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Unlocking organizational outcomes in Saudi telecommunications: the interplay of employee satisfaction, learning opportunities, and safety culture

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This research analyzes the relationship among employee satisfaction, customer satisfaction, financial performance, learning and growth opportunities, and safety culture in telecommunications companies in Saudi Arabia. The research examines the dynamics of Vision 2030-driven organizational reforms through the frameworks of Social Exchange Theory, Human Capital Theory, and Contingency Theory. A cross-sectional survey of 377 employees was conducted, and Covariance-Based Structural Equation Modeling (CB-SEM) was used due to its robustness in testing complex, theory-driven models and its suitability for assessing latent constructs with strong theoretical grounding, in contrast to the more prediction-focused PLS-SEM approach. Unexpectedly, employee satisfaction did not significantly predict customer satisfaction or financial performance. Learning and growth opportunities functioned as a suppressor rather than an enabler, demonstrating a negative indirect effect on these outcomes. Safety culture did not moderate the direct effects; however, it partially alleviated the negative mediation concerning customer satisfaction. The findings indicate that cultural norms, including high power distance and collectivism, alongside the evolving HR infrastructure, may impede the conversion of satisfaction and training into quantifiable performance within the Saudi context. This research enhances theoretical understanding by pinpointing boundary conditions that restrict the applicability of conventional HRM models in varied institutional contexts. The findings support the implementation of context-sensitive HR strategies that prioritize the alignment of employee development programs with operational requirements, promote psychologically safe environments, and customize satisfaction initiatives to fit local organizational frameworks and cultural norms.

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Introduction

Employee satisfaction is recognized as a crucial element of contemporary human resource management (HRM), significantly contributing to corporate competitiveness. An increasing amount of research indicates that satisfied employees lead to enhanced productivity, more customer loyalty, and improved service quality (Abdullahi et al., 2024; Yu et al., 2022). Compensation, acknowledgment, professional development, and work-life balance are critical factors influencing employee satisfaction (Khassawneh et al., 2024). Despite extensive academic research on its benefits, prior studies have largely overlooked the relationship between employee satisfaction and quantifiable organizational outcomes, such as customer satisfaction and financial performance, particularly in non-Western and rapidly developing economies (AlHammadi and Abu Elanain, 2024; Van Beurden et al., 2021).

Rooted in social exchange theory, the concept asserts that employees who recognize equitable and reciprocal advantages are more inclined to exhibit loyalty and commitment, providing a significant theoretical framework for comprehending the impact of satisfaction on organizational behavior (Bahadır et al., 2024). This study highlights the necessity of exploring the mechanisms by which satisfaction influences organizational success in specific contexts, rather than restating established outcomes.

Understanding the dynamics of Saudi Arabia's telecommunications sector is particularly relevant within the framework of the nation's Vision 2030 reform agenda. The sector functions in a fiercely competitive landscape, influenced by cultural norms grounded in Islamic principles that prioritize communal welfare, work-life balance, and organizational loyalty over personal accomplishments (Al-Taweel, 2021; Aldoghan et al., 2022; Alenezi, 2024). These cultural dimensions, alongside national initiatives like Saudization and digital transformation, may influence the strength and direction of the relationship between employee satisfaction and organizational performance, underscoring the need for empirical inquiry in this setting.

Among the things that may influence these interactions, opportunities for learning and development merit further consideration. Professional development programs, encompassing formal education, on-the-job training, and ongoing learning, augment employees' skills and foster corporate productivity and innovation (Chen et al., 2021; Nauman et al., 2021). Job characteristics theory posits that enhancing job aspects, including autonomy, task significance, and skill variation, can augment intrinsic motivation and performance (Alshemmari, 2023; Hackman et al., 2005). The empirical investigation has yet to sufficiently establish how developmental opportunities mediate the connection between employee satisfaction and consumer and financial outcomes (Battisti et al., 2021).

Additionally, safety culture may act as a contextual moderator influencing these dynamics. Safety culture encompasses shared values, attitudes, and practices that emphasize the importance of workplace safety (Naji et al., 2022; Tappura et al., 2022). A robust safety culture has been associated with improved employee morale and satisfaction (Abeje and Luo, 2023). From a contingency theory perspective, organizational effectiveness hinges on aligning internal structures, such as safety management systems, with external and operational demands (Grote, 2020; Kusumawati, 2020). In high-risk industries like telecommunications, where technological hazards are prevalent, safety culture may significantly affect how satisfaction translates into performance outcomes (Otitolaiye et al., 2021).

Despite extensive research indicating the advantages of employee satisfaction (Abdullahi et al., 2024; Yu et al., 2022), a significant gap exists in empirical studies that explore the translation of satisfaction into quantifiable organizational outcomes,

specifically customer satisfaction and financial performance, in emerging markets like Saudi Arabia (AlHammadi and Abu Elanain, 2024; Alsharari and Aljohani, 2024). Furthermore, while theories such as Human Capital Theory (Chen et al., 2021) and Job Characteristics Theory (Alshemmari, 2023; Hackman et al., 2005) suggest that opportunities for learning and growth may mediate these relationships, and Contingency Theory (Grote, 2020; Kusumawati, 2020) posits that safety culture could moderate them, empirical investigations testing these mechanisms within rapidly transforming economies remain scarce (Abdullahi et al., 2024; Almuhanna and Alharbi, 2023). Specifically, despite profound changes driven by national initiatives such as Vision 2030 and Saudization, the combined roles of learning and growth opportunities as a mediator and safety culture as a moderator in Saudi Arabia's telecommunications sector have not been adequately explored (Aldoghan et al., 2022; Alenezi, 2024). Addressing this research gap is critical for advancing theoretical understanding and informing managerial practices suited to this unique cultural and economic context.

Accordingly, this study seeks to examine the direct influence of employee satisfaction on customer satisfaction and financial success within Saudi Arabian telecommunications companies. This study further analyzes the mediating role of learning and growth opportunities and the moderating effect of safety culture in these interactions. This investigation is guided by the following research questions:

1. What is the impact of employee satisfaction on customer satisfaction and financial performance in Saudi telecommunications companies?
2. To what extent do learning and growth opportunities mediate the relationship between employee satisfaction and organizational outcomes?
3. How does safety culture moderate the relationships among employee satisfaction, learning and development opportunities, and organizational performance?

This study is significant for its contributions to both theory and practice. This study enhances HRM literature by clarifying the relationship between employee satisfaction and organizational outcomes in a non-Western context, utilizing social exchange, human capital, job characteristics, and contingency theories. Practically, the study offers strategic insights for HR managers aimed at improving employee satisfaction, fostering continuous professional development, and establishing a culture of safety, which in turn enhances customer satisfaction and financial performance. The findings present policy implications for national stakeholders seeking to align HRM strategies with Vision 2030 objectives, especially in addressing infrastructural and cultural challenges, including digital literacy deficiencies and resistance to organizational change. This research introduces an integrative framework that combines learning and growth opportunities as a mediator and safety culture as a moderator—an approach not yet widely adopted in emerging markets like Saudi Arabia's telecommunications sector—thus addressing critical gaps in current HRM scholarship.

Literature review and hypotheses development

Employee satisfaction and organizational performance. In the current competitive business landscape, employee satisfaction is a crucial determinant of organizational success across many industries and cultures (Abdullahi et al., 2024; Yu et al., 2022). Compensation, recognition, career advancement, and work-life balance are all elements that contribute to how satisfied individuals are with their jobs (Khassawneh et al., 2024). Social

Exchange Theory (SET) posits that employees who recognize reciprocal benefits are more inclined to demonstrate loyalty and commitment, subsequently improving organizational performance (Bahadır et al., 2024). Herzberg's Two-Factor Theory highlights the importance of intrinsic motivators, including success and acknowledgment, in contributing to employee satisfaction (Siddiqui, 2024).

Empirical evidence demonstrates that satisfied employees contribute to higher productivity, enhanced customer loyalty, and improved service delivery across industries (Arsawan et al., 2020; Yu et al., 2022). For example, innovation is stimulated by the trust between employees and leaders (Kozioł-Nadolna, 2020), and performance in the public sector is improved by recognition (Thant and Chang, 2021). Leadership and career development are consistently identified as universal factors influencing employee satisfaction (Shang et al., 2024). Nonetheless, numerous studies present mixed or contradictory results. Research suggests that high employee satisfaction does not consistently lead to measurable enhancements in customer satisfaction or financial performance, especially when contextual factors such as sector, national culture, or leadership style are misaligned (Alsharari and Aljohani, 2024; Hemsworth et al., 2024; Rajaa and Mekkaoui, 2025).

This contradiction holds particular significance in the Saudi context, where cultural and institutional factors may influence anticipated outcomes. Cultural and economic factors significantly impact job satisfaction in Saudi Arabia. Islamic principles dictate that the Saudi workplace prioritize collective welfare, work-life balance, and organizational loyalty over individual success (Al-Taweel, 2021; Alenezi, 2024). Islamic values, such as accommodating prayer times and addressing gender dynamics, shape workplace norms in industries like telecommunications and finance, potentially boosting employee satisfaction but sometimes at the cost of organizational efficiency and customer satisfaction (Almuqrin et al., 2023). Economic changes linked to Vision 2030, especially Saudization, have created opportunities and challenges, leading to new employment prospects while heightening job insecurity in the telecommunications sector, which is one of the most competitive sectors in Saudi Arabia (Aldoghan et al., 2022). Given these factors, employee satisfaction is of crucial significance to Saudi telecommunications companies that are endeavoring to maintain high-quality service delivery, minimize turnover, and retain skilled Saudi nationals in the face of intense market competition and rapid policy-driven workforce localization.

The applicability of Western theoretical models, particularly SET and Herzberg's theory, requires careful reassessment within the Saudi context. These frameworks frequently highlight individual agency and autonomy, whereas the Saudi cultural framework tends to favor collectivism, hierarchical structures, and significant power distance (Hofstede, 2001). The relationships suggested by these models may be influenced or diminished by local norms, including deferential leadership practices and restricted employee voice, which can lessen the impact of satisfaction on organizational performance.

The relationship between employee satisfaction and customer satisfaction holds significant importance in service-oriented industries, particularly within the telecommunications sector. The service-profit chain model asserts that employee satisfaction leads to enhanced service quality, thereby elevating consumer satisfaction and loyalty (Son et al., 2021). Intense competition and elevated customer expectations intensify the relationship in the Saudi telecommunications sector (Aldoghan et al., 2022). However, some studies suggest that this correlation may not be uniformly relevant. According to Guenther et al. (2025), the impact of employee satisfaction on customer perceptions may be minor when service delivery is highly standardized when organizational processes limit employee autonomy.

The nuances highlight the necessity of critically evaluating assumptions and investigating moderating factors such as safety culture or training infrastructure, especially within the Saudi context, where cultural collectivism and rigid hierarchy may alter anticipated outcomes (Alenezi, 2024; Almuqrin et al., 2023). Understanding this relationship is crucial for companies aiming to elevate customer happiness through the enhancement of employee satisfaction. Consequently, we put up the subsequent hypothesis:

Hypothesis 1: Employee satisfaction is positively associated with customer satisfaction in Saudi Arabian telecommunications companies.

Furthermore, factors including heightened productivity, decreased turnover, and improved corporate reputation have associated employee satisfaction with enhanced financial performance (Ali et al., 2020; Kessler et al., 2020; Li et al., 2022). SET posits that employees who perceive themselves as valued and satisfied are more inclined to positively impact organizational objectives, consequently enhancing financial performance (March et al., 2023). In Saudi Arabia's expanding telecommunications sector, aligned with Vision 2030's economic reforms that emphasize efficiency and competitiveness, the financial benefits of employee satisfaction are significantly considerable (Aldoghan et al., 2022).

It is important to note that not all studies establish a direct correlation. Nguyen et al. (2023) illustrate that contextual factors such as poor process alignment, external market limitations, and lack of managerial support may weaken the relationship between satisfaction and financial performance. The findings highlight the necessity for a detailed understanding of this relationship, especially in contexts where structural or cultural barriers may interfere with the expected connection between satisfaction and financial outcomes. In light of this rationale, we put forth the subsequent hypothesis:

Hypothesis 2: Employee satisfaction is positively associated with financial performance in Saudi Arabian telecommunications companies.

Taken together, Hypotheses 1 and 2 establish the foundational assumption that employee satisfaction contributes directly to key organizational outcomes. However, these direct effects may be underpinned or amplified by internal mechanisms and contextual conditions, necessitating an examination of potential mediating and moderating influences.

Learning and growth opportunities. Professional development opportunities, such as formal education, on-the-job training, seminars, and continuous learning programs, are crucial for the improvement of organizational performance by enhancing employee skills and competencies (Nauman et al., 2021; Sesen and Ertan, 2022). These initiatives improve performance in diverse global contexts and foster favorable employee attitudes, including job satisfaction and organizational commitment (Akdere and Egan, 2020; Aruldoss et al., 2022). Randall et al. (2022) demonstrated that access to formal and informal training decreased turnover intentions. In contrast, Rawashdeh and Tamimi (2020) noted that structured training programs enhanced affective commitment and job performance.

According to human capital theory, investing in employee development enhances productivity and competitiveness by equipping staff with essential knowledge and skills (Chen et al., 2021). In rapidly changing sectors such as telecommunications, these investments allow companies to adapt more swiftly to technological developments and competitive challenges (Keshavarz et al., 2021). Job Characteristics Theory posits that enhancing job roles through dimensions like skill variety, task

significance, autonomy, and feedback promotes intrinsic motivation, resulting in increased employee satisfaction and enhanced performance (Hackman et al., 2005). Alshemmari (2023) highlights that learning opportunities act as catalysts for job enrichment, allowing employees to acquire greater meaning in their work, which enhances satisfaction and organizational contribution. In the Saudi telecommunications sector, learning and growth opportunities are particularly important given the emphasis on Saudization under Vision 2030, which creates an urgent need to upskill national employees and address persistent gaps in digital literacy, technical expertise, and modern customer service competencies (Aldiab et al., 2022).

These theories should be understood within the framework of the Saudi cultural context. Workplaces in Saudi Arabia demonstrate considerable power distance, a collectivist culture, and an increased focus on socio-emotional needs (Sabir et al., 2022). Thus, conventional Western models may need modifications to operate effectively in this context. Autonomy, a key component of Job Characteristics Theory, may be constrained by hierarchical organizational structures. This limitation may necessitate the adoption of alternative mechanisms, including collaborative feedback or team-based learning, to achieve similar motivational outcomes (Hamlin et al., 2023). Furthermore, Saudi employees prioritize interpersonal relationships and emotional support, implying that successful professional development initiatives must integrate social elements alongside technical content (Sabir et al., 2022).

Technological advancements have facilitated the emergence of e-learning programs like “Ithrai,” providing flexible opportunities for upskilling (Altwijri and Aldosemani, 2022). The effectiveness of these platforms is influenced by variations in digital literacy and resistance to change (Alshahrani et al., 2023). Moreover, infrastructural obstacles, such as insufficient digital infrastructure and the lack of customized learning pathways, further constrain the transformative capacity of these programs. Effective implementation requires comprehensive assessment of employee preparedness, organizational capability, and cultural flexibility (Timotheou et al., 2023). These considerations further support the need to explore developmental mechanisms through which employee satisfaction exerts its impact on organizational outcomes.

While Hypotheses 1 and 2 propose direct relationships between employee satisfaction and performance outcomes (i.e., customer satisfaction and financial performance), prior evidence and theoretical models suggest that this effect is also likely to operate through internal capability-building mechanisms. Based on human capital theory and job characteristics theory, learning and growth opportunities serve as a mediating pathway that facilitates the translation of employee satisfaction into enhanced organizational performance. Employee perception of significant investment in their development enhances satisfaction, which in turn promotes skill acquisition, engagement, and alignment with strategic objectives, ultimately benefiting both customer-focused and financial results. Therefore, we put forth the subsequent hypotheses:

Hypothesis 3: Learning and growth opportunities significantly mediate the positive relationship between employee satisfaction and customer satisfaction in Saudi Arabian telecommunications companies.

Hypothesis 4: Learning and growth opportunities significantly mediate the positive relationship between employee satisfaction and financial performance in Saudi Arabian telecommunications companies.

Safety culture. Safety culture encompasses a collection of shared values, norms, and practices that influence organizational

attitudes regarding safety across all levels (Naji et al., 2022; Tappura et al., 2022). Core dimensions encompass management commitment, employee involvement, communication practices, and compliance with formal safety procedures (Abeje and Luo, 2023). A strong safety culture not only enhances physical well-being but also improves employee morale, satisfaction, and organizational efficiency, especially in high-risk sectors like energy and manufacturing (Naji et al., 2022; Otitolaiye et al., 2021).

According to contingency theory, organizational success depends on the fit between internal systems (e.g., HRM practices, development programs) and external contingencies (e.g., regulatory pressures, safety norms) (Grote, 2020; Kusumawati, 2020). A strong safety culture promotes employee trust, supports autonomy in dangerous situations, and creates feedback mechanisms, thereby improving satisfaction and performance (Noor Arzahan et al., 2022). While telecommunications is not typically categorized as a high-risk sector (Beeharry and Tsokizep Fokone, 2022), the Saudi telecommunications industry encounters considerable operational and technical challenges, including tower maintenance, equipment failures, and electrical hazards. Therefore, promoting a culture of safety is crucial for the well-being of employees, their morale, and ongoing productivity in this swiftly evolving industry (Asfahani, 2024). Moreover, robust safety practices are becoming more essential in alignment with the overarching goals of Vision 2030, which emphasizes enhanced workplace standards and improvements in quality of life (Aichouni et al., 2023). In Saudi Arabia, where centralized systems and risk aversion dominate many sectors, the incorporation of safety into organizational norms is both a legal need and a cultural necessity (Murr and Carrera, 2022).

However, assuming that safety culture is only a positive influence requires a more sophisticated understanding. In some firms, particularly those with inflexible hierarchies, the application of safety measures can be punitive or bureaucratic, reducing employee discretion and intrinsic motivation (Rawas and Abou Hashish, 2023). In these instances, safety culture may exert no influence, or potentially a negative influence, on the relationship between satisfaction and performance. Excessively strict safety enforcement may indicate mistrust or hinder innovation, thereby undermining employee morale (Nyarugwe et al., 2020). The implications indicate that the influence of safety culture depends on its perception and implementation. The development of safety culture in Saudi Arabia is in progress. Organizations like Saudi Aramco have successfully executed leadership-driven safety protocols that improve outcomes (Al-Arnous and Abdelwahed, 2022). Many sectors still face challenges such as low incident reporting, outdated training, and punitive measures in error management (Al Muharraq et al., 2024; Aljaffary et al., 2021). Cultural traits, including the “blame and shame” mentality, restrict open communication and impede the learning process from failures, which is essential for a mature safety culture (Rawas and Abou Hashish, 2023).

Building on Hypotheses 1 and 2, which establish direct relationships between employee satisfaction and performance outcomes, we propose that safety culture serves as a contextual moderator that enhances or weakens these effects. This assertion is substantiated by contingency theory, which posits that the success of HRM is contingent upon the congruence between internal employee conditions (e.g., satisfaction) and external organizational norms (e.g., safety culture). The positive effects of satisfaction are more likely to translate into enhanced customer satisfaction and financial outcomes in environments characterized by strong safety values and leadership commitment to employee well-being. Consequently, we put forth the subsequent hypotheses:

Hypothesis 5: Safety culture positively moderates the relationship between employee satisfaction and customer satisfaction in Saudi Arabian telecommunications companies, such that the relationship is stronger when safety culture is high.

Hypothesis 6: Safety culture positively moderates the relationship between employee satisfaction and financial performance in Saudi Arabian telecommunications companies, such that the relationship is stronger when safety culture is high.

In addition to direct effects, safety culture may enhance the mediating role of learning and growth opportunities. A safety-focused environment involves employees in developmental activities, promoting growth and enhancing satisfaction and achievement (Otitolaiye et al., 2021). The safety culture enhances risk management initiatives and training, underscoring the correlation between employee satisfaction and business success (Dağlı et al., 2024). Safety protocols promote a culture of continuous improvement, enhancing learning opportunities (Rahim et al., 2024). The combination of knowledge management and quality management with safety measures enhances learning and job satisfaction, leading to improved performance (Lehyani et al., 2023). Systematic safety training and professional development enhance commitment, hence enhancing outcomes such as customer satisfaction (Khassawneh et al., 2024).

Hypotheses 3 and 4 suggest that learning and growth opportunities mediate the relationship between employee satisfaction and performance; nevertheless, this indirect pathway may depend on the organizational climate, particularly the existing safety culture. In environments that promote safety and psychological stability, employees are more inclined to engage in development activities, internalize learning, and enhance performance (McClintock and Fainstad, 2022). In organizations characterized by punitive or bureaucratic safety regimes, opportunities for growth may not produce equivalent benefits, despite overall employee satisfaction. Contingency theory substantiates this interpretation, indicating that the effectiveness of developmental interventions is contingent upon their congruence with overarching organizational conditions (Mehta et al., 2022). Both the human capital theory and the job characteristics theory suggest that when workers experience psychological safety, support, and empowerment, they are more driven to acquire and utilize their talents (Islam and Amin, 2022).

Accordingly, this study introduces a second-order moderation, proposing that safety culture strengthens the mediating effect of learning and growth opportunities. In other words, the indirect relationship between employee satisfaction and performance outcomes (via learning and growth) becomes stronger when safety culture is high. This reflects a conditional indirect effect—commonly conceptualized as moderated mediation. We therefore present the subsequent hypothesis:

Hypothesis 7: The mediating effect of learning and growth opportunities on the relationship between employee satisfaction and organizational performance (a. customer satisfaction and b. financial performance) is stronger in Saudi Arabian telecommunications companies with a high safety culture.

The conceptual model. This study develops a fully moderated mediation model to clarify the complex relationships among employee satisfaction, learning and growth opportunities, safety culture, and organizational outcomes, particularly customer satisfaction and financial performance, within Saudi telecommunication companies. Prior research demonstrates that employee satisfaction positively influences organizational outcomes (Arsawan et al., 2020; Yu et al., 2022). Furthermore, opportunities for learning and growth play a crucial role in mediating this relationship by improving job characteristics like

skill variety and offering valuable feedback, as detailed in Job Characteristics Theory (Alshemmari, 2023; Hackman et al., 2005). Additionally, safety culture acts as an essential moderator, impacting the intensity of this mediation effect by establishing a nurturing environment that promotes ongoing learning and employee growth (Lasrado and Kassem, 2021; Parast and Safari, 2024). The suggested model states that safety culture moderates the effect of learning and growth opportunities as a mediator between employee satisfaction and organizational outcomes. More specifically, the model states that the strength and nature of this mediation vary with the level of safety culture in an organization.

This model's theoretical foundation integrates contingency theory, human capital theory, and job characteristics theory, thereby providing a comprehensive understanding of the proposed relationships. Contingency theory asserts that organizational efficiency is contingent upon the congruence between internal structures and external environmental variables (Grote, 2020; Kusumawati, 2020). In this context, safety culture, as an external factor, can influence how learning and growth opportunities mediate the relationship between employee satisfaction and organizational outcomes. Balancing centralization and decentralization in safety practices enables organizations to improve adaptability and compliance with standards, which in turn enhances employee satisfaction and performance (Grote, 2020; Lyubych et al., 2022).

Furthermore, investment in staff development, as posited by human capital theory, enhances organizational performance through the attainment of more skilled employees (Chen et al., 2021). A strong safety culture amplifies this effect by promoting ongoing learning in a safe environment, which enhances employee satisfaction and results in improved organizational outcomes through increased employee engagement and productivity (Lehyani et al., 2023; Otitolaiye et al., 2021; Rahim et al., 2024).

In addition, according to job characteristics theory, employees are more intrinsically motivated and perform better when they have opportunities to learn and advance in their careers (Alshemmari, 2023; Hackman et al., 2005). In the context of Saudi Arabian telecommunication companies, culturally tailored programs that align with collectivist values and address socio-emotional needs can further enhance employee satisfaction and organizational outcomes (Sabir et al., 2022). Thus, a safety culture can improve the efficacy of learning and development opportunities by fostering an environment that enhances job characteristics, resulting in superior performance and increased customer satisfaction.

Conversely, in organizations with a weak safety culture, employees may feel insecure or undervalued, which can hinder their participation in learning and growth opportunities (Al Muharrag et al., 2024; Aljaffary et al., 2021). Cultural factors, including a dominant “blame and shame” mentality, can hinder open communication and diminish the effectiveness of professional development programs (Rawas and Abou Hashish, 2023). This may diminish the mediating role of learning and growth opportunities in the relationship between employee satisfaction and organizational outcomes. Therefore, the suggested model indicates that safety culture moderates the indirect influence of employee satisfaction on organizational outcomes via learning and growth opportunities.

Figure 1 illustrates a conceptual model that encapsulates the intricate relationships between employee satisfaction, learning and growth opportunities, safety culture, and organizational outcomes. This highlights the essential function of safety culture in influencing the mediating effect of learning and growth opportunities, providing important insights for organizations aiming to improve performance via strategic human resource

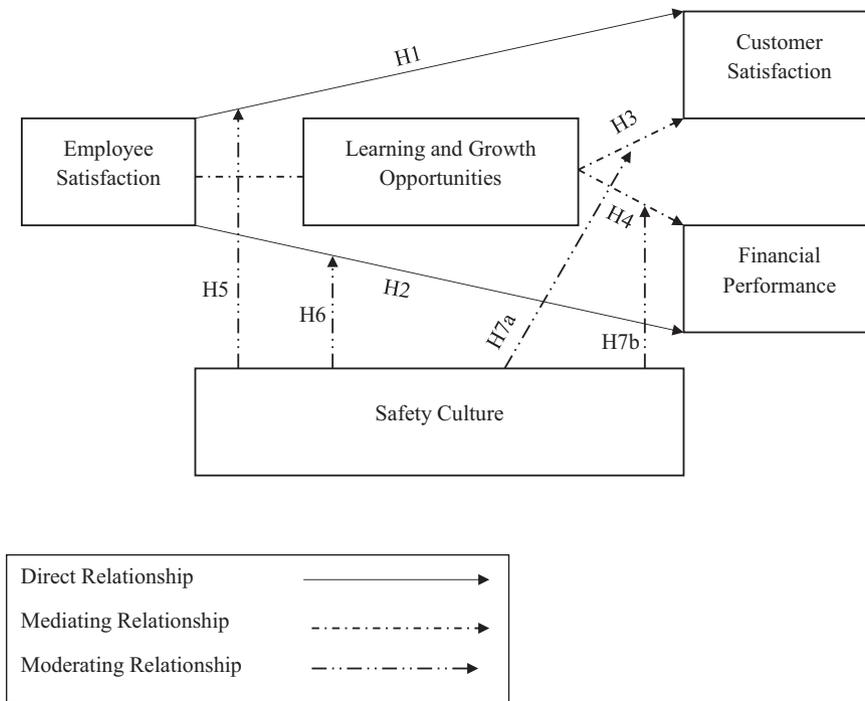


Fig. 1 The Conceptual Model.

practices. This understanding is essential for Saudi Arabian telecommunication companies seeking to utilize safety culture and enhanced job characteristics to optimize employee satisfaction and organizational success.

Research methods

Sampling and data collection. The data collection for this study was meticulously crafted to secure a representative sample from the telecommunications sector workforce in Saudi Arabia, concentrating on employees aged 18 and above across the Western, Central, and Eastern regions. The selection of these regions is based on their significance as the primary commercial and population hubs of the country, where leading telecommunications companies are based and conduct the majority of their operations. Therefore, the regional selection enhances the relevance and generalizability of the findings to the national sector. A random sampling method was used to minimize selection bias, thus enhancing the generalizability of the findings. Specifically, participating telecommunications firms provided employee rosters, from which participants were randomly selected using a computerized randomization algorithm to ensure unbiased representation.

According to Rosner’s (2015) sample size calculation with a ± 5% margin of error at a 95% confidence level, a target sample size of 384 was deemed statistically suitable for the sector’s reported employment of 249,157 employees (GaStat, 2023). To prevent under-coverage and ensure statistical validity, 500 employees were originally approached to account for anticipated non-responses, a common challenge in survey-based research.

A Google Forms electronic survey was utilized to gather data due to its secure management of extensive datasets, accessibility, and ease of use. This platform ensured the ethical treatment of data and the confidentiality of participants while also facilitating effective distribution across a variety of regions. Eligible participants were identified via employment records supplied by partnering telecommunications firms, guaranteeing that only qualified employees from the designated regions received the survey. Prior to full deployment, a pilot study was conducted with 30 employees to assess item clarity

and instrument reliability. The pilot test was conducted after initial ethical clearance and prior to full-scale data collection. Feedback from the pilot was used to refine item wording, layout, and survey length. The survey items were derived from validated scales in prior studies, ensuring theoretical grounding and construct validity.

To address common method bias (CMB), a range of procedural and statistical solutions were applied. In terms of procedure, measures were taken to ensure anonymity, the sequence of items was randomized, and any ambiguous wording was removed during the pilot phase. The single-factor analysis indicated that the first component represented just 28.6% of the overall variation, well below the 50% benchmark. A marker variable strategy was utilized to further evaluate CMB, confirming the absence of considerable common method variance. The use of both tests was intended to triangulate findings and ensure the robustness of CMB detection.

Invitations to participate were sent electronically, and informed consent was obtained at the beginning of the survey to ensure that participants were aware of the study’s objectives, their rights, and the measures in place to protect their data confidentiality. The University of Business and Technology Research Ethics Committee granted ethical approval (Approval No. UBT-REC-HRM-2023-29), and the research was conducted in compliance with the Declaration of Helsinki and applicable institutional and national guidelines for studies involving human participants. Confidentiality and anonymity were clearly underscored, and no individually identifiable information was gathered.

A total of 500 surveys were distributed, yielding 402 responses, with 377 of those validated after conducting internal consistency checks. The final response rate of 80.4% demonstrates the study’s significance and the successful implementation of engagement strategies, such as targeted reminders. Highlighting the importance of anonymity and voluntary participation was crucial for fostering candid responses and reducing response bias, thus improving the methodological integrity and dependability of the study’s results. Data was collected, encompassing demographic information, from November 2023 to February 2024, as outlined in Table 1.

Table 1 Demographic Characteristics.

Gender	Frequency	Percentage
Male	276	73.2%
Female	101	26.8%
Age	Frequency	Percentage
18-30 Years	88	23.3%
31-40 Years	132	35.0%
41-50 Years	119	31.6%
51-60 Years	31	8.2%
Above 60 Years	7	1.9%
Education Level	Frequency	Percentage
Diploma or less	57	15.1%
Undergraduate	206	54.6%
Postgraduate	114	30.2%
Level of Experience	Frequency	Percentage
Less than 1 year	13	3.4%
1-10 years	176	46.7%
11-20 years	143	37.9%
More than 20 years	45	11.9%
Marital Status	Frequency	Percentage
Single	132	35.0%
Married	227	60.2%
Divorced	15	4.0%
Widow/Widower	3	0.8%
Work Location	Frequency	Percentage
Eastern region	92	24.4%
Central region	216	57.3%
Western region	69	18.3%

Measures. The study’s components were accurately and reliably assessed using standardized measures from credible sources. Each item was scored on a five-point Likert scale, where 1 = “strongly agree” and 5 = “strongly disagree.” A sophisticated three-item scale, developed by Sinalval and Marôco (2020), was utilized to evaluate the independent variable, employee satisfaction. An example item is “I feel fairly satisfied with my present job.” We selected three items out of the original five to ensure that the measure was both relevant and manageable, minimizing respondent burden and enhancing response quality. This selective approach maintained scale validity while ensuring alignment with our research context, as confirmed by a Cronbach’s alpha of 0.839, indicating satisfactory internal consistency.

We assessed customer satisfaction based on employees’ perceptions of the services they deliver, using a two-item scale we developed for this study and informed by Manning et al. (2005). An example item is, “Our customers frequently express satisfaction with our service delivery.” Cronbach’s alpha for this scale was 0.645, slightly below the conventional threshold of 0.70; however, such levels are often acceptable in exploratory contexts, particularly when assessing constructs like customer satisfaction through indirect methods, which can be inherently complex and variable (Peterson, 1994).

The financial performance was evaluated using a three-item scale based on Chahal et al. (2016), concentrating on employees’ assessments of the organization’s financial results. An illustrative statement is, “I believe our organization has achieved strong financial profitability over the past year.” This scale exhibited great reliability, evidenced by a Cronbach’s alpha of 0.852, signifying robust internal consistency.

We conducted the assessment of learning and growth opportunities using a set of three items derived from Mourão et al. (2022). An illustrative statement is, “I have had significant professional development since I started working in this organization.” To enhance relevance to our context, we selected three of the original six items, preserving the essence of the

construct while ensuring brevity and response clarity. The adapted scale demonstrated robust internal consistency, with a Cronbach’s alpha of 0.841.

Finally, we assessed safety culture with three survey items from Håvold and Nettet (2009), which reflect employees’ perceptions of organizational safety practices. An illustrative item is, “The rules always describe the safest way of working.” With a Cronbach’s alpha of 0.856, this scale showed good evidence of internal consistency. Overall, these measures effectively encapsulate the study’s structures with dependable internal consistency, reinforcing the robustness and accuracy of the findings.

Data analysis. A series of statistical analyses were performed to guarantee robust and reliable results. We conducted an exploratory factor analysis (EFA) using SPSS version 30 to examine the underlying factor structure and construct dimensionality of the data. The EFA utilized the Kaiser-Meyer-Olkin (KMO) measure and Bartlett’s Test of Sphericity to assess sample adequacy and the suitability of the data for factor analysis, thus guaranteeing dependable factor extraction (Hair et al., 2018). Subsequently, Pearson’s correlation analysis was conducted to assess the bivariate correlations among variables, thereby reinforcing the convergence and discriminant validity of the measurement model. Following that, we performed confirmatory factor analysis (CFA) using AMOS version 30 to validate the measurement model by assessing convergent and discriminant validity, thereby confirming that the theoretical constructs were accurately represented by the observed variables. Model fit indices were utilized to assess the model’s conformity with established criteria for validity and reliability across constructs (Kline, 2023).

We employed covariance-based structural equation modeling (CB-SEM) using AMOS version 30 to assess the structural model and investigate the postulated direct links between components. We chose CB-SEM over Partial Least Squares Structural Equation Modeling (PLS-SEM) for numerous critical reasons. The primary aim of this study is to empirically validate theoretically derived hypotheses rather than to forecast results, rendering CB-SEM a more suitable analytical approach (Byrne, 2016). Secondly, CB-SEM offers an extensive array of global model fit indices that provide a thorough assessment of overall model fit, crucial for theory testing in confirmatory research (Kline, 2023). Third, due to the substantial sample size and the model’s complexity, CB-SEM provides enhanced estimation accuracy and is more adept at managing normally distributed data, aligning with the assumptions satisfied in this work (Hair et al., 2018). In contrast, PLS-SEM is better suited for exploratory research, predictive objectives, or situations involving limited sample sizes (Sarstedt et al., 2014). Additionally, CB-SEM facilitates the concurrent estimation of measurement and structural models, providing a thorough assessment of the proposed relationships (Hair et al., 2018).

To examine particular mediation and moderation hypotheses, we utilized the PROCESS macro for SPSS (version 4.2), deliberately choosing models that corresponded to the theoretical framework of each hypothesis: Model 4 for Hypotheses 3 and 4, Model 1 for Hypotheses 5 and 6, and Model 14 for Hypothesis 7. The PROCESS macro was employed for its efficacy in estimating indirect and conditional effects through bootstrapping approaches, thereby improving the precision of mediation and moderation analyses (Hayes, 2017). All analyses underpin the validity of our study’s conclusions and augment their credibility.

Results

Construct reliability and validity. The measuring methodology was rigorously assessed for reliability and validity based on established criteria. Table 2 demonstrates that all constructs

Table 2 Reliability and Validity Indicators for Study Constructs.

Instruments	Items	Factor loading	Cronbach's α	AVE	CR	Square Root of AVE
Employee Satisfaction	ES1	0.854	0.839	0.646	0.845	0.803
	ES2	0.832				
	ES3	0.922				
Customer Satisfaction	CS1	0.849	0.645	0.630	0.773	0.794
	CS2	0.866				
Financial Performance	FP1	0.895	0.852	0.558	0.791	0.747
	FP2	0.838				
	FP3	0.915				
Learning and Growth Opportunities	LGO1	0.843	0.841	0.625	0.833	0.791
	LGO2	0.899				
	LGO3	0.873				
Safety Culture	SC1	0.892	0.856	0.580	0.805	0.762
	SC2	0.854				
	SC3	0.894				

Table 3 Model Fit Indices Summary.

Fit Index	Value	Recommended Threshold	Interpretation
CMIN	73.361	Non-significant	Good
CMIN/DF	1.095	≤ 3	Good
RMSEA	0.016	≤ 0.05	Excellent
CFI	0.997	≥ 0.90	Excellent
TLI	0.996	≥ 0.90	Excellent
PGFI	0.621	≥ 0.50	Good

CMIN chi-square, DF degrees of freedom, RMSEA root mean square error of approximation, CFI Comparative Fit Index, TLI Tucker-Lewis Index, RMSEA root mean square error of approximation, PGFI Parsimony Goodness of Fit Index.

displayed sufficient internal consistency, as indicated by Cronbach's alpha values exceeding the suggested threshold of 0.70, except for customer satisfaction (0.645). This value, while slightly below the cutoff, is considered acceptable due to strong item loadings and theoretical coherence (Jebb et al., 2021). Composite reliability (CR) ratings varied from 0.773 to 0.845, signifying substantial internal consistency among the markers of each latent component. Convergent validity was confirmed by factor loadings over 0.70 and AVE values beyond the 0.50 threshold, indicating that the items effectively represent their respective constructs. Although financial performance indicates a somewhat diminished AVE (0.558), it remains within an acceptable range, supported by robust factor loadings and theoretical underpinnings (Dybro Liengard, 2024). The square roots of AVE values consistently exceeded inter-construct correlations, offering preliminary evidence of discriminant validity. The findings together affirm that the constructs employed in the study are statistically reliable and conceptually legitimate, hence endorsing their appropriateness for further structural modeling.

Confirmatory factor analysis. Table 3 displays the excellent model fit indices that were produced by the confirmatory factor analysis (CFA), which further proved the measurement model's resilience. Although there was a small difference between the observed and estimated covariance matrices, the chi-square statistic was not statistically significant. The ratio of chi-square to degrees of freedom was 1.095, which is significantly lower than the standard threshold of 3. Moreover, the RMSEA value of 0.016 demonstrates an outstanding fit, signifying minimal approximation error. The incremental fit indices, such as the Comparative Fit Index (CFI = 0.997) and Tucker-Lewis Index (TLI = 0.996), exceeded the commonly recognized threshold of 0.90, confirming

the structural adequacy of the model. With a Parsimony Goodness of Fit Index (PGFI = 0.621) higher than the minimum advised criterion of 0.50, model fit and simplicity were clearly in balance. These results taken together confirm the theoretical and empirical strength of the measurement model, therefore providing a strong basis for investigating the suggested relationships.

Discriminant validity analysis. Discriminant validity was assessed through the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio to ensure that the constructs were empirically distinct. Table 4 demonstrates that the square root of the AVE for each construct surpasses its correlations with all other constructs, thereby fulfilling the Fornell-Larcker criterion and affirming that each construct accounts for greater variance with its own indicators than with those of other constructs. The square root of AVE for employee satisfaction (0.804) exceeded its correlations with customer satisfaction, financial performance, learning and growth opportunities, and safety culture.

The HTMT ratios presented in Table 5 were all significantly beneath the stringent criterion of 0.85, with values including 0.500 for the relationship between customer satisfaction and financial performance and 0.201 for the correlation between learning and growth opportunities and employee satisfaction. The results jointly validate the discriminant validity of all constructs, establishing their conceptual distinctiveness and measurement independence within the overall model.

Hypothesis testing. The results of hypothesis testing, summarized in Table 6, reveal a nuanced set of findings that challenge initial expectations and invite further theoretical reflection. Employee satisfaction did not significantly predict customer satisfaction (H1) or financial performance (H2), despite conventional assumptions in human resource literature. Furthermore, mediation analyses indicated that learning and growth opportunities acted as a significant negative mediator in the relationships between employee satisfaction and both customer satisfaction (H3) and financial performance (H4). Employee satisfaction positively influenced learning and growth opportunities; however, the latter exhibited a negative association with the two outcomes, resulting in significant inverse indirect effects. Moderation analyses failed to support the role of safety culture in strengthening the direct relationships between employee satisfaction and customer satisfaction (H5) or financial performance (H6). However, partial support emerged for moderated mediation (H7a), where the negative mediating effect of learning and growth opportunities on the employee satisfaction–customer satisfaction link was less pronounced at higher levels of safety culture. This

Table 4 Findings of Fornell-Larker Criterion.

Instruments	1	2	3	4	5
1. Employee Satisfaction	0.804				
2. Customer Satisfaction	0.199	0.794			
3. Financial Performance	-0.074	0.657	0.747		
4. Learning and Growth Opportunities	-0.137	-0.217	-0.304	0.791	
5. Safety Culture	-0.190	0.405	0.375	-0.257	0.762

Diagonal elements (in bold) are the square roots of AVE for each construct, representing the amount of variance captured by the construct relative to the variance due to measurement error.

Table 5 Findings of Heterotrait-monotrait Ratio of Correlations (HTMT).

Instruments	Mean	Std. Deviation	1	2	3	4
1. ES	3.599	0.962				
2. CS	3.826	0.772	-0.088			
3. FP	3.183	1.207	-0.075	0.500 ^a		
4. LGO	3.331	1.063	0.201 ^a	-0.166 ^a	-0.246 ^a	
5. SC	3.157	1.161	-0.183 ^a	0.301 ^a	0.313 ^a	-0.214 ^a

ES employee satisfaction, CS customer satisfaction, FP financial performance, LGO learning and growth opportunities, SC safety culture.
^aCorrelation is significant at the 0.01 level (2-tailed).

Table 6 Summary of Hypothesis Testing Results.

Hypothesis	Path	β	SEM	t-Value	p Value	LLCI	ULCI	Results
Direct effect								
H1	ES → CS	-0.088	0.052	-1.704	0.089	-0.189	0.013	Rejected
H2	ES → FP	-0.075	0.052	-1.452	0.147	-0.177	0.028	Rejected
Meditation effect								
H3	ES → LGO → CS	-0.025	0.011			-0.049	-0.007	Rejected
H4	ES → LGO → FP	-0.061	0.021			-0.109	-0.025	Rejected
Moderation effect								
H5	ES × SC → CS	0.010	0.035	0.276	0.783	-0.059	0.079	Rejected
H6	ES × SC → FP	-0.048	0.054	-0.879	0.380	-0.154	0.059	Rejected
Moderated Mediation								
H7a	ES → LGO → CS (Moderated by SC)	0.018	0.009			0.004	0.038	Partially Supported
H7b	ES → LGO → FP (Moderated by SC)	0.009	0.011			-0.012	0.033	Rejected

ES employee satisfaction, CS customer satisfaction, FP financial performance, LGO learning and growth opportunities, SC safety culture, β standardized regression coefficient, SE standard error, t-Value calculated as β divided by SE, p Value probability value indicating statistical significance.

result indicates that safety culture may serve as a protective factor in reducing unintended negative outcomes. The moderated mediation effect on financial performance (H7b) was not supported. Although the majority of hypotheses were statistically rejected, the findings indicate intricate, context-dependent dynamics that require further theoretical and practical investigation, as detailed in the discussion section below.

Discussion and conclusion

This study investigated the correlations among employee satisfaction, customer satisfaction, financial performance, learning and growth opportunities, and safety culture in Saudi Arabian telecom companies. In contrast to predictions based on Social Exchange Theory (Bahadır et al., 2024) and Human Capital Theory (Chen et al., 2021), employee satisfaction did not significantly forecast customer satisfaction or financial performance. Additionally, learning and growth opportunities demonstrated a notable, albeit adverse, mediating effect, whereas safety culture did not significantly moderate these direct correlations; however,

partial support was identified for the moderated mediation effect on customer satisfaction.

The findings indicate a more intricate and context-dependent array of mechanisms than those typically addressed by classical HRM theories. The absence of substantial benefits of employee contentment challenges the core hypothesis that satisfied employees inherently display behaviors that enhance service quality or corporate performance. In Saudi Arabia, the results may signify a combination of cultural and institutional characteristics, including high power distance, strong collectivist norms, and centralized organizational structures, which may limit the autonomy and discretion required to translate satisfaction into measurable organizational outcomes (Alenezi, 2024; Sabir et al., 2022). In these systems, employees may adhere to minimum role requirements instead of exhibiting the discretionary effort commonly linked to high satisfaction (Hamlin et al., 2023).

The negative mediating effect of learning and growth possibilities further complicates this dynamic. Human capital theory asserts that expenditures in staff development will result in augmented competencies and superior outcomes. The findings,

however, suggest otherwise, potentially due to a misalignment between training materials and operational requirements or insufficiently executed program implementation (Alshahrani et al., 2023; Sabir et al., 2022). In rapidly evolving industries like telecommunications, training may disrupt workflows and result in service inconsistency, thereby reducing customer satisfaction and negatively impacting financial performance (Erenay et al., 2024; Jennings et al., 2022). Additionally, cultural obstacles, such as reluctance toward autonomy, opposition to innovation, and unease with self-directed learning, may further diminish the efficacy of development activities (Al Muharrag et al., 2024; Sabir et al., 2022).

Similarly, the lack of significant moderation by safety culture may indicate institutional immaturity in how safety practices are embedded and perceived. Contingency Theory emphasizes the importance of aligning internal practices with contextual demands (Grote, 2020), but the data suggest that safety culture in this sector is either underdeveloped or viewed as superficial (Aljaffary et al., 2021; Muthuswamy, 2023). Limited employee involvement, minimal incident reporting, and compliance-driven approaches may diminish its motivational impact (Alshaikh and Adamson, 2021). Nonetheless, the partial endorsement of H7a suggests that safety culture can act as a safeguard, alleviating some of the disturbances resulting from misaligned training and fostering a more stable service environment. This finding corresponds with Job Characteristics Theory, emphasizing the significance of support and feedback in enhancing intrinsic motivation and performance (Alshemmari, 2023; Hackman et al., 2005). Broader labor policy transitions, including Saudization and Vision 2030 reforms, may further explain these unexpected outcomes. Although these initiatives aim to boost national employment and economic diversification, they have also introduced uncertainty, job insecurity, and rapid restructuring (Aldoghan et al., 2022). In such an environment, employees may prioritize retention and compliance over innovation and service excellence, further weakening the link between satisfaction and performance outcomes (Asfahani et al., 2023).

Comparative international research illustrates the importance of context in influencing these relationships. Bhattacharya et al. (2021) identified that in the U.S., customer satisfaction enhances profitability by lowering operating expenses, particularly in service-intensive operations. Gazi et al. (2024) demonstrated that in Bangladesh, organizational commitment and knowledge sharing, facilitated by CRM systems, significantly improve satisfaction and performance. In South Korea, Son et al. (2021) confirmed that employee satisfaction improves customer satisfaction through perceived value, especially within well-structured service environments. Despite cultural diversity, these contexts share institutional maturity and HR system integration that allow satisfaction and development to produce measurable outcomes.

The backdrop of this study in Saudi Arabia, characterized by evolving HR policies, limited employee autonomy, and policy-driven modifications (Almatar, 2024), suggests that mere contentment and training may be insufficient. The discrepancies noted across various contexts suggest that national culture alone cannot fully explain the variations in satisfaction–performance dynamics. The interaction of cultural values, institutional structures, and strategic HR alignment serves as a crucial boundary condition for the application of theories including Social Exchange Theory, Human Capital Theory, and Job Characteristics Theory. Findings that seem contradictory in different contexts may be theoretically consistent when analyzed through the framework of institutional and cultural fit.

Theoretical implications. This study's findings present important theoretical implications by questioning the relevance of

established management theories in the context of Saudi Arabian telecommunications. The lack of substantial connections between employee satisfaction and organizational outcomes requires a thorough reassessment of social exchange theory, human capital theory, job characteristics theory, and contingency theory. Social exchange theory asserts that employees who recognize reciprocal benefits tend to demonstrate loyalty and enhance organizational performance (Bahadır et al., 2024). Nevertheless, our findings indicate that in the Saudi context, cultural elements like collectivism and high power distance may lead employees to prioritize group harmony rather than individual reciprocation (Alenezi, 2024; Sabir et al., 2022). This theory may need modification to address collective forms of reciprocity common in non-Western contexts. Furthermore, the negative mediation effect of learning and growth opportunities challenges human capital theory, which argues that investments in employee development enhance organizational performance through improved skills (Chen et al., 2021). This disparity could be attributed to misalignments between training programs and organizational needs, as well as cultural resistance to change (Alshahrani et al., 2023), implying that human capital theory should include cultural factors. Additionally, the findings impact job characteristics theory, which suggests that enhancing job dimensions increases intrinsic motivation (Alshemmari, 2023; Hackman et al., 2005); however, increasing skill variety did not lead to better performance, possibly due to cultural attitudes toward autonomy and authority (Sabir et al., 2022). Therefore, job characteristics theory might need modification to reflect cultural preferences in job design. Furthermore, the absence of moderation by safety culture necessitates a reevaluation of contingency theory, which underscores the importance of matching internal practices with external influences for optimal effectiveness (Grote, 2020; Kusumawati, 2020). The low influence of safety culture shows a misalignment, which could be due to a blame and shame attitude impeding safety efforts (Rawas and Abou Hashish, 2023). These insights underscore the necessity of accounting for cultural context when implementing Western-developed theories in non-Western settings, as the distinct cultural, economic, and organizational factors of the Saudi context (Al-Taweel, 2021; Aldoghan et al., 2022) may modify anticipated relationships. Consequently, our research enhances the human resource management literature by illustrating that assumptions regarding employee behavior and organizational performance may not be universally applicable across diverse cultural contexts, highlighting the need for the creation of more sophisticated, contextually informed models.

Practical implications. The results of this study offer significant and actionable insights for human resource managers and policymakers operating in the Saudi Arabian telecommunications sector. Given that the anticipated positive associations between employee satisfaction and organizational outcomes were not confirmed, HR professionals should conduct a thorough audit of current employee satisfaction initiatives and performance enhancement programs. The scope of this evaluation must extend beyond general interventions to encompass specific, data-driven evaluations of the aspects of satisfaction that are not translating into performance improvements, such as feedback, development opportunities, or recognition. HR managers should, in practice, implement structured feedback mechanisms, such as pulse surveys or quarterly focus groups, to obtain real-time employee feedback on their training and development requirements. Based on this input, organizations ought to collaboratively build learning modules with employees, including industry-specific scenarios and practical simulations to guarantee direct

applicability to regular job duties. This can enhance the perceived value of training programs and diminish the gap between learning and job performance. In addition, line managers should be trained to serve as on-the-ground facilitators of change, actively supporting employees through structured coaching and mentoring schemes during transitions. Performance-linked incentives tied to participation in developmental programs may also encourage more proactive engagement.

On a broader scale, the findings emphasize the necessity for policymakers to establish comprehensive guidelines that consider the distinct cultural dynamics of Saudi Arabia, especially its collectivist culture and hierarchical organizational structures. Rather than adopting Western-style anonymous reporting methods, safety regulations should incorporate culturally pertinent team-based safety commitments and visual reporting boards in local languages. These approaches would guarantee accountability while respecting cultural values. Moreover, focused policy activities should emphasize diminishing technological resistance by executing national digital upskilling campaigns within telecom entities. These campaigns may include public-private partnerships to provide region-specific, concise training modules in Arabic, delivered through mobile platforms that align with employees' digital competencies. Policymakers must integrate job security clauses and mental health support provisions into the implementation of Vision 2030 reforms, particularly as economic transformation may create uncertainty for employees. It is essential to align national HR policies with organizational practices that address performance and well-being dimensions. Policymakers ought to assess incentive structures, employee recognition programs, and flexible work arrangements as strategies to enhance satisfaction and performance. Incorporating these practices into the Vision 2030 policy framework can develop a sustainable and flexible workforce for the digital economy.

Limitations and future studies. While this study offers valuable insights, it is worth recognizing its limits, which also present opportunities for additional academic exploration. The methodological dependence on a cross-sectional, self-reported survey design poses numerous issues. Self-reported measures are susceptible to response biases, including social desirability and common method variance, thereby undermining internal validity. Employees may have exaggerated their satisfaction or participation owing to social norms that prioritize compliance and optimism. Future research could integrate multi-source data—such as supervisor evaluations, peer assessments, or archive organizational records—to triangulate responses and enhance measurement validity. The cross-sectional design further limits causal inference, as it does not allow for verification of temporal ordering and reciprocal effects. Future studies should employ longitudinal or experimental approaches to examine dynamic interactions throughout time and more effectively determine causality.

The generalizability of the findings also warrants careful consideration. Although the sample size meets minimum statistical thresholds (Rosner, 2015), the use of voluntary response sampling may have introduced self-selection bias, as those with strong opinions may have been more likely to participate. Furthermore, the sample was exclusively obtained from three main regions (Western, Central, and Eastern) in Saudi Arabia, which, although significant economic centers, fail to encompass the complete diversity of the national workforce. Consequently, subsequent research should aim for larger, more diverse samples, maybe employing stratified random sampling to guarantee sufficient representation across all locations, organizational tiers,

company sizes, and demographic attributes. Such an approach would enhance the robustness and external validity of the findings.

The geographical and industrial context further constrains transferability. The study's singular emphasis on the telecommunications sector in Saudi Arabia imposes sector-specific and cultural limitations. This sector is defined by swift digital transformation, competitive challenges, and alignment with governmental reforms like Vision 2030 and Saudization regulations (Aldoghan et al., 2022), all of which may uniquely influence employee attitudes and organizational behavior. Moreover, the cultural norms that emphasize collectivism, the significant power distance, and the centralized decision-making structures typical of organizations in Saudi Arabia (Alenezi, 2024) may not apply in nations that are more individualistic or egalitarian. To enhance generalizability, future studies ought to conduct comparative analyses across various sectors—such as education, healthcare, and manufacturing—as well as different cultural contexts, including both Gulf Cooperation Council (GCC) and non-GCC countries.

In consideration of the intricate socio-economic environment in Saudi Arabia, forthcoming research should investigate supplementary contextual variables—such as national labor policies, leadership styles, and digitalization challenges—as potential moderators or mediators in the correlation between employee satisfaction and organizational outcomes. This would enhance the explanatory capacity of the existing model and yield more nuanced, policy-relevant findings for scholars and practitioners alike.

Data availability

The datasets generated by the survey research during and/or analyzed during the current study are available in Elsevier's Mendeley Data repository: doi: 10.17632/k435yhcr98.1

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Author contributions

AA is the only author for this manuscript

Competing interests

The authors declare no competing interests.

Ethical approval

The author affirms that all research involving human participants adhered to the ethical standards set forth by the Declaration of Helsinki, as well as relevant institutional and national regulations. On October 15, 2023, ethical approval was granted (Approval No. UBT-REC-HRM-2023-29) by the Research Ethics Committee of the University of Business and Technology (UBT) in Jeddah, Saudi Arabia. The approval encompassed the entire research protocol, which included participant recruitment, informed consent procedures, survey design, and measures for data confidentiality. The research included adult participants aged 18 and older from the telecommunications sector in Saudi Arabia, employing a survey-based methodology.

Informed consent

Electronic informed consent was secured from all participants before they engaged in the study. The researcher from the University of Business and Technology in Jeddah, Saudi Arabia, oversaw the consent process. Participants received comprehensive information regarding the study's purpose, eligibility requirements, data collection methods, potential

advantages and minimal risks, as well as assurances of confidentiality. The consent form explicitly indicated that participation was voluntary, ensured anonymity, and affirmed that participants could withdraw at any moment without facing any repercussions. No personally identifiable information was gathered. The investigation consisted of non-interventional, survey-based methods, with consent secured before participation throughout the data collection phase from November 2023 to February 2024. No compensation was offered.

Additional information

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