

Article

How and When Entrepreneurial Leadership Drives Sustainable Bank Performance: Unpacking the Roles of Employee Creativity and Innovation-Oriented Climate

Rajia Ageli ^{1,*}, Ahmad Bassam Alzubi ², Hasan Yousef Aljuhmani ² and Kolawole Iyiola ¹ 

¹ Department of Business Administration, University of Mediterranean Karpasia, via Mersin 10, Northern Cyprus, Lefkosa 33010, Turkey

² Department of Business Administration, Institute of Graduate Research and Studies, University of Mediterranean Karpasia, via Mersin 10, Northern Cyprus, Lefkosa 33010, Turkey

* Correspondence: 220634078@std.akun.edu.tr

Abstract

The banking sector faces increasing pressure to balance financial performance with sustainability goals amid ongoing digital transformation, regulatory reform, and societal expectations for ethical responsibility. Entrepreneurial leadership has emerged as a pivotal approach for addressing these challenges; however, the behavioral and contextual mechanisms through which it shapes sustainability remain insufficiently understood. Drawing on Social Learning Theory (SLT), this study investigates how and when entrepreneurial leadership enhances sustainable bank performance through the mediating role of employee creativity and the moderating influence of an innovation-oriented climate. A two-wave multi-source survey was conducted among 459 employees and managers from Turkish banks, and the hypothesized model was tested using structural equation modeling to ensure robust empirical validation. The results indicate that entrepreneurial leadership significantly fosters employee creativity, which serves as a critical behavioral mechanism linking leadership behaviors to sustainability-oriented outcomes. Moreover, an innovation-oriented climate strengthens both the direct effect of entrepreneurial leadership on creativity and its indirect effect on sustainable bank performance, emphasizing the contextual importance of supportive organizational environments. Theoretically, this study extends the leadership and sustainability literature by illustrating how learning and behavioral modeling processes translate leadership vision into sustainable performance. Practically, it offers actionable guidance for bank executives to develop innovation-oriented climates, empower employees' creative engagement, and design incentive systems that align leadership behavior with sustainability imperatives, thereby enhancing resilience and long-term competitiveness.

Keywords: entrepreneurial leadership; sustainable bank performance; social learning theory; employee creativity; innovation-oriented climate; Turkey



Academic Editors: Saeed Nosratabadi and Thabit Qasem Awad Atobishi

Received: 12 September 2025

Revised: 10 October 2025

Accepted: 16 October 2025

Published: 18 October 2025

Citation: Ageli, R.; Alzubi, A.B.; Aljuhmani, H.Y.; Iyiola, K. How and When Entrepreneurial Leadership Drives Sustainable Bank Performance: Unpacking the Roles of Employee Creativity and Innovation-Oriented Climate. *Sustainability* **2025**, *17*, 9259. <https://doi.org/10.3390/su17209259>

Copyright: © 2025 by the authors.

Licensee MDPI, Basel, Switzerland.

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The banking industry is essential to the global economy, as it facilitates financial intermediation, drives economic growth, and maintains financial stability. However, banks are increasingly confronted with challenges related to changing customer expectations, technological innovation, globalization, and intensifying competition [1,2]. In addition to these pressures, sustainability has emerged as a central concern due to global climate

risks, environmental degradation, and stakeholder demands for responsible governance [3]. Aligning with the United Nations Sustainable Development Goals (SDGs) has become imperative for banks worldwide, not only to ensure compliance, but also to safeguard long-term resilience [4]. These global dynamics underscore the importance of leadership styles that can balance financial performance with sustainability imperatives. In this regard, leadership has become a crucial factor in sustaining organizational success, with entrepreneurial leadership gaining recognition as an effective approach to managing uncertainty, driving innovation, and maintaining competitive advantage [5]. Although entrepreneurial leadership has been widely examined in small-to-medium enterprises and start-ups [6–8], its relevance and application within the banking industry remain largely understudied. Moreover, existing banking studies have mainly emphasized traditional leadership styles such as transformational leadership [9–11], contributing to the lack of understanding around how entrepreneurial leadership can shape sustainable performance outcomes.

Turkey offers a particularly compelling context for this investigation. The Turkish banking sector accounts for over 80% of the country's financial system assets and remains the backbone of national financial stability [4]. As of 2023, Turkey had 51 banks, including 35 deposit banks and 16 development and investment banks, with nearly 9500 branches serving a population of over 85 million [12]. Commercial banks alone hold more than 90% of financial sector assets, highlighting their systemic importance. In addition, Turkey is classified as an emerging market with rapid digitalization, regulatory reforms, and sustainability pressures that mirror those faced by many developing economies. Positioned at the crossroads of Europe and Asia, the country's financial system reflects a hybrid of Western regulatory structures and Middle Eastern cultural dynamics [13]. These unique conditions make Turkey an important case study for exploring leadership and sustainability in banking, while also providing insights relevant to other emerging economies and contrasts with developed systems [14].

In the creativity literature, antecedents of employee creativity have often been attributed to individual determinants such as personality traits [15,16], emotional intelligence [17,18], and creative self-efficacy [19]. However, stimulating creativity extends beyond individual traits and depends heavily on managerial support [20]. Empirical studies confirm that managers and leaders can either promote or hinder employees' creative behavior [21,22]. Therefore, it is essential to investigate the role of different leadership styles in enhancing employee creativity [20,23]. As organizational environments evolve, traditional leadership approaches are increasingly supplemented by emerging ones [24]. Entrepreneurial leadership stands out as a unique approach to addressing dynamic challenges, emphasizing the pursuit of opportunities and innovation [25]. Yet, most research in banking continues to privilege transformational or transactional leadership [26,27], leaving questions about whether entrepreneurial leadership can drive both creativity and sustainability in highly regulated service industries. Entrepreneurial leadership, defined as a style that motivates subordinates to identify and exploit opportunities while engaging in innovative and creative actions [20,28], has received limited attention in the banking sector, especially regarding its role in fostering sustainable bank performance.

Although emerging evidence suggests that entrepreneurial leadership influences bank performance [5], little is known about the mechanisms through which this relationship unfolds. Specifically, while entrepreneurial leaders provide vision and adaptability, their effectiveness may hinge on employees' creativity to transform ideas into actionable solutions that enhance sustainability [23]. Employee creativity, defined as the ability to develop useful and novel ideas [29], is increasingly recognized as a vital driver of firm success, particularly in service-oriented industries such as banking [20]. However, existing discussions on employee creativity have focused largely on antecedents or individual-level

outcomes [30,31], rather than its mediating role in translating leadership into sustainable performance. By positioning creativity as a mediating mechanism, this study addresses this theoretical gap and contributes to a richer understanding of how entrepreneurial leadership is transformed into sustainable bank outcomes.

Given rapid technological advances, banks increasingly recognize innovation as essential for competitiveness and sustainability [32]. Firms that foster a supportive climate for innovation are consistently more successful than their peers. An innovation-oriented climate, defined as an environment that promotes experimentation, nurtures creativity, and supports the implementation of novel ideas [33], has been closely linked to creativity and organizational effectiveness [34]. Yet, research on such climates in the banking context remains scarce. Moreover, the conditions under which entrepreneurial leadership most effectively contributes to sustainable performance remain unclear. Grounded in Social Learning Theory (SLT) [35], this study examines how entrepreneurial leadership fosters sustainable bank performance through employee creativity and whether these relationships are contingent upon the presence of an innovation-oriented climate.

Accordingly, this study is guided by four research questions: (1) Does entrepreneurial leadership positively influence sustainable bank performance? (2) Does employee creativity mediate the relationship between entrepreneurial leadership and sustainable bank performance? (3) Does innovation-oriented climate moderate the relationships between entrepreneurial leadership, employee creativity, and sustainable bank performance? (4) Does the indirect effect of entrepreneurial leadership on sustainable bank performance through employee creativity vary across levels of innovation-oriented climate?

This research makes three key contributions. First, it develops an integrated model grounded in SLT that positions entrepreneurial leadership as a critical yet underexplored driver of sustainable outcomes in banking. Second, it introduces employee creativity as a mediating mechanism that explains how entrepreneurial leadership is transformed into sustainable bank performance. Third, it identifies innovation-oriented climate as a contextual condition that shapes the effectiveness of entrepreneurial leadership, thereby clarifying when and how entrepreneurial leadership contributes most strongly to sustainability. Together, these contributions extend the leadership, sustainability, and banking literature whilst also offering practical insights for managers seeking to leverage entrepreneurial leadership to enhance resilience, competitiveness, and long-term value creation.

The remainder of this paper is structured as follows: Section 2 presents the theoretical background and hypotheses development; Section 3 outlines the methodology; Section 4 reports the data analysis and results; Section 5 discusses the theoretical and practical implications; and Section 6 concludes with limitations and future research directions.

2. Theoretical Background and Hypothesis Development

2.1. Social Learning Theory (SLT)

Bandura [35] proposed SLT as a framework for understanding how individuals acquire knowledge and develop behaviors by observing others within social contexts. Employees not only learn from their direct experiences, but also from watching leaders and colleagues, integrating those observed behaviors into their own practices [25]. At its core, SLT emphasizes reciprocal determinism, where cognition, behavior, and environment interact to shape learning [36]. This perspective highlights that organizational settings act as social systems in which leaders serve as particularly salient models of acceptable and desirable behaviors.

The intersection between SLT and entrepreneurial leadership lies in the modeling role of leaders. Entrepreneurial leaders, by demonstrating opportunity recognition, risk-taking, and proactive problem-solving, shape employee actions and ideas [37]. Numerous studies show that such leaders inspire creativity by articulating a vision and signaling

confidence in uncertain environments [20,25]. Unlike transactional or compliance-oriented leadership styles, entrepreneurial leadership offers employees visible cues that legitimize experimentation and empower them to pursue innovation [28]. In risk-averse sectors such as banking, where strict regulations and accountability can suppress creative behaviors, this role modeling becomes critical. By observing leaders who demonstrate resilience, tolerance for failure, and innovative problem-solving, employees feel psychologically safe to replicate these behaviors in practice [38,39].

SLT has been widely applied to explain how leadership influences employee behavior. For instance, servant leadership has been shown to promote ethical conduct through modeling empathy and integrity [40], while transformational leadership has been linked to innovation and adaptability [41]. More recently, SLT has been employed to explore how leaders encourage knowledge sharing, creativity, and organizational resilience [42]. However, despite this extensive application, the use of SLT remains limited in the banking sector. The unique characteristics of banks—highly regulated environments, strong risk management systems, and pressure to balance profitability with sustainability goals—make them distinct organizational contexts [43]. Applying SLT to banking highlights how entrepreneurial leaders' role-modeling behaviors can overcome structural rigidities, stimulate creativity, and drive sustainability-oriented outcomes [44,45].

This study therefore advances the literature by demonstrating that SLT offers a novel theoretical lens for understanding how entrepreneurial leadership operates in a structured, compliance-driven industry such as banking. By positioning leaders as social role models whose actions encourage innovation and creativity, this study underscores that employee behavior is not shaped solely by formal systems but also by the visible cues provided by leaders. In doing so, SLT enriches our understanding of how entrepreneurial leadership can be translated into sustainable bank performance.

2.2. Entrepreneurial Leadership

The concept of entrepreneurial leadership emerges from the intersection of entrepreneurship and leadership research [28]. It incorporates principles from entrepreneurship [46], management [47], and entrepreneurial orientation [48]. Harrison et al. [49] identified four key entrepreneurial leadership skills—business/technical, interpersonal, conceptual, and entrepreneurial—emphasizing that leaders must integrate these to navigate complex and uncertain environments. Entrepreneurial leadership is especially critical for opportunity discovery, exploitation, vision framing, and risk-taking, dimensions that distinguish it from more conventional leadership approaches [49]. Unlike transformational or team-oriented leadership, entrepreneurial leadership has distinct attributes that focus on innovation, adaptability, and strategic opportunity recognition [50]. However, despite its growing importance, there remains limited consensus on its defining features, reflecting both the evolving nature of the concept and its context-specific application [25,51]. This lack of clarity makes it crucial to examine entrepreneurial leadership in industries where sustainability and resilience are strategic imperatives.

Gupta et al. [50] emphasized that entrepreneurial leadership establishes visionary frameworks that mobilize individuals around value creation. Similarly, Kempster and Cope [52] described it as a social process through which leaders simultaneously nurture entrepreneurial and leadership capacities. This perspective highlights its people-centered orientation, where leaders empower, motivate, and enable followers to think entrepreneurially, encouraging behaviors that promote creativity, adaptability, and resilience [5,38]. Building on this perspective, Renko et al. [28] defined entrepreneurial leadership as the ability to influence and guide group members toward organizational goals by identifying and exploiting opportunities. In practice, this style legitimizes experimentation, reduces

fear of failure, and provides psychological safety—conditions necessary for employees to pursue innovative initiatives and generate sustainable outcomes [45,53].

Recent research demonstrates that entrepreneurial leadership is particularly valuable in volatile, highly regulated, and service-intensive sectors such as banking. Unlike compliance-driven leadership, entrepreneurial leadership equips managers to absorb uncertainty, embrace adaptability, and stimulate proactive responses in dynamic conditions [54]. By modeling resilience, opportunity recognition, and risk-taking, entrepreneurial leaders inspire employees to adopt similar behaviors [39]. This is especially important in the banking sector, where regulatory constraints, sustainability pressures, and digital transformation often limit experimentation [5]. Entrepreneurial leadership thus provides the cultural and psychological conditions necessary to balance compliance with creativity, enabling employees to develop innovative solutions that advance both competitiveness and sustainability.

Accordingly, this study positions entrepreneurial leadership as a critical driver of sustainable bank performance. Through mechanisms such as visionary framing, uncertainty absorption, and employee empowerment, entrepreneurial leadership transforms individual and organizational practices into collective creativity and opportunity exploitation. By situating entrepreneurial leadership within the banking industry—an underexplored but strategically vital context—this study extends the theoretical scope of entrepreneurial leadership and highlights its relevance for achieving long-term resilience, sustainability, and competitiveness in financial institutions.

2.3. Entrepreneurial Leadership and Sustainable Bank Performance

Organizational performance has long been conceptualized in multiple ways. Masa'adeh et al. [55] categorized it into revenue-based, cost-based, and global-based dimensions, while Hirvonen et al. [56] distinguished between financial and non-financial indicators. In the banking sector, performance typically reflects a set of metrics that demonstrate an institution's ability to achieve its objectives and manage resources effectively [57]. Financial outcomes such as sales growth, profitability, and market share remain critical benchmarks [58–62]. However, with increasing stakeholder pressure and global sustainability imperatives, performance is no longer defined solely by financial measures but also by contributions to environmental and social well-being [63,64]. This broader approach reframes performance as sustainable bank performance, encompassing economic viability, ecological stewardship, and social responsibility [65].

Entrepreneurial leadership has emerged as a vital mechanism for achieving this multidimensional performance. By emphasizing vision setting, risk-taking, and opportunity recognition, entrepreneurial leaders foster adaptability and proactive innovation that strengthen organizational resilience [66,67]. Unlike compliance-driven leadership styles, entrepreneurial leadership provides a forward-looking orientation that enables banks to anticipate regulatory changes, embrace digital transformation, and pursue sustainability targets simultaneously. Empirical evidence consistently shows that firms guided by entrepreneurial leaders outperform others in growth, innovation, and strategic adaptability [6,68]. Yet, most of this evidence comes from SMEs or non-banking industries, leaving the role of entrepreneurial leadership in driving sustainable bank performance relatively underexplored.

SLT [35] helps explain how entrepreneurial leadership translates into sustainable outcomes in the banking context. Entrepreneurial leaders act as role models whose behaviors—such as resilience, opportunity-seeking, and problem-solving—are observed and internalized by employees. In highly regulated and risk-averse banking environments, this role modeling legitimizes creative behavior, reduces fear of failure, and

fosters psychological safety [38,39]. Through this social learning process, employees balance compliance with innovative practices, not only enhancing financial performance, but also long-term sustainability. This application of SLT highlights the novelty of positioning entrepreneurial leadership as a driver of sustainable performance in structured service industries like banking.

Accordingly, entrepreneurial leadership is positioned in this study as a strategic capability that shapes sustainable bank performance by embedding innovation, adaptability, and stakeholder-oriented practices into organizational routines [5,51]. By bridging financial imperatives with sustainability objectives, entrepreneurial leaders enable banks to achieve resilience, competitiveness, and long-term value creation. This underscores the importance of entrepreneurial leadership not only for profitability, but also for aligning banking practices with broader social and environmental responsibilities.

H1. *Entrepreneurial leadership positively influences sustainable bank performance.*

2.4. Entrepreneurial Leadership and Employee Creativity

The research topic of creativity has received sustained attention from both practitioners and scholars for nearly four decades [69]. Employee creativity refers to the development of novel and valuable ideas, processes, and products that contribute to organizational effectiveness [33]. In increasingly dynamic and uncertain environments, creativity is widely regarded as a strategic resource that supports organizational adaptability, competitiveness, and long-term sustainability. Within the banking industry, creativity has become particularly important as institutions face growing disruptions from fintech firms, rapidly evolving customer expectations, and rising sustainability pressures. This makes creativity not only a desirable outcome, but also a necessity for survival and resilience in the sector [5,70].

Leadership has been consistently identified as a central driver of creativity, though prior research has primarily concentrated on transactional and transformational leadership [26,27]. These traditional leadership styles have produced mixed findings, with some studies suggesting they encourage innovation and others indicating they may restrict risk-taking and novel thinking [71,72]. Such inconsistency highlights the need to examine entrepreneurial leadership, a style that explicitly emphasizes opportunity recognition, adaptability, and innovation as core drivers of creativity in highly regulated, risk-averse environments such as banking.

Entrepreneurial leadership directs and guides employees toward organizational goals through the recognition and exploitation of entrepreneurial opportunities [28]. From the lens of SLT [35], entrepreneurial leaders serve as role models whose behaviors—such as vision articulation, proactive risk-taking, and creative problem-solving—are observed and internalized by employees [50]. Unlike conventional leadership styles that often prioritize compliance, entrepreneurial leadership legitimizes experimentation and fosters psychological safety, thereby signaling that creative efforts are valued and supported [38]. By observing such behaviors, employees are more likely to develop creative confidence and engage in innovative practices that align with organizational objectives [20].

Empirical research further demonstrates that entrepreneurial leaders encourage creativity by cultivating environments of trust, knowledge sharing, and innovation support [73]. In the banking context, this influence can result in the development of innovative financial products such as green bonds, customer-centric digital solutions, and socially responsible lending practices [74]. These outcomes show how entrepreneurial leadership enables employees not only to generate new ideas, but also to channel creativity into practices that advance both competitiveness and sustainable bank performance.

Accordingly, this study views entrepreneurial leadership as a critical enabler of employee creativity because it integrates vision, opportunity-seeking, and role-modeling

into a social learning process that motivates employees to act creatively. By embedding creativity within this framework, entrepreneurial leaders empower employees to transform creative potential into organizational innovation that addresses both financial and sustainability imperatives.

H2. *Entrepreneurial leadership positively influences employee creativity.*

2.5. Employee Creativity and Sustainable Bank Performance

Creativity has long been acknowledged as a central driver of organizational success [74,75]. Yet, the relationship between employee creativity and firm-level outcomes has received limited direct empirical attention, with existing studies often reporting mixed or inconclusive results [76,77]. Some research assumes a positive link between creativity, competitiveness, and performance without providing comprehensive evidence [78,79]. This highlights the need for further investigation into how creativity contributes to organizational outcomes, particularly in structured and risk-averse contexts like banking, where innovation is both necessary and constrained. Building on prior findings, this study views employee creativity as the ability to recognize opportunities, propose novel solutions, and adapt effectively to changing environments, making it essential for banks seeking to achieve sustainable performance [78].

In the banking sector, employee creativity is not only a source of differentiation, but also a strategic enabler of sustainability. Creative employees contribute to developing innovative processes, financial products, and service delivery mechanisms that allow for banks to remain competitive [80]. Beyond efficiency and service quality, creativity enables banks to design sustainability-oriented solutions such as green finance products, socially responsible lending schemes, and digital tools that enhance financial inclusion. These innovations simultaneously strengthen profitability, meet stakeholder expectations, and align banks with global sustainability goals, demonstrating that creativity directly contributes to long-term resilience and legitimacy in the sector [4].

SLT [35] provides a useful explanation of how creativity translates into sustainable bank performance. Employees observe entrepreneurial leaders who model visionary thinking, proactive problem-solving, and risk-taking behaviors. By internalizing these modeled actions, employees gain psychological safety and legitimacy to pursue creative ideas [38]. In this way, creativity becomes not just an individual trait but a socially reinforced process that supports both innovation and compliance, making it especially critical in heavily regulated banking environments.

Accordingly, this study positions employee creativity as a vital mechanism through which banks balance financial performance with social responsibility and environmental stewardship. By embedding creativity within a social learning process, employees are encouraged to generate solutions that foster both competitiveness and sustainability, ensuring long-term performance outcomes.

H3. *Employee creativity positively influences sustainable bank performance.*

2.6. The Mediating Role of Employee Creativity

Entrepreneurial leadership has been widely acknowledged as a driver of organizational outcomes, including growth, adaptability, and resilience [5,81,82]. However, leadership does not directly guarantee sustainable bank performance; rather, its effects are realized through employee-level mechanisms. This study identifies employee creativity as a central mediating pathway through which entrepreneurial leadership translates vision into sustainability-oriented outcomes.

According to SLT [35], individuals acquire behaviors by observing and imitating role models. Entrepreneurial leaders, through their proactive vision, risk-taking, and problem-solving, serve as salient role models whose actions encourage employees to embrace creativity as part of their own work practices [28]. By legitimizing experimentation and rewarding innovative thinking, such leaders create a climate where employees feel psychologically safe to engage in creative behaviors, thereby strengthening their confidence in developing and applying novel solutions [20,83]. In this way, entrepreneurial leadership functions not merely as directive behavior but as an enabling process that stimulates employees' creative engagement.

Employee creativity acts as the bridge between leadership and sustainable performance by converting leadership influence into innovative outcomes. Creative employees are more likely to recognize opportunities, explore new methods, and generate solutions that go beyond immediate financial performance to advance long-term resilience and responsibility [78]. For banks, this creativity-driven process may result in the design of new financial products, such as green loans, fintech-enabled services, and socially responsible lending practices, as well as improved internal processes that enhance operational efficiency and digital inclusion [32]. These innovations not only support profitability, but also align with broader societal and environmental expectations, strengthening sustainable bank performance.

Thus, this study proposes that employee creativity mediates the relationship between entrepreneurial leadership and sustainable bank performance. By situating creativity within the social learning process, it highlights how employees absorb and model the entrepreneurial behaviors of leaders, ultimately channeling them into practices that reinforce competitiveness, social responsibility, and long-term sustainability in the banking sector.

H4. *Employee creativity mediates the relationship between entrepreneurial leadership and sustainable bank performance.*

2.7. The Moderating Role of Innovation-Oriented Climate

Innovation is broadly understood as the successful transformation of creative ideas into valuable products, services, or processes [84]. In the banking industry, where digital disruption, regulatory pressure, and sustainability demands converge, innovation has become indispensable for survival and growth [70]. Firms operating in dynamic environments must rely not only on employee creativity, but also on organizational conditions that support experimentation and idea application [85]. An innovation-oriented climate refers to the shared perceptions among employees that creativity, risk-taking, and knowledge sharing are supported, resourced, and rewarded within the organization [86,87]. This climate provides the psychological safety and resources necessary for employees to propose and test novel ideas, thereby strengthening innovation potential.

From a SLT perspective [35], leaders play a central role in shaping such climates by modeling behaviors that employees observe and emulate. Entrepreneurial leaders who demonstrate risk-taking, visionary thinking, and opportunity recognition signal that innovative behavior is valued and legitimate [50,88]. When these signals are reinforced by an innovation-oriented climate, employees feel supported in pursuing creative and unconventional approaches, thereby enhancing both individual and collective innovation. In contrast, when the climate is weak or risk-averse, employees may hesitate to apply creative ideas due to fear of failure or lack of organizational backing [89,90].

An innovation-oriented climate amplifies the impact of entrepreneurial leadership by converting role-modeling behaviors into tangible performance benefits. In banking, such climates enable employees to design sustainability-oriented financial solutions, including green loans, digital inclusion services, and socially responsible lending practices [91–93].

These innovations not only enhance competitiveness and profitability, but also reinforce the bank's long-term resilience and social responsibility. Conversely, in the absence of such a climate, even entrepreneurial leadership may struggle to overcome rigid structures, compliance-driven processes, and cultural resistance.

Accordingly, this study positions innovation-oriented climate as a boundary condition that strengthens the pathways through which entrepreneurial leadership influences employee creativity and sustainable bank performance. By creating an environment that validates experimentation and supports innovation, such climates ensure that the social learning process initiated by entrepreneurial leaders translates into broader organizational outcomes.

H5. *The relationship between entrepreneurial leadership and employee creativity is moderated by an innovation-oriented climate. That is, the higher the level of innovation-oriented climate, the stronger the effect of entrepreneurial leadership on employee creativity.*

H6. *The relationship between entrepreneurial leadership and sustainable bank performance is moderated by an innovation-oriented climate. That is, at lower levels of an innovation-oriented climate, the positive effect of entrepreneurial leadership on sustainable bank performance is weaker.*

H7. *The indirect positive effect of entrepreneurial leadership on sustainable bank performance through employee creativity is strongest when the innovation-oriented climate is high.*

2.8. Research Model

Drawing on SLT [35], this study proposes a moderated mediation model explaining how entrepreneurial leadership (EL) enhances sustainable bank performance (SBP) through employee creativity (EC), and how these effects are strengthened by an innovation-oriented climate (IOC). Entrepreneurial leaders act as role models whose visionary behavior, opportunity recognition, and risk-taking are observed and internalized by employees [28,50], inspiring them to engage in creative problem-solving and opportunity exploitation that contribute to long-term organizational sustainability [5,38]. Employee creativity thus serves as a mediating mechanism translating leadership into sustainable outcomes by enabling the generation of innovative services, digital financial products, and green banking solutions that align profitability with social and environmental responsibility. At the same time, an innovation-oriented climate amplifies these effects by offering psychological safety, resource support, and organizational norms that encourage experimentation and learning [84,86]. In banks characterized by such climates, employees are more likely to emulate leaders' entrepreneurial behaviors and convert creative insights into sustainable performance gains, whereas in less supportive settings, these mechanisms weaken due to cultural resistance or limited institutional support [89,94]. Accordingly, Figure 1 illustrates the theoretical framework integrating EL, EC, IOC, and SBP to visualize the study's hypothesized relationships (H1–H7) and demonstrate how leadership, creativity, and context interact to drive sustainability in the banking sector.

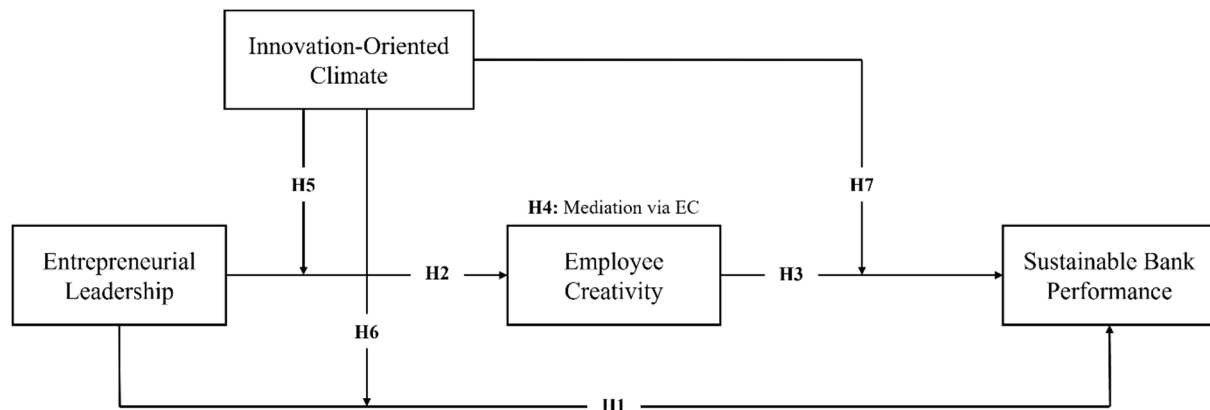


Figure 1. Research model. Source(s): Authors' own work.

3. Methods

3.1. Research Design

To conduct this study, we first contacted managers and employees from several banks to confirm their willingness to participate. Bank management that agreed to participate received a questionnaire package that included a survey and a return envelope. Prior to distribution, managers informed the participants of the study's objectives to address potential concerns and clarify the survey process [95]. Following Hunter et al. [96], a multi-source, two-wave survey design was adopted to reduce the common method bias. In the first wave, employees completed items related to entrepreneurial leadership, employee creativity, and an innovation-oriented climate. In the second wave, which was conducted one month later, bank managers provided assessments of the dependent variable: sustainable bank performance. Consistent with Landry et al. [97], managers were asked to evaluate their banks' overall performance by incorporating the financial, social, and innovation-related dimensions of sustainability. In total, 690 questionnaires were distributed, with each manager supervising approximately ten employees.

Before initiating the main data collection, the survey instrument was initially developed in English and translated into Turkish using Brislin's [98] back-translation method to ensure linguistic and conceptual equivalence. Two bilingual experts—a management scholar and a senior banking professional—verified the translation accuracy and resolved discrepancies through iterative discussion [99]. A pilot test was conducted with 35 employees and five branch managers to evaluate clarity, readability, and scale reliability. Results demonstrated satisfactory internal consistency (Cronbach's $\alpha > 0.80$), and minor modifications were made to refine item wording for cultural relevance.

Managers were specifically selected to rate sustainable bank performance because of their comprehensive understanding of both financial and non-financial outcomes at the branch level [5]. Where multiple managers evaluated the same branch, inter-rater reliability was assessed to ensure the consistency of evaluations, resulting in an intraclass correlation coefficient, which confirms a high level of agreement across raters.

3.2. Data Collection and Procedure

Data for the empirical testing of the proposed model were collected from Turkish banks listed on the Banks Association of Türkiye and the Banking Regulation and Supervision Agency [100]. We obtained a list of public and private banks and their contact details from the Borsa Istanbul Directory. With the assistance of HR officials in the selected banks, the survey was administered to non-managerial employees and managers in Istanbul, Ankara, and Izmir. A simple random sampling method was employed as it provides each member

of the population with an equal chance of selection and is suitable for minimizing sampling bias [101,102].

Eleven banks were chosen according to multiple criteria—market capitalization, deposit volume, loan portfolio, total assets, and service diversification—to ensure representativeness of the Turkish banking industry [103,104]. Each selected branch employed at least ten employees, and each received eleven questionnaires (ten for employees and one for the branch manager). The two-wave design was implemented one month apart to minimize temporal bias and reduce common method variance [105,106]. In the first wave, employees responded to constructs measuring entrepreneurial leadership, employee creativity, and innovation-oriented climate, while in the second wave, managers assessed sustainable bank performance, covering financial, social, and environmental indicators.

A total of 690 questionnaires were distributed between February and March 2024. After a single reminder call, 472 valid responses were returned, and 13 incomplete cases were excluded, yielding a final response rate of 66.52%. The use of multi-source and multi-wave data significantly minimized the risk of common method bias and strengthened the study's internal validity [96,97,105].

Ethical approval for this research was obtained from the Ethics Committee of the University of Mediterranean Karpasia. All participants were adults, participation was voluntary, and written informed consent was obtained [3]. Participants were informed about confidentiality, anonymity, and their right to withdraw at any stage. No vulnerable groups or minors were involved in the study, ensuring full compliance with ethical research standards [107].

Table 1 summarizes respondents' demographic characteristics. Among respondents, 278 (60.57%) were male and 181 (39.43%) female. In terms of education, 307 (66.89%) held a bachelor's degree, 101 (22.00%) a master's degree, and 51 (11.11%) held other qualifications. Regarding work experience, 201 respondents (40.12%) reported six or more years of experience, indicating a mature workforce well-positioned to evaluate leadership behaviors and creative practices within the banking context.

Table 1. Participants' characteristics.

Demographic Profiles	Categories	Frequency	Proportion (%)
Gender	Male	278	60.57
	Female	181	39.43
Education	Bachelor degree	307	66.89
	Master degree	101	22.00
	Others	51	11.11
Experience	Less than 3	69	13.77
	Between 3 and 5	162	32.34
	More than 6 years	201	40.12
Total		459	100%

Source(s): Authors' elaboration based on survey data.

3.3. Measurement Items

To ensure cross-linguistic validity, the questionnaire was initially developed in English and translated into Turkish using Brislin's [98] back-translation method. Two bilingual experts—one academic specializing in management and one professional from the banking sector—evaluated both versions for conceptual and linguistic accuracy. A pilot test involving 35 bank employees and five managers confirmed the clarity and reliability

of all items (Cronbach's α values ranging from 0.82 to 0.89). All constructs were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), with higher scores indicating stronger perceptions of entrepreneurial leadership, employee creativity, innovation-oriented climate, and sustainability-oriented performance. For full transparency, the complete list of measurement items, scales, and citations is provided in Appendix A Table A1.

Entrepreneurial leadership (EL) was assessed using eight items adapted from Renko et al. [28]. The items capture leaders' visionary and opportunity-oriented behaviors that stimulate employees' creative and proactive engagement. Sample statements include "My manager often comes up with ideas for completely new products or services we could sell" and "My manager challenges and pushes me to act in a more innovative way." This scale reflects key behavioral indicators such as risk-taking, passion, vision articulation, and creative problem-solving, consistent with the entrepreneurial leadership construct. Reliability analysis yielded a Cronbach's α of 0.89, indicating strong internal consistency.

Employee creativity (EC) was measured using four items from Tierney and Farmer [108], which assess employees' self-perceptions of generating and applying novel and useful ideas. To reflect the self-report nature of this study, the items were slightly reworded into first-person form. Example items include "I generate novel but operable work-related ideas," "I seek new ideas and ways to solve problems," "I identify opportunities for new ways of dealing with work," and "I demonstrate originality in my work." These items conceptualize creativity as an individual cognitive-behavioral process that contributes to organizational innovation and adaptability [33]. The reliability coefficient for this construct was 0.84, confirming acceptable internal consistency.

The innovation-oriented climate (IOC) was assessed through four items adapted from Oke et al. [109], reflecting an organizational environment that encourages innovation and experimentation. Sample items include "The bank provides time and resources for employees to generate, share, and experiment with innovative ideas/solutions" and "Employees are recognized and rewarded for their creativity and innovative ideas." This measure captures the collective perception of organizational support, open communication, and recognition mechanisms that foster innovation [84,86]. The internal reliability of this construct was high (Cronbach's $\alpha = 0.82$).

Sustainable bank performance (SBP) was measured using 12 items derived from Khan and Quaddus [110], encompassing economic, social, and environmental dimensions, aligned with the triple bottom line framework [111]. The economic performance (four items) included indicators such as "Sales growth", "Income stability", and "Return on investment". The social performance (four items) reflected community engagement and employee well-being through items such as "Enhances our social recognition in society" and "Provides freedom and control". The environmental performance (four items) assessed ecological responsibility, including "Uses utilities in an environment-friendly manner" and "Produces few wastes and emissions". Reliability analyses confirmed satisfactory internal consistency for each dimension ($\alpha = 0.89$ for economic, 0.87 for social, and 0.85 for environmental performance).

3.4. Non-Response Bias

To assess the possibility of non-response bias, the extrapolation method was applied, which assumes that late respondents can serve as proxies for non-respondents [112]. Independent-sample t-tests compared early and late respondents across all constructs—entrepreneurial leadership, employee creativity, innovation-oriented climate, and sustainable bank performance—to test for systematic differences in mean responses [113]. The results revealed no statistically significant differences ($p > 0.05$) between the two groups,

suggesting that non-response bias is unlikely to affect the findings and that the sample can be considered representative of the broader banking population.

3.5. Common Method Bias

Because this study relied on survey-based data, both procedural and statistical strategies were implemented to control for common method bias (CMB) [105]. Procedurally, respondents were informed that participation was voluntary and anonymous, that there were no right or wrong answers, and that their responses would be used solely for academic research purposes. Items for different constructs were placed in separate sections of the questionnaire, and midpoint-labeled Likert scales were used to discourage patterned responses [107]. Furthermore, a two-wave, multi-source design—where employees and managers completed surveys at different points in time—helped further minimize common source variance [96].

For statistical checks, Harman's single-factor test was conducted by loading all measurement items into an exploratory factor analysis. The first unrotated factor accounted for only 21.8% of the total variance, which is well below the 50% threshold, indicating that no single factor dominated the covariance structure [114]. In addition, the marker variable technique [115] was employed using a theoretically unrelated construct included in the questionnaire. The correlations between the marker variable and the principal constructs were below 0.01, providing additional evidence against the presence of CMB. Together, these results confirm that common method bias does not pose a serious threat to the validity of this study's findings.

3.6. Analytical Methods

Data analysis was performed using IBM SPSS 27 and AMOS 26. Preliminary analyses confirmed data normality, absence of multicollinearity ($VIF < 3$), and appropriate reliability levels, supporting the use of parametric techniques. Pearson's correlation analysis was conducted to examine bivariate relationships among the study variables. Confirmatory factor analysis (CFA) using AMOS 26 was then applied to verify construct reliability, convergent validity, and discriminant validity, ensuring the robustness of the measurement model [116].

To test the hypothesized relationships, Hayes' [117] PROCESS macro was employed. Model 4 tested the direct effect of entrepreneurial leadership on sustainable bank performance and the indirect mediating effect of employee creativity. Model 59 was subsequently used to assess the moderated mediation model, in which entrepreneurial leadership served as the independent variable, employee creativity as the mediator, innovation-oriented climate as the moderator, and sustainable bank performance as the dependent variable. Control variables such as employee experience and education were incorporated to account for potential confounding effects.

The significance threshold was set at $p < 0.05$. A bootstrapping procedure with 5000 bias-corrected resamples was used to compute 95% confidence intervals for indirect and conditional effects [118]. Mediation and moderation effects were considered significant if the confidence interval did not include zero. To interpret the interaction terms, simple slope analyses were performed to graphically represent the nature and direction of significant moderating effects.

4. Analysis and Results

4.1. Measurement Model Assessment

Before testing the proposed hypotheses, a series of reliability and validity analyses were performed to ensure the robustness of the measurement model. Reliability was first

examined using Cronbach's alpha (CA), with all constructs exceeding the threshold value of 0.70 [119], confirming internal consistency (see Table 2). Confirmatory factor analysis (CFA) was then conducted using AMOS 26 to assess unidimensionality, convergent validity, and discriminant validity [116,120]. All standardized factor loadings were significant ($p < 0.001$) and exceeded 0.60 (ranging from 0.624 to 0.938), demonstrating acceptable indicator reliability [121].

Table 2. Measurement model.

Constructs	Indicators	SFL	CA	CR	AVE
Entrepreneurial Leadership			0.886	0.890	0.553
	EL1	0.711			
	EL2	0.744			
	EL3	0.693			
	EL4	0.699			
	EL5	0.754			
	EL6	0.708			
	EL7	0.624			
	EL8	0.732			
Employee Creativity			0.835	0.821	0.537
	EC1	0.787			
	EC2	0.699			
	EC2	0.638			
	EC4	0.794			
Innovation-Oriented Climate			0.821	0.823	0.538
	IOC1	0.757			
	IOC2	0.722			
	IOC3	0.729			
	IOC4	0.727			
Sustainable Bank Performance			0.935	0.938	0.791
	EP	0.938			
	SO	0.905			
	EN	0.914			

Note: SFL = standard factor loading; CA = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted; EL = entrepreneurial leadership; EC = employee creativity; IOC = innovation-oriented climate; EP = economic performance; SO = social performance; EN = environmental performance. Source(s): Authors' elaboration based on survey data.

Composite reliability (CR) values ranged from 0.821 to 0.938, surpassing the recommended cut-off of 0.70, while average variance extracted (AVE) values ranged between 0.537 and 0.791, exceeding the minimum threshold of 0.50 [122]. These results indicate that each construct captured sufficient variance from its indicators, thus confirming convergent validity [123]. Furthermore, the Cronbach's alpha and CR values were closely aligned, showing consistency across reliability estimations.

Descriptive statistics and discriminant validity results are presented in Table 3. Discriminant validity was assessed using the Fornell–Larcker criterion [122], which requires that the square root of each construct's AVE be greater than its correlations with other

constructs. As shown in Table 3, all constructs satisfied this condition, confirming empirical distinctiveness and reducing the risk of conceptual overlap.

Table 3. Pearson correlation and discriminant validity.

Construct	Mean	Std	EL	EC	IOC	SBP	Edu	Ex
EL	5.133	0.530	(0.503)					
EC	5.573	0.501	0.497 **	(0.732)				
IOC	4.856	0.572	0.517 **	0.465 **	(0.734)			
SBP	5.552	0.664	0.674 **	0.704 **	0.515 **	(0.889)		
Edu	-	-	0.074	0.074	0.031	0.065	na	
Ex	-	-	0.037	0.036	0.006	0.039	0.040	na

Note: Std = standard deviation; EL = entrepreneurial leadership; EC = employee creativity; IOC = innovation-oriented climate; SBP = sustainable bank performance; ** = $p < 0.01$; na = not applicable; edu = education; Ex = experience. Source(s): Authors' elaboration based on survey data.

Model fit indices were evaluated following Bagozzi and Yi [124], confirming that the measurement model provided an acceptable representation of the data. All model fit indices presented in Table 4 met or exceeded recommended thresholds: $\chi^2/df = 2.195$, CFI = 0.956, TLI = 0.946, NFI = 0.923, RFI = 0.905, and RMSEA = 0.061, indicating a good overall fit.

Table 4. Model fitness summary.

Fit Indicators	Cut-Off Range	Results
CMIN/df	≤ 3	2.195
TLI	≥ 0.9	0.946
NFI	≥ 0.9	0.923
RFI	≥ 0.9	0.905
RMSEA	≤ 0.9	0.061
CFI	≤ 0.9	0.956
GFI	≥ 0.9	0.903

Source(s): Authors' elaboration based on survey data.

Finally, to rule out potential multicollinearity issues, variance inflation factor (VIF) values were examined and found to be below 2.5 across all variables, confirming that multicollinearity was not a concern. Overall, these findings collectively demonstrate that the measurement model is both statistically sound and theoretically valid, providing a robust foundation for subsequent hypothesis testing.

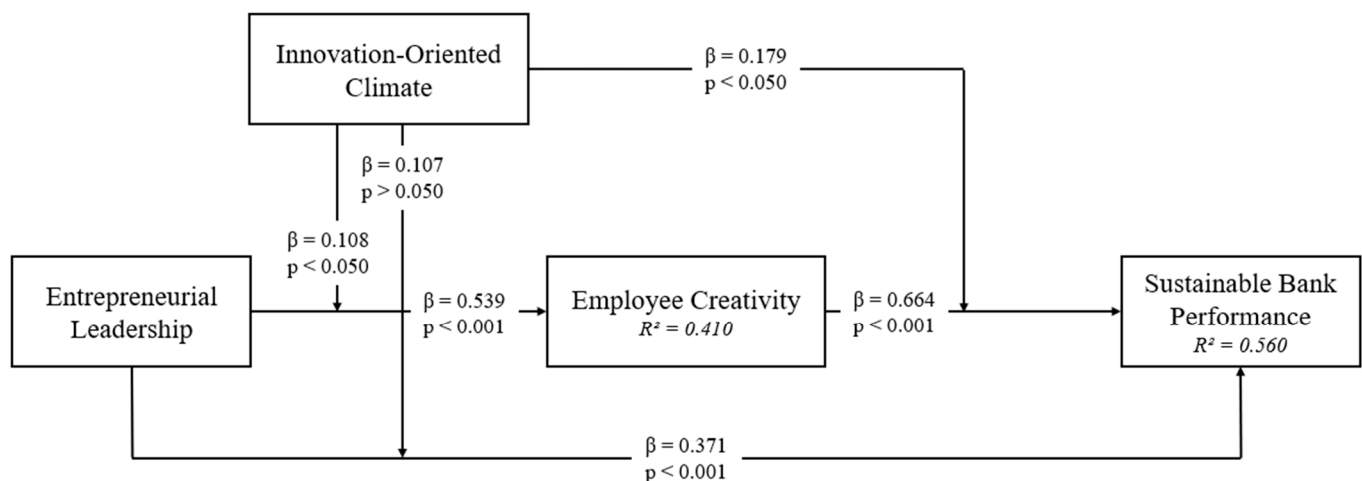
4.2. Hypotheses Testing: Direct and Indirect Effects

Following Hayes [117], PROCESS Macro Model 4 was employed to examine the direct and indirect relationships between EL, EC, and SBP. The analysis results summarized in Table 5 and illustrated in Figure 2 provide strong empirical support for the proposed mediation model. Entrepreneurial leadership exhibited a significant and positive effect on SBP ($\beta = 0.371$, $t = 6.823$, $p < 0.001$), confirming H1. Similarly, EL significantly influenced EC ($\beta = 0.539$, $t = 14.996$, $p < 0.001$), supporting H2, while EC strongly predicted SBP ($\beta = 0.664$, $t = 10.269$, $p < 0.001$), validating H3.

Table 5. Mediation model.

Relationships	β	S.E.	t-Values	p-Values	95% CI
Intercept	2.910	0.179	16.286	<0.001	[2.559, 3.262]
H1: EL $\rightarrow$ SBP	0.371	0.054	6.823	<0.001	[0.264, 0.487]
H2: EL $\rightarrow$ EC	0.539	0.036	14.996	<0.001	[0.468, 0.610]
H3: EC $\rightarrow$ SBP	0.664	0.065	10.269	<0.001	[0.573, 0.791]
H4: EL $\rightarrow$ EC $\rightarrow$ SBP	0.357	0.043	-	<0.001	[0.277, 0.444]

Note: EL = entrepreneurial leadership; EC = employee creativity; SBP = sustainable bank performance; S.E. = standard error. Source(s): Authors' elaboration based on survey data.

**Figure 2.** Structural model. Source(s): Authors' own work.

Effect size calculations revealed that the path EL $\rightarrow$ EC ($f^2 = 0.70$) represented a large effect, EC $\rightarrow$ SBP ($f^2 = 0.34$) a large-to-moderate effect, and EL $\rightarrow$ SBP ($f^2 = 0.27$) a moderate-to-large effect [125]. These values demonstrate that entrepreneurial leadership not only exerts statistically significant relationships, but also produces meaningful practical impacts on creativity and sustainability performance in banking organizations. This aligns with prior findings suggesting that entrepreneurial leaders foster innovative thinking, adaptability, and long-term value creation.

To assess mediation, a bootstrapping analysis with 5000 bias-corrected resamples was conducted [126]. The results indicated a significant indirect effect of EL on SBP through EC (BootEffect = 0.357, BootSE = 0.043, 95% CI [0.277, 0.444]), while the direct effect of EL on SBP remained significant. This indicates partial mediation, thereby supporting H4. This finding underscores that entrepreneurial leadership contributes to sustainability outcomes both directly—through vision articulation and strategic guidance—and indirectly by cultivating employee creativity as a vital internal resource. In line with SLT [35], employees emulate leaders' proactive and opportunity-oriented behaviors, which enhances their creative output and supports sustainable innovations such as green banking solutions, digitalization of services, and community-focused financial initiatives. These outcomes highlight that entrepreneurial leaders play a pivotal role in embedding creativity within the organizational fabric, translating individual innovation into tangible sustainability results.

4.3. Hypotheses Testing: Moderating and Conditional Indirect Effects

To test the moderating role of innovation-oriented climate (IOC) and the conditional indirect effects, PROCESS Model 59 was applied [117]. The results presented in Table 6 demonstrate that IOC significantly moderates the relationship between EL and EC ($\beta = 0.108$, $t = 2.262$, $p < 0.05$), providing support for H5. A simple slope analysis [127] revealed that the positive influence of EL on EC was stronger under high IOC ($\beta = 0.549$, $p < 0.001$) compared to low IOC ($\beta = 0.423$, $p < 0.001$), as shown in Figure 3. These results suggest that an innovation-oriented climate strengthens the extent to which employees internalize and replicate their leaders' creative behaviors by offering psychological safety, recognition, and resources for experimentation [84,86]. In such climates, employees are encouraged to challenge routines, take calculated risks, and generate new ideas—behaviors that entrepreneurial leaders actively reinforce.

Table 6. Moderated mediation model.

Paths	β	S.E.	t-Values	p-Values	95% CI
Model 1: Employee Creativity					
Intercept	0.097	0.031	2.816	<0.001	[0.048, 0.128]
Gender	0.039	0.060	0.188	>0.05	[−0.073, 0.210]
Education	0.018	0.072	0.105	>0.05	[0.049, 0.103]
EL	0.483	0.042	11.516	<0.001	[0.400, 0.566]
IOC	0.190	0.041	4.539	<0.001	[0.108, 0.272]
H5: $EL \times IOC \rightarrow EC$	0.108	0.048	2.262	<0.05	[0.014, 0.202]
$R^2 = 0.451$					
The conditional direct effect of EL on EC at different levels of IOC					
IOC (−1SD)	0.423	0.043	9.613	<0.001	[0.436, 0.661]
IOC (Mean)	0.486	0.042	9.774	<0.001	[0.337, 0.508]
IOC (+1SD)	0.549	0.057	11.197	<0.001	[0.402, 0.569]
Model 2: Sustainable Bank performance					
Constant	5.558	0.026	214.587	<0.001	[5.507, 5.609]
Gender	0.028	0.077	0.119	>0.05	[−0.061, 0.99]
Education	0.010	0.104	0.036	>0.05	[−0.027, 0.084]
EL	0.310	0.059	5.298	<0.001	[0.195, 0.320]
EC	0.596	0.065	9.218	<0.001	[0.468, 0.723]
IOC	0.212	0.050	4.207	<0.000	[0.113, 0.311]
H6: $EL \times IOC \rightarrow SBP$	0.107	0.093	1.160	>0.05	[−0.075, 0.290]
Interaction: $EC \times IOC \rightarrow SBP$	0.179	0.071	2.559	<0.05	[0.062, 0.302]
H7: The conditional indirect effect of EL on SBP through EC at different levels of IOC					
IOC (−1SD)	0.270	0.057			[0.160, 0.380]
IOC (Mean)	0.289	0.039			[0.214, 0.368]
IOC (+1SD)	0.295	0.052			[0.194, 0.402]

Note: EL = entrepreneurial leadership; EC = employee creativity; IOC = innovation-oriented climate SBP = sustainable bank performance. Source(s): Authors' elaboration based on survey data.

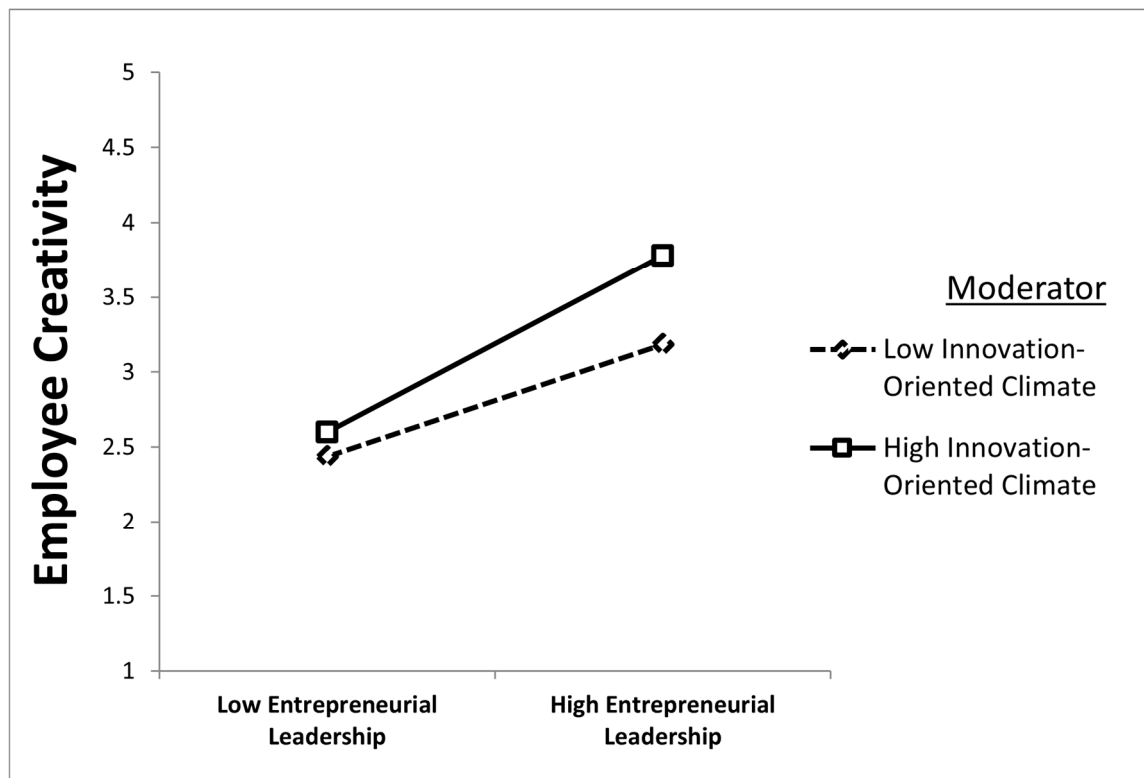


Figure 3. Moderating effect of innovation-oriented climate on the direct relationship between entrepreneurial leadership and employee creativity. Source(s): Authors' elaboration based on survey data.

However, the interaction between EL and IOC on SBP was not statistically significant ($\beta = 0.107$, $t = 1.160$, $p > 0.05$), indicating that H6 was not supported. This non-significant finding provides valuable theoretical insight. It suggests that while innovation-oriented climates are critical for stimulating creativity, they may not directly enhance the link between leadership and performance outcomes unless creativity mediates this relationship. In other words, organizational climate functions as an enabling condition, amplifying creativity as the mechanism that transforms leadership behaviors into measurable sustainability results. This interpretation aligns with previous research showing that supportive climates foster creative engagement but do not independently drive performance without the mediation of innovative behavior [94].

Finally, the results provided evidence for moderated mediation (H7). As indicated in Table 6 and Figure 4, the indirect effect of EL on SBP via EC was stronger in banks with a high IOC (95% CI [0.194, 0.402]) than in those with a low IOC (95% CI [0.160, 0.380]). This finding confirms that an innovation-oriented climate magnifies the positive influence of entrepreneurial leadership on sustainability outcomes by strengthening employees' creative capacity. When banks cultivate environments that promote experimentation, open communication, and recognition for innovation, employees' creative contributions become the driving force behind sustainable economic, social, and environmental performance. These results reinforce the interactive nature of leadership and contextual factors, where leadership effectiveness is contingent upon the presence of supportive organizational climates that channel creativity into sustainable innovation [20,35].

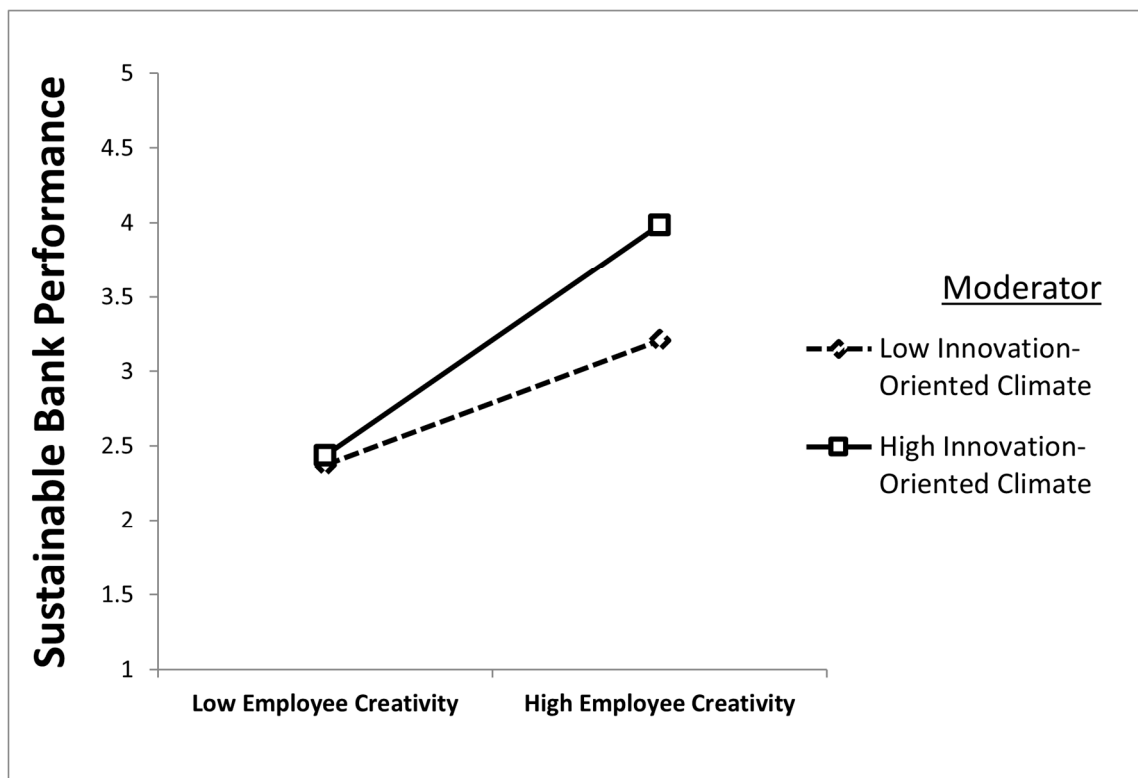


Figure 4. Moderating effect of innovation-oriented climate on the indirect relationship between entrepreneurial leadership and sustainable bank performance through employee creativity. Source(s): Authors' elaboration based on survey data.

5. Discussion

Grounded in SLT [35], this study developed and empirically tested an integrated model examining the direct effect of entrepreneurial leadership on sustainable bank performance, the mediating role of employee creativity, and the moderating role of an innovation-oriented climate. The findings provide robust evidence for SLT by demonstrating that employees internalize and emulate their leaders' innovative and proactive behaviors, transforming them into creativity-driven actions that ultimately enhance sustainability performance. These results reaffirm that learning through observation and imitation is not merely cognitive but deeply behavioral, as employees mirror leaders' problem-solving approaches, opportunity recognition, and adaptability. This highlights that entrepreneurial leadership, when reinforced by a supportive innovation-oriented climate, cultivates employee creativity as a strategic behavioral capability essential for translating sustainability-oriented goals into measurable performance outcomes. Collectively, the findings affirm that leadership, creativity, and organizational climate function as complementary mechanisms that enable banks to build long-term resilience and competitiveness in dynamic environments.

Consistent with prior research, entrepreneurial leadership exerts a significant positive impact on organizational performance [128–130]. This study extends those insights by demonstrating that entrepreneurial leadership not only stimulates financial and operational outcomes, but also embeds sustainability within core banking strategies. In the context of an increasingly complex regulatory landscape, entrepreneurial leaders play a pivotal role in navigating institutional challenges, managing digital transformation, and embedding environmental and social responsibility into business models [7,32]. Through their vision, risk-taking, and proactive orientation, entrepreneurial leaders act as catalysts for change, empowering employees to integrate sustainability-driven innovations across financial services and processes [5]. By promoting continuous learning and experimentation, such

leaders foster a culture that values both innovation and accountability, ensuring that sustainability becomes a lived organizational practice rather than a peripheral initiative.

The strong and positive relationship between entrepreneurial leadership and employee creativity is consistent with findings across knowledge-intensive sectors such as tourism and information technology [20,131]. This study contributes by revealing how entrepreneurial leaders within the banking sector foster creativity not only through empowerment, but also by legitimizing non-conformity, encouraging idea-sharing, and modeling innovative problem-solving behaviors. These leaders provide psychological cues that reduce uncertainty and stimulate cognitive flexibility among employees, allowing them to reframe problems and explore new solutions [73]. In banking, this translates into creative initiatives such as green financing products, sustainable investment services, and digital innovation platforms that align profitability with environmental and social goals [132]. Hence, entrepreneurial leadership acts as both a behavioral catalyst and an organizational facilitator, transforming employees' creative potential into actions that reinforce innovation-based sustainability outcomes.

The results also demonstrate that employee creativity significantly enhances sustainable bank performance, confirming its role as a vital mechanism linking leadership to performance [74]. This study advances this understanding by situating creativity as a dynamic capability that enables banks to respond to external shocks, regulatory reforms, and environmental pressures through continuous innovation. Unlike product-based industries, the banking sector relies heavily on process innovation, digital transformation, and relationship management to sustain competitive advantage [32,132]. Creative employees enhance sustainability by developing resource-efficient systems, improving customer-centric services, and integrating ethical principles into operational decision-making. Moreover, banks—unlike smaller firms constrained by limited assets [133]—can institutionalize creative initiatives at scale, ensuring that innovation and sustainability become embedded within their strategic architecture. Thus, creativity not only functions as an individual competency, but also as a collective organizational asset that reinforces both adaptability and social legitimacy.

The mediating role of employee creativity supports the behavioral learning pathway of SLT. Entrepreneurial leaders model innovative thinking, initiative, and persistence, which employees observe, internalize, and reproduce through creative work behaviors [6,8,134]. This process highlights that leadership effectiveness is realized through the behavioral translation of vision into action. Without creativity, the transformative potential of leadership remains conceptual; with it, strategic vision becomes operational reality. Therefore, employee creativity functions as the behavioral conduit that converts leadership intent into sustainability-oriented outcomes, underscoring the need for organizations to align leadership development with creativity-enhancing systems such as participatory decision-making, skill-based training, and cross-functional collaboration [135].

The moderating effect of innovation-oriented climate further underscores the contextual interdependence between leadership and organizational environment. The positive link between entrepreneurial leadership and employee creativity was found to be stronger in banks characterized by psychological safety, openness to experimentation, and collective learning [84,136]. This finding demonstrates that leadership alone is insufficient to drive creativity; instead, its impact depends on the broader climate that either enables or constrains innovative behavior. Supportive climates encourage risk-taking, promote dialogue across hierarchies, and reward idea generation—factors essential for translating creativity into sustainable outcomes [89]. Conversely, in rigid or risk-averse cultures, even proactive leaders may find their influence limited by structural inertia or normative resistance to

change. Thus, an innovation-oriented climate serves as a contextual amplifier, enhancing the translation of leadership-driven creativity into sustained organizational performance.

Importantly, this study contextualizes the Turkish banking sector within global leadership and sustainability frameworks. Turkey's banking system, situated at the intersection of emerging-market dynamism and institutional maturity, provides a distinctive yet generalizable setting for examining leadership-driven sustainability. Characterized by rapid digitalization, regulatory adaptation, and evolving environmental accountability, the sector mirrors conditions in other transitional economies such as Brazil, India, and South Africa [137–139]. These parallels suggest that the mechanisms identified—linking entrepreneurial leadership, creativity, and innovation-oriented climate—are not culturally idiosyncratic but broadly relevant across markets where volatility and sustainability imperatives coexist. By integrating contextual nuances into a universal behavioral framework, this study strengthens the external validity of SLT and contributes to the ongoing effort to de-Westernize leadership research [3,51,140].

Overall, this study advances both theoretical and practical understanding by positioning entrepreneurial leadership as a behavioral engine for sustainability-driven innovation. Theoretically, it refines SLT by illustrating how creativity functions as a mediating behavioral mechanism and how organizational climate moderates these effects. Practically, it underscores that sustainable competitiveness in banking not only requires policy compliance and financial control, but also dynamic leadership that empowers creativity and cultivates climates conducive to innovation. By linking human-centered leadership to environmental and social performance, the study highlights the strategic importance of fostering learning-oriented cultures that convert individual initiative into systemic transformation. These insights provide actionable implications for bank managers, policymakers, and regulators seeking to align financial success with broader sustainability objectives in both emerging and developed economies.

6. Conclusions

6.1. Theoretical Implications

This study presents several important theoretical implications that enrich our understanding of entrepreneurial leadership, employee creativity, and sustainable performance within service-based and regulated sectors such as banking. First, by providing empirical evidence that entrepreneurial leadership significantly enhances sustainable bank performance, this study deepens the theoretical integration between entrepreneurship, leadership, and sustainability. It extends prior research that primarily focused on entrepreneurial leadership in start-ups, SMEs, or manufacturing contexts [6,81] by demonstrating that entrepreneurial leadership functions as a strategic and behavioral capability even in highly formalized institutions. This insight reinforces the argument that entrepreneurial leadership transcends industry boundaries, serving as a dynamic capability that enables opportunity recognition, adaptability, and innovation-driven sustainability [65,141,142]. By validating this relationship in the banking sector, the study broadens the theoretical landscape of entrepreneurial leadership, confirming its relevance for mature organizations facing environmental and digital transformation pressures.

Second, this study advances leadership and creativity theory by empirically confirming that entrepreneurial leadership fosters employee creativity in conservative service contexts. This finding not only responds to Renko et al.'s [28] call to further investigate how entrepreneurial leadership nurtures creative behavior, but also extends the theory to non-traditional settings. It highlights that entrepreneurial leaders in banks cultivate a sense of empowerment, autonomy, and cognitive flexibility among employees—qualities that are essential for creative problem-solving and proactive innovation [74,143]. This

reconceptualization challenges the notion that banking institutions are inherently risk-averse and compliance-bound, instead portraying them as adaptive systems capable of fostering creative capital. Theoretically, this positions entrepreneurial leadership as an enabling mechanism that converts organizational rigidity into an opportunity-oriented culture, enriching both the creativity and sustainability literature [37,144–146].

Third, this study broadens the theoretical understanding of creativity by demonstrating its influence beyond innovation-oriented industries to include sustainability outcomes in service-based organizations. While previous research emphasized creativity in R&D and technical innovation teams [136,147], the current findings reveal that employee creativity in banking not only contributes to economic efficiency, but also to environmental and social sustainability. Creative employees help banks design green financial products, digital eco-services, and inclusive financing mechanisms that align with sustainable development goals [4,21]. This conceptual extension reframes creativity as a multidimensional construct—one that acts as an organizational lever for ethical innovation and competitive differentiation in regulated markets. Accordingly, this study integrates creativity theory into the broader sustainability discourse, offering a nuanced understanding of how individual creative behavior fuels systemic, long-term performance advantages.

Fourth, this research contributes to theory by uncovering the mediating role of employee creativity in the relationship between entrepreneurial leadership and sustainable performance. Consistent with SLT [35], the findings reveal that employees internalize leaders' entrepreneurial behaviors—such as vision setting, opportunity seeking, and calculated risk-taking—and emulate these behaviors through creative engagement [51,74,134]. This process illustrates how learning through observation and imitation serves as a mechanism by which leadership is translated into concrete innovative outputs that drive sustainability. By positioning creativity as the behavioral link between leadership intent and sustainability outcomes, this study expands SLT's explanatory scope, demonstrating that leadership influence operates not merely through inspiration, but also through cognitive modeling and behavioral replication that generate sustainable value [3]. This provides a valuable multi-level theoretical bridge connecting individual learning, team creativity, and organizational sustainability.

Finally, this study identifies an innovation-oriented climate as a critical boundary condition that determines the extent to which entrepreneurial leadership enhances creativity and performance. While prior research has recognized an innovation climate as a determinant of creativity [136,148], the current findings demonstrate that such a climate amplifies the indirect effects of entrepreneurial leadership on sustainability performance. This underscores that leadership effectiveness not only depends on individual capabilities, but also on contextual factors such as openness, experimentation, and psychological safety [73,89,90]. An innovation-oriented climate creates the social and emotional conditions necessary for employees to take risks and express creative ideas, reinforcing the behavioral modeling process central to SLT. By integrating contingency and learning perspectives, this study contributes a more holistic framework illustrating how leadership, creativity, and climate interact to shape organizational sustainability trajectories. This multi-level theoretical synthesis advances our understanding of leadership in dynamic and environmentally conscious organizational systems.

6.2. Practical Implications

The findings of this study offer several strategic and actionable implications for banking practitioners, policymakers, and sustainability professionals. Entrepreneurial leadership is not merely a desirable managerial attribute, but also a strategic capability essential for building sustainable competitiveness in today's volatile financial ecosystem. Banks

must therefore recognize that developing entrepreneurial leaders is fundamental to balancing economic goals with social and environmental responsibilities. In an era defined by accelerating climate risks, digital transformation, and stakeholder scrutiny under ESG (Environmental, Social, and Governance) frameworks, entrepreneurial leaders serve as catalysts for transforming traditional banking operations into sustainability-oriented systems of value creation. Such leaders can anticipate regulatory changes, integrate green financing mechanisms, and align internal processes with global sustainability standards such as the UN's Sustainable Development Goals and the Principles for Responsible Banking. To realize this transformation, banks should redesign leadership recruitment and training programs to emphasize proactive opportunity recognition, innovation, and sustainability-driven decision-making [149]. This approach not only cultivates adaptive strategic thinking, but also ensures that leadership competencies align with the broader agenda of responsible finance and climate-conscious growth.

Beyond leadership development, the results underscore that employees play a pivotal role in operationalizing sustainability initiatives. As the primary interface with customers and organizational systems, employees represent the transmission channel through which entrepreneurial leadership behaviors translate into sustainable outcomes [65]. Managers must therefore actively model entrepreneurial behaviors that encourage employee autonomy, experimentation, and responsible risk-taking. Such behaviors can inspire employees to identify sustainability opportunities, innovate service delivery models, and design solutions that integrate environmental responsibility into core financial activities. For example, bank employees can innovate by developing digital microfinance tools for underserved communities, designing eco-loan products that promote energy efficiency, or embedding ESG metrics into customer relationship management [4]. By fostering psychological safety and open communication, entrepreneurial leaders can create an organizational culture that values creativity as a pathway to sustainable innovation. This participatory and empowering leadership approach strengthens intrinsic motivation, commitment, and collective ownership of sustainability goals.

Considering the mediating role of employee creativity, banks must establish structured mechanisms to stimulate, recognize, and reward innovation that contributes to sustainability. Creativity management should be institutionalized through human resource systems that link performance incentives to sustainability achievements and innovative problem-solving. Practical measures may include implementing innovation challenges, cross-departmental project teams, and intrapreneurship programs that focus on environmental efficiency and financial inclusion. Human resource departments can further integrate creativity-oriented performance indicators and sustainability-based reward systems to reinforce innovation as an organizational norm. These mechanisms transform creative potential into measurable organizational outcomes by encouraging employees to propose initiatives that improve digital resilience, ethical governance, and stakeholder value creation [135,143]. Ultimately, fostering employee creativity transforms the bank into a continuously learning organization capable of responding to global sustainability challenges with agility and foresight.

The moderating role of an innovation-oriented climate also carries important managerial implications. Entrepreneurial leadership thrives in environments that support experimentation, collaboration, and open dialogue. Banks should therefore assess and strengthen their internal innovation climates by promoting transparency, team-based problem solving, and knowledge sharing across departments. Institutional leaders can facilitate this process by providing resources for pilot projects, establishing innovation hubs, and embedding sustainability indicators in strategic performance dashboards [32,91]. Furthermore, banks should integrate innovation-oriented climate initiatives into their strategic

planning processes to bridge the gap between leadership intent and employee action. A supportive climate reinforces trust and psychological safety, encouraging employees to transform creative insights into scalable, sustainability-driven innovations [89,90]. This alignment ensures that entrepreneurial leadership not only influences individual behavior, but also permeates the organizational culture, leading to enduring systemic transformation.

Taken together, these implications illustrate that entrepreneurial leadership represents a transformative mechanism for achieving sustainability in the banking sector. By synchronizing leadership behaviors, employee creativity, and innovation-oriented climates, banks can build adaptive capacity, enhance ESG performance, and secure long-term institutional legitimacy. In doing so, entrepreneurial leadership enables banks to move beyond compliance-based sustainability toward innovation-led transformation, where financial growth and environmental stewardship are mutually reinforcing objectives. This integrative perspective positions entrepreneurial leadership as a cornerstone of modern banking strategy—one that empowers organizations to navigate regulatory complexity, strengthen stakeholder trust, and contribute meaningfully to Sustainable Development Goals at both local and global levels.

6.3. Limitations and Direction for Future Research

Although this study enhances our understanding of how entrepreneurial leadership fosters employee creativity and strengthens sustainable bank performance, several limitations open avenues for future inquiry. First, since this research was conducted among Turkish banks—representing an emerging economy with distinctive institutional dynamics, regulatory transitions, and collectivist cultural tendencies—its generalizability may be limited. Comparative cross-national studies involving developed and emerging markets could clarify how cultural and institutional variations shape the entrepreneurial leadership–creativity–sustainability relationship [150]. Second, despite applying procedural controls, the reliance on self-reported survey data introduces potential bias. Future research could integrate multi-source data (e.g., supervisor and peer evaluations) or longitudinal approaches to enhance validity and capture the temporal evolution of leadership and creativity [105]. Third, conceptual refinement is needed, as entrepreneurial leadership was examined as a unidimensional construct; adopting a multidimensional framework that distinguishes between vision articulation, opportunity recognition, and strategic risk-taking could reveal which facets most strongly influence sustainability outcomes [28]. Moreover, future studies could examine additional mediators—such as intrapreneurship, knowledge sharing, or organizational citizenship behavior—and moderators like sustainability culture, digital readiness, and organizational learning to better capture contextual contingencies. Finally, incorporating sustainability-specific performance metrics, including environmental, social, and governance (ESG) indicators or green innovation indices, would align future research with global sustainability frameworks and provide richer insights into how entrepreneurial leadership drives long-term resilience and transformation in service-oriented industries.

Author Contributions: Writing—original draft, R.A.; Formal analysis, K.I.; Supervision, A.B.A.; Project administration, H.Y.A.; Validation, K.I. and R.A.; Writing—review and editing, R.A. and H.Y.A. All authors have read and agreed to the published version of the manuscript.

Funding: This study received no external funding.

Institutional Review Board Statement: This study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board of the University of Mediterranean Karpasia (Approval Code: [2023–2024 Fall 003], Approval Date: [22 January 2024]).

Informed Consent Statement: All participants in this study provided their informed consent.

Data Availability Statement: Data from this study can be requested from the corresponding author, Rajia Ageli.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Table A1. Measurement items.

Construct	Measurement Items	Source
Entrepreneurial Leadership (EL)	1. My manager often comes up with radical improvement ideas for the products/services we are selling. 2. My manager often comes up with ideas for completely new products/services we could sell. 3. My manager takes risks. 4. My manager has creative solutions to problems. 5. My manager demonstrates a passion for his work. 6. My manager has a vision of the future of our business. 7. My manager challenges and pushes me to act in a more innovative way. 8. My manager wants me to challenge the current ways we do business.	Renko et al. [28]
Employee Creativity (EC)	1. I generate novel but operable work-related ideas. 2. I seek new ideas and ways to solve problems. 3. I identify opportunities for new ways of dealing with work. 4. I demonstrate originality in my work.	Tierney & Farmer [108]
Innovation-Oriented Climate (IOC)	1. The bank provides time and resources for employees to generate, share/exchange, and experiment with innovative ideas/solutions. 2. The bank works in diversely skilled work groups where there is free and open communication among the group members. 3. The employees frequently encounter nonroutine and challenging work that stimulates creativity. 4. The employees are recognized and rewarded for their creativity and innovative ideas.	Oke et al. [109]
Sustainable Bank Performance (SBP)	Economic Performance (EP) 1. Provides employment to us and others. 2. Sales growth. 3. Income stability. 4. Return on investment. Social Performance (SO) 1. Ensures basic needs for our family. 2. Enhances our social recognition in society. 3. Improves our empowerment in society. 4. Provides freedom and control. Environmental Performance (EN) 1. Uses utilities in an environment-friendly manner. 2. Produces insignificant waste and emissions. 3. Is concerned about waste management. 4. Is concerned about hygiene factors.	Khan & Quaddus [110]

References

1. Murinde, V.; Rizopoulos, E.; Zachariadis, M. The Impact of the FinTech Revolution on the Future of Banking: Opportunities and Risks. *Int. Rev. Financ. Anal.* **2022**, *81*, 102103. [\[CrossRef\]](#)
2. Zhao, Y.; Chupradit, S.; Hassan, M.; Soudagar, S.; Shoukry, A.M.; Khader, J. The Role of Technical Efficiency, Market Competition and Risk in the Banking Performance in G20 Countries. *Bus. Process Manag. J.* **2021**, *27*, 2144–2160. [\[CrossRef\]](#)

3. Elkhweildi, M.; Vetbuje, B.; Alzubi, A.B.; Aljuhmani, H.Y. Leading with Green Ethics: How Environmentally Specific Ethical Leadership Enhances Employee Job Performance Through Communication and Engagement. *Sustainability* **2025**, *17*, 7923. [\[CrossRef\]](#)
4. Elansari, H.; Alzubi, A.; Khadem, A. The Impact of United Nations Sustainable Development Goals on Customers' Perceptions and Loyalty in the Banking Sector: A Multi-Mediation Approach. *Sustainability* **2024**, *16*, 8276. [\[CrossRef\]](#)
5. Djalil, M.A.; Amin, M.; Herjanto, H.; Nourallah, M.; Öhman, P. The Importance of Entrepreneurial Leadership in Fostering Bank Performance. *Int. J. Bank Mark.* **2023**, *41*, 926–948. [\[CrossRef\]](#)
6. Nguyen, P.V.; Huynh, H.T.N.; Lam, L.N.H.; Le, T.B.; Nguyen, N.H.X. The Impact of Entrepreneurial Leadership on SMEs' Performance: The Mediating Effects of Organizational Factors. *Heliyon* **2021**, *7*, e07326. [\[CrossRef\]](#)
7. Sahibzada, U.F.; Aslam, N.; Muavia, M.; Shujahat, M.; Rafi-ul-Shan, P.M. Navigating Digital Waves: Unveiling Entrepreneurial Leadership toward Digital Innovation and Sustainable Performance in the Chinese IT Industry. *J. Enterp. Inf. Manag.* **2024**, *38*, 474–501. [\[CrossRef\]](#)
8. Hoang, G.; Luu, T.T.; Nguyen, T.T.; Du, T.; Le, L.P. Examining the Effect of Entrepreneurial Leadership on Employees' Innovative Behavior in SME Hotels: A Mediated Moderation Model. *Int. J. Hosp. Manag.* **2022**, *102*, 103142. [\[CrossRef\]](#)
9. Alrowwad, A.; Abualoush, S.H.; Masa'deh, R. Innovation and Intellectual Capital as Intermediary Variables among Transformational Leadership, Transactional Leadership, and Organizational Performance. *J. Manag. Dev.* **2020**, *39*, 196–222. [\[CrossRef\]](#)
10. Geyery, A.L.J.; Steyrer, J.M. Transformational Leadership and Objective Performance in Banks. *Appl. Psychol.* **1998**, *47*, 397–420. [\[CrossRef\]](#)
11. Karatepe, O.M.; Ozturk, A.; Kim, T.T. Servant Leadership, Organisational Trust, and Bank Employee Outcomes. *Serv. Ind. J.* **2019**, *39*, 86–108. [\[CrossRef\]](#)
12. Bayram, O.; Talay, I.; Feridun, M. Can Fintech Promote Sustainable Finance? Policy Lessons from the Case of Turkey. *Sustainability* **2022**, *14*, 12414. [\[CrossRef\]](#)
13. Uzkuurt, C.; Kumar, R.; Semih Kimzan, H.; Eminoğlu, G. Role of Innovation in the Relationship between Organizational Culture and Firm Performance: A Study of the Banking Sector in Turkey. *Eur. J. Innov. Manag.* **2013**, *16*, 92–117. [\[CrossRef\]](#)
14. Alpkın, L.; Karabay, M.; Şener, İ.; Elçi, M.; Yıldız, B. The Mediating Role of Trust in Leader in the Relations of Ethical Leadership and Distributive Justice on Internal Whistleblowing: A Study on Turkish Banking Sector. *Kybernetes* **2020**, *50*, 2073–2092. [\[CrossRef\]](#)
15. Alikaj, A.; Ning, W.; Wu, B. Proactive Personality and Creative Behavior: Examining the Role of Thriving at Work and High-Involvement HR Practices. *J. Bus. Psychol.* **2021**, *36*, 857–869. [\[CrossRef\]](#)
16. Du, J.; Ma, E.; Lin, X. Can Proactivity Translate to Creativity? Examinations at Individual and Team Levels. *Int. J. Hosp. Manag.* **2021**, *98*, 103034. [\[CrossRef\]](#)
17. Nguyen, N.N.; Nham, P.T.; Takahashi, Y. The Joint Effect of Value Diversity and Emotional Intelligence on Team Creativity: Evidence from Vietnam. *Int. J. Emerg. Mark.* **2024**, *20*, 3782–3797. [\[CrossRef\]](#)
18. Stawicki, C.; Krishnakumar, S.; Robinson, M.D. Working with Emotions: Emotional Intelligence, Performance and Creativity in the Knowledge-Intensive Workforce. *J. Knowl. Manag.* **2022**, *27*, 285–301. [\[CrossRef\]](#)
19. Han, G.H.; Bai, Y. Leaders Can Facilitate Creativity: The Moderating Roles of Leader Dialectical Thinking and LMX on Employee Creative Self-Efficacy and Creativity. *J. Manag. Psychol.* **2020**, *35*, 405–417. [\[CrossRef\]](#)
20. Hou, F.; Su, Y.; Qi, M.-D.; Dong, B.; Jia, Y. A Multilevel Investigation of the Cascading Effect of Entrepreneurial Leadership on Employee Creativity: Evidence from Chinese Hospitality and Tourism Firms. *Tour. Manag.* **2024**, *100*, 104816. [\[CrossRef\]](#)
21. Liu, X.; Zhu, Z.; Liu, Z.; Fu, C. The Influence of Leader Empowerment Behaviour on Employee Creativity. *Manag. Decis.* **2020**, *58*, 2681–2703. [\[CrossRef\]](#)
22. Zhang, M.; Chen, Z.; Zhao, L.; Li, X.; Zhang, Z.; Zhang, X. How Does High-Commitment Work Systems Stimulate Employees' Creative Behavior? A Multilevel Moderated Mediation Model. *Front. Psychol.* **2022**, *13*, 904174. [\[CrossRef\]](#)
23. Shalley, C.E.; Gilson, L.L. What Leaders Need to Know: A Review of Social and Contextual Factors That Can Foster or Hinder Creativity. *Leadersh. Q.* **2004**, *15*, 33–53. [\[CrossRef\]](#)
24. Uhl-Bien, M.; Marion, R.; McKelvey, B. Complexity Leadership Theory: Shifting Leadership from the Industrial Age to the Knowledge Era. *Leadersh. Q.* **2007**, *18*, 298–318. [\[CrossRef\]](#)
25. Mehmood, M.S.; Jian, Z.; Akram, U.; Tariq, A. Entrepreneurial Leadership: The Key to Develop Creativity in Organizations. *Leadersh. Organ. Dev. J.* **2021**, *42*, 434–452. [\[CrossRef\]](#)
26. Awang, A.H.; Haron, M.; Zainuddin Rela, I.; Saad, S. Formation of Civil Servants' Creativity through Transformative Leadership. *J. Manag. Dev.* **2020**, *39*, 499–515. [\[CrossRef\]](#)
27. Tung, F.-C. Does Transformational, Ambidextrous, Transactional Leadership Promote Employee Creativity? Mediating Effects of Empowerment and Promotion Focus. *Int. J. Manpow.* **2016**, *37*, 1250–1263. [\[CrossRef\]](#)
28. Renko, M.; El Tarabishy, A.; Carsrud, A.L.; Brännback, M. Understanding and Measuring Entrepreneurial Leadership Style. *J. Small Bus. Manag.* **2015**, *53*, 54–74. [\[CrossRef\]](#)

29. Amabile, T.M.; Pratt, M.G. The Dynamic Componential Model of Creativity and Innovation in Organizations: Making Progress, Making Meaning. *Res. Organ. Behav.* **2016**, *36*, 157–183. [\[CrossRef\]](#)
30. Hirst, G.; Van Knippenberg, D.; Zhou, J. A Cross-Level Perspective on Employee Creativity: Goal Orientation, Team Learning Behavior, and Individual Creativity. *Acad. Manag. J.* **2009**, *52*, 280–293. [\[CrossRef\]](#)
31. Zhou, J.; George, J.M. Awakening Employee Creativity: The Role of Leader Emotional Intelligence. *Leadersh. Q.* **2003**, *14*, 545–568. [\[CrossRef\]](#)
32. Al Issa, H.-E.; Omar, M.M.S. Digital Innovation Drivers in Retail Banking: The Role of Leadership, Culture, and Technostress Inhibitors. *Int. J. Organ. Anal.* **2024**, *32*, 19–43. [\[CrossRef\]](#)
33. Anderson, N.; Potočník, K.; Zhou, J. Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework. *J. Manag.* **2014**, *40*, 1297–1333. [\[CrossRef\]](#)
34. Dabić, M.; Lažnjak, J.; Smallbone, D.; Švarc, J. Intellectual Capital, Organisational Climate, Innovation Culture, and SME Performance: Evidence from Croatia. *J. Small Bus. Enterpr. Dev.* **2018**, *26*, 522–544. [\[CrossRef\]](#)
35. Bandura, A. *Social Learning Theory*; Prentice-Hall: Englewood Cliffs, NJ, USA, 1977; ISBN 978-0-13-816744-8.
36. Bandura, A. *Social Foundations of Thought and Action: A Social Cognitive Theory*; Prentice Hall: Englewood Cliffs, NJ, USA, 1986; ISBN 978-0-13-815614-5.
37. Pauceanu, A.M.; Rabie, N.; Moustafa, A.; Jiroveanu, D.C. Entrepreneurial Leadership and Sustainable Development—A Systematic Literature Review. *Sustainability* **2021**, *13*, 11695. [\[CrossRef\]](#)
38. Newman, A.; Neesham, C.; Manville, G.; Tse, H.H.M. Examining the Influence of Servant and Entrepreneurial Leadership on the Work Outcomes of Employees in Social Enterprises. *Int. J. Hum. Resour. Manag.* **2018**, *29*, 2905–2926. [\[CrossRef\]](#)
39. Hussain, G.; Samreen, F.; Riaz, A.; Wan Ismail, W.K.; Sultan, M. A Cross-Level Relationship between Entrepreneurial Leadership and Followers' Entrepreneurial Intentions through Entrepreneurial Self-Efficacy and Identification with the Leader under Moderating Role of Cultural Values. *Curr. Psychol.* **2024**, *43*, 7478–7496. [\[CrossRef\]](#)
40. Liden, R.C.; Wayne, S.J.; Liao, C.; Meuser, J.D. Servant Leadership and Serving Culture: Influence on Individual and Unit Performance. *Acad. Manag. J.* **2014**, *57*, 1434–1452. [\[CrossRef\]](#)
41. García-Morales, V.J.; Lloréns-Montes, F.J.; Verdú-Jover, A.J. The Effects of Transformational Leadership on Organizational Performance through Knowledge and Innovation*. *Br. J. Manag.* **2008**, *19*, 299–319. [\[CrossRef\]](#)
42. Raziq, M.M.; Saleem, S.; Borini, F.M.; Naz, F. Leader Spirituality and Organizational Innovativeness as Determinants of Transformational Leadership and Project Success: Behavioral and Social Learning Perspectives. *Int. J. Product. Perform. Manag.* **2024**, *74*, 56–80. [\[CrossRef\]](#)
43. Saunders, A.; Cornett, M.M. *Financial Institutions Management: A Risk Management Approach*, 7th ed.; McGraw-Hill/Irwin: New York, NY, USA, 2011; ISBN 978-0-07-353075-8.
44. Brownson, C. Entrepreneurial Leadership and Managerial Sustainability. *Int. J. Bus. Manag. Rev.* **2022**, *10*, 42–75. [\[CrossRef\]](#)
45. Awashreh, R.; Hamid, A.A. The Role of Entrepreneurial Leadership in Driving Employee Innovation: The Mediating Effect of Knowledge Sharing. *Cogent Bus. Manag.* **2025**, *12*, 2466812. [\[CrossRef\]](#)
46. Schumpeter, J.A. *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*; Harvard University Press: Cambridge, MA, USA, 1934; ISBN 978-0-674-87990-4.
47. Olson, P.D. Entrepreneurship and Management. *J. Small Bus. Manag.* **1987**, *25*, 7.
48. Covin, J.G.; Wales, W.J. Crafting High-Impact Entrepreneurial Orientation Research: Some Suggested Guidelines. *Entrep. Theory Pract.* **2019**, *43*, 3–18. [\[CrossRef\]](#)
49. Harrison, C.; Burnard, K.; Paul, S. Entrepreneurial Leadership in a Developing Economy: A Skill-Based Analysis. *J. Small Bus. Enterpr. Dev.* **2017**, *25*, 521–548. [\[CrossRef\]](#)
50. Gupta, V.; MacMillan, I.C.; Surie, G. Entrepreneurial Leadership: Developing and Measuring a Cross-Cultural Construct. *J. Bus. Ventur.* **2004**, *19*, 241–260. [\[CrossRef\]](#)
51. Hoang, G.; Luu, T.T.; Babalola, M.T. Entrepreneurial Leadership: A Systematic Literature Review and Research Agenda. *Leadersh. Organ. Dev. J.* **2024**, *46*, 285–313. [\[CrossRef\]](#)
52. Kempster, S.; Cope, J. Learning to Lead in the Entrepreneurial Context. *Int. J. Entrep. Behav. Res.* **2010**, *16*, 5–34. [\[CrossRef\]](#)
53. Islam, T.; Zahra, I.; Rehman, S.U.; Jamil, S. How Knowledge Sharing Encourages Innovative Work Behavior through Occupational Self-Efficacy? The Moderating Role of Entrepreneurial Leadership. *Glob. Knowl. Mem. Commun.* **2022**, *73*, 67–83. [\[CrossRef\]](#)
54. Guberina, T.; Wang, A.M.; Obrenovic, B. An Empirical Study of Entrepreneurial Leadership and Fear of COVID-19 Impact on Psychological Wellbeing: A Mediating Effect of Job Insecurity. *PLoS ONE* **2023**, *18*, e0284766. [\[CrossRef\]](#)
55. Masa'deh, R.; Al-Henzab, J.; Tarhini, A.; Obeidat, B.Y. The Associations among Market Orientation, Technology Orientation, Entrepreneurial Orientation and Organizational Performance. *Benchmarking Int. J.* **2018**, *25*, 3117–3142. [\[CrossRef\]](#)
56. Hirvonen, S.; Laukkanen, T.; Salo, J. Does Brand Orientation Help B2B SMEs in Gaining Business Growth? *J. Bus. Ind. Mark.* **2016**, *31*, 472–487. [\[CrossRef\]](#)

57. Bikker, J.; Bos, J.W.B. *Bank Performance: A Theoretical and Empirical Framework for the Analysis of Profitability, Competition and Efficiency*; Routledge: Abingdon, UK; New York, NY, USA, 2008; ISBN 978-0-415-56961-3.
58. Aljuhmani, H.Y.; Emeagwali, O.L.; Ababneh, B. The Relationships between CEOs' Psychological Attributes, Top Management Team Behavioral Integration and Firm Performance. *Int. J. Organ. Theory Behav.* **2021**, *24*, 126–145. [\[CrossRef\]](#)
59. Aljuhmani, H.Y.; Awwad, R.I.; Albuhihi, B.; Hamdan, S. The Impact of Digital Transformation Leadership Competencies on Firm Performance Through the Lens of Organizational Creativity and Digital Strategy. In *Innovative and Intelligent Digital Technologies; Towards an Increased Efficiency: Volume 1*; Al Mubarak, M., Hamdan, A., Eds.; Springer Nature: Cham, Switzerland, 2024; pp. 283–293; ISBN 978-3-031-70399-7.
60. AlAjlouni, A.O.; Aljuhmani, H.Y. Leveraging Business Intelligence for Enhanced Financial Performance: The Mediating Effect of Supply Chain Integration. In *Achieving Sustainable Business Through AI, Technology Education and Computer Science: Volume 3: Business Sustainability and Artificial Intelligence Applications*; Hamdan, A., Ed.; Springer Nature: Cham, Switzerland, 2024; pp. 79–89; ISBN 978-3-031-73632-2.
61. Aljuhmani, H.Y.; Neiroukh, S. From AI Capability to Enhanced Organizational Performance: The Path Through Organizational Creativity. In *Achieving Sustainable Business Through AI, Technology Education and Computer Science: Volume 2: Teaching Technology and Business Sustainability*; Hamdan, A., Ed.; Springer Nature: Cham, Switzerland, 2024; pp. 667–676; ISBN 978-3-031-71213-5.
62. Ayoub, H.S.; Aljuhmani, H.Y. Artificial Intelligence Capabilities as a Catalyst for Enhanced Organizational Performance: The Importance of Cultivating a Data-Driven Culture. In *Achieving Sustainable Business Through AI, Technology Education and Computer Science: Volume 2: Teaching Technology and Business Sustainability*; Hamdan, A., Ed.; Springer Nature: Cham, Switzerland, 2024; pp. 345–356; ISBN 978-3-031-71213-5.
63. Enbaia, E.; Alzubi, A.; Iyiola, K.; Aljuhmani, H.Y. The Interplay Between Environmental Ethics and Sustainable Performance: Does Organizational Green Culture and Green Innovation Really Matter? *Sustainability* **2024**, *16*, 10230. [\[CrossRef\]](#)
64. Alkish, I.; Iyiola, K.; Alzubi, A.B.; Aljuhmani, H.Y. Does Digitization Lead to Sustainable Economic Behavior? Investigating the Roles of Employee Well-Being and Learning Orientation. *Sustainability* **2025**, *17*, 4365. [\[CrossRef\]](#)
65. Nor-Aishah, H.; Ahmad, N.H.; Thurasamy, R. Entrepreneurial Leadership and Sustainable Performance of Manufacturing SMEs in Malaysia: The Contingent Role of Entrepreneurial Bricolage. *Sustainability* **2020**, *12*, 3100. [\[CrossRef\]](#)
66. Fontana, A.; Musa, S. The Impact of Entrepreneurial Leadership on Innovation Management and Its Measurement Validation. *Int. J. Innov. Sci.* **2017**, *9*, 2–19. [\[CrossRef\]](#)
67. Covin, J.G.; Slevin, D.P. Strategic Management of Small Firms in Hostile and Benign Environments. *Strateg. Manag. J.* **1989**, *10*, 75–87. [\[CrossRef\]](#)
68. Nawaz, A.; Wenqi, J.; Akhtar, S. Entrepreneurial Leadership and Organizational Performance: Employee Creativity and Behavior. *Manag. Decis.* **2025**, *63*, 2486–2510. [\[CrossRef\]](#)
69. Amabile, T.M.; Pillemer, J. Perspectives on the Social Psychology of Creativity. *J. Creat. Behav.* **2012**, *46*, 3–15. [\[CrossRef\]](#)
70. Alt, R.; Beck, R.; Smits, M.T. FinTech and the Transformation of the Financial Industry. *Electron. Mark.* **2018**, *28*, 235–243. [\[CrossRef\]](#)
71. Cai, W.; Lysova, E.I.; Khapova, S.N.; Bossink, B.A.G. Does Entrepreneurial Leadership Foster Creativity Among Employees and Teams? The Mediating Role of Creative Efficacy Beliefs. *J. Bus. Psychol.* **2019**, *34*, 203–217. [\[CrossRef\]](#)
72. Mumford, M.D. Managing Creative People: Strategies and Tactics for Innovation. *Hum. Resour. Manag. Rev.* **2000**, *10*, 313–351. [\[CrossRef\]](#)
73. Mehmood, M.S.; Jian, Z.; Akram, U.; Akram, Z.; Tanveer, Y. Entrepreneurial Leadership and Team Creativity: The Roles of Team Psychological Safety and Knowledge Sharing. *Pers. Rev.* **2021**, *51*, 2404–2425. [\[CrossRef\]](#)
74. Otache, I.; Mejabi, E.I.; Alogwuja, C.U.; Umar, K. Entrepreneurial Leadership and Hospitality Firm Performance: The Roles of Employee Creativity and Competitive Advantage. *J. Hosp. Tour. Insights* **2025**, 1–18. [\[CrossRef\]](#)
75. Yasmeen, A.; Ajmal, S.K. How Ambidextrous Leadership Enhances Employee Creativity: A Quantitative Approach. *Evid.-Based HRM A Glob. Forum Empir. Scholarsh.* **2023**, *12*, 421–440. [\[CrossRef\]](#)
76. Weinzimmer, L.G.; Michel, E.J.; Franczak, J.L. Creativity and Firm-Level Performance: The Mediating Effects of Action Orientation. *J. Manag. Issues* **2011**, *23*, 62–82.
77. Khedhaouria, A.; Gurău, C.; Torrès, O. Creativity, Self-Efficacy, and Small-Firm Performance: The Mediating Role of Entrepreneurial Orientation. *Small Bus. Econ.* **2015**, *44*, 485–504. [\[CrossRef\]](#)
78. Zou, J.; Jian, C. Does Cloud Computing Improve Team Performance and Employees' Creativity? *Kybernetes* **2021**, *51*, 582–601. [\[CrossRef\]](#)
79. Alsafadi, Y.; Aljuhmani, H.Y. The Influence of Entrepreneurial Innovations in Building Competitive Advantage: The Mediating Role of Entrepreneurial Thinking. *Kybernetes* **2023**, *53*, 4051–4073. [\[CrossRef\]](#)
80. DeYoung, R.; Lang, W.W.; Nolle, D.L. How the Internet Affects Output and Performance at Community Banks. *J. Bank. Financ.* **2007**, *31*, 1033–1060. [\[CrossRef\]](#)
81. Dwi Widayani, A.A.; Landra, N.; Sudja, N.; Ximenes, M.; Sarmawa, I.W.G. The Role of Ethical Behavior and Entrepreneurial Leadership to Improve Organizational Performance. *Cogent Bus. Manag.* **2020**, *7*, 1747827. [\[CrossRef\]](#)

82. Karimi, A.; Daryani, M.A.; Rahmani, S. The Influence of Entrepreneurial Orientation on Firm Growth among Iranian Agricultural SMEs: The Mediation Role of Entrepreneurial Leadership and Market Orientation. *J. Glob. Entrep. Res.* **2021**, *11*, 519–531. [\[CrossRef\]](#)
83. Frese, M.; Gielnik, M.M. The Psychology of Entrepreneurship: Action and Process. *Annu. Rev. Organ. Psychol. Organ. Behav.* **2023**, *10*, 137–164. [\[CrossRef\]](#)
84. Amabile, T.M.; Conti, R.; Coon, H.; Lazenby, J.; Herron, M. Assessing the Work Environment for Creativity. *Acad. Manag. J.* **1996**, *39*, 1154–1184. [\[CrossRef\]](#)
85. Kessler, E.H.; Chakrabarti, A.K. Innovation Speed: A Conceptual Model of Context, Antecedents, and Outcomes. *Acad. Manag. Rev.* **1996**, *21*, 1143–1191. [\[CrossRef\]](#)
86. Kissi, J.; Dainty, A.; Liu, A. Examining Middle Managers' Influence on Innovation in Construction Professional Services Firms: A Tale of Three Innovations. *Constr. Innov. Inf. Process Manag.* **2012**, *12*, 11–28. [\[CrossRef\]](#)
87. Waheed, A.; Miao, X.; Waheed, S.; Ahmad, N.; Majeed, A. How New HRM Practices, Organizational Innovation, and Innovative Climate Affect the Innovation Performance in the IT Industry: A Moderated-Mediation Analysis. *Sustainability* **2019**, *11*, 621. [\[CrossRef\]](#)
88. Aryee, S.; Hsiung, H.-H.; Jo, H.; Chuang, C.-H.; Chiao, Y.-C. Servant Leadership and Customer Service Performance: Testing Social Learning and Social Exchange-Informed Motivational Pathways. *Eur. J. Work Organ. Psychol.* **2023**, *32*, 506–519. [\[CrossRef\]](#)
89. Ghosh, K. Developing Organizational Creativity and Innovation: Toward a Model of Self-Leadership, Employee Creativity, Creativity Climate and Workplace Innovative Orientation. *Manag. Res. Rev.* **2015**, *38*, 1126–1148. [\[CrossRef\]](#)
90. Al'Ararah, K.; Çağlar, D.; Aljuhmani, H.Y. Mitigating Job Burnout in Jordanian Public Healthcare: The Interplay between Ethical Leadership, Organizational Climate, and Role Overload. *Behav. Sci.* **2024**, *14*, 490. [\[CrossRef\]](#) [\[PubMed\]](#)
91. Martín-de Castro, G.; Delgado-Verde, M.; Navas-López, J.E.; Cruz-González, J. The Moderating Role of Innovation Culture in the Relationship between Knowledge Assets and Product Innovation. *Technol. Forecast. Soc. Change* **2013**, *80*, 351–363. [\[CrossRef\]](#)
92. Tamayo-Torres, I.; Gutiérrez-Gutiérrez, L.J.; Llorens-Montes, F.J.; Martínez-López, F.J. Organizational Learning and Innovation as Sources of Strategic Fit. *Ind. Manag. Data Syst.* **2016**, *116*, 1445–1467. [\[CrossRef\]](#)
93. Balcioglu, Y.S.; Evranos, F. Sustainable Digital Banking in Turkey: Analysis of Mobile Banking Applications Using Customer-Generated Content. *Sustainability* **2025**, *17*, 6676. [\[CrossRef\]](#)
94. Martins, E.C.; Terblanche, F. Building Organisational Culture That Stimulates Creativity and Innovation. *Eur. J. Innov. Manag.* **2003**, *6*, 64–74. [\[CrossRef\]](#)
95. Ali, M.; Iyiola, K.; Alzubi, A.; Aljuhmani, H.Y. Using Safety-Specific Transformational Leadership to Improve Safety Behavior Among Construction Workers: Exploring the Role of Knowledge Sharing and Psychological Safety. *Buildings* **2025**, *15*, 3340. [\[CrossRef\]](#)
96. Hunter, S.T.; Bedell-Avers, K.E.; Mumford, M.D. The Typical Leadership Study: Assumptions, Implications, and Potential Remedies. *Leadersh. Q.* **2007**, *18*, 435–446. [\[CrossRef\]](#)
97. Landry, G.; Vandenberghe, C. Relational Commitments in Employee–Supervisor Dyads and Employee Job Performance. *Leadersh. Q.* **2012**, *23*, 293–308. [\[CrossRef\]](#)
98. Brislin, R.W. Translation and Content Analysis of Oral and Written Materials. In *Handbook of Cross-Cultural Psychology: Methodology*; Allyn and Bacon: Boston, MA, USA, 1980; pp. 389–444.
99. Behr, D. Assessing the Use of Back Translation: The Shortcomings of Back Translation as a Quality Testing Method. *Int. J. Soc. Res. Methodol.* **2017**, *20*, 573–584. [\[CrossRef\]](#)
100. Ozkan, N.; Cakan, S.; Kayacan, M. Intellectual Capital and Financial Performance: A Study of the Turkish Banking Sector. *Borsa Istanbul. Rev.* **2017**, *17*, 190–198. [\[CrossRef\]](#)
101. Iyiola, K.; Rjoub, H. Using Conflict Management in Improving Owners and Contractors Relationship Quality in the Construction Industry: The Mediation Role of Trust. *Sage Open* **2020**, *10*, 2158244019898834. [\[CrossRef\]](#)
102. Awwad, R.I.; Aljuhmani, H.Y.; Hamdan, S. Examining the Relationships Between Frontline Bank Employees' Job Demands and Job Satisfaction: A Mediated Moderation Model. *Sage Open* **2022**, *12*, 21582440221079880. [\[CrossRef\]](#)
103. Atalay, M.O.; Altin, M.; Al Ani, M.K. From Diversity to Sustainability: How Board Meeting Frequency, Financial Performance and Foreign Members Enhance the Board Gender Diversity—ESG Performance Link. *Borsa Istanbul. Rev.* **2025**, *25*, 552–567. [\[CrossRef\]](#)
104. Turkmen, S.Y.; Yigit, I. Diversification in Banking and Its Effect on Banks' Performance: Evidence from Turkey. *Am. Int. J. Contemp. Res.* **2012**, *2*, 111–119.
105. Podsakoff, P.M.; MacKenzie, S.B.; Lee, J.-Y.; Podsakoff, N.P. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *J. Appl. Psychol.* **2003**, *88*, 879–903. [\[CrossRef\]](#)
106. Fuller, C.M.; Simmering, M.J.; Atinc, G.; Atinc, Y.; Babin, B.J. Common Methods Variance Detection in Business Research. *J. Bus. Res.* **2016**, *69*, 3192–3198. [\[CrossRef\]](#)
107. Chang, S.-J.; van Witteloostuijn, A.; Eden, L. From the Editors: Common Method Variance in International Business Research. *J. Int. Bus. Stud.* **2010**, *41*, 178–184. [\[CrossRef\]](#)

108. Tierney, P.; Farmer, S.M. Creative Self-Efficacy Development and Creative Performance over Time. *J. Appl. Psychol.* **2011**, *96*, 277–293. [\[CrossRef\]](#)
109. Oke, A.; Prajogo, D.I.; Jayaram, J. Strengthening the Innovation Chain: The Role of Internal Innovation Climate and Strategic Relationships with Supply Chain Partners. *J. Supply Chain Manag.* **2013**, *49*, 43–58. [\[CrossRef\]](#)
110. Khan, E.A.; Quaddus, M. Development and Validation of a Scale for Measuring Sustainability Factors of Informal Microenterprises—A Qualitative and Quantitative Approach. *Entrep. Res. J.* **2015**, *5*, 347–372. [\[CrossRef\]](#)
111. Elkington, J. *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*; New Society Publishers: Gabriola Island, BC, USA; Stony Creek, CT, USA, 1998; ISBN 978-0-86571-392-5.
112. Armstrong, J.S.; Overton, T.S. Estimating Nonresponse Bias in Mail Surveys. *J. Mark. Res.* **1977**, *14*, 396–402. [\[CrossRef\]](#)
113. Slil, E.; Iyiola, K.; Alzubi, A.; Aljuhmani, H.Y. Impact of Safety Leadership and Employee Morale on Safety Performance: The Moderating Role of Harmonious Safety Passion. *Buildings* **2025**, *15*, 186. [\[CrossRef\]](#)
114. Mamash, A.; Iyiola, K.; Aljuhmani, H.Y. The Role of Circular Economy Entrepreneurship, Cleaner Production, and Green Government Subsidy for Achieving Sustainability Goals in Business Performance. *Sustainability* **2025**, *17*, 3990. [\[CrossRef\]](#)
115. Lindell, M.K.; Whitney, D.J. Accounting for Common Method Variance in Cross-Sectional Research Designs. *J. Appl. Psychol.* **2001**, *86*, 114–121. [\[CrossRef\]](#)
116. Collier, J. *Applied Structural Equation Modeling Using AMOS: Basic to Advanced Techniques*, 1st ed.; Routledge: New York, NY, USA, 2020; ISBN 978-0-367-43526-4.
117. Hayes, A.F. Partial, Conditional, and Moderated Moderated Mediation: Quantification, Inference, and Interpretation. *Commun. Monogr.* **2018**, *85*, 4–40. [\[CrossRef\]](#)
118. Wen, Z.; Ye, B. Analyses of Mediating Effects: The Development of Methods and Models. *Adv. Psychol. Sci.* **2014**, *22*, 731. [\[CrossRef\]](#)
119. Nunnally, J.C. *Psychometric Theory*, 2nd ed.; McGraw-Hill Companies: Columbus, OH, USA, 1978.
120. Aljuhmani, H.Y.; Ababneh, B.; Emeagwali, L.; Elrehail, H. Strategic Stances and Organizational Performance: Are Strategic Performance Measurement Systems the Missing Link? *Asia-Pac. J. Bus. Adm.* **2022**, *16*, 282–306. [\[CrossRef\]](#)
121. Byrne, B.M. *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, 2nd ed.; Routledge: New York, NY, USA, 2009; ISBN 978-0-8058-6373-4.
122. Fornell, C.; Larcker, D.F. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *J. Mark. Res.* **1981**, *18*, 39–50. [\[CrossRef\]](#)
123. Chin, W.W. Commentary: Issues and Opinion on Structural Equation Modeling. *MIS Q.* **1998**, *22*, vii–xvi.
124. Bagozzi, R.P.; Yi, Y. On the Evaluation of Structural Equation Models. *J. Acad. Mark. Sci.* **1988**, *16*, 74–94. [\[CrossRef\]](#)
125. Sullivan, G.M.; Feinn, R. Using Effect Size—Or Why the P Value Is Not Enough. *J. Grad. Med. Educ.* **2012**, *4*, 279–282. [\[CrossRef\]](#) [\[PubMed\]](#)
126. Preacher, K.J.; Hayes, A.F. Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models. *Behav. Res. Methods* **2008**, *40*, 879–891. [\[CrossRef\]](#) [\[PubMed\]](#)
127. Alashiq, S.; Aljuhmani, H.Y. From Sustainable Tourism to Social Engagement: A Value-Belief-Norm Approach to the Roles of Environmental Knowledge, Eco-Destination Image, and Biospheric Value. *Sustainability* **2025**, *17*, 4353. [\[CrossRef\]](#)
128. Koryak, O.; Mole, K.F.; Lockett, A.; Hayton, J.C.; Ucbasaran, D.; Hodgkinson, G.P. Entrepreneurial Leadership, Capabilities and Firm Growth. *Int. Small Bus. J.* **2015**, *33*, 89–105. [\[CrossRef\]](#)
129. Razzaque, A.; Lee, I.; Mangalaraj, G. The Effect of Entrepreneurial Leadership Traits on Corporate Sustainable Development and Firm Performance: A Resource-Based View. *Eur. Bus. Rev.* **2023**, *36*, 177–200. [\[CrossRef\]](#)
130. Surie, G.; Ashley, A. Integrating Pragmatism and Ethics in Entrepreneurial Leadership for Sustainable Value Creation. *J. Bus. Ethics* **2008**, *81*, 235–246. [\[CrossRef\]](#)
131. Chen, M.-H. Entrepreneurial Leadership and New Ventures: Creativity in Entrepreneurial Teams. *Creat. Innov. Manag.* **2007**, *16*, 239–249. [\[CrossRef\]](#)
132. Hidayat-ur-Rehman, I.; Hossain, M.N. The Impacts of Fintech Adoption, Green Finance and Competitiveness on Banks' Sustainable Performance: Digital Transformation as Moderator. *Asia-Pac. J. Bus. Adm.* **2024**. [\[CrossRef\]](#)
133. Iyiola, K.; Alzubi, A.; Dappa, K. The Influence of Learning Orientation on Entrepreneurial Performance: The Role of Business Model Innovation and Risk-Taking Propensity. *J. Open Innov. Technol. Mark. Complex.* **2023**, *9*, 100133. [\[CrossRef\]](#)
134. Koseoglu, G.; Liu, Y.; Shalley, C.E. Working with Creative Leaders: Exploring the Relationship between Supervisors' and Subordinates' Creativity. *Leadersh. Q.* **2017**, *28*, 798–811. [\[CrossRef\]](#)
135. de Barros, R.; Resende, L.M.; Pontes, J. Exploring Creativity and Innovation in Organizational Contexts: A Systematic Review and Bibliometric Analysis of Key Models and Emerging Opportunities. *J. Open Innov. Technol. Mark. Complex.* **2025**, *11*, 100526. [\[CrossRef\]](#)
136. Alshahrani, M.A.; Yaqub, M.Z.; Ali, M.; El Hakimi, I.; Salam, M.A. Could Entrepreneurial Leadership Promote Employees' IWB? The Roles of Intrinsic Motivation, Creative Self-Efficacy and Firms' Innovation Climate. *Int. J. Innov. Sci.* **2025**. [\[CrossRef\]](#)

137. Süer, Ö.; Levent, H.; Şen, S. Foreign Entry and the Turkish Banking System in 2000s. *North Am. J. Econ. Financ.* **2016**, *37*, 420–435. [\[CrossRef\]](#)
138. Bousrih, J. The Impact of Digitalization on the Banking Sector: Evidence from Fintech Countries. *Asian Econ. Financ. Rev.* **2023**, *13*, 269–278. [\[CrossRef\]](#)
139. Tekin, Z. Green Banking Strategies: Evidence from Turkish Banks. *Borsa Istanbul. Rev.* **2025**, *25*, 930–938. [\[CrossRef\]](#)
140. Kim, R.C.; Scullion, H. Inclusive Leadership in a Turbulent Global World: A Systematic Review and Future Research Directions. In *Advances in Global Leadership*; Osland, J.S., Reiche, B.S., Maznevski, M.L., Mendenhall, M.E., Eds.; Emerald Publishing Limited: Leeds, UK, 2025; Volume 16, pp. 151–166; ISBN 978-1-83662-289-5.
141. Rehman, K.; Lim, K.B.; Yeo, S.F.; Saif, N.; Ameerq, M. The Nexus of Entrepreneurial Leadership and Entrepreneurial Success with a Mediation of Technology Management Processes: From the Perspective of the Small- and Medium-Sized Enterprises of Khyber Pakhtunkhwa, Pakistan. *Sustainability* **2025**, *17*, 882. [\[CrossRef\]](#)
142. Adu, I.N.; Boakye, K.O.; Yeboah, S.; Twumasi, E. Entrepreneurial Leadership and Employee Performance; the Role of Innovative Work Behavior among Employees in the Food and Beverages Industry. *Int. Hosp. Rev.* **2024**, *39*, 2516–8142. [\[CrossRef\]](#)
143. Ibrahim, A.; Al-refaei, A.A.; Alshuhumi, S.; Al-Hidabi, D.; Ateeq, A. The Effect of Entrepreneurial Leadership on Employee's Creativity and Sustainable Innovation Performance in Education Sector: A Literature Review. In *Business Development via AI and Digitalization: Volume 1*; Hamdan, A., Harraf, A., Eds.; Springer Nature: Cham, Switzerland, 2024; pp. 1005–1017; ISBN 978-3-031-62102-4.
144. Ercantan, K.; Eyupoglu, Ş.Z.; Ercantan, Ö. The Entrepreneurial Leadership, Innovative Behaviour, and Competitive Advantage Relationship in Manufacturing Companies: A Key to Manufactural Development and Sustainable Business. *Sustainability* **2024**, *16*, 2407. [\[CrossRef\]](#)
145. Atobishi, T.; Podruzsik, S. Ethical Entrepreneurial Leadership and Corporate Sustainable Development: A Resource-Based View of Competitive Advantage in Small and Medium Enterprises. *Sustainability* **2025**, *17*, 6109. [\[CrossRef\]](#)
146. Al Mamun, A.; Ibrahim, M.D.; Yusoff, M.N.H.B.; Fazal, S.A. Entrepreneurial Leadership, Performance, and Sustainability of Micro-Enterprises in Malaysia. *Sustainability* **2018**, *10*, 1591. [\[CrossRef\]](#)
147. Vasconcellos, S.L.D.; Parente, R.C.; Schotter, A.P.J.; Garrido, I.L.; Gonçalo, C.R. Organizational Creativity: A Microfoundation of the International Business Competence and Performance Link. *J. Int. Manag.* **2024**, *30*, 101203. [\[CrossRef\]](#)
148. Zhang, Y.; Zheng, J.; Darko, A. How Does Transformational Leadership Promote Innovation in Construction? The Mediating Role of Innovation Climate and the Multilevel Moderation Role of Project Requirements. *Sustainability* **2018**, *10*, 1506. [\[CrossRef\]](#)
149. Marfu, A.; Abbas, H.; Sya, A.; Purwanto, A.; Nadiroh; Sumargo, B.; Wulandari, S.S.; Malaihollo, C.A.; Tanubrata, D.; Pratiwi, D.I. Building Long-Term Value: A Practical Guide to Integrating ESG into Business Strategies. *Sustain. Futures* **2025**, *10*, 100955. [\[CrossRef\]](#)
150. House, R.J.J.; Hanges, P.J.J.; Javidan, M. *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*, 1st ed.; Dorfman, P.W.W., Gupta, V., Eds.; SAGE Publications, Inc.: Thousand Oaks, CA, USA, 2004; ISBN 978-0-7619-2401-2.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.