

# Evaluating the effect of multifactors on employee's innovative behavior in SMEs: mediating effects of thriving at work and organizational commitment

Effect of  
multifactors

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## Abstract

**Purpose** – This study aims to explore the effect of multiple factors on employee innovative behavior (EIB) and examine the mediating role that thriving at work and organizational commitment play in this relationship, specifically related to the hospitality sector.

**Design/methodology/approach** – Primary data was gathered from 612 employees across 100 small and medium-sized enterprises (SMEs) in Vietnam. Using covariance-based structural equation modeling and the bootstrapping method, the research estimates ten overarching hypotheses to address the research question: how do job, personal and contextual factors influence EIB?

**Findings** – Job, personal and contextual factors influence EIB significantly and positively. The results uncover the relationship between workplace support and EIB under the mediating effects of thriving at work and organizational commitment. Especially interesting for the hospitality sector is that the authors find these three factors are a strong influence on EIB.

**Practical implications** – Management can stimulate EIB by designing job control and job demand appropriately to build and maintain workplace social support in the organization, especially in the hospitality sector. Employees' personal characteristics can also facilitate this behavior. The research adds to theory on EIB and methods to analyze the factors affecting this driver of innovation.

**Originality/value** – The research enhances our understanding of EIB in the hospitality and the SME context generally. EIB is affected by employee perceptions of job factors (job demand and job control), personal factors (thriving at work and organizational commitment) and contextual factors (supervisor support, coworker support and climate for innovation).

**Keywords** Innovation, SMEs, Organizational commitment, Hospitality, Employee innovative behavior, Workplace support

**Paper type** Research paper



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## 1. Introduction

Innovation is considered an essential requirement for organizational survival and success (Hornig *et al.*, 2018; Tang *et al.*, 2019). People are central to the innovation story: the entrepreneur, employees and employee-managers all have the potential to contribute to firms' innovation activity (Edghiem and Mouzughy, 2018; Lenihan *et al.*, 2019; Muskat *et al.*, 2019). For example, innovative behavior of employees has a crucial role in enabling organizations, especially in the hospitality sector (Edghiem and Mouzughy, 2018; Luu, 2021), to meet challenges arising from increasing global competition and customer expectations (Carmeli and Spreitzer, 2009; Zhou and George, 2001) as well as other more contemporary issues in the sector such as customers' "green" demands (Cho and Yoo, 2021). Organizations have recognized this and have motivated their employees to be more innovative to improve service/product quality and overall performance (Li and Hsu, 2016; Luoh *et al.*, 2014). Employees' knowledge-sharing behavior too plays an important role in increasing their service innovation behavior (Kim and Lee, 2013). The seminal work by these authors (Kim and Lee, 2013) and Kim *et al.* (2013) provides a strong basis for the current research and contributes to the growing stock of empirical evidence within the hospitality literature.

Although small and medium enterprises (SMEs) account for a large proportion of the total number of enterprises globally, most studies on employee innovative behavior (EIB) are devoted to large firms (Knezović and Drkić, 2021). There is a lack of literature on EIB in the context of SMEs (Stoffers *et al.*, 2020), a concept of particular interest to the hospitality and service sectors, given the extensive research in the field of knowledge sharing behavior for innovation in hotels (Kim and Lee, 2013). The current research adds new knowledge on EIB, specifically for SMEs in the hospitality sector. Scholars such as Luoh *et al.* (2014), Scott and Bruce (1994) and Zhou and George (2001) identify job factors as drivers of EIB, while Li and Hsu (2016) find EIB is the foundation for innovation in the services sectors. Others have investigated various personal and contextual factors such as personality (Alikaj *et al.*, 2021), work engagement/commitment (Al-Hawari *et al.*, 2019; Hakimian *et al.*, 2016), job stress (Bani-Melhem *et al.*, 2018), thriving at work (TaW) (Riaz *et al.*, 2018), coworker support (CS) (Zhou and George, 2001), leadership/supervisor support (SS) (Chen *et al.*, 2016; De Jong and Den Hartog, 2007) and workplace climate (Shanker *et al.*, 2017). The relationship between employee commitment and workplace empowerment, with quality of work-life as mediator, highlights the value of employees as long-term assets (Nayak *et al.*, 2018). However, further research is required to better understand conditions where EIB can be facilitated in SMEs (Knezović and Drkić, 2021) and the contextual variables for EIB (Bysted, 2013).

Using Vietnam as a case study to explore EIB, the current study uses primary data collected from 612 employees from 100 SMEs. Vietnam has a population of 97 million, the third largest population in the Association of Southeast Asian Nations and 15th globally. SMEs play a major role in Vietnam's economy and represent 96% of the total stock of companies, employ 47% of the labor force and account for 36% of national value added (OECD, 2021).

To this end, this research poses the question: how do job, personal and contextual factors influence EIB? In addressing the question, the research contributes to the literature in three distinct ways. First, it explains how EIB is affected by employees' perception of job factors (job demand (JD) and job control (JC)), their personal factors (TaW and organizational commitment (OC)) and contextual factors (SS, CS and climate for innovation (CI)). Until now, there has been a lack of detailed insight into how these three factor groups can stimulate EIB simultaneously within SMEs (Hammond *et al.*, 2011). Second, we examine the mediating role of both personal factors (TaW and OC) on the relationship between job factors, contextual factors and EIB. These two variables are selected as individual differences in EIB based on

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interactionist perspective, arguing that EIB is the outcome of the interaction of individual, situational and other contextual factors (Afsar and Umrani, 2020). The third contribution of the current research is the treatment of the three factors as distinct constructs; we extend research on workplace social supports (SS, CS and CI) and EIB relationships in connection with positive emotion (OC) and individual competency (TaW). The research also bridges the gap between existing knowledge of peoples' contribution to innovation and the factors affecting their innovative behavior as employees and the influence of social and contextual relationships. This is particularly important in the hospitality sectors and other services, given the high dependence on people.

The remainder of this paper is set out as follows: Section 2 provides a review of the literature and presents the hypotheses; Section 3 explains the data, methodology and analysis; Section 4 details the results; and Section 5 provides a discussion on the findings and the implications for practice and theory.

## 2. Literature review and hypotheses development

### 2.1 *Employee innovative behavior (EIB)*

Scott and Bruce (1994) view innovative behavior as a multistage process, with different activities and individual behaviors necessary at each stage. Innovative work behavior is described as the intentional creation and application of ideas within a work role, group or organization (De Jong and Den Hartog, 2007). Such innovative behavior can help hospitality organizations' competitive advantage (Yang *et al.*, 2022). Developing this further, Kim and Lee (2013) find employees who collect and share knowledge have positive links to their service innovative behavior. In the current study, EIB refers to the generation, production or application of ideas, processes or procedures with the intention of benefiting the relevant unit of adoption (De Spiegelaere *et al.*, 2015; Scott and Bruce, 1994).

### 2.2 *Job factors – job demand (JD) and job control (JC)*

The job design literature stresses the importance of combined effects of job characteristics (De Spiegelaere *et al.*, 2015). Karasek (1985) developed a JD control (JDC) model and argued that job design should be found in the combination of JD and JC. JD is associated with the psychological costs necessary to carry out the tasks that refer to "workload" (Karasek and Theorell, 1990). JC refers to the degree in which the workers can decide themselves how to meet JDs. It is operationalized by the combination of task authority and skill discretion, named as decision latitude. The JDC model suggests that employees, who have experienced different levels of JD and JC, will have different outcomes in terms of learning and job strain (Karasek, 1979).

### 2.3 *Personal factors – thriving at work (TaW) and organizational commitment (OC)*

According to Spreitzer *et al.* (2005), TaW is viewed as the psychological state in which one experiences a sense of vitality and a sense of learning at work. Learning is a necessary process to accumulate professional knowledge, thereby promoting creativity and ensuring success for employee innovative efforts (Carmeli and Spreitzer, 2009). Porath *et al.* (2012) consider TaW as a second-order factor accounting for the shared variance among vitality and learning. On the other hand, OC is defined as the strength of an individual's identification with and involvement in a particular organization (Shadur *et al.*, 1999). It includes their strong belief in an organization's values and goals, a desire to continue working with the organization and a willingness to make efforts for the organization.

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#### *2.4 Contextual factors – supervisor support (SS), coworker support (CS) and climate for innovation (CI)*

According to the social exchange theory, employees can form distinguishable social relationships with different partners within an organization, such as supervisors and coworkers (Cropanzano and Mitchell, 2005). SS relates to the extent to which individuals receive support and encouragement from their superior (Haynes *et al.*, 1999). It refers to superiors caring about their subordinates, helping them at work, valuing their contributions and supporting their development (Rousseau and Aubé, 2010). On the other hand, CS refers to the work-related assistance, encouragement and sustainment provided by colleagues in the workplace (Zhou and George, 2001).

To capture the concept of CI, the third and final contextual factor, we first need to explain organizational climate. Organizational climate as described by Mutonyi *et al.* (2020) and Gui *et al.* (2020) is the individuals' cognitive representations and psychological interpretations of their organizational setting. As a subset of the organizational climate, CI is described by Scott and Bruce (1994) as individual cognitive representations of the organizational setting. It refers to the norms and practices that encourage flexibility, the expression of ideas and learning, which conveys the message that employees should contribute to the organization's mission creatively and adaptively (Charbonnier-Voirin *et al.*, 2010). Furthermore, Ouyang *et al.* (2021) found the CI had a larger effect on creativity in the hospitality and tourism sector.

#### *2.5 The direct effects of job factors on personal factors*

Spreitzer *et al.* (2005) contend that work conditions that facilitate knowledge sharing, decision-making, discretion and trust can contribute to employees' thriving. The same authors argue that employees are more likely to thrive when certain enabling conditions are present at work and when they can work without adversity. Thriving has the potential to foster individuals' well-being and development of their subjective experiences at work. In addition, Holman *et al.* (2012) found that JD and JC were positively associated with cognitive learning and behavioral learning. When thriving, employees' experiences and behaviors are intrinsically motivating and supportive of their development and growth (Kleine *et al.*, 2019). Therefore, we expect that:

*H1a, H1b.* Job factors (JD and JC) relate positively to TaW.

*H2a, H2b.* Job factors (JD and JC) relate positively to OC.

#### *2.6 The direct effects of contextual factors on personal factors*

Rousseau and Aubé (2010) argue that SS may be viewed as formal interventions to sustain employees' functioning in the organizational setting due to supervisors' official authority. SS can facilitate knowledge sharing among employees that lead to innovative behavior (Lee and Kim, 2017). Besides, CS has the potential to facilitate and encourage employees to share knowledge and expertise, particularly when dealing with complex or new tasks (Scott and Bruce, 1994). Similarly, coworkers are likely to provide needed support to each other by exchanging knowledge and ideas openly in the same environment (Zaitouni and Ouakouak, 2018). Zhai *et al.* (2020) found that SS and CS (contextual factors) are valuable resources for employees to thrive at work. Rousseau and Aubé (2010) found that SSs/CSs have directly and simultaneously impacted an employee's affective commitment. Therefore, the following hypotheses are proposed:

*H3a, H3b, H3c.* Contextual factors (SS, CS and CI) relate positively to TaW.

*H4a, H4b, H4c.* Contextual factors (SS, CS and CI) relate positively to OC.

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### 2.7 The direct effects of job factors on employee innovative behavior

Karasek and Theorell (1990) stress the importance of JC as an enabling and motivating job characteristic and proposed that the combination of high demands and JC would result in highly motivated and innovative employees. Urbach *et al.* (2010) confirmed that JC supports innovation activities, while Holman *et al.* (2012) argued that organizations can promote employees' innovation by combining effective job designs with interventions to enhance employee learning. To facilitate employee learning and innovation, JD and JC are considered key characteristics of job design (Holman *et al.*, 2012; Karasek and Theorell, 1990). Interestingly, De Spiegelaere *et al.* (2015) assert that the combination of high demands and JC will result in engaged and innovative employees. Dediu *et al.* (2018) found that not all JDs have the same association with innovation, and they found that autonomy was linked to both idea generation and idea implementation. This paper focuses on the effect of job factors and formulates the following hypotheses:

*H5a, H5b.* Job factors (JD and JC) relate positively to EIB.

### 2.8 The direct effects of contextual factors on employee innovative behavior

The supervisor can support innovation by providing developmental feedback, displaying interactional justice and being trustworthy (Zaitouni and Ouakouak, 2018) and importantly, immediate supervisors are the closest organizational link to the employee in conveying an organization's direction (Yang *et al.*, 2020). According to Kim and Koo (2017), high-quality relationships with supervisors provide distinct benefits to employees that significantly influence their innovative behavior in hotels. Odoardi *et al.* (2019) found that employee innovation behavior is facilitated when they receive their supervisor's support. Therefore, SS is conducive to innovative behavior through promoting intrinsic motivation (Chen *et al.*, 2016) and enhances the joint impact of affective commitment and proactive goal generation on EIB (Montani *et al.*, 2017).

In addition, Hammond *et al.* (2011) indicate that CS can drive innovation. CS has a direct positive influence on employee creativity if provided with new ideas and knowledge emanating from their experience (Zaitouni and Ouakouak, 2018). Innovative behavior can be stimulated when employees are willing to share their expertise and provide suggestions and assistance (Bani-Melhem *et al.*, 2018). Interestingly, the study by Al-Hawari *et al.* (2019) found that coworker socializing undermined the innovative behavior of frontline employees in the service sector. This notion of CS may also reduce individuals' sense of risk and uncertainty that facilitate the development of new ideas and procedures (Yang *et al.*, 2020).

While CI has positively influenced EIB (Wang *et al.*, 2013), Jung *et al.* (2003) argue that if organizational climate values initiative and innovative approaches, employees are more likely to take risks, accept challenging assignments and lead to innovative behavior. Supporting this, Li and Hsu (2016) posit that firms' support for innovation is an important antecedent of employee innovation behavior. The significance of the CI in advancing and enhancing employees' creativity and learning has been documented by Khalili (2016) and, more specifically, Karatepe *et al.* (2020) show that climate for creativity had a strong positive influence on innovative behavior. Based on these above discussions, we propose the following hypotheses:

*H6a, H6b, H6c.* Contextual factors (SS, CS and CI) relate positively to EIB.

### 2.9 The direct effects of personal factors on employee innovative behavior

When employees are TaW, they have energy and adaptability to learn new things and are likely to be innovative (Amabile *et al.*, 1996) and to promote creative performance (Kark and Carmeli, 2009). Riaz *et al.* (2018) proposed a model to examine the effect of TaW on innovative behavior via organizational support. Their empirical results showed that high

thriving people are likely to experience heightened levels of innovation. Furthermore, the indirect effect of TaW on EIB was of higher significance when employees had numerous external social exchanges (Riaz *et al.*, 2018). Moreover, individuals develop new knowledge and skills that support them in trying out new things and generate creative ideas by learning at work (Kleine *et al.*, 2019). Therefore, we hypothesize that:

H7. TaW is positively related to EIB.

We understand that innovative behavior relies on knowledge sharing and employee commitment to the organization, and highly committed employees will go beyond their normal job responsibilities for better performance and exhibit high levels of innovative work (Slåtten and Mehmetoglu, 2011). Hakimian *et al.* (2016), studying the relationship between three forms of commitment and EIB, found a significant relationship between affective and normative commitment and innovative behavior. Interestingly, Kim and Koo (2017) did not reveal the support of the organization's engagement on innovative behavior. However, the findings from studies by Odoardi *et al.* (2019) and Tang *et al.* (2019) pointed to the positive relationship between OC and EIB. These findings lead us to propose the following hypothesis.

H8. OC is positively related to EIB.

### 2.10 The mediating effects of personal factors

Most literature investigating the mechanism in which job factors and workplace support (contextual factors) relate to EIB use personal factors such as TaW, commitment or job satisfaction as a single mediator (Kark and Carmeli, 2009; Tang *et al.*, 2019). The current research extends the single mediator approach to explore the mediating role of personal factors (TaW and OC) on the relationship between job and contextual factors and EIB.

*2.10.1 Mediating effect of thriving at work.* According to the social exchange theory, if the organization treats employees well, then they will pay back. Extant empirical studies also suggest that TaW serves as an important intermediate mechanism between leadership and innovative behavior (Iqbal *et al.*, 2020). In addition, Zhai *et al.* (2020) showed the mediating role of thriving in the relationship between workplace support and life satisfaction. Alikaj *et al.* (2021) stated that the role of thriving has a mediating impact of human resource practices and creative behavior. Therefore, we expect that:

H9a. TaW mediates the relationship between JD and EIB.

H9b. TaW mediates the relationship between JC and EIB.

H9c. TaW mediates the relation between the SS and EIB.

H9d. TaW mediates the relation between the CS and EIB.

H9e. TaW mediates the relation between CI and EIB.

*2.10.2 Mediating effect of organizational commitment.* Management practices, organization support and SSs are found to be highly correlated with OC (Yang *et al.*, 2020). Besides, scholars have documented that management practices such as providing adequate resources, leadership support (Scott and Bruce, 1994; Zhai *et al.*, 2020) and guiding working cohesion (Mutonyi *et al.*, 2020) mediate the relationship between CI as well as CS and EIB. When the organization nurtures an innovative environment, positive emotions and learning between employees are generated. These, together with the workplace support, can lead to greater levels of OC, a contributor to EIB (Hakimian *et al.*, 2016; Montani *et al.*, 2017). Related

to this, [Kim and Koo \(2017\)](#) found a positive relationship between leader–member exchange and job performance that is mediated by organizational engagement. Similarly, [Jehanzeb and Mohanty \(2020\)](#) reported a mediating role of OC between organizational justice and organizational citizenship behavior and [Sezen-Gultekin et al. \(2021\)](#) confirmed that OC is significant in the relationship between emotional labor and work engagement of teachers. To this end, we present our final set of hypotheses and illustrated in [Figure 1](#):

*H10a.* OC mediates the relationship between JD and EIB.

*H10b.* OC mediates the relationship between JC and EIB.

*H10c.* OC mediates the relation between the SS and EIB.

*H10d.* OC mediates the relation between the CS and EIB.

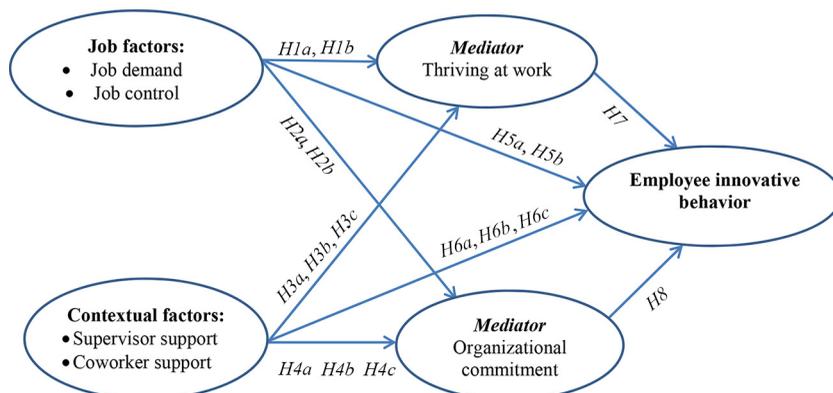
*H10e.* OC mediates the relation between CI and EIB.

### 3. Methods

#### 3.1 Sample and data collection

The survey questionnaire method was used to collect the information from employees of SMEs in Vietnam. The questionnaire, based on previously published instruments, was translated into Vietnamese and back into English by two bilingual teachers to ensure quality and consistency. A pilot study was conducted with a sample of 20 respondents, including 15 employees, three managers and two academic experts in the organizational behavior field. It was used to test the reliability of the constructs before conducting a formal survey ([Hair et al., 2018](#)). Innovation exists in all industries ([Edghiem and Mouzoughi, 2018](#)), and therefore, we drew on a convenience sample of 100 companies in Vietnam's industries, including agriculture, industry, and construction; services (banking, finance, retail; hospitality and tourism). We contacted the managers of the selected companies to introduce the objective of this research and asked for the distribution of the questionnaires to their staff. The questionnaires were delivered in person between September and October 2020.

The survey consisted of two sections:



**Figure 1.**  
Research model

- (1) respondents were asked to provide their demographic information (i.e. age, gender, education level); and
- (2) their perception about the proposed constructs (e.g. EIB, TaW).

Neither the names of the respondents nor the company was recorded. We distributed 1,000 questionnaires and received 638 responses. However, 16 questionnaires were discarded because of missing information. As a result of the outlier check, 612 questionnaires were used for analysis, yielding a response rate of 61.2%, an acceptable rate for the research (Bani-Melhem *et al.* (2018) – 60%; Afsar and Umrani (2020) – 48.7%). Table 1 provides details of the demographic characteristics where 293 (47.9%) of the 612 respondents were male, the majority of employees were aged 25–35 years. With respect to the educational level, 36.1% had a diploma and 45.4% a bachelor's degree. Nearly half of the respondents (45.5%) worked in the service sector, with 22.5% from hospitality and tourism. This is representative of the Vietnamese industries where the service sector accounts for 42% of businesses (Vietnam Credit, 2020).

### 3.2 Measurements

We used validated scales to measure constructs of the study. All the items were measured with five-point Likert scales ranging from “1 = strongly disagree” to “5 = strongly agree.”

- EIB (six items) adopted from Scott and Bruce (1994); JD (eight items) and JC (six items) from Holman *et al.* (2012) and Karasek (1985); TaW (12 items) from Carmeli and Spreitzer (2009) and Porath *et al.* (2012) with eight items representing vitality and four items representing learning orientation. OC (eight items) from Mowday *et al.* (1979).

Characteristics	Categories	Frequency	(%)
Gender	Male	293	47.9
	Female	319	52.1
Age (years)	< 25	145	23.7
	25–35	277	45.3
	36–45	144	23.5
	46–55	36	5.9
	> 55	10	1.6
Educational level	High school	55	9.0
	Diploma	221	36.1
	Bachelor degree	278	45.4
	Graduate study	58	9.5
Organizational tenure (years)	< 3	95	15.5
	3–5	241	39.4
	6–9	187	30.6
	> 9	89	14.5
Sector	Agriculture	113	18.5
	Industry and manufacturing	221	36.1
	Banking, finance and retail	140	22.9
	Hospitality and tourism	138	22.5

**Table 1.**  
Respondents'  
characteristics

- 
- SS (six items) from Haynes *et al.* (1999) and Zhai *et al.* (2020); CS (seven items) from Bani-Melhem *et al.* (2018) and Zhou and George (2001) and CI (12 items) from Mutonyi *et al.* (2020) and Scott and Bruce (1994).

*3.2.1 Control variables.* Previous studies have suggested employee's age, tenure and education level are related to innovative behavior (Montani *et al.*, 2017; Yang *et al.*, 2020). Holman *et al.* (2012) indicated that increasing age has negative associations with innovation behavior. Individuals who have a higher education are more likely to solve problems with new ideas (Yang *et al.*, 2020). Research also noted that significant differences in innovation across industries were associated with innovative behavior (Castellacci, 2008; Strobl *et al.*, 2020). Therefore, we included these characteristics as control variables to check for potential effects. Age was coded: 1 = 24 years or under, 2 = 25–35 years, 3 = 36–45 years, 4 = 46–55 years and 5 = over 55 years; education level: 1 = high school or under, 2 = diploma, 3 = bachelor, 4 = graduate study; sector: 1 = agriculture, 2 = industry and manufacturing, 3 = banking, finance and retail, 4 = hospitality and tourism.

### 3.3 Data analysis

The SPSS 26.0 software was used to examine the respondents' demographic characteristics, descriptive statistics of the construct variables, reliability analysis, including outlier and multicollinearity checks. Two-step approach from Anderson and Gerbing (1988) was used for the data analysis, based on the AMOS 24.0 package. To determine the uni-dimensionality and causal relationship between items and constructs, we examined the measurement model by using confirmatory factor analysis (CFA). Then, we tested our hypotheses using structural equation modeling (SEM) with maximum likelihood estimation. Covariance-based (CB)-SEM was applied to verify the hypotheses and to examine how well-established theories fit reality (Hair *et al.*, 2017). The bootstrapping with bias-corrected bootstrap of SEM was used for testing both direct and indirect effects simultaneously, which minimizes the effects of measurement error (Kline, 2011; Karatepe *et al.*, 2022). Bootstrapping provides the most powerful and reasonable method of obtaining confidence limits for specific indirect effects (Preacher and Hayes, 2008). Following suggestions from the same authors with the model consisting of multiple potential mediators, multiple mediation is the appropriate analytic strategy in our study. Specific indirect effects of individual variables have been estimated using the user-defined estimates with bootstrapping under the support of AMOS 24.0.

## 4. Results

### 4.1 Measurement model

Both kurtosis and skewness values were below 3.00, indicating the data were normally distributed (Kline, 2011). We also tested multicollinearity by calculating variance inflation factors (VIFs). The VIF values for all the predictor constructs ranged between 1.75 and 4.83, below the suggested level of 10.0, indicating no problems with multicollinearity in the data set (Hair *et al.*, 2018). All the factors had Cronbach's  $\alpha$  values higher than 0.7 (Table 2), thereby indicating the satisfactory internal reliability for each of the constructs (Hair *et al.*, 2018; Pesämaa *et al.*, 2021). Then, CFA was performed using AMOS 24.0, to evaluate the construct validity of the measurement instrument (Hair *et al.*, 2018). The proposed measurement model showed the results:  $\chi^2 = 3,757.56$ ,  $df = 1,983$ , CFI = 0.94, TLI = 0.94, RMSEA = 0.038. The indices meet the recommended criteria (RMSEA should be lower than 0.08, whereas CFI and TLI should exceed 0.9), thereby indicating an acceptable model fit (Kline, 2011). All standardized factor loadings exceeded 0.50 ( $p < 0.01$ ), signifying evidence of convergent validity (Table 2).

Constructs	Indicators	Loadings	CR	$\alpha$	AVE
JD			0.89	0.88	0.58
	My job requires to deal with problems that are difficult to solve	0.74			
	My job requires to solve problems that have no obvious correct answer	0.74			
	My job requires to come across problems that I have not meet before	0.89			
	My job requires much physical efforts	0.73			
	My job requires intense concentration	0.73			
	My job requires intense work hard	0.73			
JC			0.94	0.93	0.65
	My job allows me to plan my own work	0.72			
	My job allows me to choose the methods to use in carrying out your work	0.77			
	My job allows me to decide how to go about getting your job done	0.75			
	I have an opportunity to develop my own ability	0.77			
	I get to do a variety of different things on my job	0.87			
	My job requires a high level of skill	0.88			
	My job requires me it be creative	0.83			
	I have a lot to say about what happens on my job	0.85			
CS			0.93	0.92	0.65
	My coworkers encourage me when I am down	0.68			
	My coworkers willing share their expertise with each other	0.69			
	My coworkers help each other out if someone falls behind in his/her work	0.69			
	My coworkers are willing to offer assistance to help me to perform my job to the best of my ability	0.90			
	My coworker care about my opinions	0.90			
	My coworkers are complimentary of my accomplishment at work	0.90			
	My coworkers are supportive of my goals and values	0.85			
SS			0.89	0.89	0.59
	My supervisor listens to me when I need to talk about problems at work	0.77			
	My supervisor helps me with a difficult task at work	0.76			
	My supervisor encourages those who work for him/her to work as a team	0.72			
	My supervisor encourages me to give my best effort	0.76			
	My supervisor is fair and does not show favoritism in responding to employees' needs or background	0.87			
	I feel comfortable bringing up my personal or family issues with my supervisor	0.69			
OC			0.94	0.93	0.66
	I am willing to put in a great deal of effort beyond normally expected to help this organization be successful	0.70			
	I talk up this organization to my friends as a great organization to work for	0.91			
	I would accept almost any type of job assignment to keep working for this organization	0.69			
	I am proud to tell others that I am part of this organization	0.86			
	This organization really inspires the very best in me in the way of job performance	0.90			
	I am extremely glad that I chose this organization to work for, compared with others at the time I joined	0.76			
	I really care about the fate of this organization	0.90			
	I find that my values and the organization's values are very similar	0.70			

**Table 2.**  
CFA results, AVE  
and reliability

(continued)

Constructs	Indicators	Loadings	CR	$\alpha$	AVE
EIB			0.93	0.92	0.68
	I come up with innovative and creative notions	0.80			
	I seek new technology, processes and techniques to complete my work	0.80			
	I develop adequate plans and schedules for the implementation of new ideas	0.92			
	I try to secure the funding and resources needed to implement innovations	0.90			
	I promote my ideas so that others might use them in their work	0.76			
	Overall, I consider myself an innovative person	0.76			
Support for innovation			0.94	0.93	0.66
	My organization is open and responsive to change	0.87			
	Our ability to function creatively is respected by the leadership	0.88			
	My organization publicly recognizes those who are innovative	0.82			
	Creativity is encouraged in my organization	0.71			
	Around here, people are allowed to try to solve the same problems in different ways	0.75			
	The people in charge around here usually get credit for others' ideas	0.72			
	The reward system here encourages innovation	0.87			
	There is a high "ceiling" for making mistakes among colleagues	0.85			
Resource supply			0.89	0.89	0.67
	Assistance in developing new ideas is readily available	0.82			
	There are adequate resources devoted to innovation here	0.74			
	There is adequate time available to pursue creative ideas here	0.81			
	This organization gives me free time to pursue creative ideas during the workday	0.89			
CI (second order)			0.75	0.70	0.60
	Support for innovation	0.85			
	Resources supply	0.69			
Vitality			0.91	0.91	0.56
	I feel active and energetic at work	0.74			
	I have high energy to complete my work	0.81			
	During the working day, I feel I am full of energy	0.74			
	I have the energy to successfully do my job	0.74			
	I am looking forward to each new day	0.69			
	I feel a lot of excitement when I am doing my work	0.76			
	The work in this organization gives me positive energy	0.77			
	When I am at work, I feel vital and alive	0.75			
Learning orientation			0.88	0.87	0.65
	I learn new things at work	0.77			
	I continue to learn more and more as time goes by	0.77			
	What I learn at work help me a lot in my life	0.86			
	What I learn at work enable me to thrive in life	0.83			
TaW (second order)			0.83	0.77	0.71
	Vitality	0.92			
	Learning	0.75			

Table 2.

In addition, results for our factor analysis on all measurement items showed that all items pertaining to TaW as well as CI were loaded onto two factors. We modeled TaW and CI as second-order constructs, which were manifested by two first-order constructs (learning orientation and vitality; support for innovation and resource supply). We further checked for

endogeneity in the proposed model by running a series of tests using Durbin–Wu–Hausman test based on STATA 15.0 software. For example, Wu–Hausman test results for OC and TaW are as:  $F = 0.12, p = 0.73$ ;  $F = 0.33, p = 0.56$  and for JD:  $F = 14.80, p < 0.01$ ). The results revealed that both exogenous variables (JD, JC, SS, CS and CI) and endogenous variables (TaW, OC and EIB) exist in the proposed model.

The descriptive statistics for observed variables, as well as measure intercorrelations, were given in [Table 3](#). The average variance extracted (AVE) values of all constructs exceeded 0.5, supporting the convergent validity of this measure. We also calculated the squared correlation for each latent variable. Discriminant validity was checked via [Fornell and Larcker's \(1981\)](#) criterion. For example, the findings showed that the highest correlation (0.65) was between TaW and EIB ([Table 3](#)). The square root of AVE of TaW (0.84) and EIB (0.83) was greater than the correlation given above. In addition, the square root of each AVE for the rest of the variables was superior to the correlation between the relevant variables. Overall, discriminant validity was verified. Therefore, the measurement model is statistically supported.

#### 4.2 Common method variance (CMV)

To avoid the possibility of CMV, the study applied the guideline recommended by [Podsakoff et al. \(2003\)](#). We obtained full support from the company's management and participation was voluntary. Specifically, we ensured complete confidentiality and anonymity of the participants to avoid artificial and dishonest responses. Harman's single-factor method is not the best tool to assess CMV, as suggested by [Pesämaa et al. \(2021\)](#). Therefore, we used a single-common-method-factor approach to deal with the potential concerns about this bias ([Podsakoff et al., 2003](#)). Following prior research ([Xu and Lv, 2018](#)), we created a CMV, and all items were loaded on the method factor and their corresponding theoretical constructs. The analytical results indicated that the measurement model consisting of CMV factor and focal constructs reported a good fit to the data:  $\chi^2 = 3,959.40$ ,  $df = 1,982$ ,  $\chi^2/df = 2.00$ , CFI = 0.94, TLI = 0.93 and RMSEA = 0.04. However, variance interpretation of CMV factor was 10.40%, less than 25% ([Williams et al., 1989](#)). As such, CMV did not appear to be a problem in our study.

#### 4.3 Structural model test results

**4.3.1 Direct effects.** We tested the relationship between exogenous variables (job factors and contextual factors) and endogenous variables (personal factors and EIB) using a structural model by deploying maximum likelihood estimation in AMOS ([Table 4](#)). The goodness-of-fit statistics for the structural model were:  $\chi^2 = 3,758.04$ ,  $df = 1,984$ ,  $\chi^2/df = 1.89$ , CFI = 0.94, TLI = 0.94 and RMSEA = 0.038. The results confirmed an acceptable model fit and an acceptable value for each model fit index.

Presented in [Table 4](#), related to the relationship between job factors and personal factors, the results reported JD did not affect TaW, while JC had a positive and significant impact on TaW. Therefore, *H1a* was not supported, while *H1b* received support. *H2a* was not supported because JD did not portray a positive association with OC. The relationship between JC and OC was positive and significant; thus, *H2b* was supported. In addition, *H3a*, *H3b* and *H3c* tested the effect of contextual factors (SS, CS and CI) on TaW. The standardized regression weights for these hypotheses were positive and significant, leading us to accept *H3a*, *H3b*, *H3c*. In addition, *H4a*, *H4b* and *H4c* sought to test the influence of contextual factors (SS, CS and CI) on OC where our results provided support for *H4a*, *H4c* and no support for *H4b*.

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Age	—	—	—	—	—	—	—	—	—	—	—
2. Education	0.03	—	—	—	—	—	—	—	—	—	—
3. Sector	-0.12	0.10	—	—	—	—	—	—	—	—	—
4. JD	-0.01	0.18	0.18	—	—	—	—	—	—	—	—
5. JC	-0.09	0.18	0.15	—	—	—	—	—	—	—	—
6. SS	-0.12	0.17	0.16	0.34** (0.30)	—	—	—	—	—	—	—
7. CS	-0.04	0.16	0.10*	0.34** (0.31)	0.44** (0.41)	—	—	—	—	—	—
8. CI	-0.06	0.15	0.19	0.36** (0.29)	0.44** (0.29)	0.45** (0.32)	—	—	—	—	—
9. T <sub>a</sub> W	-0.04	0.18*	0.11	0.37** (0.34)	0.46** (0.43)	0.57** (0.47)	0.38** (0.33)	—	—	—	—
10. OC	-0.06	0.18	0.14	0.33** (0.21)	0.46** (0.45)	0.55** (0.44)	0.55** (0.47)	0.45** (0.43)	—	—	—
11. EIB	-0.14**	0.23**	0.23**	0.31** (0.35)	0.51** (0.49)	0.53** (0.47)	0.40** (0.34)	0.54** (0.48)	0.45** (0.39)	—	—
Mean	2.17	2.55	2.50	0.42** (0.35)	0.62** (0.61)	0.65** (0.60)	0.53** (0.51)	0.59** (0.56)	0.70** (0.65)	0.65** (0.58)	—
SD	0.91	0.79	1.03	3.57	3.59	3.32	3.54	3.56	3.54	3.62	3.59
				0.71	0.65	0.87	0.70	0.67	0.64	0.66	0.69

**Notes:** correlation between observed variables are presented below the diagonal and the squared correlation between latent variables are presented within the parentheses (. \*\*  $p < 0.01$ , \*  $p < 0.05$  (two-tailed))

**Table 3.**  
Mean, standard deviations and intercorrelations (observed variables) and discriminant validity test results

Effect of  
multifactors

Hypothesis	Structural relationships	Without control variables		With control variables		Result
		$\beta$	C.R.	$\beta$	C.R.	
<i>H1a</i>	JD → TaW	0.06	1.46	0.06	1.47	Unsupported
<i>H1b</i>	JC → TaW	0.10	1.98*	0.10	1.97*	Supported
<i>H2a</i>	JD → OC	0.01	0.18	0.01	0.18	Unsupported
<i>H2b</i>	JC → OC	0.15	3.07***	0.15	3.07***	Supported
<i>H3a</i>	SS → TaW	0.25	4.14***	0.25	4.14***	Supported
<i>H3b</i>	CS → TaW	0.36	7.23***	0.36	7.23***	Supported
<i>H3c</i>	CI → TaW	0.19	2.51*	0.19	2.51*	Supported
<i>H4a</i>	SS → OC	0.14	2.31*	0.14	2.30*	Supported
<i>H4b</i>	CS → OC	0.08	1.76	0.08	1.76	Unsupported
<i>H4c</i>	CI → OC	0.45	5.35***	0.45	5.34***	Supported
<i>H5a</i>	JD → EIB	0.04	1.37	0.03	1.12	Unsupported
<i>H5b</i>	JC → EIB	0.20	5.28***	0.19	5.09***	Supported
<i>H6a</i>	SS → EIB	0.15	3.36***	0.14	3.08***	Supported
<i>H6b</i>	CS → EIB	0.08	2.15*	0.08	2.16*	Supported
<i>H6c</i>	CI → EIB	0.22	3.36***	0.21	3.21***	Supported
<i>H7</i>	TaW → EIB	0.19	3.84***	0.20	4.03***	Supported
<i>H8</i>	OC → EIB	0.18	4.60***	0.19	4.71***	Supported
Control effects	Education → EIB			0.07	2.69**	Supported
	Age → EIB			-0.06	-2.35*	Supported
	Sector → EIB			0.07	2.69**	Supported

**Table 4.**  
SEM results

Notes: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

*H5a* and *H5b* postulated that job factors (JD and JC) positively predict EIB. The coefficient of the path from JD and JC to EIB were 0.04 ( $p > 0.05$ ) and 0.20 ( $p < 0.01$ ). Therefore, *H5a* was rejected, while *H5b* received support. Our study found support for *H6a*, *H6b* and *H6c* because contextual factors (SS, CS and CI) had strong positive influence on EIB. In addition, personal factors, including TaW and OC, influenced EIB, supporting *H7* and *H8*. Furthermore, the independent sample *t*-tests found that EIB shows a significant difference in gender; univariate analysis demonstrated that EIB differs with age and education but not in tenure. Similar to Strobl *et al.* (2020), we found a difference in sectors, leading us to control for age, education and sector. To conduct a rigorous test of the hypothesized relationships, we included pathways from respondents' age, education and sector as control variables to EIB into SEM analysis by deploying maximum likelihood estimation with results exhibiting a good model ( $\chi^2/df = 1.86$ , CFI = 0.94 and RMSEA = 0.037).

Our findings reveal that the responding employees' education level and age are the predicting factors for innovative behavior. It seems logical that highly educated employees are more knowledgeable and have skills to perform their jobs, in turn, leading to EIB. These findings again are supported by previous findings by Montani *et al.* (2017) and Schuckert *et al.* (2018). Unlike Dediu *et al.* (2018), our findings, in line with Shanker *et al.* (2017) and Yang *et al.* (2020), report that increasing age has a negative effect on EIB. It may be that due to difficulties in absorbing new knowledge as well as reluctance to change, older employees are less innovative than younger individuals, suggesting managers assign young talent and invest in employees by offering and providing training programs that develop innovative behavior. The sector variable exerted a positive effect on EIB ( $\beta = 0.07$ ,  $p < 0.01$ ); we divided the data into two groups: service industry (banking, finance, retail, hospitality and tourism) and production industry (agriculture, industry and manufacturing) and ran multigroup checks. The difference test between the service model and the production

returned a significant result ( $\Delta\chi^2 = 98.14$ ,  $\Delta df = 74$ ,  $p < 0.05$ ). Further, comparing the hospitality and tourism group with banking, finance and retail, the result suggested that there is no difference between the two groups related to EIB ( $\Delta\chi^2 = 94.32$ ,  $\Delta df = 74$ ,  $p > 0.05$ ). These findings demonstrated that employees in the service industry, especially those employed in the hospitality and tourism sector have a positive attitude toward EIB. The results explained 51% of the variance in OC, 59% in TaW and 72% in EIB, while the control variables did not confound the linkages proposed in this study.

**4.3.2 Mediating effects.** Following prior research (Yolal *et al.*, 2017; Zhai *et al.*, 2020), we used the bootstrapping method for testing the mediation effects of TaW and OC. Because the distribution of indirect effects is skewed in most cases, following Preacher and Hayes' (2008) procedure, we generated 5,000 bootstrapped samples with a 95% bias-corrected confidence interval to test the indirect and total effect of both job factors and contextual factors on EIB via TaW and OC (Table 5). The results of the mediation test, summarized in Table 5, reveal that many of hypothesized indirect relationships (*H9* and *H10*) are supported.

Along with the insignificant direct effect of JD on EIB, we also find that JD does not influence EIB indirectly via TaW ( $\beta = 0.01$ , intervals did include 0). Thus, *H9a* is not supported. However, the mediation results show that TaW plays a mediating role in the effect of JC on EIB, as well as the contextual factors (SS, CS and CI) on EIB. The confidence interval did not include 0; therefore, *H9b* to *H9e* are supported. Related to the indirect effect of JC, SS and CI on innovative behavior via OC, our results showed significance where intervals did not include 0; therefore, *H10b*, *H10c* and *H10e* are supported. By contrast, the mediation results reveal that OC does not mediate the association between JD and EIB or the effect of CS on EIB. Therefore, *H10a* and *H10d* are not confirmed.

## 5. Discussion and conclusion

### 5.1 Conclusion

Using primary data from 612 employees from 100 SMEs located in Vietnam, including 45% in the services industries (22.5% in hospitality/tourism), representative of the Vietnamese industries demographics (Vietnam Credit, 2020), the current study explores the relationship between EIB and three factors (job, personal and contextual). While most studies focus on one or two views to explain innovative behavior (Afsar and Umrani, 2020; Bysted, 2013), our research adds to this stock of knowledge by providing a comprehensive view through three key factors: personal, contextual and job, and advances the innovation, hospitality and general SME literature. This research also adds to the empirical evidence of the link between

Hypothesis	Structural relationship	Indirect	Lower	Upper	<i>p</i> -value	Remarks
<i>H9a</i>	JD→TaW→EIB	0.01	0.00	0.03	0.10	Unsupported
<i>H9b</i>	JC→TaW→EIB	0.02	0.01	0.05	0.05	Supported
<i>H9c</i>	SS→TaW→EIB	0.05	0.02	0.10	0.00	Supported
<i>H9d</i>	CS→TaW→EIB	0.07	0.04	0.14	0.00	Supported
<i>H9e</i>	CI→TaW→EIB	0.04	0.02	0.10	0.00	Supported
<i>H10a</i>	JD→OC→EIB	0.00	-0.01	0.01	0.89	Unsupported
<i>H10b</i>	JC→OC→EIB	0.03	0.01	0.06	0.00	Supported
<i>H10c</i>	SS→OC→EIB	0.03	0.01	0.06	0.03	Supported
<i>H10d</i>	CS→OC→EIB	0.01	0.00	0.05	0.06	Unsupported
<i>H10e</i>	CI→OC→EIB	0.08	0.07	0.18	0.00	Supported

**Table 5.**  
Result of mediation  
analysis

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EIB, its antecedents and what constitutes the mediating effect on the mechanism that includes both direct and indirect effects on dependent variables.

Our results reveal that personal and contextual factors and some job factors substantially influence EIB. These results are in line with previous studies (Holman *et al.*, 2012; Riaz *et al.*, 2018; Sönmez and Yıldırım, 2019) and provides practical and theoretical value. In posing our research question, how do job, personal and contextual factors influence EIB, our findings reveal JC and each group of factors (personal and contextual) are important in nurturing EIB. In so doing, the research supports Do and Luu (2020) in highlighting the importance of employee's individuality and behavior on organization's performance and González-González *et al.* (2021) suggestion that employee-driven organizational change is crucial for growth in the hospitality sector. The current study also advances the finding of Amabile *et al.* (1996) who posit that workload pressure has a negative influence on creativity. Our findings are in line with those of Amabile *et al.* (1996), Shanker *et al.* (2017) and Al-Hawari *et al.* (2021), when individuals perceive freedom and autonomy at work, they can control their job and engage in innovative behavior.

Our research argues that JC may contribute to EIB in the SME context, particularly in the case of the hospitality sector, and provides evidence that JC has insignificant links to OC and TaW. Strengthening the findings from Lee and Kim (2017), our research suggests that by enabling autonomy at work, employees can satisfy their needs (of achievement and power) and lead to knowledge application, one main component of EIB. Therefore, when designing a job to foster innovation, a manager should consider workload demand and JC and provide opportunities for employees' autonomy and freedom. Allowing employees to design their own work plan, in line with organizational requirements, can enhance job engagement, ultimately leading to innovation (Kim and Koo, 2017).

The positive relationship between supervisor support and CS leads to knowledge gain, increased competencies and improved innovation. Contributing further to the work of Zaitouni and Ouakouak (2018), the current research finds that CS and SS influences employee creativity significantly. Yang *et al.* (2020) too demonstrated that when employees received adequate job support from their supervisors and colleagues, they exhibited more positive behaviors such as innovative behavior.

Our study emphasizes and reshapes the important role of managers/supervisors who not only set organization objectives but also provides an appropriate climate in which employees support and care for each other to enhance employee creativity (Shanker *et al.*, 2017; Zhai *et al.*, 2020). Like Nayak *et al.* (2018), we advocate valuing employees as drivers of innovation, particularly through their innovative behavior. Building on previous literature, the current study finds that these two factors contribute to employees' thriving and commitment to work, potentially stimulating and enhancing innovative behavior (Tang *et al.*, 2019; Zaitouni and Ouakouak, 2018).

### *5.2 Theoretical implications*

The results are consistent with other studies that examine innovative behavior and provide valuable additional knowledge to the contemporary hospitality literature and our new empirical approach extends the analysis on the effect of mediators (Karatepe *et al.*, 2020; Kim and Koo, 2017; Kim and Lee, 2013; Yolal *et al.*, 2017). The findings emphasize the important role of JC in fostering EIB, as well as the importance of workplace support. The supportive relationship with supervisors/coworkers, along with a CI, can increase employees' confidence and beliefs that their performance will be valued and rewarded, which subsequently drives their innovative behavior. Our research is a valuable addition to Chon and Zoltan (2019) where, in their systematic review of the literature, they identify the

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importance of leadership in addressing contemporary issues, as our research finds for innovation. Previous studies have mentioned such SS/CS and organizational support have often been used in combination (Kim *et al.*, 2017; Yang *et al.*, 2020). As suggested by Kim *et al.* (2017), we differentiated three types of social support and tested their distinct impact on EIB and revealed that SS, CS and CI played an important role in affecting employees' innovative behavior. Such evidence builds on the stock of theoretical knowledge in the literature, with the ultimate impact on practical application, especially in sectors such as hospitality, which demands large numbers of employees.

### 5.3 Practical implications

Support from employers/managers and that of coworkers is critical for EIB, suggesting that leaders should recognize their role in and contribute to the innovation process as well as building and maintaining a climate that facilitates knowledge sharing and supports (Kim and Koo, 2017; Zaitouni and Ouakouak, 2018). We also maintain that those leaders/managers who consider job design and empower their employees through giving them autonomy have the potential to drive their employees' innovative behavior. In addition to this, labor-intensive sectors such as hospitality can benefit considerably from our findings: that a positive relationship between JC, personal and contextual factors has the potential for employees to thrive and hence contribute to the organization's innovation activities.

### 5.4 Limitations and future research

Like all empirical research, limitations are inevitable, but limitations give rise to possible future research. As the current study uses self-reported measures to collect data, this may result in an overestimation. Thus, future research should use multiple sources to obtain data on EIB, for instance, information from the supervisors' or coworkers' perspective. Furthermore, the authors acknowledge that the interaction between social support constructs as well as other personal factors such as psychological capital and job satisfaction were not considered and suggest inclusion in future studies. Another limitation of our data is the inability to analyze employee service innovative behavior irrespective of sector but prompts an interesting avenue for further research. Given the labor-intensive nature of the hospitality sector, this research could be replicated in future studies and employ data from SMEs in the hospitality sector from different country contexts. This future research could also take account of policy formation and governance in the sector.

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