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Ethical Leadership and Physical Work Environment as Determinants of Employee Creativity and Innovative Work Behaviour

[1]Meenu, [2]Dr. Anil Kumar

[1]Research Scholar Guru Jambheshwar University of Science & Technology

[2]Professor Guru Jambheshwar University of Science & Technology

Abstract:

This study examines the impact of ethical leadership and the physical work environment on the creativity and innovative behaviour of employees in the same organizational context, with a particular emphasis on implications for international business settings. A quantitative method (survey) was used for this study, with 396 questionnaires completed online. Data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS 4, following the two-stage approach. The research sample was generated using a simple, non-probability, convenience sampling technique. This study challenges prevailing theoretical frameworks by examining the interrelations between ethical leadership (EL), physical work environment (PWE), employee creativity (EC) and innovative behaviours (IB) within a unified framework. EC emerges as a key mediator linking EL and PWE to IB. The PWE, modelled as a second-order construct, exerts both direct and indirect effects on IB, indicating partial mediation through EC. Supportive and aesthetically pleasing environments stimulate EC and directly promote IB. These findings are particularly relevant for multinational organizations managing culturally diverse teams. The present study is subject to a number of limitations that may inform the design of future research. One such limitation is that the study included a relatively younger cohort of respondents, with an average age range of 29–30. This may have influenced the overall findings of the study.

Keywords Ethical leadership, Physical work environment, Employee creativity, Innovative behaviour

Introduction

Among key factors influencing performance, creativity is critical for implementing strategies and achieving goals (Bousinakis and Halkos, 2021; Wang *et al.*, 2024). Scholars agree that organizational success and survival increasingly depend on employee creativity (Yao and Li, 2021). Likewise, innovation is a major driver of competitive advantage. Cultivating an innovative mindset and attracting creative thinking are now essential for organizational success (Hanafy *et al.*, 2025; Wang *et al.*, 2023). Once limited to a few individuals, innovation is now embedded in organizational culture (Tetteh *et al.*, 2024). Employees' ability to generate new ideas is vital to performance, making innovative employees valuable assets (Dongxian and Batool, 2024; Uppathampracha and Liu, 2022). It is also important to consider how managers influence employees' perceptions of what is ethical and beneficial. More empirical evidence is needed to determine whether ethical leadership directly impacts employee creativity (Esguerra *et al.*, 2022; Tetteh *et al.*, 2024) and innovative behaviour (Hoang *et al.*, 2023; Tran Pham and Nguyen Le, 2024; Sharma and Sharma, 2024). One potential influence is the physical work environment: although visually appealing workplaces have emerged, the link between physical environment and creativity remains underexplored (Hamed *et al.*, 2024; Lee and Lee, 2023; Lin and Chang, 2020). Similarly, limited research exists on how physical environments affect innovative behaviour due to a lack of understanding (Sander *et al.*, 2019). Prior research highlights their individual roles in fostering innovation (Islam *et al*., 2024; Tran Pham and Nguyen Le, 2024; Sharma and Sharma, 2024), yet mechanisms remain underexplored (Dongxian and Batool, 2024; Liu *et al*., 2023; Mazzetti and Schaufeli, 2022). The scholars agree that organizational success hinges on ethical leadership and supportive environments enhancing well-being and innovation (Hanafy *et al*., 2025; Islam *et al*., 2024; Liu *et al*., 2023).

This study examines the interplay between ethical leadership, physical work environment, and employee creativity and innovation. The mediating role of employee creativity was also assessed. A survey questionnaire was used to collect quantitative data. Analysis was performed using Partial Least Squares Structural Equation

Modelling (PLS-SEM) in SmartPLS 4, following Hair *et al.* (2019). This method is well-suited for theory-building and complex models with latent variables. The statistical results supported the development of theoretical and practical conclusions. This study is structured as follows: Part 1 provides an overview of the theoretical framework and an account of the development of the hypotheses; Part 2 outlines the methodological approach employed in the study; Part 3 presents and analyzes the findings; Part 4 concludes with a presentation of the conclusions and a discussion of the theoretical and practical insights, along with an analysis of their potential implications.

Theoretical background

To provide a clear and analytically grounded review of the existing literature, this section is organized into distinct thematic subsections. This structural approach is motivated by the multidimensional nature of the research problem, which examines how employee creativity and innovative behaviour are influenced by two distinct yet interrelated antecedents: ethical leadership and the physical work environment. Separating the literature into focused subsections allows for a more precise conceptual mapping of each construct and its theoretical underpinnings. Firstly, employee creativity and innovative behaviour are treated as foundational constructs, establishing the core relationship that drives the study. Secondly, ethical leadership is examined in two separate subsections–its influence on creativity and on innovative behaviour–because prior research suggests these relationships may operate through different psychological mechanisms. Thirdly, the physical work environment is explored in relation to creativity and innovation, with further breakdown into its dimensions (focus, beauty, and connectedness), reflecting recent empirical efforts to isolate environmental features that contribute to cognitive and behavioural outcomes. This thematic separation is not merely organizational but analytical: it enables the formulation of targeted hypotheses (H1–H7c), each grounded in specific streams of literature. Moreover, it facilitates a nuanced discussion of how these constructs interact, particularly through the mediating role of creativity. By structuring the literature review in this way, the paper ensures conceptual clarity, avoids conflation of distinct theoretical arguments, and lays a coherent foundation for the empirical model tested in the study.

Employees' creativity and innovative behaviour

The notion that creativity is an individual attribute essential for innovation is well established in management literature. In organizational behaviour, creativity is commonly defined as the generation of novel ideas or products that are not only original but also appropriate and valuable (Yue *et al*., 2025). Creativity is widely recognized as the first step in innovation–idea generation (Gonzalez-Gonzalez and Garcıa-Almeida, 2021; Lim, 2022). Theories of creativity emphasize that producing original, unconventional, and distinctive ideas requires originality (Liu *et al*., 2021), while the development of innovative strategies to meet market demands depends on curiosity and imagination (Hanaysha *et al*., 2022). Creative problem-solving capacity refers to the extent to which employees can generate and develop innovative solutions to complex, often ambiguous challenges in the workplace (Alyafei *et al*., 2025). Consequently, employee creativity can logically foster the development of innovative behaviours (Volery and Tarabashkina, 2021; Yue *et al*., 2025). Organizations seeking to create innovative products, processes, or services must manage creativity effectively and understand how new ideas emerge (Fetrati *et al*., 2022; Tetteh *et al*., 2024). Many scholars argue that employee creativity is crucial for generating innovative proposals (Hanaysha *et al*., 2022; Liu *et al*., 2021; Nazir *et al*., 2021). The existing literature also identifies several personal drivers of engagement and innovation, including public service motivation (Rafique *et al*., 2023), self-efficacy (Jacobsen and Andersen, 2017), intrinsic motivation (Greener, 2019), and job autonomy (Tsamantouridis *et al*., 2023). Employees who freely exchange information, ideas, and expertise foster a collaborative environment that encourages innovation (Budur, 2024). However, most studies adopt a Western-centric, rational-cognitive framework, often overlooking the emotional and existential dimensions of creativity, which vary across cultural contexts (Demircioglu, 2024; Criado *et al*., 2025). Accordingly, hypothesis H1 is formulated based on prior research findings, to guide further investigation:

H1. There is a positive relationship between employee creativity and innovative behaviour.

Ethical leadership and employee creativity

The importance of employee creativity has driven extensive research into its influencing factors. Scholars consistently affirm a strong link between leadership and creativity, as evidenced by studies examining leadership styles during idea generation (Esguerra *et al*., 2022; Hanaysha *et al*., 2022; Nazir *et al*., 2021; Tetteh *et al*., 2024). In today's business environment, where organizations face increasing expectations and responsibilities, refining leadership approaches has become imperative. While leadership styles tend to be relatively stable and exhibit limited responsiveness to dynamic changes (Dong and Guo, 2025), specific leader behaviours demonstrate greater adaptability to the diverse demands of organizational contexts and the varying needs of teams (Gao and Gu, 2025). Although the link between ethical leadership and creativity may appear indirect, social learning theory provides an explanation: individuals emulate respected leaders who model integrity and challenge misconduct (Chen and Hou, 2016; Liu *et al*., 2021). Such behaviour fosters trust and responsibility, which in turn encourage creativity (Esguerra *et al*., 2022; Wang *et al*., 2023; Kalyar *et al*., 2020). Empirical studies confirm a strong positive relationship between ethical leadership and creativity, showing that leaders who act ethically enhance employee creativity through social learning (Liu *et al*., 2021; Wang *et al*., 2023). Leaders serve as role models for employees, influencing their behaviour and ultimately shaping organizational performance (Nguyen *et al*., 2024; Rossi *et al*., 2023). Furthermore, Esguerra *et al*. (2022) identified a direct correlation between authentic leadership and creativity, emphasizing that ethical leadership fosters collaboration and engagement, thereby contributing significantly to innovation across tasks and projects. Finally, promoting open communication and discouraging knowledge- hiding behaviours can increase knowledge sharing among employees, which further stimulates creativity (Devi, 2024). Based on this body of research, hypothesis H2 was formulated:

H2. There is a positive relationship between ethical leadership and employee creativity.

Ethical leadership and innovative behaviour

Innovation is the key to survive, adapt, and succeed in modern markets (Rossi *et al*., 2023; Testa *et al*., 2023). Previous studies have shown that creating and sharing innovative knowledge contributes to ongoing knowledge mastery, improved learning, effective performance, and organizational growth (Rehman *et al*., 2022; Wang *et al*., 2023). Innovation's growing importance has led scholars to emphasize leadership's role in fostering employee creativity. Leadership is increasingly vital in promoting innovation (Hanafy *et al*., 2025; Uppathampracha and Liu, 2022), with ethical leadership emerging as a catalyst for pioneering behaviour. As ethical concerns rise, understanding how leaders drive innovation through ethical practices is essential. However, literature on ethical leadership and innovative behaviour remains fragmented (Islam *et al*., 2024; Tran Pham and Nguyen Le, 2024; Sharma and Sharma, 2024). Ethical leadership involves behaviour aligned with professional norms, expressed through actions and relationships (Uppathampracha and Liu, 2022; Ye *et al*., 2023), and reinforced through communication and decision-making (Tran Pham and Nguyen Le, 2024). Social exchange theory suggests that positive leader-employee relationships enhance performance (Dhar, 2016), with reciprocity fostering commitment and innovation (Sharma and Sharma, 2024; Islam *et al*., 2024). Ethical leaders have been shown to promote meaningful work, fostering enthusiasm and risk-taking in innovation (Hoang *et al*., 2023; Hanafy *et al*., 2025). The provision of supplementary task-related information to employees has been demonstrated to enhance their performance and reduce the likelihood of errors (Hamid *et al*., 2025). Consequently, effective leadership behaviour has been shown to motivate employees to engage in creative and innovative activities (Uppathampracha and Liu, 2022). According to the social exchange theory, Dhar (2016) posits that employees who establish positive relationships with their supervisors tend to exhibit higher levels of performance. The "norms of reciprocity" postulate that favourable treatment fosters emotional bonds and commitment to leaders and organizations (Sharma and Sharma, 2024), increasing motivation and encouraging innovation (Islam *et al*., 2024; Tran Pham and Nguyen Le, 2024). Uppathampracha and Liu (2022) also posit that effective leadership behaviour is instrumental in motivating employees to engage in innovative activities. Innovation can be a risky and complex process; however, ethical leadership that underscores the importance of work that benefits others foster employee understanding and enthusiasm for their work, thereby facilitating the generation and implementation of innovative concepts within organizations (Hanafy *et al.*, 2025; Hoang *et al.*, 2023).

A substantial body of research has demonstrated that leadership style exerts a significant influence on the innovative behaviour of employees. When the leader is perceived by the employee as psychologically empowering and supports open and transparent communication, it encourages innovative work behaviour (Dhar, 2016; Islam *et al.*, 2024; Tran Pham and Nguyen Le, 2024). Ethical leaders facilitate a shift in employees' perceptions of personal standards, prompting the pursuit of higher goals and demands. It can be argued, therefore, that ethical leaders exert a considerable influence on employee behaviour, including that which is innovative (Uppathampracha and Liu, 2022). The overall findings on the positive relationship between ethical leadership and innovative behaviour yield several conclusions. For example, when ethical leaders prioritize organizational and societal outcomes, this encourages open communication and motivates employees to take initiative (Tran Pham and Nguyen Le, 2024). It also provides employees with the opportunity to express and share their opinions (Iqbal and Parray, 2024). In response, followers engage in innovative workplace behaviour (Dhar, 2016; Islam *et al.*, 2024; Musenze and Mayende, 2023; Wang *et al.*, 2024). In light of the preceding research, hypothesis H3 was formulated to guide the present study:

H3. There is a positive relationship between ethical leadership and innovative behaviour.

Physical work environment, employee creativity and innovative behavior

Prior research has shown that creativity is a key precursor to innovation, vital for new ventures when organizational, cultural, and environmental conditions are met (Wu *et al*., 2021). However, creativity is not a static trait; it is shaped by multiple environmental factors that influence how individuals generate and develop ideas (Lee and Lee, 2023). The creator's surroundings play a crucial role in fostering creativity, as the physical and social context can either stimulate or inhibit innovative thinking (Elsbach and Stigliani, 2019; Hamed *et al*., 2024; Schilleci, 2023). Scholars increasingly emphasize that the physical work environment can serve as a strategic resource for promoting creativity within organizations (Blomberg and Kallio, 2022; Huang *et al*., 2023; Kearney *et al*., 2023). Empirical studies demonstrate that elements such as furnishings, wall coverings, and makerspace placement can significantly influence creative performance. Lin and Chang (2020) identified creativity-enhancing features including space allocation, aesthetic appeal, artwork, colour schemes, and environmental conditions such as heating and ventilation. Similarly, Kearney *et al*. (2023) validated a comprehensive physical work environment construct encompassing five dimensions: colour and design, cleanliness and odours, music, lighting, and layout. These findings suggest that a well-designed environment can stimulate cognitive flexibility and imaginative thinking. Furthermore, scholars argue that environments supporting diverse tasks and interactions may enhance organizational creativity by enabling employees to adapt their workspaces to different needs (Wu *et al*., 2021). Building on this perspective, Lee and Lee (2023) classified 15 physical attributes–such as light, furniture, plants, privacy, and air quality–and identified several spatial configurations that foster creativity, including open spaces, social zones, and production labs. These spaces encourage collaboration, idea exchange, and focused work, all of which are essential for creative processes. Collectively, prior research underscores the importance of physical settings as a determinant of employee creativity, highlighting the need for organizations to invest in environments that balance functionality with aesthetic and social dimensions. Hypotheses H4–H4c) are formulated to be investigated further based on the insights of previous researchers:

H4. There is a positive relationship between physical work environment and employee creativity.

H4a. There is appositive relationship between focus and employee creativity.

H4b. There is appositive relationship between sense of beauty and employee creativity.

H4c. There is appositive relationship between connectedness and employee creativity.

However, the relationship between the physical environment and employee outcomes has received limited scholarly attention (Kearney *et al.*, 2023; Schilleci, 2023). Existing literature on the physical work environment's impact on employee perceptions, performance, and behaviour remains fragmented, with varied methodologies and conclusions (Hamed *et al.*, 2024; Sander *et al.*, 2019). In response, organizations are adopting new workplace design strategies to foster innovation. Increasingly, symbolic design elements–such as bright colours

and artwork–are used to create stimulating environments that support idea generation (Hussain and Wahab, 2021). The perceived importance of innovation drives organizations to invest in workplace redesign to boost productivity (Blomberg and Kallio, 2022). Scholars argue that employee creativity, a key precursor to innovation, is stimulated when environmental conditions are favourable (Wu *et al.*, 2021). However, research examining the link between physical work environments and employee innovation remains scarce. The lack of a comprehensive framework for understanding employee responses to physical environments hinders progress in this area (Hamed *et al.*, 2024; Sander *et al.*, 2019; Yeh *et al.*, 2022). Based on these findings, supplementary hypotheses H5–H5c, H6, and H7–H7c were formulated for further analysis:

H5. There is a positive relationship between physical work environment and innovative behaviour.

H5a. There is appositive relationship between focus and innovative behaviour.

H5b. There is appositive relationship between sense of beauty and innovative behaviour.

H5c. There is appositive relationship between connectedness and innovative behaviour.

H7a. Creativity acts as a mediator between focus and innovative behaviour.

H7b. Creativity acts as a mediator between sense of beauty and innovative behaviour.

H7c. Creativity acts as a mediator between connectedness and innovative behaviour.

Research methodology

The Research methodology section is structured into subsections to provide a clear and sequential overview of the study design, including sampling, measurement, data collection, and analytical procedures, ensuring transparency and ease of interpretation.

Sample and data collection

Data were collected in Lithuania between February and May 2025. The questionnaire was administered in Lithuanian, using a back-translation procedure (English Lithuanian English) to ensure conceptual and linguistic equivalence of the measurement scales. A non-probability convenience sampling strategy was employed. Organizations operating across different industries were contacted and invited to disseminate the online questionnaire among their employees. This approach was selected due to the exploratory nature of the study and the absence of a comprehensive sampling frame representing employees across sectors, which made probabilistic sampling infeasible.

Participation was voluntary, anonymous, and without remuneration. Eligibility was restricted to respondents who were currently employed at the time of data collection. Individuals who indicated unemployment were excluded prior to analysis. In total, 396 valid responses were retained from the 417 questionnaires received. In line with Hair *et al*. (2019), the required minimum sample size was calculated as 370, based on the 37 reflective measurement items used in the study (excluding sociodemographic questions). Before full administration, the questionnaire was pretested with nine employed respondents to evaluate clarity, relevance, and cultural appropriateness. Based on the feedback, minor stylistic refinements were implemented; however, no items were removed or substantially revised.

Measures

The survey questionnaire was divided into three sections: introduction, main section, and final section. The introductory section outlined the study's objectives, ethical considerations, and methodology. Participants were assured of anonymity, confidentiality, and that data would be used solely for research purposes. Internal consistency reliability was assessed using Cronbach's alpha (α), with values above 0.70 considered acceptable (Hair *et al*., 2019). The main section included four parts. Ethical leadership was measured using Brown *et al*.'s (2005) 10-item scale (e.g. "My leader discusses ethics"), showing high reliability (α 5 0.946). The physical work environment was assessed with Sander *et al*.'s (2019) 12-item scale (e.g. "My physical work environment is aesthetically pleasing"), also highly reliable (α 5 0.950). Employee creativity was measured using Zhou and

George's (2001) 9-item scale, adapted by Lee and Kim (2021), with items like "I offer novel suggestions" (α 5 0.941). Innovative behaviour was assessed using Hu *et al*.'s (2009) 6-item scale (e.g. "I frequently seek new approaches"), supported by Lim (2022), and showed strong reliability (α 5 0.915). Each scale demonstrated robust psychometric properties. Responses to each group of questions were prepared on a 5-point Likert scale of agreement with the statement, where 1 indicates a strong disagreement and 5 indicates a strong agreement. The final section of the questionnaire comprised seven questions. Respondents were requested to indicate their gender, age, educational background, the sector in which their organization operates, and the number of employees in their organization. They were additionally asked whether they have subordinate employees and the duration of their employment with their current organization. Full list of questionnaire items along with their descriptive statistics to enhance transparency and replicability are added in the Appendix 1.

Analytical procedures

Data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS 4, following the two-stage approach proposed by Hair *et al*. (2019): first evaluating the measurement model and then the structural model, including both direct and indirect effects. PLS-SEM was chosen because it is suitable for complex models with mediating relationships and higher-order constructs, and is recommended when the research has a predictive focus rather than a purely confirmatory one (Hair *et al*., 2019). Internal consistency was confirmed using Cronbach's alpha and composite reliability (CR), with all values exceeding the recommended threshold of 0.70 (Hair *et al*., 2022). Convergent validity was established through indicator loadings above 0.70 and AVE values above 0.50 (Fornell and Larcker, 1981). Discriminant validity was assessed using the Fornell-Larcker criterion and HTMT, with HTMT values below the recommended threshold of 0.85 (Henseler *et al*., 2015). Structural model evaluation involved path coefficients, t- and *p*-values from 5,000 bootstrap resamples, R^2 values (0.75, 0.50, 0.25 as substantial, moderate, weak; Hair *et al*., 2022), Q^2 predictive relevance (above zero), and effect sizes f^2 (0.02, 0.15, 0.35 for small, medium, large; Cohen, 1988). VIF values were below 5, indicating no multicollinearity. SRMR values were under 0.08 (Henseler *et al*., 2016). PLSpredict showed lower RMSE and MAE than a linear regression benchmark, confirming superior predictive accuracy (Shmueli *et al*., 2019). Mediation was tested with bootstrapped direct and indirect effects, and VAF values above 80%, between 20–80%, and below 20% indicated full, partial, and no mediation, respectively (Hair *et al*., 2022).

Assessing common method bias

To mitigate common method bias (CMB) from self-reported data, both procedural and statistical remedies were applied. Procedurally, validated measurement scales were used, anonymity was ensured, and respondents were assured there was no "right" or "wrong" answers. The online survey could be completed at any time and place, reducing situational influence. A double-translation procedure (English–Lithuanian–English) ensured conceptual equivalence, supplemented by pilot interviews to refine wording and ensure cultural relevance. Statistically, Harman's Single Factor Test showed the first factor explained 47.59% of variance, below the 50% threshold. Variance Inflation Factor (VIF) values were all well below 5, indicating no multicollinearity issues. These safeguards suggest CMB was unlikely to have significantly affected the study's results.

Results and analysis

Profile of respondents

The sample comprised 396 respondents (56.6% female, 43.4% male), aged 19–58 (*M* 5 29.6, SD 5 9.12). Nearly half (44.7%) held university degrees, followed by college (21.5%), secondary (21.0%), vocational (9.3%), and basic education (3.5%). Participants worked in diverse sectors, with IT (19.4%), commerce (13.4%), and production (11.9%) most represented. Medium-sized organizations employed 33.3% of respondents, large 28.5%, small 24.2%, and micro 13.9%; 33.6% held managerial roles. Average tenure was 3.6 years (SD 5 5.18).

Means, standard deviations, correlations of the constructs

Mean scores ranged from 3.457 to 3.885, indicating generally positive perceptions. The highest mean was for connectedness and the lowest for Innovative Behaviour (Table 1). Correlation analysis ($p < 0.01$) showed strong

associations, particularly between Creativity and Innovative Behaviour (r =0.824), and between Ethical Leadership and Physical Work Environment (PWE) (r =0.665). PWE dimensions correlated highly with the overall construct (r 0.840–0.877), confirming their validity.

Table 1: Means, standard deviations, correlations of the constructs

	Mean	SD	1	2	3	4	4a	4b	4c
Ethical Leadership	3.764	0.89	1						
Creativity	3.678	0.92	0.52**	1					
Innovative Behaviour	3.457	0.96	0.47**	0.82**	1				
Physical Work Environment	3.805	0.88	0.66**	0.57**	0.56**	1			
Focus	3.768	1.00	0.58**	0.53**	0.54**	0.86**	1		
Beauty	3.762	1.06	0.51**	0.50**	0.47**	0.87**	0.665**	1	
Connectedness	3.885	1.01	0.62**	0.45**	0.47**	0.84**	0.58**	0.59**	1

Note(s): **Correlation is significant at the 0.01 level (2-tailed)

Model fit and predictive strength

Model fit indices indicated good fit for both first-order (SRMR =0.043) and second-order models (SRMR =0.062) (Henseler *et al*., 2016). R^2 values showed strong explanatory power for Innovative Behaviour (~0.70) and moderate for Creativity (~0.37) (Hair *et al*., 2022). Both models had $Q^2 > 0.30$, confirming predictive relevance. PLSpredict results (Table 2) demonstrated superior predictive accuracy of PLS-SEM over linear models (Shmueli *et al*., 2019), with significant average loss differences ($p < 0.05$).

Table 2: PLS-SEM vs linear model (LM)

	Ist order Model					2nd Order Model				
	PLS loss	LM loss	loss difference	t value	*p* value	PLS loss	LM loss	loss difference	t value	*p* value
Creativity	0.948	1,004	—0.056	3,256	0.001	0.95	1,004	—0.054	2,918	0.004
Innovative	1,034	1,086	—0.053	2,318	0.021	1,027	1,086	—0.059	2,535	0.012
Behaviour	0.983	1,037	—0.055	3,154	0.002	0.981	1,037	—0.056	3,103	0.002

Discussion

The findings of this study offer compelling insights into the mechanisms through which ethical leadership and the physical work environment foster employee creativity and innovative behaviour. By integrating structural

equation modelling and mediation analysis, we provide empirical support for several theoretical propositions, while also revealing nuanced relationships that both align with and extend existing literature.

This study highlights creativity as a central mediating mechanism linking ethical leadership and the physical work environment (PWE) to innovative behaviour. Ethical leadership significantly enhances employee creativity, which in turn strongly drives innovative behaviour. The absence of a direct link between ethical leadership and innovative behaviour confirms a case of full mediation, emphasizing that ethical leadership fosters innovation primarily by cultivating creativity in the workplace. The PWE, modelled as a second-order construct, shows both direct and indirect effects on innovative behaviour, indicating partial mediation through creativity. This suggests that supportive, aesthetically pleasing, and focused environments not only stimulate creativity but also promote innovative behaviour directly. Among the first-order dimensions of PWE, focus and sense of beauty influence innovative behaviour entirely through creativity–again demonstrating full mediation.

In contrast, connectedness does not significantly influence creativity and thus lacks an indirect path to innovation. However, it shows a direct but modest positive effect on innovative behaviour, suggesting that feelings of social connection in the workspace may facilitate innovation independently of creative processes. The findings affirm that both leadership and environmental factors shape innovative behaviour, primarily through their influence on creativity. However, certain environmental features–like connectedness–may also play a unique, direct role in fostering innovative outcomes. These insights are particularly relevant in international business contexts, where diverse cultural expectations and workplace norms may influence how leadership and environmental factors are perceived and enacted. Multinational organizations must therefore consider how ethical leadership and workplace design can be adapted across borders to consistently foster creativity and innovation.

Implications, limitations and future research

Theoretical contributions

This study has several theoretical implications for existing literature. Firstly, it uses an ethical framework to examine the impact of ethical leadership on employee innovation behaviours. While research on leadership's influence on creativity and innovation has increased, most studies focus on employee creativity. More investigation is needed to understand ethical leadership's effect on task performance and innovative behaviour. Our research provides empirical evidence for the causal relationship between ethical leadership and innovative work behaviour. Secondly, the study explores the internal relationship between ethical leadership and employee innovation, highlighting creativity's mediating role. Empirical evidence shows that employee creativity mediates the relationship between ethical leadership and innovative work behaviour. Ethical leaders who foster trust, respect, honesty, and a positive work environment encourage creativity, leading to more innovative behaviours. Thirdly, researchers emphasize the importance of physical work environments, which impact organizational activities and outcomes. Factors like walls, plants, and temperature are crucial, and understanding their influence is essential for optimal adaptation. In international business settings, where physical and cultural environments vary widely, this understanding becomes even more critical. The study contributes to cross-cultural organizational theory by suggesting that the effectiveness of physical work environments and leadership styles may depend on local norms and expectations. Lastly, this study challenges existing theoretical frameworks by examining the interplay between ethical leadership, physical work environments, and employee creativity and innovation within the same context. Research highlights the significant influence of ethical leadership and physical environments on creativity and innovation. However, further research is needed to understand the complex mechanisms and contextual factors shaping these relationships. Despite the importance of creativity and innovation in the modern economy, there is a lack of literature examining the interplay between ethical leadership, physical work environments, and innovative performance, with creativity as a potential mediator–especially in the context of international and multicultural organizations.

Practical implications

Our research has several managerial implications for enterprises. Firstly, the findings highlight the crucial role of ethical leadership in fostering employee engagement in innovative practices. Prior research shows that employees' positive conduct is influenced by their leadership environment. Organizations aiming to foster novel ideas should

recognize the importance of employee creativity and facilitate its development. Ethical leaders can encourage creative employees to behave more innovatively, thus promoting innovation within the organization. Secondly, organizations must consider the significance of the physical work environment to fully leverage employee potential and positively influence results. The study indicates that organizations aiming to enhance employee creativity, often manifested in innovative behaviour, must prioritize improvements to the physical work environment. Creating a visually appealing and engaging workplace contributes to employee satisfaction and significantly influences their behaviour, productivity, and engagement. For international businesses, these implications are even more pronounced. Multinational companies must adapt ethical leadership practices and workplace design to align with local cultural values and expectations. For example, what constitutes a "supportive" or "aesthetically pleasing" environment may differ across regions. Similarly, leadership behaviours perceived as ethical and empowering in one culture may not translate directly to another. Therefore, global organizations should invest in culturally sensitive leadership development and workplace strategies that support creativity and innovation across diverse settings. This approach not only enhances local effectiveness but also contributes to a cohesive global innovation strategy.

Limitations and future research avenues

The present study is subject to a number of limitations that may inform the design of future research. One such limitation is that data were collected using a non-probability convenience sampling approach, which limits the generalizability of the findings to broader employee populations. The study was also conducted within a single national context (Lithuania), and cultural norms and workplace expectations specific to this setting may have influenced responses. Therefore, potential cross-cultural variation should be considered when interpreting the results, and future studies may benefit from comparative research designs across different countries or regions. Additionally, the study included a relatively younger cohort of respondents, with an average age of approximately 29–30 years, which may have influenced the overall findings. Future research should seek a broader and more balanced age distribution to capture a wider range of employee perspectives. The voluntary nature of participation presents a further limitation, as self-selection may have introduced demographic biases. Subsequent studies could therefore benefit from expanding the inclusion of organizations from diverse sectors and using alternative sampling strategies to reduce self-selection effects. Finally, the cross-sectional design prevents causal inference, and longitudinal or experimental approaches may be required to explore whether the observed relationships remain stable over time. Despite these limitations, the results provide a valuable foundation for continued empirical work in this area.

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