors that can mitigate the negative effects of role conflict on work engagement (Zahari & Kalhannan, 2023). A low level of leadership and coworker support may increase employees' sense of isolation and frustration at work, thereby decreasing their level of engagement at work. If employees have access to other sources of clarity and direction in their work, such as feedback, support, or training, role ambiguity may not affect work engagement (Ehrhart & Ziegerer, 2005).

5. Conclusion

This study provides new insights into the factors that affect work engagement and job satisfaction among educational managers in Vietnam, especially within the dynamic socio-economic environment of a developing country. Our study results show that role conflict, person-organization fit, and fun at work have a significant impact on improving work engagement and job satisfaction. However, it is important to note that role ambiguity does not have a significant impact in this particular context. This research expands the current body of knowledge on work engagement and job satisfaction by examining previously unexplored variables in a unique setting. The study challenges some conventional assumptions regarding the influence of role ambiguity and proposes that its impact can differ significantly depending on the cultural or organizational context. This study enhances our understanding of the complexities involved in promoting work engagement in educational institutions amidst various socio-economic pressures.

To create a supportive and enjoyable work environment, educational institutions should prioritize initiatives that encourage positive interactions. Such initiatives include team-building activities, recognition programs, and social events. These actions not only improve the alignment between individuals and organizations but also reduce the negative impact of conflicting roles. Effective communication of organizational values and goals is also crucial. Educational managers can achieve this by involving staff in decision-making processes, promoting transparency, and ensuring that individual goals are aligned with organizational objectives. Additionally, implementing targeted interventions such as clearly defining job responsibilities and ensuring sufficient resources will assist managerial personnel in effectively carrying out their duties.

This study contributes valuable information to the field of human resource management in the public sector. It highlights the significance of considering both the context and individual factors when analyzing the effectiveness and satisfaction of educational managers. The findings of the study provide a basis for creating specific human resource practices that could enhance job satisfaction and engagement in similar institutions that are undergoing change and development pressures.

6. Limitations and Future Research Implications

This study provides valuable insights into what factors influence job satisfaction and engagement among managers in Vietnam's educational sector. However, the findings are limited as the study relied on self-reported data and a cross-sectional research design. To establish causality and investigate the stability of work engagement and job satisfaction over time, future research should use longitudinal or experimental designs. Exploring additional factors that affect job satisfaction and engagement, such as

the impact of different leadership styles or changes in organizational policies, while taking into account moderating factors like gender, education level, and length of employment, could provide more profound insights. Conducting comparative analyses across different cultural contexts or public sector organizations would help apply the findings to a wider range of situations. Since this study only focused on the National University of Ho Chi Minh City, conducting research that involves multiple institutions from different regions or countries could enhance understanding and relevance of the findings in the global educational sector.

Data Availability Statement
The original contributions presented in the study are included in the article/supplementary materials, further inquiries can be directed to the corresponding author/s.

Author Contributions
Huynh conceived the research topic, outlined the research design, collected the data, and wrote the initial drafts of the article. Bui supervised the whole process of the preparation of the article, read and commented on the manuscript several times. Vuong was involved in data collection and editing of the article. Nguyen revised the article and submitted the manuscript to the journal. All authors contributed to the article and approved the submitted version.

Conflict of Interest
The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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