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Complementing Effects of Perceived Supervisor Support on Ethical Leadership's Influence on Employee Engagement via Organizational Commitment

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Abstract

This research investigates how the perception of supervisor support shapes the connection between ethical leadership and employee engagement, with organisational commitment serving as an intermediary factor, within an Eastern cultural framework. Data were obtained through a questionnaire survey of 389 IT professionals employed in Pakistan. The relationships among the variables were analysed using linear regression and the PROCESS macro (Preacher & Hayes, 2004). Findings indicate that ethical leadership significantly influences both engagement and commitment among employees. Moreover, organisational commitment functions as a linking mechanism between ethical leadership and engagement. Perceived supervisor support further strengthens this linkage: when such support is high, the indirect impact of ethical leadership on engagement via commitment becomes more pronounced. The evidence suggests that positive supervisory perception enhances the influence of ethical leadership through organisational commitment, thereby fostering greater engagement. Based on social exchange theory, this research enriches organisational behaviour scholarship by introducing perceived supervisor support as a complementary element in the ethical leadership–engagement dynamic—an area with limited prior exploration.

Keywords: Ethical leadership, Employee engagement, Organisational commitment, Perceived supervisor support

Introduction

Employee engagement has drawn considerable scholarly attention in recent years [1]. It reflects the energy, dedication, and enthusiasm employees invest in their job roles [2]. High engagement correlates with stronger organisational performance, innovation, and competitiveness [3]. while its absence is linked to withdrawal behaviours, weaker commitment, and declining productivity [4, 5]. Global surveys, such as those by Gallup, reveal that nearly two-thirds of employees are not actively engaged in their jobs [6, 7]—a statistic that poses serious implications for organisational sustainability.

According to Schaufeli *et al.* [8], engagement is a fulfilling state of mind toward one's work, characterised by vigour, dedication, and absorption (p. 74). Vigour reflects endurance and persistence, dedication expresses enthusiasm and commitment, while absorption refers to being fully immersed in tasks. Although Christian *et al.* [9], Newman *et al.* [10], and Ababneh *et al.* [1] found that engagement is conceptually close to organisational commitment, they remain distinct phenomena [3, 11-13]. Engagement embodies passion for work itself [10], whereas commitment denotes attachment to the organisation and an intention to remain within it [14].

Prior evidence shows that ethical leadership [15, 16], organisational commitment [4, 17], and supervisory support [18, 19] contribute positively to employee engagement. Yet, as Ahmad and Gao [20] noted, the relationship between ethical leadership and engagement in Eastern settings remains underexplored. Numerous investigations have tested organisational commitment

as a mediator between ethical leadership and different outcomes [21-23], but only a limited number have examined engagement as the end variable (e.g., Asif *et al.* [24]). Furthermore, research integrating perceived supervisor support as a moderator in this relationship is rare. The only notable effort is by Tu *et al.* [25], who explored it in relation to creativity. Hence, the current research is the first to empirically test how perceived supervisor support enhances the ethical leadership– employee engagement link through organisational commitment. Addressing this gap, the study applies social exchange theory [26] to explain the underlying mechanism. The proposed conceptual model is illustrated in **Figure 1**.
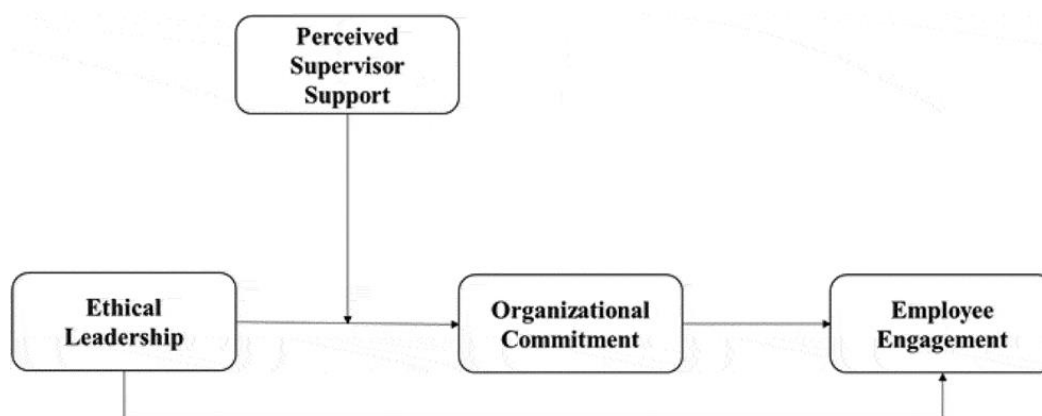

Figure 1. Research Model

This research offers several noteworthy contributions. First, acknowledging that cultural context influences leadership behavior [27], the study investigates the association between ethical leadership and employee engagement within an eastern cultural framework—an area with limited scholarly inquiry [20]. Second, it emphasizes the importance of supervisory involvement by employing a moderated mediation framework to assess the role of perceived supervisor support in the ethical leadership–outcome relationship. Third, it expands existing literature by validating organisational commitment as a mediating variable between ethical leadership and employee engagement. Lastly, this investigation enhances understanding of how ethical leaders influence their subordinates [20, 28, 29], highlighting the underlying mechanisms through the lens of social exchange theory.

Theory and Hypotheses

Ethical leadership
The growing interest in ethical leadership emerged largely as a response to unethical practices by top executives in major corporations [30, 31]. Riggio *et al.* [30] explained that ethical leadership can be viewed from two perspectives: personal traits and behavioural expressions. From a trait-oriented standpoint, ethical leaders are characterised by four primary virtues— prudence, courage, temperance, and justice [30]. Prudence involves deliberate moral judgment and consideration of ethical consequences before taking action [32]. Courage denotes the willingness to uphold moral standards despite opposition. Temperance represents restraint from self-interest or greed, while justice concerns fairness and equity in decision-making.
Brown *et al.* [33] described ethical leaders as individuals who consistently demonstrate moral integrity both personally and in interactions with others. They promote ethical behaviour among followers through reinforcement, discipline, and ethical decision-making, representing the behavioural dimension of leadership [32]. Treviño *et al.* [34] further conceptualised ethical leadership through two components: the moral person and the moral manager. As moral persons, ethical leaders embody qualities such as honesty, trustworthiness, openness, empathy, and respect [35]. By displaying moral virtues, they serve as role models whose conduct shapes followers' ethical standards [32, 36]. Through observation and imitation, subordinates internalise these moral values and develop a stronger ethical identity [37], cultivating genuine concern for others [38].
As moral managers, ethical leaders establish systems that ensure accountability and reinforce appropriate conduct [39]. By implementing ethical norms and aligning employee actions with organisational standards [36], they help shape followers' ethical behaviour [31]. Ethical leadership has been positively linked to a wide range of outcomes, including organisational performance [30, 39], inclusive climate [35], organisational citizenship behaviour, reduced deviance [31], concern for the organisation [40], and higher employee engagement [41].

Social exchange theory
Social Exchange Theory (SET) [26] provides a foundational framework for explaining how ethical leaders stimulate employee engagement. The theory posits that repeated interactions between individuals generate reciprocal obligations and expectations [13]. It remains one of the most influential perspectives for interpreting workplace relationships [42]. When reciprocity is sustained, it nurtures trust, loyalty, and commitment [42], fostering interdependence through ongoing exchanges [26]. These

exchanges create implicit mutual obligations tied to future outcomes [43], where trust serves as a critical element [44]. According to Blau [26], trust develops through consistent fulfilment of one's obligations. Schaubroeck *et al.* [45] further emphasise that trust mitigates uncertainty, thereby improving the quality of social interactions and the overall workplace atmosphere. Consequently, SET has been widely adopted by scholars (e.g., Charoensap *et al.* [46]; Yasir & Rasli [47]) to describe how ethical leaders inspire and influence their followers.

Employee engagement

Employee engagement has emerged as a central theme in human resource management research [48]. Early work by Kahn [11], later discussed by Attridge [49] and Schaufeli & Bakker [2], conceptualised engagement as the degree to which employees involve themselves physically, emotionally, and cognitively in their work. Kahn viewed engagement as a dynamic connection between the employee and their job, in which the role serves as a means for self-expression and creativity, utilising both physical and mental capabilities.

Schaufeli *et al.* [8] defined engagement as a positive and fulfilling state of mind towards work, expressed through vigour, dedication, and absorption (p. 74). Vigour reflects persistence and resilience, dedication embodies pride and enthusiasm, and absorption denotes being deeply engrossed in one's work to the point of losing awareness of time [50, 51]. Engagement has been found to correlate positively with distributive and interactional justice [52]. organisational commitment [53], intrapreneurial behaviour, and personal resources [54], while negatively relating to turnover intention [55], absenteeism [56], and diversity-focused HR practices [57].

Social Exchange Theory offers a useful lens for interpreting engagement dynamics [58]. Within this framework, reciprocity is the driving principle [26]. Ethical leaders foster cooperative relationships by maintaining fairness, listening to employees, and protecting their interests [33]. They promote transparent exchanges grounded in trust [59]. When employees perceive fairness and moral conduct, they reciprocate through stronger commitment [60]. According to Walumbwa *et al.* [61], followers respond to ethical leadership by demonstrating higher job performance and engagement.

Hypothesis 1: Ethical leadership has a positive relationship with employee engagement.

Organisational commitment

The notion of organisational commitment reflects the psychological and emotional linkage that ties employees to their workplace [62]. As highlighted by Yahaya and Ebrahim [63], this concept has been explained in multiple ways. Drawing on Porter and Smith [64], Mowday *et al.* [65] describe it as the intensity of an individual's identification with and participation in organisational goals and operations. Their interpretation emphasizes employees' alignment with the organisation's mission and values, their readiness to contribute effort toward achieving them, and their determination to remain part of the organisation. Allen and Meyer [66] further conceptualised organisational commitment as an employee–organisation attachment that lowers the likelihood of leaving the organisation. To better capture this relationship, they proposed three components: affective, continuance, and normative commitment. The first concerns the emotional closeness and affection employees feel toward the organisation [67]. The second reflects a rational decision to stay based on evaluating the costs and benefits of departure [68]. The third is rooted in moral duty or gratitude that makes employees feel obliged to remain [68]. Uraon [69] asserts that these elements represent distinct aspects of commitment, each influencing the effectiveness of both employees and organisations in unique ways.

Research consistently shows that organisational commitment is linked to a variety of positive outcomes—such as dedication to work [63], higher efficiency [70], improved job and employee performance [71, 72], greater job satisfaction [53], and stronger work engagement [73]. In contrast, it is inversely related to turnover intentions [74] and absentee behaviour [75].

Ethical leaders tend to act compassionately and fairly toward their subordinates, showing concern for their welfare and maintaining integrity in their actions [33]. They provide guidance, uphold ethical norms, and encourage transparent communication. According to Bedi *et al.* [59], such leaders create high-quality exchanges with followers through moral and constructive conduct [39]. Followers, in turn, respond to this fairness and care by demonstrating respect, loyalty, and organisational commitment [60]. Previous findings confirm that ethical leadership enhances both organisational commitment [76, 77] and employee engagement [78, 79]. Similarly, organisational commitment itself has been shown to foster employee engagement [80, 81]. Collectively, these studies indicate both a direct link between ethical leadership and commitment and a mediating influence of commitment within that relationship [82].

Hypothesis 2: Ethical leadership has a positive impact on organisational commitment.
Hypothesis 3: Organisational commitment mediates the effect of ethical leadership on employee engagement.

Perceived supervisor support as moderator

Perceived supervisor support describes how employees perceive that their supervisor *recognises their efforts and genuinely cares about their well-being* [83]. This concept is characterised by four essential traits: benevolence, sincerity, fairness, and experiential processing. Benevolence involves acknowledging employees' extra effort, encouraging learning from mistakes,

ensuring access to training, and compensating when clients behave unfairly. Sincerity is evident when supervisors keep their commitments, communicate honestly, treat staff with dignity, and provide constructive feedback and guidance for improvement [84]. Fairness means applying policies impartially, listening to employee concerns, and offering chances for correction [85]. Finally, experiential processing involves thoughtful evaluation of information and avoidance of impulsive reactions [86], which enables sound, unbiased judgment. Such leadership behaviour, especially in high-pressure settings, heightens employees' perception that their supervisor is supportive.

Prior research demonstrates that perceived supervisor support contributes positively to employees' trust in their supervisors [87], feelings of job security and autonomy [88], affective and normative commitment [89], task-related performance [90], and learning motivation [91]. Given these associations, perceived supervisor support is proposed as a moderating factor influencing the strength of the relationship between ethical leadership and employee engagement through organisational commitment.

Hypothesis 4: Perceived supervisor support moderates the relationship between ethical leadership and employee engagement through organisational commitment, such that the link becomes stronger when perceived supervisor support is high rather than low.

Methods

Sample and data collection procedure

This research gathered data via a field-based questionnaire survey among employees of information technology firms located in the Rawalpindi–Islamabad metropolitan area of Pakistan. Following approval and coordination with company management, a total of 600 questionnaires were distributed for a cross-sectional analysis. Each questionnaire was accompanied by a cover letter clarifying the study's objectives and ensuring participant confidentiality. Responses were collected directly by trained survey staff to maintain privacy. Out of the distributed forms, 389 valid questionnaires were received, yielding a 64.83% response rate. Among participants, 82.5% were men, while 17.5% were women. The average respondent age was 28.03 years, and the mean professional experience was approximately six years. A detailed summary of respondent characteristics is provided in **Table 1**.

Table 1. Demographic profile of respondents

Variable	Category	Frequency	Percentage (%)
Gender			
	Male	321	82.5
	Female	68	17.5
Age			
	Less than 20 years	93	23.9
	20–30 years	121	31.1
	31–40 years	127	32.6
	41–50 years	37	9.5
	51–60 years	11	2.8
Education			
	Matric	63	16.2
	Intermediate	102	26.2
	Bachelor	124	31.9
	Master	97	24.9
	PhD	3	0.8
Experience			
	Less than 5 years	186	47.8
	6–10 years	106	27.2
	11–15 years	46	11.8
	More than 15 years	51	13.1

Measures

Data for this research were gathered using a self-administered questionnaire prepared in English. Since professionals in Pakistan's IT sector generally possess English proficiency, participants were able to understand the content easily. However, to ensure accessibility for employees with limited literacy levels, each English question was accompanied by its Urdu translation. None of the respondents reported any difficulty in interpreting the items. Responses were recorded on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Ethical Leadership: Perceptions of leadership ethics were measured using the Ethical Leadership Scale (ELS) created by Brown *et al.* [33], which remains one of the most frequently used instruments for this construct [59]. Example items include "My leader listens to what employees have to say" and "My leader discusses business ethics or values with employees." In this study, the reliability coefficient (Cronbach's α) was 0.91, confirming excellent consistency.

Organisational Commitment: The study assessed commitment levels through the nine-item shortened form of the Organisational Commitment Questionnaire (OCQ) designed by Mowday *et al.* [65]. Many contemporary researchers have used this abbreviated scale [74, 92, 93]. Representative statements include "I am proud to tell others that I am part of this organisation" and "I really care about the fate of this organisation." The internal reliability for this tool was 0.90, indicating strong dependability.

Employee Engagement: Following Christian *et al.* [9], who recognized the Utrecht Work Engagement Scale (UWES) as the most dominant framework for evaluating engagement, this research applied the nine-item short version frequently employed by scholars [94-96]. Example items were "At my work, I feel bursting with energy" and "My job inspires me." The calculated Cronbach's alpha was 0.90, reflecting solid reliability.

Perceived Supervisor Support: Perceived supervisor support was evaluated using a modified version of Eisenberger *et al.*'s [97] Perceived Organisational Support Scale, adjusted by Rhoades *et al.* [98] by substituting the term "organisation" with "supervisor." This adaptation is frequently employed in empirical studies [90, 91]. Illustrative examples are "My supervisor cares about my opinions" and "My supervisor strongly considers my goals and values." In the current analysis, the reliability score for this construct was 0.85.

Data analysis

Data were analyzed using SPSS AMOS (version 20) in combination with the PROCESS macro developed by Preacher and Hayes [99]. Model validation was conducted through Confirmatory Factor Analysis (CFA) in line with the guidelines of Kline [100]. According to these standards, a good model fit requires that χ^2/df be below 3, indices such as GFI, CFI, NFI, and TLI exceed 0.90, and RMSEA remain under 0.08. The obtained CFA results—χ^2/df = 1.61, GFI = .90, CFI = .96, NFI = .90, TLI = .96, and RMSEA = 0.04—demonstrated an excellent fit between data and model.

Reliability was assessed via Cronbach's alpha, following Hair *et al.* [101], who noted that coefficients greater than 0.70 indicate high reliability, whereas 0.60–0.70 may suffice for exploratory research. In this study, alpha values ranged from 0.85 to 0.91 **(Table 2)**, confirming strong internal coherence among all scales.

Table 2. Composite Reliability and Average Variance Extracted

Variable	α	CR	AVE
EL	0.91	0.92	0.55
OC	0.90	0.92	0.57
EE	0.90	0.91	0.55
PSS	0.85	0.89	0.67

Note. CR = Composite Reliability; AVE = Average Variance Extracted; EL = Ethical Leadership; OC = Organisational Commitment; EE = Employee Engagement; PSS = Perceived Supervisor Support; α = Cronbach's Alpha.

To confirm construct validity, both Composite Reliability (CR) and Average Variance Extracted (AVE) were examined. According to Hair *et al.* [102], acceptable limits are CR ≥ 0.70 and AVE ≥ 0.50. All measured constructs exceeded these thresholds **(Table 2)**, confirming convergent validity. Furthermore, discriminant validity was verified by ensuring that the square root of each AVE value was higher than its corresponding correlation coefficient in the Pearson correlation matrix [102]. This requirement was met for all variables **(Table 3)**, demonstrating a clear distinction between constructs.

Table 3. Means, Standard Deviations, Correlations, and Square Roots of AVE

	Mean	SD	EL	EE	OC	PSS
EL	3.79	0.70	**(0.74)**			
EE	3.91	0.63	.441**	**(0.74)**		
OC	3.89	0.60	.539**	.478**	**(0.75)**	
PSS	4.08	0.71	.559**	.266**	.403**	**(0.82)**

Note. EL = Ethical Leadership; EE = Employee Engagement; OC = Organisational Commitment; PSS = Perceived Supervisor Support.
. Correlation is significant at the 0.01 level (2-tailed).
√AVE values are presented in parentheses.
*p < .05, **p < .01, **p < .001

To control for common method bias, Harman's single-factor test was applied following Podsakoff *et al.* [103]. The unrotated factor solution explained 31.16% of total variance—well below the 50% criterion—suggesting minimal bias. Additionally, a CFA for the single-factor model revealed an inadequate fit (χ^2/df = 6.92, GFI = .51, CFI = .59, NFI = .55, TLI = .56, RMSEA = 0.124), further confirming that common method variance was not a significant issue in this dataset.

Control variables

Potential control factors were assessed using a one-way ANOVA. The results indicated that education influences organisational commitment, while gender has a notable effect on employee engagement. Consequently, these two demographic variables were retained as controls in subsequent analyses.

Results

Descriptive measures, including means, standard deviations, Pearson correlation coefficients, and square roots of AVE, are presented in **Table 3**. The correlation matrix demonstrates positive associations between ethical leadership and employee engagement (r = .44, p < .01), organisational commitment (r = .54, p < .01), and perceived supervisor support (r = .56, p < .01). Since all square root AVE values (shown in parentheses) surpass the corresponding correlation coefficients, discriminant validity among constructs is verified.

Prior to hypothesis testing, variables were standardized by mean-centering. As reflected in **Table 3** and **Table 4**, the regression results confirm that ethical leadership exerts a significant positive influence on both organisational commitment (β = 0.54, p < .001) and employee engagement (β = 0.44, p < .001), thereby validating Hypotheses 1 and 2.

Table 4. Regression coefficients (β) for direct effects of ethical leadership, organisational commitment, and employee engagement

Path	Standardized β	SE	t	Significance
Ethical Leadership → Employee Engagement	0.441	0.041	9.66	< .001
Ethical Leadership → Organisational Commitment	0.539	0.037	12.597	< .001

The mediation effect was examined via the PROCESS macro developed by Preacher and Hayes [99]. As displayed in Table 5, the indirect relationship was found to be significant. A two-tailed Sobel test assuming normal distribution revealed that organisational commitment mediates the link between ethical leadership and employee engagement (Sobel effect = 0.16, z = 5.82, p < .001). The bias-corrected bootstrap analysis using 5000 samples and 95% confidence intervals produced a range of 0.11 to 0.23, excluding zero, thus providing strong support for Hypothesis 3.

Table 5. Mediation analysis summary

#	Analysis	R	R²	Coefficient (B)	Std. Error (SE)	t-value	p-value
	Overall Model Fit	.54	.29	—	—	—	.000
1	Direct effect of **Ethical Leadership (EL)** on **Organisational Commitment (OC)**	—	—	.46	.04	12.52	.000
	Overall Model Fit	.53	.28	—	—	—	.000
2	Direct effect of **EL** on **Employee Engagement (EE)**	—	—	.23	.05	4.91	.000
3	Direct effect of **OC** on **EE**	—	—	.35	.05	6.60	.000

Test	Effect	SE	Z	p-value
Sobel	.16	.03	5.82	.000

Path	Mean (M)	SE	Lower 95% CI	Upper 95% CI
Indirect effect of EL → OC → EE	.16	.03	.11	.23

Note: EL = Ethical Leadership; EE = Employee Engagement; OC = Organisational Commitment

Moderated mediation was then assessed, and the results are reported in **Table 6**. The analysis evaluated the conditional indirect effects of ethical leadership on employee engagement through organisational commitment at three perceived supervisor support levels: mean (.00), +1 SD (1.47), and −1 SD (−1.47). The indirect influence remained significant at low (0.062–0.176), medium (0.088–0.206), and high (0.101–0.256) levels of perceived supervisor support. The findings indicate that when perceived supervisor support is high, the mediating impact of organisational commitment becomes more pronounced. This pattern offers empirical confirmation for Hypothesis 4.

Table 6. Moderated mediation results

Independent Variable	Mediator	Dependent Variable	Moderator Level (Perceived Supervisor Support)	Indirect Effect	95% Bootstrap CI (Lower, Upper)
Ethical Leadership	Organisational Commitment	Employee Engagement	Low	0.11***	[0.062, 0.176]
			Medium	0.14***	[0.088, 0.206]
			High	0.16***	[0.101, 0.256]

*Note: n = 389; Gender was treated as a control variable; Bootstrap samples = 5000; LL = Lower limit; UL = Upper limit; CI = Confidence Interval; **p < .001

Discussion

This research primarily aimed to determine how perceived supervisor support alters the influence of ethical leadership on employee engagement within an Eastern cultural context. The dataset, drawn from professionals employed in Pakistan's IT sector, revealed that ethical leadership has a positive and statistically significant relationship with both organisational commitment and employee engagement. Moreover, organisational commitment functions as a mediator, while perceived supervisor support strengthens this indirect connection—enhancing the overall effect of ethical leadership on engagement when support is perceived as high.

Theoretical implications

This work provides several meaningful insights into organisational behaviour theory.

First, it extends prior discussions by analysing how ethical leadership influences employee engagement in a non-Western setting, an aspect seldom examined in prior research (see Chughtai *et al.* [104]; Demirtas [105]). The outcomes demonstrate that ethical leadership significantly enhances engagement, consistent with the evidence from Ahmad and Gao [20] and Demirtas [105].

Second, the investigation incorporated organisational commitment as a mediating variable connecting ethical leadership with engagement. The findings confirm that commitment plays a pivotal role in explaining this linkage, reinforcing the conclusions drawn by Asif *et al.* [24] in their Chinese study on ethical leadership and work engagement through affective commitment.

Finally, the study's most novel contribution lies in its integration of perceived supervisor support as a moderator. The moderation results reveal that when supervisors are seen as supportive, the indirect impact of ethical leadership on engagement via organisational commitment intensifies. This implies that supervisors who provide encouragement, fairness, and care amplify the benefits of ethical leadership. To the best of current scholarly knowledge, this research represents the first empirical attempt to examine how perceived supervisor support moderates the ethical leadership–engagement relationship through organisational commitment.

Practical implications

This study provides several actionable insights for organisational management.

Firstly, the findings reaffirm that ethical leadership is effective in a collectivist society with high power distance, such as Pakistan [106]. This suggests that adopting ethical leadership practices in such cultural contexts can meaningfully boost employee engagement.

Secondly, the results indicate that ethical leadership not only fosters employee engagement but also strengthens organisational commitment. Since organisational commitment mediates the connection between ethical leadership and engagement, organisations should proactively implement strategies to enhance employees' commitment, which, in turn, supports better work engagement.

Thirdly, the study highlights that perceived supervisor support amplifies the positive influence of ethical leadership on engagement. This underscores the importance of cultivating a supportive supervisory environment, as supervisors who demonstrate care and fairness can significantly improve employees' performance and engagement levels.

Finally, the findings show that the positive behaviours of both ethical leaders and supportive supervisors encourage reciprocal engagement from employees. This positive reciprocity mechanism plays a crucial role in driving employees' motivation and active participation in their work.

Limitations and directions for future research

This study has several limitations that should be acknowledged.

The primary limitation is the reliance on self-reported data collected from a single source, which may increase the risk of bias. While Harman's one-factor test [103] and a CFA of the single-factor model were performed to examine common method bias, future studies could adopt time-lagged or longitudinal designs to reduce this concern.

Secondly, the data was gathered exclusively from employees in the IT sector in Pakistan, which limits the generalizability of the results. To enhance external validity, future research could consider a multi-industry approach and include cross-cultural samples, allowing findings to be applied to a broader range of organisational and cultural contexts.

Ethics statement: None

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