RESEARCH ARTICLE

Determinants Of Organizational Commitment In Telecommunications Industry: An Application Of Fuzzy Analytic Hierarchy Process

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ARTICLE INFO	ABSTRACT
	The research evaluated the hierarchical ranking of elements contributing to an employee's commitment to the telecommunication industry. Through the steps of Fuzzy analytic hierarchy process (FAHP) analysis by interviewing 17 experts, fuzzy mean (r), weight ($\tilde{r}$), and best nonfuzzy performance (BNP) values are obtained. The results revealed that the employee commitment to the organization linkage model ranked the job satisfaction factor. The second factor is leadership style, and the final rating is organizational climate. Notably, the top 5 factors are Transformational leadership, followed by employee empowerment, job security, ethical leadership, and employee motivation. The lowest ranking scores are communication satisfaction, laissez-faire leadership and compensation management, and transactional leadership.

1. INTRODUCTION

For a business, employees are like leverage; they can impact revenue and profitability, both positively and negatively. Especially in the service sector, an organization's most important asset is its employees, who are the people who directly provide quality service to their customers. They are responsible for building an image of an organization, which is an essential part of the organization, especially in building, planning, progressing, and delivering quality service to customers. The link between employees and the organization is an essential factor in ensuring the effectiveness and success of the organization. Employees who are associated with the organization will feel empathic about its goals, values, missions, and strategies and have the motivation and energy to do their job the best they can.

Employee engagement is an approach to studying organizational behavior that has gained much interest recently. Many studies have shown a correlation between employee engagement, conductivity, performance, business revenue, and profitability. Research has been carried out to measure employee engagement and find ways to improve the degree of engagement to increase labor productivity. Some studies look at factors that affect employee job satisfaction, commitment, and loyalty, such as Smith and Macko (2014), Meyer and Allen (1991), and Vinh (2023). The link between employees and the organization is essential in ensuring its effectiveness and success. Employees who are associated with the organization will feel empathic about its goals, values, missions, and strategies and have the motivation and energy to do their jobs well.

When employees feel a strong sense of attachment to the organization, they exhibit higher levels of commitment and exert more significant effort toward the organization's development. Additionally, this fosters a positive organizational culture and a favorable working environment for all organization members. According to Ncube and Steven (2012), employee engagement is crucial for

establishing an organization's competitive advantage. Therefore, the organization must optimize its resources to enhance its employees' development, thereby fostering greater cohesion among them.

The paper focuses on studying the factors that makeup employee cohesion. In the telecommunications sector in Vietnam, managers are conscious that excellent staffing will help improve business efficiency. However, today, the issue of human resources competition is intensifying. With workers' perceptions of legitimate rights changing and a growing tendency to work independently from home, enhancing staff cohesion becomes a strategic question for managers. Therefore, developing and retaining employees is vital to Vietnamese telecommunications today. By employing the AHP methodology and drawing on experimental data from telecommunications enterprises in Hanoi, the study evaluates the priority order of key factors influencing organizational cohesion. The paper not only identifies these factors but also offers actionable strategies for telecom business managers. These strategies aim to bolster employee retention, reduce the costs associated with employee turnover, and ultimately, contribute to the growth of the telecom industry.

1. LITERATURE REVIEW
1.1. Employee Engagement

The word "employee engagement" is structured in a way that clearly shows a strong connection between the terms "employee" and "engagement." Engagement can have various interpretations, but one aspect of it is when individuals demonstrate a genuine concern for their work and display a strong commitment to performing it with excellence (Albrecht, 2010). Various researchers have articulated several alternative definitions of employee engagement. Engagement, as defined by Thomas (Henryhand, 2009), is a reciprocal connection between employees and organizations that satisfies their respective requirements. Engagement, as defined by Vazquez et al. (2015), is a positive and meaningful experience that is motivating. It is characterized by vigor, dedication, and absorption.

According to Lockwood (2005), employee engagement is the emotional and intellectual dedication of an individual towards their organization. Employee engagement can be measured by observing positive behaviors such as speaking positively about the organization, displaying intense passion, and exerting extra effort and behavior that contribute to the organization's success. David Zinger (2009) defines employee engagement as employees' level of involvement and commitment towards their jobs and their organization. This level of engagement serves as a source of motivation for employees to perform at their best and take ownership of the organization's success. As per William Kahn (2013), employee engagement refers to the interconnected thoughts, emotions, and behaviors of employees associated with their involvement in their work. According to Kahn, employees engaged in their work will experience positive emotions toward it and perceive it as meaningful.

Employee engagement is not just a concept, but a crucial factor for organizational success. Engaged employees demonstrate higher levels of productivity, satisfaction, and job tenure, painting a promising picture for the organization's future. While the concept of employee engagement may be defined differently by various experts, the underlying idea remains the same-it actively involves employees in their work and fosters a strong sense of connection to the organization they are employed by.

According to Lotanz and Shave (1992), organizational commitment refers to a solid inclination to remain in the organization, a willingness to go above and beyond, and a firm conviction in the organization's values and goals. The source cited is Khanifar et al. (2012). Organizational commitment consists of three components: affective commitment, continuance commitment, and normative commitment. (i) Affective commitment refers to a deep emotional connection and active engagement with the organization; (ii) Continuance commitment involves recognizing the potential disadvantages of leaving the organization; (iii) Normative commitment is a sense of duty and responsibility to remain a part of the organization (Jena, 2015).

Age, gender, educational qualification, and marital status are the major factors affecting organizational commitment. Allen and Meyer said job satisfaction is higher with old workers because of their attitudinal commitment. Some studies suggest that women are more committed to organizations than men, although the difference is minor. Different types of organizational commitment include commitment to the organization, commitment to the job, commitment to

customers, commitment to superiors, and commitment to management. More studies focus on factors influencing organizational commitment.

Major influencing factors of organizational commitment include

-    Job satisfaction

-    Leadership style

-    Organization climate

Job satisfaction is related to an employee's mindset towards a working environment that meets the needs and values of employees and the individual's response to that environment. Job satisfaction is the primary factor influencing organizational commitment (Gangai, 2015). Secondly, there is a positive correlation between leadership styles and organizational commitment. Leadership styles are also linked to employee job satisfaction, organizational effectiveness, and culture (Aghashahi et al., 2013). Different leadership styles include transformational, transactional, laissez-faire, and Ethical leadership. Organizational climate is an enduring quality of the internal environment of an organization that is experienced by its employees and influenced by their behavior. Moreover, this climate can be described in terms of the values of the organization's particular characteristics (or attitudes). Organizational climate is directly or indirectly related to all the activities in an organization. In the current competitive business scenario, the survival and growth of any organization depend on a favorable organizational climate. A favorable organizational climate enhances job satisfaction (Singh et al., 2011).

According to William Kahn (2013), Employee Engagement can be defined as "employees' thoughts, feelings, and actions that are interrelated with each other and related to involvement in the work being done." In Kahn's view, employees involved in their work will have positive feelings towards it and feel that work is significant. According to Zinger, Employee Engagement can be defined as "employees' engagement with their job and the organization where they work, which motivates them to do their best for the organization and take responsibility for the success of the organization."

It is evident that employee engagement is not just a buzzword, but a key determinant of organizational success. Engaged employees tend to be more productive, happier, and more likely to stay employed for long periods, reinforcing the importance of this concept. While the definition of employee engagement may vary, the core principle remains the same-it involves employees in their work and fosters a strong sense of connection to the organization where they work.

1.2. Job satisfaction and organizational commitment

Brown and Peterson (1994) observed that job satisfaction is necessary for organizational commitment (Cheng Lin, 2011). Further investigation across various sectors has established a correlation between job satisfaction and organizational commitment. Several researchers have identified and ranked the factors that impact job satisfaction. The studies conducted by Halis and Gokgoz (2007), Hong et al. (2013), Parvin and Kabir (2011), and Neog and Barua (2014) are included in this list.

The implications of these findings are significant, as they underscore the importance of internal customer satisfaction with company policies, compensation systems, working conditions, and advancement in fostering organizational commitment. Halis and Gokgoz (2007) conducted a study on organizational commitment by examining the level of job satisfaction among internal customers. The researchers determined that there is a strong correlation between internal customer satisfaction with company policies, company compensation systems, company working conditions, satisfaction with company advancement, and organizational commitment.

Hong et al. (2013) delved into the determinants of job satisfaction among employees working at a factory in Semban, Malaysia. Their findings revealed that the factors of working environment, compensation, and promotion principles wield a significant influence on job satisfaction. However, the fairness of a company was found to have minimal impact on job satisfaction.

In their study, Parvin and Kabir (2011) examined the various factors that impact employee job satisfaction within the pharmaceutical industry. According to his research, the main factors that affect employee job satisfaction in the pharmaceutical industry are working conditions, pay and

promotion, fairness, job security, relationships with co-workers, and relationships with supervisors. Observation in the pharmaceutical industry indicates that employee job satisfaction is neutral about working conditions, pay and promotion, job security, and relationships with co-workers. The level of employee job satisfaction is moderately low in the relationship with the immediate supervisor.

Neog and Barua (2014) studied the determinants of job satisfaction among employees working in automobile service workshops in Assam. According to this study, 37% of the participants indicated that salary significantly impacts an employee's job satisfaction. Work-family balance was cited as a factor influencing job satisfaction by 29% of respondents, while 19% mentioned supervisory support and 15% mentioned career opportunities.

1.3. Leadership style and organizational commitment

A significant body of research has been dedicated to unraveling the intricate relationship between organizational commitment and leadership style. The findings of these studies have consistently shown a strong correlation between organizational commitment and leadership style. Notably, Aghashahi et al. (2013), Mclaggan, Bezuidenhout, and Botha (2013), Celik, Dedeoglu, and Inanir (2015), and Zehir, Sehitoglu, and Erdogan (2012) have all contributed to this understanding, shedding light on this crucial aspect of organizational dynamics.

Primary research focuses on four leadership style types: Zehir, Sehitoglu, and Erdogan (2012) and Celik, Dedeoglu, and Inanir (2015).

- Transformational leadership

- Transactional leadership

- Laissez-faire leadership

- Ethical leadership

Transformational leaders consistently inspire and motivate their followers to be dedicated to the organizational mission and goals. A transformational leader is committed to achieving organizational objectives and values by working beyond their self-interest. In order to realize its objectives, they implement modifications to the organization. Additionally, transformational leaders prioritize innovation and creativity. Transformational leadership is characterized by the idealized influence of a leader's character and qualities, the idealized influence of their behavior, individual consideration, intellectual stimulation, and inspirational motivation. Transformational leadership is characterized by the idealized influence of leaders' characters and qualities, their behavior, individual consideration, intellectual stimulation, and inspirational motivation, as per Aghashahi et al. (2013) and Zehir, Sehitoglu, and Erdogan (2012).

Transactional leadership is characterized by a focus on subordinate performance and satisfaction, linked to a rewarding system designed to achieve the organizational mission and objectives. Aghashahi et al. (2013) and Zehir, Sehitoglu, and Erdogan (2012) have observed that they prioritize their employees' financial incentives, status, and advancements while disregarding innovative and creative efforts. In the private banking sector of Pakistan, Javed et al. (2014) have analyzed the correlation between employees' job satisfaction and leadership styles. *Transactional leadership* is the primary leadership style that can significantly enhance the job satisfaction of employees in the private banking sector of Pakistan, as it is more frequently implemented by branch managers, according to this study. This result is due to the strong positive correlation between job satisfaction and transactional leadership.

The laissez-faire leadership style, which advocates for minimal control and responsibility, has been found to foster a positive commitment to superiors, as noted by Zehir, Sehitoglu, and Erdogan (2012). This leadership style encourages the original ideas of their team members, providing a sense of empowerment and autonomy that can be beneficial in certain organizational contexts.

Ethical leaders exhibit more ethical behaviors and are impartial. They prioritize the interests of their employees and ensure that their rights are adequately safeguarded. Celik, Dedeoglu, and Inanir (2015) discovered that ethical leadership benefits job satisfaction and organizational commitment. Additionally, organizational commitment serves as a partial mediator between job satisfaction and ethical leadership. (Celik, Dedeoglu, Inanir, 2015).

1.4. Organizational climate and organizational commitment

Organizational commitment is significantly influenced by organizational climate, a factor that is largely shaped and maintained by the leadership of top-level management and managers. Their role in promoting employee development, providing practical guidance, support, and favorable working conditions is crucial. It is through their efforts that job satisfaction and organizational commitment can be achieved, fostering a positive organizational climate.

Bulut and Çulha (2010) discovered that providing training opportunities, access, benefits, and support induces organizational commitment. Engin and Akgoz (2013) analyzed the impact of communication satisfaction on organizational commitment. The results of this study indicate that the impact of communication satisfaction on organizational commitment is higher for normative and affective commitment and lower for continuance commitment. Additionally, organizational commitment is significantly influenced by performance appraisals. Singh and Rana (2013) studied the correlation between organizational commitment and performance appraisal among bank employees. This investigation determined that understanding performance appraisal, fairness in appraisal, and performance-based payment practices enhances organizational commitment. Khan et al. (2014) discovered that organizational commitment positively correlates with employee empowerment. Additionally, this investigation verified that participation in decision-making generates motivation that results in organizational dedication.

In the current competitive scenario, teamwork is not just essential; it is a necessity for organizational commitment. The need for collaboration and collective effort is paramount. Employee wellness, particularly in terms of work-family balance, also plays a crucial role in fostering organizational commitment. Trust between employees and managers is another key factor in job satisfaction and organizational commitment. The image of the organization, including its brand value, reputation as an employer of choice, and market recognition, is also a significant contributor to organizational commitment (Castro and Martins, 2010).

3. RESEARCH METHODS

According to Vinh et al. (2023), there are four sequential steps in the FAHP technique investigation:

Step 1: Provide a concise overview of past research on organizational culture and its influence on business competitiveness.

Step 2: Construct an Analytic Hierarchy Process (AHP) survey and conduct interviews with experts who are academics, economists, and business executives employed by firms in the electronics industry.

Step 3: Construct a fuzzy matrix system using the outcomes derived from expert assessments.

Step 4: Analyzing and evaluating the influence of organizational culture elements on firm competitiveness.

Table 1 below shows the indicators drawn from the theoretical basis, and Figure 3 presents the research framework.

Table 1: Summary of factors and indicators

Dimensions	Indicators	Encode	Source
Job satisfaction	Working environment	JS1	Raziqa and Maulabakhsha (2015)
	Compensation Management	JS2	Sharma (2013)
	Promotion Opportunity	JS3	Muhammad and Akhter (2010)
	Job security	JS4	Yashoglu, Karagulle and Baran (2013)
	Management-Employee Relationship	JS5	Tansel and Gazioglu (2012)
Leadership style	Transformational leadership	LS1	Zehir, Sehitoglu and Erdogan (2012);
	Transactional leadership	LS2	
	Laissez-faire Leadership	LS3	

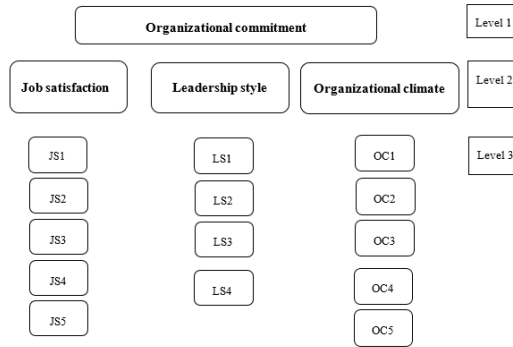| Dimensions	Indicators	Encode	Source
	Ethical Leadership	LS4	Celik, Dedeoglu, Inanir (2015)
Organizational climate	Training and development	OC1	Castro and Martins (2010); Noordin et al. (2010)
	Communication satisfaction	OC2	
	Performance appraisal	OC3	
	Employee motivation	OC4	
	Employee empowent	OC5	

Figure 2. The research framework

The hierarchical ranking of the elements that contribute to an employee's commitment to the firm was evaluated using the FAHP approach in the research. The integration of uncertainty and errors that result from the decision-maker's perceptions and assessments of the statistics used in the model is a common challenge for AHP, despite its widespread use.

Consequently, the FAHP technique was developed to address decision-related issues that frequently exhibit fuzziness as a prominent characteristic. Fuzzy numbers can be employed by decision-makers to represent the approximate values of inputs (Zadeh, 1965). Numerous methodologies have been proposed by researchers to establish and consolidate weights for the purpose of ranking elements. The fuzzy multiplicative and fuzzy geometric mean values were determined in this study using the fuzzy geometric mean approach. The proposed method by Hsieh et al. (2004) has been employed in numerous studies to ascertain the relative importance of each criterion, including Sun (2010), Owusu-Agyeman et al. (2017), Lyu et al. (2020), and Vinh, Do, et al. (2022).

The implementation steps of the FAHP method are as follows:

Step one: The FAHP model represents the expert's assessment as a triangular number, and the corresponding matrix looks like this:

$$\tilde{A} = \left(\tilde{a}_{ij}\right)_{n \times n} = \begin{bmatrix} (1,1,1) & (l_{12}, m_{12}, u_{12}) & \cdots & (l_{1n}, m_{1n}, u_{1n}) \\ (l_{21}, m_{21}, u_{21}) & (1,1,1) & \cdots & (l_{2n}, m_{2n}, u_{2n}) \\ \vdots & \vdots & \vdots & \vdots \\ (l_{n1}, m_{n1}, u_{n1}) & (l_{n2}, m_{n2}, u_{n2}) & \cdots & (1,1,1) \end{bmatrix}$$

In there $\tilde{a}_{ij} = \left(l_{ij}, m_{ij}, u_{ij}\right)$ và $\tilde{a}_{ij}^{-1} = \left(1/u_{ij}, 1/m_{ij}, 1/l_{ij}\right)$ with *i, j* = 1, . . ., *n* and *i* ≠ j.

Step 2: The next step involves determining the blurred multiplier and blurry weight averages for each specific criterion, as indicated in formulas (1) and (2).

$$\tilde{r}_i = (\tilde{a}_{i1} \otimes \ldots \otimes \tilde{a}_{i2} \otimes \ldots \otimes \tilde{a}_{in})^{1/n} \qquad (1)$$

$$\tilde{w}_i = \tilde{r}_i \otimes [\tilde{r}_i \oplus \ldots \oplus \tilde{r}_i \oplus \ldots \oplus \tilde{r}_i)^{-1} \qquad (2)$$

The fuzzy comparison value between the criterion i and the criteria j is denoted by ij in this scenario. As a result, (r) denotes the multiplier average of the fuzzy comparison value between the criterion i and each criterion, while w denotes the fuzzy weight of the second criterion i. The triangular fuzzy

number (TFN), also known as the fuzzied triangle scale, is a method for expressing this weight. Wi = (lwi, mwi, uwi), where lwi, mwi, and uwi denote the lower, middle, and upper values of the fuzzy weights of the second index i.

Step 3: Involves using the best blur performance indicator to optimally determine the weights of the criteria. (BNP: Best Nonfuzzy Performance):

$$BNP = \frac{[(U_{wi}-L_{wi})+ (M_{Wi}-L_{wi})]}{3} + L_{wi} \quad (3)$$

Step four: Matrix consistency measurement: If the CR coherence ratio value < 0.1 is acceptable, a greater value requires decision-makers to reduce the inconsistency by changing the critical value of the index pairs.

Step 5: Conduct a study to rank the indicators according to the synthesis of the influence indicators. Vincent and Dat (2014) proposed a method for rectifying the deficiencies of Liou and Wang's ratings. Liou and Wang's classification method is the most frequently employed and has a wide range of applications among the numerous classification methods. In conclusion, it is reasonable to assume that there are n triangles with fuzzy Ai, where i spans the range of 1 to n. We compute the sum of the integer values for each fuzzy triangle: Ai = (li, mi, ui).

Sα(A) = (1/2) [(ui-li) α+(li+mi)-2Xmin (4)

There is Xmin=infni=1 {x=μAi (x) >0} α∈ [0,1] where α is the indicator of optimism in the assessment α = 0 for the pessimistic decision-maker, α = 1 for the optimistic decision-maker, and α = 0,5 for the moderate decision-maker. The calculation of the formula remains the same as it was in Liou and Wang's case.

To perform the pairwise comparison between fuzzy parameters, the linguistic variables are defined corresponding to the assessment levels in Table 2.

Table 2. 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)

The study recruited a cohort of 17 professionals, comprising of faculty members and researchers specializing in human resources management from various universities, economists employed at research institutes, as well as HR directors and executives from telecommunications companies. Table 3 below provides comprehensive details about the experts who were invited to be interviewed for their opinions.

Table 3. Information of experts

No.	Position	Year of experience	Organization
1	Vice-president	20	University
2	Dean of Business Administration Faculty	18	University
3	Dean of Business Administration Faculty	21	University
4	Dean of Human Resource managenment Faculty	19	University
5	Dean of Human Resource managenment Faculty	15	University

No.	Position	Year of experience	Organization
6	Economics expert	22	Institute for Economic Management
7	Economics expert	14	Institute for Economic Management
8	HR directors	18	Telecommunications company
9	HR directors	21	Telecommunications company
10	HR directors	16	Telecommunications company
11	HR directors	19	Telecommunications company
12	CEO	08	Telecommunications company
13	CEO	14	Telecommunications company
14	HR excutives	16	Telecommunications company
15	HR excutives	12	Telecommunications company
16	HR excutives	15	Telecommunications company
17	HR excutives	17	Telecommunications company

4. RESULTS

Through the steps of FAHP analysis, fuzzy mean (r), weight ($\tilde{r}$), and best nonfuzzy performance (BNP) values are obtained. The local index ranking of the organizational culture model affecting the competitiveness of the enterprise is shown in Table 4.

Table 4. The ranking of organizational cultural model factors that affect the competitiveness of enterprises is based on local indicators

	r	W*	BNP	Ranking
Job satisfaction	**(1.39, 1.62, 1.85)**	**(0.37, 0.50, 0.67)**	**0.512**	**1**
Working environment	(0.89, 1.06, 1.27)	(0.13, 0.19, 0.28)	0.200	4
Compensation Management	(0.33, 0.40, 0.50)	(0.05, 0.07, 0.11)	0.077	5
Promotion Opportunity	(0.96, 1.20, 1.48)	(0.14, 0.22, 0.32)	0.227	2
Job security	(1.51, 1.83, 2.15)	(0.23, 0.33, 0.47)	0.341	1
Management-Employee Relationship	(0.89, 1.08, 1.30)	(0.13, 0.19, 0.28)	0.204	3
Leadership Style	**(0.87, 1.04, 1.20)**	**(0.23, 0.32, 0.43)**	**0.328**	**2**
Transformational leadership	(2.65, 3.03, 3.42)	(0.42, 0.55, 0.71)	0.560	1
Transactional leadership	(0.35, 0.40, 0.48)	(0.06, 0.07, 0.10)	0.076	4
Laissez-faire Leadership	(0.44, 0.52, 0.60)	0.07, 0.09, 0.13)	0.096	3
Ethical Leadership	(1.36, 1.59, 1.83)	(0.22, 0.29, 0.38)	0.294	2
Organizational climate	**(0.52, 0.59, 0.69)**	**(0.14, 0.18, 0.25)**	**0.190**	**3**
Training and development	(0.72, 0.87, 1.05)	(0.10, 0.15, 0.21)	0.156	3
Communication satisfaction	(0.42, 0.50, 0.62)	(0.06, 0.09, 0.13)	0.090	5

	r	W*	BNP	Ranking
Performance appraisal	(0.56, 0.69, 0.85)	(0.08, 0.12, 0.17)	0.124	4
Employee motivation	(1.17, 1.40, 1.64)	(0.17, 0.24, 0.33)	0.248	2
Employee empowent	(2.05, 2.38, 2.74)	(0.30, 0.41, 0.56)	0.420	1

Table 3 shows the r, w, and BNP values of the indicators in the priority model for the performance indicators. The results indicated that the job security factor, with a value of BNP = 0.341, held the first critical position in the job satisfaction index. Promotion opportunity is the second-ranked factor, with a BNP value of 0.227. Third place goes to the management-employee relationship factor, which has a BNP of 0.204. The fourth factor is the working environment, with a BNP of 0.200, and the last factor is compensation management, with a BNP of 0.077.

The leadership style index's findings place transformative leadership at the top of the critical list, with a BNP of 0.560. The factor ranks second, ethical leadership with a BNP value of 0.294. The third most significant element is laissez-faire leadership, with a BNP of 0.096, while the last factor in the leadership style index is transactional leadership, with a BNP of 0.076.

The study's results indicate that the organizational climate indicator ranks the employee empowerment factor as the most critical element, with a BNP value of 0.420. Employee motivation is the second-most important factor, with a BNP of 0.248. The third most important factor with a BNP of 0.156 is training and development. With a BNP of 0.124, the performance appraisal factor ranks fourth, while communication satisfaction, with a BNP value of 0.090, is the last critical factor in the organizational climate index.

The results in Table 3 also indicate the priority of the key elements of employee engagement with the organization. The results revealed that the employee-to-organization linkage model ranked the job satisfaction factor first (BNP = 0.512). The second factor is leadership style (BNP = 0.328), and the final rating factor is organizational climate (BNP = 0.190). *CR < 0.1 represents the acceptable proportion of consistency proposed by Saaty (1980). The study continues to define a common indicator for each indicator, with the aim of assessing the overall coefficient of these indicators. The overall indicator reflects the contribution of each indicator to the overall objective (employee engagement with the organization). We calculate the overall index of each index in the structure by multiplying the segment index with the index of the main element; for instance, the "working environment" index is (0.13, 0.19, 0.28) * (0.37, 0.50, 0.67) = (0.0491, 0.0945, 0.1850).

We apply equation (5) to rank blurred numbers with total integrated values. Consider a work element that serves multiple meanings and purposes.

$S\alpha$ = (1/2) [(0.1849 – 0.0491) α + (0.0491 + 0.0945) – 2 * 0.0491] and α = 0.5 for moderate decision makers, we have $S\alpha$ = 0.057.

Table 5. The global scores and indicators ranking

No	Indicators	Global scores	Final weight (Sa)	Ranking
1	Working environment	(0.0491, 0.0945, 0.1849)	0.057	8
2	Compensation Management	(0.0185, 0.0359, 0.0726)	0.022	13
3	Promotion Opportunity	(0.0535, 0.1073, 0.2148)	0.067	6
4	Job security	(0.0839, 0.1633, 0.3132)	0.097	3
5	Management-Employee Relationship	(0.0493, 0.0964, 0.1899)	0.059	7
6	Transformational leadership	(0.1554, 0.2723, 0.4759)	0.139	1
7	Transactional leadership	(0.0205, 0.0362, 0.0665)	0.019	14
8	Laissez-faire Leadership	(0.0258, 0.0463, 0.0839)	0.024	12
9	Ethical Leadership	(0.0799, 0.1425, 0.2539)	0.075	4
10	Training and development	(0.0389, 0.0739, 0.1421)	0.043	9
11	Communication satisfaction	(0.0224, 0.0425, 0.0834)	0.025	11
12	Performance appraisal	(0.0301, 0.0589, 0.1158)	0.036	10
13	Employee motivation	(0.0631, 0.1194, 0.2223)	0.068	5

No	Indicators	Global scores	Final weight (Sa)	Ranking
14	Employee empowent	(0.1107, 0.2024, 0.3708)	0.111	2

The figures in Table 4 illustrate the overall impact of 14 indicators on employee engagement within telecommunications enterprises. The analysis and data processing results rank the Transformational leadership factor as the top factor for employee engagement with the organization, with a $S\alpha$ = 0.139; the employee empowerment factor follows in second place with a $S\alpha$ = 0.111; the job security factor ranks third with a $S\alpha$ = 0.111; the Ethical Leadership factor occupies the fourth position with a score of 0.075; and the employee motivation factor ranks fifth with a $S\alpha$ = 0.068.

Promotion opportunity is ranked sixth ($S\alpha$ = 0.067), Management employee relationship is not lower than similar companies ranked seventh ($S\alpha$ = 0.059), the eighth belongs to working environment ($S\alpha$ = 0.057), the ninth is stay calm in Training and development ($S\alpha$ = 0.043), the tenth belongs to Performance appraisal ($S\alpha$ = 0.036), the 11th is Communication satisfaction ($S\alpha$ = 0.025) and Laissez-faire Leadership to live ($S\alpha$ = 0.024), the 13th is Compensation Management ($S\alpha$ = 0.022), and last ranking, the 14th position belongs to Transactional leadership ($S\alpha$ = 0.019).

5. DISCUSSIONS AND CONCLUSIONS

Major influencing factors of organizational commitment include job satisfaction, leadership style and organization climate. The research results show that, with the group of main factors, the rankings of the three factors are as follows: ranked first is Job satisfaction, ranked second is Leadership Style, ranked third is Organizational climate. 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), C Yashoglu, Karagulle and Baran (2013), Handani et al. (2016), Kim and Hyun (2017), Mazzetti et al. (2023), Ozturk et al. (2021), Saks (2022), Toth et al. (2020), Castro and Martins (2010), and Vinh (2023).

Organizational commitment necessitates job satisfaction. The primary factors that influence job satisfaction include the working environment, working conditions, compensation management, promotion opportunities, job security, relationships with the manager, relationships with co-workers, and management-employee relationships. In recent years, employees have increased their expectations for a positive work environment, which includes health and safety facilities, sustenance and recreation facilities, and enjoyment at the workplace. This has resulted in a higher level of job satisfaction and organizational commitment. Conversely, job dissatisfaction is exacerbated by adverse work environments, including tension, overtime, burden, fatigue, and tedium. In the manufacturing industry, job satisfaction and organizational commitment are influenced by the provision of secure working conditions, training to enhance machinery management, and protective equipment to workers.

Organizational commitment is significantly correlated with leadership style. In particular, transformational leadership behaviors can promote a higher sense of organizational commitment among employees. Organizational commitment is also influenced by transactional leadership, laissez-faire leadership, and ethical leadership, as the results of several studies confirm.

The research results also indicate that organizational commitment is influenced by various dimensions of organizational climate, including training and development, communication satisfaction, performance appraisal, employee empowerment (decision-making), employee motivation, teamwork, trust between employee and manager, employee wellness, and the organization's image. Organizational commitment is facilitated by training opportunities, training access, training benefits, and training support. When it comes to normative and affective commitments, the level of communication satisfaction with organizational commitment is higher, while it is lower with continuance commitments. Organizational commitment is enhanced by the implementation of equitable performance-based payment practices and appraisals. Employee empowerment, similar to participation in decision-making, fosters motivation that results in organizational dedication. An organization that takes into account all of these factors is likely to achieve   success.

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