DETERMINANTS OF EMPLOYEE ENGAGEMENT IN THE HOTEL INDUSTRY: AN APPLICATION OF FUZZY ANALYTIC HIERARCHY PROCESS APPROACH

Pham Thi Thuy Van *, Luc Manh Hien **, Quang Vinh Nguyen *

* University of Labour and Social Affairs, Hanoi, Vietnam

** Corresponding author, University of Labour and Social Affairs, Hanoi, Vietnam

Contact details: University of Labour and Social Affairs, 43 Tran Duy Hung, Cau Giay, Hanoi, Vietnam



How to cite this paper: Van, P. T. T., Hien, L. M., & Nguyen, Q. V. (2024). Determinants of employee engagement in the hotel industry: An application of fuzzy analytic hierarchy process approach [Special issue]. Corporate Governance and Organizational Behavior Review, 8(2), 276–284. https://doi.org/10.22495/cgobrv8i2sip3

Copyright © 2024 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). https://creativecommons.org/licenses/by/4.0/

ISSN Online: 2521-1889 ISSN Print: 2521-1870

Received: 06.09.2023 **Accepted:** 30.05.2024

 $\textbf{JEL Classification:}\ M10,\ M54,\ N35,\ O15,\ Z30$

DOI: 10.22495/cgobrv8i2sip3

Abstract

The study aims to apply the fuzzy analytic hierarchy process (FAHP) method to evaluate the priority of factors that constitute employee engagement with hotels. The theoretical review introduced and modeled five factors and 21 indicators. A pairwise comparison survey was designed and sent to experts, including university scientists, leaders of state management agencies in charge of tourism, and leaders of hotels. The research results show that the job characteristics factor is ranked as the first, the second factor is the working environment, the third factor is salary and welfare, the fourth factor is direct management, and the last ranking factor is the employee's personality. Twenty-one indicators belonging to five factors were ranked through Liou and Wang's (1992) method; the results showed that they ranked in the first three positions and had the most influence on hotel employee engagement as rated by experts, including recognizing employee efforts ranked first; the second factor is working together to achieve a common goal, and meaningful and purposive are ranked as the third factor. Meanwhile, the three factors with the lowest rankings, skills requirement, are ranked 19, the 20th place belongs to full facility, and the last place belongs to the sociable, enthusiastic, and friendly.

Keywords: Employee Engagement, Hotel Industry, Fuzzy AHP

Authors' individual contribution: Conceptualization — P.T.T.V.; Methodology — Q.V.N.; Resources — L.M.H. and Q.V.N.; Investigation — L.M.H.; Writing — P.T.T.V., L.M.H., and Q.V.N.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

With potential and strengths in natural conditions and human resources, tourism is considered one of the five key economic sectors of Ba Ria-Vung Tau province. According to Man (2021), before the COVID-19 pandemic, the number of tourists visiting the province tended to increase sharply.

In 2018, the province welcomed more than 13.5 million arrivals; in 2019, 15.5 million (increased by two million). Revenue from tourism in 2018 was 14.2 billion VND, and by 2019, it reached 16.5 billion VND. The province's tourism development orientation states that develop the tourism industry towards high quality. In particular, the quality of human resources is the key factor determining success



for development (Ngan, 2021). In the project "Development of Human Resources for Tourism in the Province to 2025, Orientation to 2030", the Department of Culture, Sports and Tourism has set specific goals: by 2025, the province will have 38,000 employees, and by 2030, there will be 46,000 employees in the tourism sector, in which the rate of trained workers will reach from 80% to 100%. The tourism industry in Ba Ria-Vung Tau province is lacking in quantity and weak in quality, asynchronous in terms of industry structure, age, and gender. Especially after the COVID-19 pandemic, along with the characteristics of the service provision industry with the diversity of labor affected by seasonality, the rate of job transfer and job hopping in the industry is alarming. Moreover, hotel staff is the person who directly provides services to customers and is responsible for building the image of the organization.

According to Ncube and Jerie (2012), employee engagement is the key to creating an organization's competitive advantage. Therefore, organizations must make the most of resources to develop employees, increasing employee engagement. In the tourism industry, managers always know that good human resources will help improve business performance (Vinh, 2023). However, the rate of voluntary resignation and job transfer in the tourism sector is very high (Vinh, Hien, et al., 2022). The studies confirm that job opportunities from other businesses are the main reason for quitting, especially in hotels (Ncube & Jerie, 2012; Vinh, Hien, et al., 2022). When employees feel attached to the organization, they will not only have a higher commitment to their work and will work harder to contribute to the development of the organization but also work harder (Khan et al., 2014; Beloor et al., 2017; Wertheim, 2016), improving performance and productivity, creating economic benefits the organization as well as will help create a positive organizational culture and a good environment for all members organization.

Employee engagement with the organization is essential to ensure organizational effectiveness and success (Book et al., 2019; Karatepe et al., 2018; Sun & Bunchapattanasakda, 2019). Employees who are engaged with the organization will feel sympathetic to its goals, values, missions, and strategies and will have the motivation and energy to complete their work in the best way (Toth et al., 2020). Therefore, developing and retaining employees is a vital factor for businesses (Book et al., 2019; Karatepe et al., 2018; Sun & Bunchapattanasakda, 2019; Toth et al., 2020). The article evaluates the priority order of factors that constitute employee engagement. Empirical research at hotels in Ba Ria-Vung Tau province will determine the importance the components of employee engagement for hotels.

The study used the fuzzy analytic hierarchy process (FAHP) method (Saaty, 1980) to solve complex decision-making problems with different selection criteria and people involved in the decision-making process. Although the conventional analytic hierarchy process (AHP) explains and describes expert knowledge, it cannot detail or reflect human behavior and thinking (Saaty, 1980). Therefore, FAHP was developed to solve fuzzy gradation problems. The matrix pair comparisons in the FAHP process are fuzzy numbers, allowing

the decision-maker to assign priorities in the form of a natural linguistic expression of the importance of each criterion (Yaghoobi, 2018). Consequently, fuzzy logic provides a systematic basis for dealing with ambiguous or undefined situations (Kahraman et al., 2014). Additionally, fuzzy decision-making has been applied in various fields, such as Mosayebi et al. (2020) in applying fuzzy Delphi and best-worst method for identifying and prioritizing key factors affecting university-industry collaboration and Lyu et al. (2020) in risk assessment using a new consulting process or determining the importance of the criteria of traffic accessibility. Vinh, Do, et al. (2022) applied the fuzzy Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) approach in the hotel industry. Therefore, applying the FAHP approach, this article will propose implications to help hotel managers retain employees and reduce costs for recruiting and training human resources due to employees leaving the organization to contribute to local tourism development.

The rest of this paper is structured as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology used to conduct empirical research on employee engagement in the hotel industry. Section 4 identifies the factors that constitute employee engagement with hotels. Section 5 discusses the research findings. Section 6 concludes the results and discuss the limitations of the research.

2. LITERATURE REVIEW

2.1. Employee engagement

Engagement is the intention to stay with the organization for a long time (Chandani et al., 2016; Sun & Bunchapattanasakda, 2019). The cohesion of everyone is not simply a matter of the individual. However, it is a link in the chain of dedicated work dedicated to achieving the goals set by the organization (Mazzetti et al., 2023). There are many different views and opinions of researchers in defining employee engagement with the organization.

Kahn (1990) shows that employee engagement contribution of work members the the organization. When engaged, they can present themselves physically, mentally, and emotionally while doing the job. Engagement occurs when individuals are emotionally connected to others and aware of work (Saks, 2022). Employees are swept up in emotions and perceptions when they know what they expect, are expected of, and what they need to do to get there, perceive that they are part of the organization, mean to their colleagues, are trusted, and could improve and grow (Mazzetti et al., 2023). In this research, "job engagement" is defined as a persistent, positive, and motivated state of being motivated to complete work. According to Schaufeli's concept, employees are neither in a state of burnout nor automatically engaged in work.

Book et al. (2019) and Chandani et al. (2016) stated that employee engagement is employees' positive attitude towards the organization and depends on the level of support they receive. Thus, engagement has a lot to do with employee attitudes. When employees are committed to the organization, they maximize their work abilities (Kahn, 1990).

Moreover, employees will engage with their work when they feel the meaning of the work, are safe and can do it. Therefore, it is the responsibility of the organization to develop and nurture engagement, as engagement requires a two-way relationship between employees and the organization. However, Mazzetti et al. (2023) argue that organizational commitment is staying with the organization, participating in the work regularly, working hard every day, protecting the organization's assets, and believing in the organization's goals. Khan et al. Wertheim (2016)(2014)and show organizational commitment is employees' loyalty, willingness to give their best efforts for its goals and values, and desire to remain a member. According to Beloor et al. (2017), organizational commitment is the willingness to work actively for the organization, feel proud to be a member and have a solid attachment.

According to social exchange theory, when organizations provide resources for employees to pursue and develop careers, including benefits, job advancement, training, and development, employees will have a sense of service obligation and commitment to the organization (Meira & Hancer, 2021; Tsen et al., 2022). Saks (2022) divides employee engagement into work engagement and organizational engagement. Lockwood (2008) divides engagement into two types: emotional engagement refers to how employees feel about the company, their leaders, and their colleagues; behavioral engagement refers to the effort employees put into their work, such as mental effort, time, and energy. Mazzetti et al. (2023) suggest that employee engagement is a purposefully desired state that participation, commitment, enthusiasm, and effort toward the organization. Therefore, it includes an attitude component and a behavioral component. From the management and organizational behavior perspective, include emotions, behavior, and cognition (Reddy et al., 2019). Therefore, engagement includes three components: emotional, cognitive, and behavioral.

2.2. Factors affecting employee engagement with the organization

The factors affecting employee engagement with the organization are as follows.

Job characteristics

In the tourism sector, creativity, empowerment, and work characteristics are important factors affecting employee engagement (Khan et al., 2014). Exciting and challenging work will make employees love their work and will thereby contribute to increased loyalty (Karatepe & Olugbade, 2009). Furthermore, work that requires many skills and is given autonomy are conditions that encourage employees to engage with their work. Saks (2022) found that job characteristics were positively correlated with employees' job involvement and increased their commitment to the organization. When employees are provided with information about goals and are empowered, they will be satisfied with their work, increasing their commitment to the organization (Karatepe et al., 2018).

Work environment

The working environment in the organization includes the physical environment and psychological environment (Nanjundeswaraswamy, 2015).

The physical environment includes location, workspace, and working conditions. A suitable and convenient physical environment will create excellent conditions for employees to strengthen their attachment to the organization (Adhikari & Gautam, 2010). The psychological environment includes work pressure, working atmosphere, etc. A friendly, fun, and sociable working atmosphere will increase the confidence of each employee, stimulate the creative spirit, and increase the employee's commitment the organization. According to Kim and Hyun (2017), when the organization has a good working environment, the employee's commitment to the organization is higher. Research by Vinh (2023) has shown the relationship between the working environment and employee's commitment the organization. The working environment is always a concern for employees because it is related to personal convenience, but at the same time, it is also a factor that helps them complete their tasks well. A good working environment will further enhance employee engagement.

Direct management

Management is getting things done effectively and efficiently through and with other people. Operational-level managers (direct managers) are directly responsible for producing the products and services of the unit. They influence employee attitudes and behaviors (Vargas-Sevalle et al., 2020). A good relationship between direct management and employees will make employees feel safe, support, and trust their leaders, thereby making employees strive at work, promote new ideas, and bond with the organization's position (Kahn, 1990; Saks, 2022). Employees are more engaged with their work when their superiors are friendly, inspiring, and care about the interests of employees (Nanjundeswaraswamy et al., 2020). The relationship between employees and operational managers positively impacts employee loyalty and commitment (Wegner et al., 2021). Furthermore, employees who have close, trusting relationships with their superiors will have more positive attitudes and behaviors toward work and the organization (Saks, 2022).

Salary and benefits

Salaries and benefits include base salaries, allowances, bonuses, and other benefits (Hien et al., 2022). To motivate employees toward the achievement of organizational goals, the reward must be associated with the employee's work results (Yadav & Dabhade, 2014). Conversely, when employees feel that they are being mistreated, they will be inhibited, depressed, and even leave their jobs (Hsu & Kernohan, 2006). All employees want to be in specific ways for their dedication or contributions. Rewards must be directed toward satisfying the personal needs of employees (Mazzetti et al., 2023; Tsen et al., 2022). In addition, the reward is commensurate with the contribution achievements. The diverse and rich welfare policy will show the concern of the enterprise to the employees, making the employees feel satisfied with the reward policy and company welfare (Shanock et al., 2019). Once satisfied with the reward and welfare policy, employees will want to engage with the organization more.

Employee's personality

Personality includes the properties and characteristics of everyone expressed in behavior,

thoughts, and emotions, with unique and lasting characteristics (Huang et al., 2007). There are many personality measurement tools, the most popular of which are the Myers-Briggs index (MBTI) and the Big Five model. The Big Five model is closely related to employee job performance, affecting job satisfaction (Ahmad et al., 2014) and organizational commitment. Ahmad et al. (2014) point out that two dimensions in the Big Five model (emotional stability and conscientiousness) strongly influence employee engagement. Kim and Hyun (2017) point out that personality significantly affects employee work engagement. A hotel is an industry in which employees must meet customer's needs, so personality greatly influences the service provided

to customers (Ncube & Jerie, 2012; Vinh, Do, et al., 2022). In this study, the author expected that employee personality, focusing on emotional stability, extroversion, and conscientiousness, is essential for employee engagement.

Based on the overview of studies on engagement, the authors have demonstrated sets of factors that constitute employee engagement with the organization. The study has selected a group of factors that constitute employee engagement with the organization with the following 5 aspects: 1) Job characteristics; 2) Working environment; 3) Direct management; 4) Salary and benefits; 5) Personal personality as the basis for my research model.

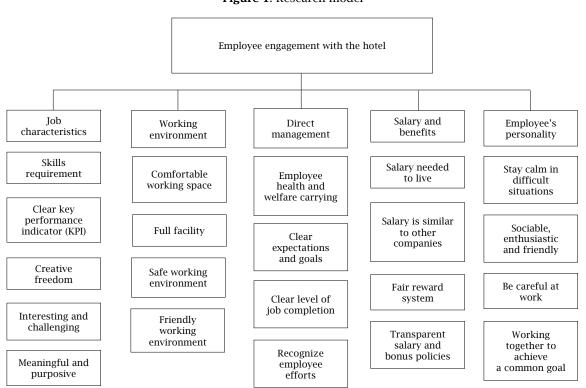


Figure 1. Research model

3. METHODOLOGY

The study uses the FAHP method to evaluate the order of priority of the factors constituting the employee's commitment to the organization. Although widely used, AHP often has limitations in combining uncertainty and inaccuracies inherent in decision-maker's perceptions judgments of numbers used in the AHP model. Therefore, when fuzzyness is a common feature of decision-related problems, the FAHP method was developed to solve this problem. It allows decisionmakers to express approximations of inputs using fuzzy numbers (Zadeh, 1965). Many forms have been proposed to calculate and synthesize weights to rank factors. This study uses the fuzzy geometric technique to determine the multiplicative and fuzzy geometric mean. The fuzzy weighting of each criterion is suggested by Hsieh et al. (2004) and applied in several studies such as Sun (2010), Owusu-Agyeman et al. (2017), Lyu et al. (2020), and Vinh, Do, et al. (2022).

The next step of the research is to rank the indicators based on the aggregate results of the impact indicators. The ranking method of Liou and Wang (1992) is applied. Liou and Wang's method is widely applied in many ranking methods. In summary, suppose there are fuzzy triangular numbers Ai, i = 1, 2, ..., n. The total breakdown value for each fuzzy number Ai = (li, mi, ui) is given in the Eq. (1):

$$Sa(A) = \left(\frac{1}{2}\right)((u_i - l_i) \ a + (l_i + m_i) - 2x_{min}) \tag{1}$$

in which $x_{min} = \inf Uni = 1\{x = \mu A_i(x) > 0\}$, $\alpha \in [0,1]$, $\alpha = 1$ for optimistic decision makers and $\alpha = 0.5$ for moderate decision makers. When $X_{min} = 0$, the formula is calculated as Liou and Wang (1992).

To perform the pairwise comparison between fuzzy parameters, the linguistic variables are defined corresponding to the assessment levels in Table 1.

Table 1. Linguistic variables

Fuzzy number	Linguistic variables	Triangular fuzzy number
1	Equal importance	(1,1,1)
2	Importance of levels 1 and 3	(1,2,3)
3	Medium importance	(2,3,4)
4	Importance of levels 3 and 5	(3,4,5)
5	General importance	(4,5,6)
6	Importance of levels 5 and 7	(5,6,7)
7	Very important	(6,7,8)
8	Important of levels 7 and 9	(7,8,9)
9	Absolutely important	(8,9,10)

Seventeen experts were selected to participate in the survey, including educational managers, businesses, alumni, and university scholars. Among the returned responses, two questionnaires had

inappropriate answers. Therefore, the results of this study are based on the responses of 15 experts. Table 2 presents information from experts.

Table 2. Information of experts

No.	Position	Year of experience	Organization	
1	Vice-president	10	University	
2	Dean of Human Resource Management Faculty	15	University	
3	Dean of Tourism Faculty	12	University	
4	Dean of Tourism Faculty	14	University	
5	Leaders of the Department of Labor, Invalids and Social Affairs	15	Department of Labor, Invalids and Social Affairs	
6	Leader of the Department of Tourism	12	Department of Tourism	
7	Hotel manager	10	Hotel	
8	Hotel manager	16	Hotel	
9	Human resources manager	15	Hotel	
10	Human resources manager	14	Hotel	
11	Sales manager	6	Hotel	
12	Sales Manager	7	Hotel	
13	HR Manager	5	Hotel	
14	HR Manager	8	Hotel	
15	Head of Training Department of the hotel	7	Hotel	

4. RESULTS

Through the steps of FAHP analysis, fuzzy mean (r), weight (\widetilde{r}) , and best nonfuzzy performance (BNP)

values are obtained. The local index ranking of indicators related to factors of employee engagement with the organization is shown in Table 3.

Table 3. Impact factors of employee's engagement with hotels by local ranking

Factors/Indicators	r	W*	BNP	Ranking
Job characteristics	(2.75, 3.00, 3.44)	(0.33, 0.44, 0.58)	0.45	1
Skills requirement	(0.36, .42, 0.50)	(0.05, 0.06, 0.08)	0.06	5
Clear KPI	(0.69, 0.80, 0.94)	(0.09, 0.12, 0.16)	0.12	3
Creative freedom	(0.46, 0.53, 0.61)	(0.06, 0.08, 0.10)	0.08	4
Interesting and challenging	(1.36, 1.57, 1.79)	(0.17, 0.23, 0.30)	0.23	2
Meaningful and purposive	(3.09, 3.58, 4.06)	(0.39, 0.52, 0.68)	0.53	1
Working environment	(1.68, 1.92, 2.18)	(0.22, 0.28, 0.37)	0.29	2
Comfortable working space	(2.16, 2.43, 2.69)	0.34, 0.42, 0.53)	0.43	2
Full facility	(0.31, 0.34, 0.38)	(0.05, 0.06, 0.07)	0.06	4
Safe working environment	(0.42, 0.46, 0.52)	(0.06, 0.08, 0.10)	0.08	3
Friendly working environment	(2.23, 2.52, 2.82)	(0.35, 0.44, 0.55)	0.45	1
Direct management	(0.37, 0.41, 0.44)	(0.05, 0.06, 0.08)	0.06	4
Employee health and welfare carrying	(0.36, 0.40, 0.45)	(0.06, 0.07, 0.09)	0.08	4
Clear expectations and goals	(1.04, 1.16, 1.29)	(0.17, 0.22, 0.27)	0.22	2
Clear level of job completion	(0.62, 0.70, 0.78)	(0.10, 0.13, 0.17)	0.13	3
Recognizing employee efforts	(2.73, 3.11, 3.52)	(0.45, 0.58, 0.74)	0.59	1
Salary and benefits	(0.91, 1.03, 1.17)	(0.12, 0.15, 0.20)	0.16	3
Salary needed to live	(0.56, 0.63, 0.72)	(0.10, 0.13, 0.17)	0.14	3
Salary is similar to other companies	(1.17, 1.34, 1.54)	(0.21 0.28, 0.37)	0.29	2
Fair reward system	(0.47, 0.53, 0.59)	(0.09, 0.11, 0.14)	0.11	4
Transparent salary and bonus policies	(1.93, 2.25, 2.61)	(0.35, 0.47, 0.63)	0.49	1
Employee's personality	(0.36, 0.41, 0.46)	(0.05, 0.06, 0.08)	0.06	5
Stay calm in difficult situations	(1.30, 1.46, 1.63)	(0.19, 0.24, 0.30)	0.24	2
Sociable, enthusiastic, and friendly	(0.28, 0.31, 0.35)	(0.04, 0.05, 0.06)	0.05	4
Be careful at work	(0.52, 0.59, 0.67)	(0.08, 0.10, 0.12)	0.10	3
Working together to achieve a common goal	(3.36, 3.74, 4.10)	(0.50, 0.61, 0.75)	0.62	1

Note: * *CR* < 0.1.

Table 3 shows the r, w, and BNP values of the indicators in the preference model for job characteristics indicators. The results show that meaningful and purposive are ranked first among job characteristics factors (BNP = 0.53). The second factor is interesting and challenging (BNP = 0.23). The third factor is clear KPI (BNP = 0.12). The fourth factor is creative freedom (BNP = 0.08), and the last important factor is the skills requirement (BNP = 0.06).

Regarding the working environment indicator, results show that a friendly environment is ranked as the most critical indicator in the working environment factor (BNP = 0.45). The factor ranked second is comfortable working space (BNP = 0.43). The factor ranked third is a safe working environment (BNP = 0.08), and the last important indicator is a full facility (BNP = 0.06). Regarding the direct management indicators, the results show that recognizing employee efforts is ranked in the most critical position among direct management indicators (BNP = 0.59). The factor ranked second is clear expectations and goals (BNP = 0.22). The factor ranked third is the clear level of job completion (BNP = 0.13), and the last important indicator is employee health and welfare carrying (BNP = 0.08).

Regarding the salary and welfare indicators, the results show that transparent salary and bonus policies are ranked in the most critical position among salary and welfare factors (BNP = 0.49). The second ranking is salary is similar to other companies (BNP = 0.29). The factor ranked third is the salary needed to live (BNP = 0.14), and the last ranking is the fair reward system (BNP = 0.11). The results show that working together to achieve

a common goal is the first ranking of importance level in employee personality factors (BNP = 0.62). The second ranking is for staying calm in difficult situations (BNP = 0.24), the factor ranked third is careful at work (BNP = 0.10), and the last ranking is sociable, enthusiastic, and friendly (BNP = 0.05).

The results in Table 3 also show the priority level of the main factors of employee engagement with the organization. The results show that the job characteristics factor is ranked first in the model of employee engagement with the organization (BNP = 0.45). The second factor is working environment (BNP = 0.29), the third factor is salary The second factor is working and benefits (BNP = 0.16), the fourth-ranking factor is direct management (BNP = 0.06), and the last factor employee's ranking is personality (BNP = 0.06). *CR < 0.1 indicates an acceptable consistency ratio, as Saaty (1980) suggested.

The study continues to determine indicator's common index to evaluate the indicators' overall coefficient. The overall index represents the contribution of each index to the overall goal (employee engagement with the organization). The overall index of each indicator in the structure is calculated by multiplying the part index with the index of the main factor. For example, the indicator "meaningful and purposive" is (0.39, 0.52, 0.68) * (0.33, 0.44, 0.58) = (0.1287, 0.2288, 0.3944). Equation (1) is applied to rank fuzzy numbers with total integral values. Take the meaningful and purposive as an example: $S\alpha = (1/2) [(0.3944 - 0.1287) \alpha + (0.1287 + 0.2288) -$ 2 * 0.1287] and $\alpha = 0.5$ for moderate decisionmakers, we have $S\alpha = 0.116$.

No.	Indicators	Global score	Final weight (Sa)	Ranking
1	Skills requirement	(0.0165, 0.0264, 0.0464)	0.012	19
2	Clear KPI	(0.0297, 0.0528, 0.0928)	0.027	13
3	Creative freedom	(0.0198, 0.0352, 0.0580)	0.017	16
4	Interesting and challenging	(0.0561, 0.1012, 0.1740)	0.052	8
5	Meaningful and purposive	(0.1287, 0.2288, 0.3944)	0.116	3
6	Comfortable working space	(0.1122, 0.1848, 0.3074)	0.085	6
7	Full facility	(0.0165, 0.0264, 0.0406)	0.011	20
8	Safe working environment	(0.0198, 0.0352, 0.0580)	0.017	16
9	Friendly working environment	(0.1155, 0.1936, 0.3190)	0.090	5
10	Employee health and welfare carrying	(0.0198, 0.0308, 0.0522)	0.014	18
11	Clear expectations and goals	(0.0561, 0.0968, 0.1566)	0.045	10
12	Clear level of job completion	(0.0330, 0.0572, 0.0986)	0.029	11
13	Recognizing employee efforts	(0.1485, 0.2552, 0.4292)	0.124	1
14	Salary needed to live	(0.0330, 0.0572, 0.0986)	0.029	11
15	Salary is similar to other companies	(0.0693, 0.1232, 0.2146)	0.063	7
16	Fair reward system	(0.0297, 0.0484, 0.0812)	0.022	14
17	Transparent salary and bonus policies	(0.1155, 0.2068, 0.3654)	0.108	4
18	Stay calm in difficult situations	(0.0627, 0.1056, 0.1740)	0.049	9
19	Sociable, enthusiastic, and friendly	(0.0132, 0.0220, 0.0348)	0.010	21
20	Be careful at work	(0.0264, 0.0440, 0.0696)	0.020	15
21	Working together to achieve a common goal	(0.165, 0.2684, 0.4350)	0.119	2

Table 4. The global scores and indicators ranking

Table 4 shows the overall results of the impact of 21 indicators on employee engagement with the organization at hotels in Ba Ria-Vung Tau province. According to the analysis results, recognizing employee efforts is ranked as the first indicator that impacts employee engagement with the organization ($S\alpha = 0.124$); the second factor is working together to achieve a common goal ($S\alpha = 0.119$), meaningful and purposive is ranked as the third indicator ($S\alpha = 0.116$), the fourth is

represented by transparent salary and bonus policies ($S\alpha=0.108$), fifth is friendly working environment ($S\alpha=0.090$), comfortable working space is ranked sixth ($S\alpha=0.085$), salary is not lower than similar companies ranked seventh ($S\alpha=0.063$), the eighth belongs to interesting and challenging ($S\alpha=0.052$), the ninth is stay calm in difficult situations ($S\alpha=0.049$), the tenth belongs to clear expectations and goals ($S\alpha=0.045$), the 11th is clear level of job completion ($S\alpha=0.029$) and salary

needed to live ($S\alpha=0.029$), the 13th is clear KPI ($S\alpha=0.027$), fair reward system is ranked as the 14th ($S\alpha=0.022$), the 15th represented by be careful at work ($S\alpha=0.020$), the 16th is safe working environment ($S\alpha=0.017$) and creative freedom ($S\alpha=0.017$), employee health and welfare carrying is ranked 18th ($S\alpha=0.014$), skills requirement is ranked 19th ($S\alpha=0.012$), ranked 20th belongs to full facility ($S\alpha=0.011$) and last ranking, the 21st position belongs to sociable, enthusiastic and friendly ($S\alpha=0.010$).

5. DISCUSSION

The critical elements of the employee engagement model with the organization are developed based on the social exchange theory, including five factors: job characteristics, working environment, direct management, salary and benefits, and employee personality. The research results show that, with the group of main factors, the rankings of the five factors are as follows: ranked first is job characteristics, ranked second is a working environment, ranked third is direct management, ranked fourth by salary and benefits, and ranked fifth belong to employee's personality. The results of this study are consistent with previous research results that have shown the ranking level of factors such as Book et al. (2019), Chandani et al. (2016), Kim and Hyun (2017), Mazzetti et al. (2023), Ozturk et al. (2021), Saks (2022), Toth et al. (2020), and Vinh (2023). However, the research results also show differences in the ranking order for individual personality factors. While the research results show that the priority level for employee personality factors is ranked 5th, research by Saks (2022), Toth et al. (2020), and Vinh (2023) evaluates the priority level. The priority of this factor is ranked second among the factors affecting business cohesion. This difference may come from the characteristics of the research context and the characteristics of the industry and field chosen for research. Research results when evaluating the overall indicators show the importance of the factors of employee engagement within the organization: recognizing employee efforts, working together to achieve a common goal, and meaningful and purposive are the top three critical factors that most notably affect the engagement of employees with the organization at hotels in Ba Ria-Vung Tau province. The three factors considered to have the lowest ratings include skills requirement, full facility. sociable. enthusiastic, and friendly.

6. CONCLUSION

The purpose of the study is to evaluate the order of priority for factors affecting employee engagement with the organization at hotels in Ba Ria-Vung Tau province. The theoretical review introduced and modeled five factors and 21 indicators. A pairwise comparison survey was designed and sent to 15 experts, including university scientists, leaders of state management agencies in charge of tourism, and leaders of hotels. Through the FAHP analysis process, the research results show that the job characteristics factor is ranked first in the model of

employee engagement with the organization (BNP = 0.45). The second factor is working environment (BNP = 0.29), the third factor is salary and benefits (BNP = 0.16), the fourth-ranking factor is direct management (BNP = 0.06), and the last ranking is employee's personality (BNP = 0.06). Twenty-one indicators belonging to 5 factors were ranked through the method of Liou and Wang (1992). The results showed that ranking in the first three positions and having the most influence on employee engagement in hotels was ranked by experts include recognizing employee efforts ($S\alpha = 0.124$), working together to achieve a common goal ranked as the second ($S\alpha = 0.119$), meaningful and purposive is ranked as the third factor ($S\alpha = 0.116$). Meanwhile, the three factors with the lowest rankings include skills requirement $(S\alpha = 0.012)$, full facility $(S\alpha = 0.011)$, and sociable, enthusiastic, and friendly ($S\alpha = 0.010$). These results show certain similarities with previous studies such as Book et al. (2019), Chandani et al. (2016), Kim and Hyun (2017), Mazzetti et al. (2023), Ozturk et al. (2021), Saks (2022), Toth et al. (2020), and Vinh (2023). Besides, the results also show changes in the order of factors and instructions in different contexts.

The results show a specific academic contribution when the study has synthesized a research model related to employee engagement in the hotel industry, especially in the post-COVID-19 context. Previous studies have shown that the tourism industry is the most heavily affected by the pandemic (Vinh, Hien, et al., 2022). The study results can show high reliability when the experts invited to survey are people with experience and an in-depth understanding of the tourism industry. The combination of the FAHP method and the extended FAHP of Liou and Wang (1992) shows its effectiveness in scientific and consistent research results.

Research results can be an essential reference source for tourism and hospitality-related training at management, state universities, and businesses. In addition to academic contributions, results from this study can also help hotels have better human resource options in engaging employees with hotels, especially in the post-COVID-19. Some hotel suggestions include: 1) Hotels must focus on developing job descriptions to help workers better know the tasks they must complete. 2) The working environment is vital because of material factors such as salary and bonus. 3) Administrator recognition of employees' contributions motivates them more than financial factors. Besides, building an office cultural environment and creating joy for employees, making them feel that their work brings them more meaning and purpose, are factors that need attention from the business side.

Despite specific contributions to academia and management practice, the research must show some limitations. The research was only conducted in Ba Ria-Vung Tau province. The research method stops at ranking factors and indicators. The study only surveyed experts' opinions. Further studies can be expanded to other cities across the country. Vary the methodological approaches and expanding the survey to hotel employees, can be more diverse.

REFERENCES

- Adhikari, D. R., & Gautam, D. K. (2010). Labor legislations for improving quality of work life in Nepal. *International Journal of Law and Management, 52*(1), 40–53. https://doi.org/10.1108/17542431011018534

 Ahmad, J., Ather, M. R., & Hussain, M. (2014). Impact of Big Five personality traits on job performance
- Ahmad, J., Ather, M. R., & Hussain, M. (2014). Impact of Big Five personality traits on job performance (Organizational commitment as a mediator). In *Management, Knowledge and Learning International Conference 2014*, 571–577. https://toknowpress.net/ISBN/978-961-6914-09-3/papers/ML14-597.pdf
- Beloor, V., Nanjundeswaraswamy, T. S., & Swamy, D. R. (2017). Employee commitment and quality of work life A literature review. *The International Journal of Indian Psychology*, 4(2). https://doi.org/10.25215/0402.040
- Book, L., Gatling, A., & Kim, J. (S.) (2019). The effects of leadership satisfaction on employee engagement, loyalty, and retention in the hospitality industry. *Journal of Human Resources in Hospitality & Tourism*, 18(3), 368–393. https://doi.org/10.1080/15332845.2019.1599787
- Chandani, A., Mehta, M., Mall, A., & Khokhar, V. (2016). Employee engagement: A review paper on factors affecting employee engagement. *Indian Journal of Science and Technology*, 9(15), 1–7. https://doi.org/10.17485/ijst/2016/v9i15/92145
- Hien, L. M., Vinh, N. Q., & Hoang, T. H. (2022). The influence of quality of work-life on employee motivation in banking industry. *The Seybold Report*, 866–882. https://doi.org/10.5281/ZENODO.6911295
- Hsieh, T.-Y., Lu, S.-T., & Tzeng, G.-H. (2004). Fuzzy MCDM approach for planning and design tenders selection in public office buildings. *International Journal of Project Management*, 22(7), 573–584. https://doi.org/10.1016/j.ijproman.2004.01.002
- Hsu, M.-Y., & Kernohan, G. (2006). Dimensions of hospital nurses' quality of working life. *Journal of Advanced Nursing*, 54(1), 120–131. https://doi.org/10.1111/j.1365-2648.2006.03788.x
- Huang, T.-C., Lawler, J., & Lei, C.-Y. (2007). The effects of quality of work life on commitment and turnover intention. *Social Behavior and Personality: An International Journal*, 35(6), 735–750. https://doi.org/10.2224/sbp.2007.35.6.735
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. https://www.jstor.org/stable/256287
- Kahraman, C., Öztayşi, B., Sarı, İ. U., & Turanoğlu, E. (2014). Fuzzy analytic hierarchy process with interval type-2 fuzzy sets. *Knowledge-Based Systems*, *59*, 48–57. https://doi.org/10.1016/j.knosys.2014.02.001
- Karatepe, O. M., & Olugbade, O. A. (2009). The effects of job and personal resources on hotel employees' work engagement. *International Journal of Hospitality Management*, 28(4), 504–512. https://doi.org/10.1016/j.ijhm.2009.02.003
- Karatepe, O. M., Yavas, U., Babakus, E., & Deitz, G. D. (2018). The effects of organizational and personal resources on stress, engagement, and job outcomes. *International Journal of Hospitality Management*, 74, 147–161. https://doi.org/10.1016/j.ijhm.2018.04.005
- Khan, F., Rasli, A. M., Tariq, Rahman, A.-ur, & Khan, M. M. (2014). Job rotation, job performance, organizational commitment: An empirical study on bank employees. *Journal of Management Info, 1*(3), 10–13. https://www.semanticscholar.org/reader/87b401eedac56c853ed141841e35be2db1ae42cc
- Kim, W., & Hyun, Y. S. (2017). The impact of personal resources on turnover intention: The mediating effects of work engagement. *European Journal of Training and Development, 41*(8), 705–721. https://doi.org/10.1108/EJTD-05-2017-0048
- Liou, T.-S., & Wang, M.-J. J. (1992). Ranking fuzzy numbers with integral value. Fuzzy Sets and Systems, 50(3), 247-255. https://doi.org/10.1016/0165-0114(92)90223-Q
- Lockwood, M. A. (2008). The relationship of self-efficacy, perceptions of supervisor leadership styles and blue-collar employee engagement (Publication No. 3302638) [Doctoral dissertation, University of Phoenix]. Citeseer. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=47f0c22b621cb2bbfeea2b427d1e1c35f eed98e8
- Lyu, H.-M., Sun, W.-J., Shen, S.-L., & Zhou, A.-N. (2020). Risk assessment using a new consulting process in fuzzy AHP. *Journal of Construction Engineering and Management*, 146(3), Article 04019112. https://doi.org/10.1061/(ASCE)CO.1943-7862.0001757
- Man, N. (2021). *Du lịch Bà Rịa-Vũng Tàu 30 năm phát triển* [Ba Ria-Vung Tau tourism 30 years of development]. Department of Tourism of Ba Ria-Vung Tau. https://danviet.vn/du-lich-ba-ria-vung-tau-30-nam-tro-minh-thanh-diem-den-hap-dan-20211220122633185.htm
- Mazzetti, G., Robledo, E., Vignoli, M., Topa, G., Guglielmi, D., & Schaufeli, W. B. (2023). Work engagement: A metaanalysis using the job demands-resources model. *Psychological Reports*, 126(3), 1069–1107. https://doi.org/10.1177/00332941211051988
- Meira, J. V. de S., & Hancer, M. (2021). Using the social exchange theory to explore the employee-organization relationship in the hospitality industry. *International Journal of Contemporary Hospitality Management*, 33(2), 670–692. https://doi.org/10.1108/IJCHM-06-2020-0538
- Mosayebi, A., Ghorbani, S., & Masoomi, B. (2020). Applying fuzzy Delphi and best-worst method for identifying and prioritizing key factors affecting on university-industry collaboration. *Decision Science Letters*, *9*, 107–118. https://doi.org/10.5267/j.dsl.2019.7.001
- Nanjundeswaraswamy, T. S. (2015). Nurses quality of work life: Scale development and validation. *Journal of Economic and Administrative Sciences*, 38(2), 371–394. https://doi.org/10.1108/jeas-09-2020-0154
- Nanjundeswaraswamy, T. S., Swamy, D. R., & Nagesh, P. (2020). Leadership styles in mediating the relationship between quality of work life and employee commitment. *International Journal for Quality Research*, 14(2), 387-412. https://doi.org/10.24874/IJQR14.02-04
- Ngan, L. (2021, April 29). *Tự hào 30 năm xây dựng và phát triển, vững bước đi lên trong thời kỳ hội nhập* [Proud of 30 years of construction and development, steadily moving forward in the integration period]. Web Portal. https://vungtau.baria-vungtau.gov.vn/tin-tuc-noi-bat/-/view-content/243283/tu-hao-30-nam-xay-dung-va-phat-trien-vung-buoc-i-len-trong-thoi-ky-hoi-nhap

- Ncube, F., & Jerie, S. (2012). Leveraging employee engagement for competitive advantage in the hospitality industry. A comparative study of hotels A and B in Zimbabwe. Journal of Emerging Trends in Economics and Management Sciences, 3(4), 380-388. https://hdl.handle.net/10520/EJC126570
- Owusu-Agyeman, Y., Larbi-Siaw, O., Brenya, B., & Anyidoho, A. (2017). An embedded fuzzy analytic hierarchy process for evaluating lecturers' conceptions of teaching and learning. Studies in Educational Evaluation, 55, 46-57. https://doi.org/10.1016/j.stueduc.2017.07.001
- Ozturk, A., Karatepe, O. M., & Okumus, F. (2021). The effect of servant leadership on hotel employees' behavioral consequences: Work engagement versus job satisfaction. International Journal of Hospitality Management, 97, Article 102994. https://doi.org/10.1016/j.ijhm.2021.102994
- Reddy, T. N., Inthiyaz, K., & Subramanyachary, P. (2019). Investigating the relationship between quality of work life and employee commitment amongst bank employees. International Journal of Advanced Science and Technology, 28(8), 190-196. http://surl.li/sbbzj
- Saaty, T. L. (1980). The analytic hierarchy process: Planning, priority setting, resource allocation. McGraw-Hill.
- Saks, A. M. (2022). Caring human resources management and employee engagement. Human Resource Management Review, 32(3), Article 100835. https://doi.org/10.1016/j.hrmr.2021.100835
- Shanock, L. R., Eisenberger, R., Heggestad, E. D., Malone, G., Clark, L., Dunn, A. M., Kirkland, J., & Woznyj, H. (2019). Treating employees well: The value of organizational support theory in human resource management. The Psychologist-Manager Journal, 22(3-4), 168-191. https://doi.org/10.1037/mgr0000088
 Sun, C. C. (2010). A performance evaluation model by integrating fuzzy AHP and fuzzy TOPSIS methods. Expert
- Systems with Applications, 37(12), 7745-7754. https://doi.org/10.1016/j.eswa.2010.04.066
- Sun, L., & Bunchapattanasakda, C. (2019). Employee engagement: A literature review. International Journal of Human Resource Studies, 9(1), 63-80. https://doi.org/10.5296/ijhrs.v9i1.14167
- Toth, I., Heinänen, S., & Nisula, A.-M. (2020). Personal resources and knowledge workers' job engagement. International Journal of Organizational Analysis, 28(3), 595–610. https://doi.org/10.1108/IJOA-07-2019-1830
 Tsen, M. K., Gu, M., Tan, C. M., & Goh, S. K. (2022). Does flexible work arrangements decrease or increase turnover
- intention? A comparison between the social exchange theory and border theory. International Journal of Sociology and Social Policy, 42(11-12), 962-983. https://doi.org/10.1108/IJSSP-08-2021-0196
- Vargas-Sevalle, L., Karami, M., & Spector, S. (2020). Transformational leadership in the hospitality and tourism industry. In V. Ratten (Ed.), Entrepreneurial opportunities (pp. 73-97). Emerald Publishing Limited. https://doi.org/10.1108/978-1-83909-285-520201007
- Vinh, N. Q. (2023). The influence of personal resources on job engagement of employees in tourism companies. Journal of Organizational Behavior Research, 8(1), 231-243. https://doi.org/10.51847/is94kjrwdn
- Vinh, N. Q., Do, Q. H., & Hien, L. M. (2022). An integrated fuzzy AHP and fuzzy TOPSIS approach in the hotel industry. *International Journal of* https://doi.org/10.21833/ijaas.2022.10.017 Advanced and Applied Sciences, 9(10),135-148.
- Vinh, N. Q., Hien, L. M., & Do, Q. H. (2022). The relationship between transformation leadership, job satisfaction and employee motivation in the tourism industry. Administrative Sciences, *12*(4), Article 161. https://doi.org/10.3390/admsci12040161
- Wegner, R. da. S., Tontini, J., Costa, V. M. F., Muller, A., Jr., & Cardoso da Silva, D., Jr. (2021). An analysis of the influence of organizational leadership on innovation management using the Fuzzy-AHP method. Revista de Administração da UFSM, 14(3), 521-544. https://doi.org/10.5902/1983465940719
- Wertheim, V. V. (2016). The effect of organizational commitment, organizational based self esteem and work engagement on nurses' perception of medication errors [Doctoral dissertation, University of San Diego]. Digital USD. https://doi.org/10.22371/07.2016.002
- Yadav, R. K., & Dabhade, N. (2014). Work life balance and job satisfaction among the working women of banking and education sector — A comparative study. *International Letters of Social and Humanistic Sciences*, (10), 181–201. https://www.ceeol.com/search/article-detail?id=220323
- Yaghoobi, T. (2018). Prioritizing key success factors of software projects using fuzzy AHP. Journal of Software: Evolution and Process, 30(1), Article e1891. https://doi.org/10.1002/smr.1891
- Zadeh, L. A. (1965). Fuzzy sets. Information and Control, 8(3), 338-353. https://doi.org/10.1016/S0019-9958(65)90241-X