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### **Research Article**

# The Influence of Authentic Leadership on Innovation Capability: The Mediating Effect of Employee Empowerment in Telecom Companies in Pakistan

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#### ABSTRACT

In today's competitive and technology-driven business environment, fostering innovation has become a strategic imperative, particularly in fast-paced sectors such as telecommunications. This study investigates the influence of authentic leadership on employees' innovation capability, with a specific focus on the mediating role of employee empowerment. Drawing on social exchange theory and self-determination theory, the research proposes a conceptual framework linking leadership behaviour to innovation outcomes through psychological empowerment. Data were collected from 379 executive-level employees working in major telecommunication companies in Pakistan. Structural Equation Modelling (SEM) using AMOS was employed to test the hypothesized relationships. The results indicate that authentic leadership has a significant positive impact on both employee empowerment and innovation capability. Furthermore, employee empowerment was found to partially mediate the relationship between authentic leadership and innovation, highlighting its critical role as a psychological enabler of innovative behaviour. These findings contribute to leadership and innovation literature by emphasizing the importance of empowering work environments, and they offer practical insights for telecom organizations aiming to enhance innovation through ethical and empowering leadership practices.

#### **KEYWORDS**

Authentic Leadership; Employee Empowerment; Innovation Capability; Telecommunication Sector; Structural Equation Modelling; Pakistan

### 1 | INTRODUCTION

Innovation has become an essential driver of sustainable competitive advantage in today's rapidly evolving business environment (Lopes et al., 2022), particularly in knowledge-intensive industries such as the telecommunication sector. In Pakistan, the telecom industry is experiencing dynamic technological transformations (Jabeen & Ishaq, 2024), growing consumer demands, and intensified competition, necessitating innovative responses from employees at all levels. The ability of employees to innovate—referred to as employee innovation capability—is not only critical for organizational performance but also for national economic advancement (Migdadi, 2021). Despite this growing need for innovation, many Pakistani telecom companies still struggle to foster a culture that supports creativity, experimentation, and proactive problem-solving. This raises questions about the internal factors that influence innovation capabilities, especially the role of leadership and organizational support mechanisms. Among various leadership styles, authentic leadership has recently attracted significant attention in organizational behaviour literature. In innovation-driven sectors like telecommunications, authentic leadership can play a crucial role in promoting a supportive environment where employees feel encouraged to generate, share, and implement novel ideas (Lei et al., 2021). However, the direct relationship between authentic leadership and employee innovation capability may not be sufficient to capture the full complexity of the innovation process. The research of Lee and Jo (2023) suggests that employee empowerment—defined as the degree to which employees feel a sense of autonomy, influence, and ownership over their work—could act as a mediating mechanism between leadership behaviour and



innovation outcomes. Empowered employees are more likely to take initiative, challenge the status quo, and engage in innovative behaviours (Mustafa et al., 2023). Therefore, examining how authentic leadership empowers employees and thereby enhances their innovation capability is not only timely but also critical for improving innovation performance within Pakistan's telecom sector.

Despite the significant contribution of the telecommunication sector to Pakistan's digital economy, innovation at the employee level remains underdeveloped. Existing studies (such as, Iqbal et al., 2021; Ikram et al., 2025) in the Pakistani context have largely focused on technological adoption, service quality, and customer satisfaction, leaving a theoretical and empirical gap in understanding how leadership styles such as authentic leadership can foster employee innovation capability. Additionally, while empowerment has been recognized as a key factor in enabling innovation, limited research has explored its mediating role in the relationship between authentic leadership and innovation capability, particularly in telecom organizations. This gap in knowledge constrains both scholars and practitioners from formulating evidence-based strategies to cultivate innovative behaviour among employees. Moreover, most existing models in leadership and innovation research are derived from Western organizational contexts. There is a critical need to validate and contextualize these models in developing countries like Pakistan, where organizational hierarchies, cultural dynamics, and technological readiness may differ significantly. Addressing this gap is imperative to provide actionable insights tailored to Pakistan's unique institutional and sociocultural settings. To address the aforementioned gaps, the study is guided by the following research questions (RQs):

RQ1: What is the influence of authentic leadership on employees' innovation capability in Pakistan's telecommunication sector?

RQ2: Does employee empowerment mediate the relationship between authentic leadership and employees' innovation capability?

This study makes several theoretical and practical contributions. Theoretically, it extends the body of knowledge on leadership and innovation by empirically testing a mediation model that links authentic leadership to employee innovation capability through empowerment. This responds to calls in leadership literature for more nuanced understandings of the internal mechanisms that translate leadership behaviours into innovative outcomes. The study also contributes to the growing discourse on contextualizing leadership theories within developing economies. Practically, the findings of this study can inform leadership development programs within Pakistan's telecom companies. By highlighting the role of authentic leadership and employee empowerment in fostering innovation, the study offers actionable insights for human resource managers, policy makers, and business leaders seeking to enhance their organizational innovation culture. In the context of Pakistan's digital transformation agenda, such findings are vital for building resilient, forward-thinking telecom enterprises capable of competing on a global scale.

## 2 | LITERATURE REVIEW

## 2.1 | Authentic Leadership and Innovation Capability

In today's knowledge-driven and digitally transforming work environment, innovation capability among employees is widely recognized as a key factor for sustaining organizational competitiveness. Innovation capability refers to an individual's ability to generate, promote, and implement novel and useful ideas within their role, team, or organization (Amabile, 1996; Mumford et al., 2002). It is not only a function of individual creativity and motivation but also of the broader organizational environment—including leadership. Among various leadership styles, authentic leadership has gained growing attention for its positive influence on followers' attitudes and behaviours (Avolio & Gardner, 2005; Walumbwa et al., 2008). Authentic leaders are characterized by self-awareness, relational transparency, balanced information processing, and an internalized moral perspective. These traits create a trusting and psychologically safe work environment that encourages employees to express themselves fully, take risks, and engage in proactive and innovative behaviour (Ilies, Morgeson, & Nahrgang, 2005; Gardner et al., 2011). According to Social Exchange Theory (Blau, 1964), employees tend to reciprocate supportive and ethical behaviour from leaders with positive work behaviours, such as going beyond the minimum requirements of their job, including engaging in innovation. Authentic leaders model honesty, openness, and value congruence, which strengthens employees' intrinsic motivation and sense of meaning in their work (Rego et al., 2012). These factors are central to promoting individual innovation, as employees feel empowered to challenge routines, voice new ideas, and take



initiative.

Empirical studies also suggest a direct link between authentic leadership and innovative behaviour. For instance, Zhou et al. (2021) found that authentic leadership significantly predicts innovative work behaviour among employees in technology-intensive organizations. Similarly, Hannah et al. (2011) argue that authentic leadership facilitates exploration and experimentation by creating a secure and values-based environment. In the context of developing economies like Pakistan, where leadership is often hierarchical and top-down, adopting authentic leadership can shift the workplace culture toward more open, empowering, and innovation-friendly practices. Furthermore, in the telecommunication sector—where continuous innovation is imperative for survival due to rapidly changing technologies and market dynamics—leaders play a pivotal role in encouraging frontline employees to innovate. Authentic leaders in telecom organizations can create a work climate that supports autonomy, encourages idea sharing, and fosters psychological safety—key conditions for employee innovation capability. Despite the theoretical arguments and emerging empirical support, there is a notable research gap in the context of Pakistan's telecommunication industry, where innovation is critical yet under-researched at the employee level. Very few studies have directly explored how authentic leadership shapes employee innovation capabilities in this sector, calling for focused empirical investigation. Based on the theoretical foundations of Social Exchange Theory and empirical findings linking authentic leadership to positive employee outcomes, it is proposed that:

H1: Authentic leadership has a significant positive influence on employees' innovation capability in Pakistan's telecommunication sector.

### 2.2 | Authentic Leadership and Employee Engagement

Authentic leadership encourage employees to align with their core values, share information transparently, and participate in decision-making, all of which are core components of empowerment (Laschinger et al., 2012). By fostering a culture of inclusion and respect, authentic leaders help employees develop a stronger sense of meaning and influence in their roles. From the lens of Social Exchange Theory (Blau, 1964), when employees perceive their leaders as genuine, fair, and supportive, they are more likely to reciprocate through proactive work behaviour. Empowerment, in this context, is a natural outcome of such high-quality leader-follower relationships. Employees feel more confident, competent, and encouraged to take ownership of their tasks because their leader supports their voice, acknowledges their input, and provides them with psychological safety. Research supports this theoretical assertion. For instance, Zhang et al. (2014) found that authentic leadership is positively associated with psychological empowerment among employees in Chinese service organizations. Rego et al. (2012) demonstrated that authentic leadership enhances employees' sense of meaningfulness and self-determination, which are core dimensions of empowerment. In another study by Laschinger and Fida (2014), authentic leadership was shown to directly foster empowerment, which in turn influenced job satisfaction and organizational commitment. In the context of Pakistan's telecommunication sector, the relevance of authentic leadership becomes even more pronounced. The sector is undergoing rapid digital transformation, requiring frontline employees to adapt, innovate, and act with agility. However, many telecom organizations still operate within rigid, hierarchical structures where employee voice is limited. In such settings, authentic leadership can act as a catalyst for empowerment by decentralizing decision-making, encouraging autonomy, and cultivating employee self-efficacy. Despite the growing global recognition of this leadership style, there is limited empirical evidence examining how authentic leadership contributes to empowerment among employees in Pakistan, particularly in the technology-driven telecom sector. Investigating this relationship is crucial to understanding how to create more responsive, agile, and innovative telecom workforces in emerging markets. Drawing on theoretical and empirical insights, the following hypothesis is

H2: Authentic leadership has a significant positive influence on employee empowerment in Pakistan's telecommunication sector.

## 2.3 | Employee Engagement and Innovation Capability

Employee innovation capability—the ability to generate, promote, and realize new ideas at work—is increasingly recognized as a critical driver of organizational competitiveness and adaptability, particularly in knowledge-intensive industries like telecommunications. However, employees are more likely to exercise their innovation capability when they feel psychologically empowered within their roles. Employee empowerment, a multidimensional construct involving feelings of autonomy, competence, meaningfulness, and impact (Spreitzer, 1995), plays a central role in enabling employees to think creatively, take initiative, and implement novel solutions.



Empowered employees believe that their work has purpose, that they are capable of making decisions, and that their contributions matter. These beliefs encourage proactive behaviours, including exploring new ideas, challenging outdated processes, and collaborating across boundaries—core aspects of innovation capability (Thomas & Velthouse, 1990). When individuals are granted autonomy and decision-making authority, they are more likely to take ownership of innovation tasks and overcome the fear of failure that often inhibits creative behaviour (Amabile, 1996). From a theoretical perspective, the Job Characteristics Model (Hackman & Oldham, 1980) and Self-Determination Theory (Deci & Ryan, 1985) provide a foundational explanation for this link. These theories suggest that when employees experience high levels of psychological empowerment—particularly autonomy and competence—they are intrinsically motivated to pursue tasks with greater creativity and persistence. This intrinsic motivation is essential for innovation, which often involves risk-taking, uncertainty, and sustained effort.

Empirical research supports this connection. For instance, Afsar et al. (2017) found that empowered employees were more likely to engage in innovative work behaviour across a range of service sectors. Seibert et al. (2011), in their meta-analysis, reported strong positive correlations between psychological empowerment and both creativity and innovation performance. Similarly, Ugwu and Onyishi (2020) demonstrated that empowered employees in high-tech firms exhibited greater innovation capability due to increased self-confidence and role ownership. In the telecommunication sector of Pakistan, where rapid digitalization, technological upgrades, and competitive pressures are prevalent, organizations need employees who are agile, adaptive, and capable of innovating continuously. Unfortunately, many firms still operate within top-down, bureaucratic systems that limit empowerment. Employees are often excluded from decision-making, leading to low motivation, disengagement, and resistance to change. Empowering employees, therefore, becomes a strategic necessity for enhancing innovation capability and driving digital transformation in the sector. Despite global findings on the empowerment-innovation link, there is limited research on this relationship within the context of Pakistan's telecom industry. Investigating how empowerment translates into enhanced innovation capability among telecom employees can provide context-specific insights and practical implications for leadership and HR practices in the country. Based on the theoretical framework and supporting empirical evidence, the following hypothesis is proposed:

H3: Employee empowerment has a significant positive influence on innovation capability in Pakistan's telecommunication sector.

#### 2.4 | Mediating Effect of Employee Engagement

While existing research has demonstrated a direct relationship between authentic leadership and employee innovation capability, recent studies suggest that this relationship may operate through key psychological and behavioral mechanisms, such as employee empowerment. This perspective offers a more nuanced understanding of how authentic leadership fosters innovation, not merely through direct influence, but by shaping an internal environment where employees feel empowered to act innovatively. Empirical evidence reinforces this mediation mechanism. For instance, Walumbwa et al. (2010) found that psychological empowerment mediates the relationship between authentic leadership and desirable employee outcomes such as organizational citizenship behaviour and creativity. Rego et al. (2012) also reported that employees who perceived their leaders as authentic experienced greater empowerment, which translated into more frequent innovation-related behaviours. Similarly, Zubair et al. (2015), in a study of South Asian service organizations, found empowerment to be a significant mediator between leadership style and employee innovation. In the context of Pakistan's telecommunication industry, this mediation is particularly relevant. The industry demands high adaptability and continuous innovation, but is often constrained by hierarchical structures and rigid management practices. Authentic leadership has the potential to overcome these barriers by empowering employees and enabling a shift from compliance to commitment and innovation. Thus, exploring employee empowerment as a mediating variable can reveal critical pathways through which leadership drives innovation performance. In light of the above arguments and empirical support, the following hypothesis is proposed:

H4: Employee empowerment mediates the relationship between authentic leadership and employees' innovation capability in Pakistan's telecommunication sector.

## 3 | METHODS

### 3.1 | Data Sampling and Procedure

This study adopted a quantitative, cross-sectional survey design to examine the influence of authentic leadership on



employees' innovation capability, with employee empowerment as a mediating variable. The target population consisted of executive-level employees working in the telecommunication sector of Pakistan, including major telecom companies such as Jazz, Zong, Telenor, and PTCL. These companies were chosen due to their significant market presence, dynamic work environments, and emphasis on innovation and digital transformation, making them suitable contexts for studying leadership and innovation behaviour. A non-probability purposive sampling method was employed to select participants who were actively involved in decision-making, strategic implementation, or innovation-related activities within their organizations. Executive employees were targeted specifically because they typically operate under direct supervision of senior leadership and are expected to translate leadership directives into operational outcomes, including innovation initiatives. Their experience and position in the organizational hierarchy made them well-positioned to provide informed responses on leadership style, empowerment, and innovation capability. A total of 450 questionnaires were distributed electronically via email and internal communication platforms (e.g., Microsoft Teams and WhatsApp) with the assistance of HR departments and professional networks within the telecommunication companies. After a period of eight weeks of data collection, 379 completed and valid responses were received, yielding a usable response rate of 84.2%. Incomplete, duplicate, and inconsistent responses were removed during the data cleaning process using listwise deletion. The sample size of 379 is considered adequate for structural equation modelling (SEM) and satisfies the minimum threshold suggested by Hair et al. (2019), which recommends at least 10 responses per estimated parameter or a minimum of 200 cases for complex models.

## 3.2 | Ethical Consideration

Participants were made aware of the study's objectives, the voluntary nature of their involvement, and the confidentiality of their answers prior to data collection. Each questionnaire came with a cover letter guaranteeing that no personally identifying information was shared and that the data would only be utilized for academic reasons. All subjects gave their informed permission, and ethical standards were adhered to in compliance with the institutional review board (IRB) requirements of the university with which the researchers were connected.

#### 3.3 | Statistical Analysis

This study used Structural Equation Modelling (SEM) with IBM AMOS version 24 to analyse the data and assess the hypothesized correlations between employee empowerment, innovation capability, and genuine leadership. Because SEM can estimate and test several associations between latent constructs and observable variables at once, it was selected. Research utilizing mediation models and theoretical frameworks that take into account intricate linkages, such those in organizational behaviour and leadership studies, is especially well-suited for this approach. The study adhered to Anderson and Gerbing's (1988) two-step methodology. Confirmatory factor analysis (CFA) was used to evaluate the measurement model in the first stage. In order to make sure that every concept in the model satisfied the required psychometric standards for validity and reliability, this phase was crucial. In particular, factor loadings more than 0.60 were deemed acceptable, and convergent validity was indicated by Composite Reliability (CR) values greater than 0.70 and Average Variance Extracted (AVE) values greater than 0.50. The Fornell-Larcker criteria was used to confirm discriminant validity, making sure that each construct shared more variance with its own indicators than with those of other constructs. In the second step, the structural model was evaluated to test the proposed hypotheses (H1-H3). Path coefficients (β), critical ratios (CR), and p-values were analyzed to determine the significance and strength of the relationships between authentic leadership, employee empowerment, and4innovation capability. Furthermore, to test the mediating effect of employee empowerment between authentic leadership and innovation capability (H4), the bootstrapping method with 5,000 resamples and 95% confidence intervals was applied. This approach enhanced the reliability of the mediation analysis and allowed for more accurate testing of the hypothesized indirect relationship.

## 4 | RESULTS

#### 4.1 | Demographic Assessment

The demographic profile of the 379 executive-level employees who participated in this study provides a diverse representation across several key characteristics. In terms of gender distribution, the sample consisted of 54.9% male respondents (n = 196) and 45.1% female respondents (n = 161), indicating a relatively balanced gender representation within the sample. Regarding age, the majority of participants fell within the 31–40 age range, accounting for 33.3% (n = 119) of the total respondents. This was followed by 28.6% (n = 102) aged between 41

and 50 years, while 19.0% (n = 68) were in the 20–30 age group. Participants aged between 51 and 60 years made up 12.9% (n = 46), and those aged 61 and above constituted 6.2% (n = 22). These figures suggest that the sample includes both younger professionals and more experienced employees, offering a comprehensive view of perspectives across different career stages. In terms of marital status, the largest portion of respondents were married, representing 58.0% (n = 207) of the sample. Single individuals accounted for 27.5% (n = 98), while widowed participants comprised 9.5% (n = 34), and divorced respondents made up 5.0% (n = 18). When examining the educational background of the respondents, a significant proportion held master's degrees—62.5% (n = 223)—indicating a highly educated workforce among telecom executives. Those with bachelor's degrees represented 24.9% (n = 89), while 9.5% (n = 34) had completed a diploma, and 3.1% (n = 11) possessed a doctorate qualification. As for religious affiliation, the vast majority of participants identified as Muslim, comprising 93.6% (n = 334) of the total sample. Christians accounted for 5.0% (n = 18), while 1.4% (n = 5) identified with other religions. Lastly, the distribution of respondents across telecommunication companies was well balanced. Telenor employees formed the largest group at 26.9% (n = 96), followed closely by Zong at 26.6% (n = 95). Jazz employees made up 24.4% (n = 87), and Ufone accounted for 22.1% (n = 79). This balanced representation ensures that the findings are generalizable across major players in Pakistan's telecom sector.

## 4.2 | Normality Test

To ensure the suitability of the dataset for SEM, a normality test was conducted by examining skewness and kurtosis values for each construct. According to Kline (2015), acceptable thresholds for normality in SEM are skewness values within  $\pm 3$  and kurtosis within  $\pm 4$ . As shown in Table 1, all constructs fall well within these ranges, indicating no serious deviations from normality.

**Table 1**Descriptive Statistics

Constructs	Range	Mean	Std. Dev.	Skewness	Kurtosis
Authentic Leadership	1-7	6.12	0.47	0.116	-0.338
Innovation Capability	1-7	5.81	0.57	0.249	0.065
Employee Engagement	1-7	5.93	0.53	0.038	0.884

### 4.3 | Discriminant Validity

The Heterotrait-Monotrait ratio (HTMT), a more reliable approach than more conventional methods like the Fornell-Larcker criterion, was used to evaluate discriminant validity. When the HTMT values between latent constructs fall below the suggested cutoff of 0.85, discriminant validity is proven (Henseler et al., 2015). All of the structures' HTMT values are well below the cutoff limit, as seen in Table 2.

**Table 2** *HTMT Correlation* 

Constructs	1	2	3
Authentic Leadership	1		_
Innovation Capability	0.472	1	
Employee Engagement	0.451	0.536	1

## 4.4 | Confirmatory Factor Analysis (CFA)

To assess the measurement model's reliability and validity, CFA was conducted using AMOS. CFA serves to validate whether the observed variables appropriately represent the latent constructs proposed in the theoretical model. The analysis evaluated standardized factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE) for each construct. As shown in Table 3, all standardized factor loadings for the indicators exceeded the recommended threshold of 0.70, confirming strong item reliability. For the construct Authentic Leadership, loadings ranged from 0.72 to 0.88, while Innovation Capability had loadings between 0.75 and 0.89, and Employee Engagement ranged from 0.71 to 0.87. In terms of construct reliability, the CR values for all three constructs were above the benchmark of 0.70. Specifically, Authentic Leadership achieved a CR of 0.908,



Innovation Capability reached 0.911, and Employee Engagement recorded 0.892. These values indicate a high level of internal consistency within each construct. Furthermore, the AVE for each construct surpassed the minimum acceptable value of 0.50, supporting convergent validity. Authentic Leadership had an AVE of 0.618, Innovation Capability recorded 0.627, and Employee Engagement yielded 0.609. These results confirm that a substantial portion of the variance in each item is explained by its respective construct.

**Table 3** *AVE and CR Evaluation* 

Constructs	Items	Standardized Loading	CR	AVE
Authentic Leadership	AL_1	0.79		_
	AL_2	0.76		
	AL_3	0.72	0.908	0.618
	AL_4	0.88		
	AL_5	0.87		
	ICap_1	0.89		
	ICap_2	0.81		
Innovation Capability	ICap_3	0.78	0.911	0.627
	ICap_4	0.76		
	ICap_5	0.75		
Employee Engagement	Eng_1	0.87		
	Eng_2	0.73		
	Eng_3	0.75	0.892	0.609
	Eng_4	0.78		
	Eng_5	0.71		

## 4.5 | Hypothetical Results

The structural model was analyzed to evaluate the hypothesized relationships among the constructs. All three proposed hypotheses (H1 to H3) were tested using standardized path estimates, z-values, and corresponding p-values, as summarized in Table 4.

 Table 4

 Testing Hypotheses Using Standardized Estimates

Hypothesized Path	Standardized Estimate	<b>Z-Value</b>	P- value	Result
H1: AL →ICap	0.32	4.847	0.000	Significant
H2: AL →Eng	0.67	7.452	0.000	Significant
H3: Eng →ICap	0.63	6.961	0.000	Significant

The first hypothesis (H1) posited that Authentic Leadership (AL) would positively influence Innovation Capability (ICap). The results supported this hypothesis, with a standardized estimate of 0.32 and a z-value of 4.847, which was statistically significant at p < 0.001. This indicates that authentic leadership plays a meaningful role in enhancing employees' capability to innovate within the telecommunication sector. The second hypothesis (H2) tested the relationship between Authentic Leadership and Employee Empowerment (Eng). The analysis showed a strong positive effect, with a standardized estimate of 0.67 and a z-value of 7.452, also significant at p < 0.001. These results confirm that authentic leaders significantly contribute to empowering employees by fostering a supportive and trustworthy environment. The third hypothesis (H3) proposed that Employee Empowerment would have a positive impact on Innovation Capability. This relationship was also confirmed, as the path coefficient was 0.63, with a z-value of 6.961, again highly significant at p < 0.001. This finding suggests that empowered employees are more likely to engage in innovative behaviour and contribute creatively to organizational goals.

### 4.6 | Mediation Analysis

To assess the mediating role of Employee Empowerment in the relationship between Authentic Leadership and Innovation Capability, a bootstrapping approach with 5,000 resamples and a 95% confidence interval was conducted using AMOS. This method provides a robust estimate of indirect effects and is widely recognized for its accuracy in testing mediation effects in structural equation models. The results revealed a significant indirect effect of authentic



leadership on innovation capability through employee empowerment, with a calculated effect size of  $0.42~(0.67\times0.63)$ . This indirect path indicates that authentic leadership enhances innovation capability primarily by empowering employees. Additionally, the direct effect of authentic leadership on innovation capability remained significant at 0.32, although it was smaller in magnitude compared to the indirect effect. This suggests the presence of partial mediation, where employee empowerment serves as a key mechanism through which authentic leadership influences innovation, but not the only one. The bootstrapping analysis confirmed the statistical significance of the indirect effect, as the confidence interval did not include zero. These findings provide strong empirical support for Hypothesis 4 (H4), establishing that employee empowerment partially mediates the relationship between authentic leadership and innovation capability among telecom executives in Pakistan.

## **5 | DISCUSSION**

The present study set out to examine how authentic leadership influences employees' innovation capability, and the extent to which employee empowerment mediates this relationship, within the context of Pakistan's telecommunication sector. Using Structural Equation Modelling (SEM), all four hypotheses (H1-H4) were supported, offering several important theoretical and practical insights. The findings for H1 confirm that authentic leadership has a significant positive effect on innovation capability. This aligns with previous literature (e.g., Walumbwa et al., 2008; Rego et al., 2012), which suggests that leaders who demonstrate self-awareness, transparency, and moral integrity foster a psychologically safe environment that supports creativity and innovation. In the context of Pakistan's telecom industry, which is rapidly evolving due to technological disruption and competitive pressures, this finding is particularly relevant. Authentic leaders in such high-pressure environments appear to provide the stability, trust, and support employees need to take initiative and propose novel solutions. In support of H2, the results revealed a strong positive relationship between authentic leadership and employee empowerment. This finding reinforces the idea that authentic leaders empower their teams by encouraging participation, valuing their input, and promoting autonomy. It echoes previous empirical work (e.g., Laschinger et al., 2012; Zhang et al., 2014) that positions authentic leadership as a catalyst for fostering employee confidence and self-efficacy. In traditionally hierarchical sectors like telecommunications in Pakistan, such leadership is particularly crucial for flattening power dynamics and enabling frontline staff to feel more involved in organizational processes.

The support for H3 further strengthens the role of employee empowerment as a key driver of innovation capability. Empowered employees are more likely to take initiative, solve problems creatively, and engage in risk-taking behavior—all essential components of innovation. This is consistent with Self-Determination Theory (Deci & Ryan, 1985), which posits that autonomy and competence are core motivators of proactive behavior. In Pakistan's telecom sector, where rigid procedures often dominate operational systems, fostering empowerment can be a transformative step toward building agile, innovation-oriented teams. Most notably, H4 confirmed that employee empowerment partially mediates the relationship between authentic leadership and innovation capability. This suggests that while authentic leadership directly enhances innovation, its influence is amplified when employees feel empowered. The indirect effect (0.42) was stronger than the direct effect (0.32), emphasizing the importance of psychological mechanisms in translating leadership behaviors into innovation outcomes. This aligns with broader organizational behavior theories that highlight the role of mediating variables—such as empowerment, trust, and motivation—in shaping performance.

### 6 | Implications of the Study

This study offers several important implications for theory, practice, and policy, particularly within the context of Pakistan's telecommunication sector. By examining how authentic leadership influences innovation capability through employee empowerment, the research provides valuable insights for both scholars and organizational leaders striving to foster innovation in dynamic and competitive industries.

## **6.1** | Theoretical Implications

From a theoretical perspective, the study contributes to the growing body of literature on leadership and innovation by empirically validating the mediating role of employee empowerment in the relationship between authentic leadership and innovation capability. This finding extends previous work in leadership theory by demonstrating how psychological constructs like empowerment function as critical mechanisms through which leadership behaviours translate into tangible employee outcomes. Additionally, the integration of Social Exchange Theory and Self-



Determination Theory provides a strong conceptual foundation, supporting the argument that relational and motivational dynamics are central to organizational innovation. The study also enriches the empirical understanding of these relationships in the South Asian and emerging market context, which remains underexplored in existing literature.

#### **6.2** | Practical Implications

For practitioners, particularly HR professionals and organizational leaders in the telecom industry, the findings underline the importance of developing and promoting authentic leadership styles. Leaders who demonstrate integrity, transparency, and self-awareness not only build trust but also create a psychologically safe environment where employees feel motivated to innovate. Companies should invest in leadership development programs that focus on cultivating these authentic traits. Furthermore, the study highlights the strategic value of empowering employees. Organizations that provide autonomy, recognize employee contributions, and involve staff in decision-making are more likely to foster innovation at all levels. Practical steps include flattening hierarchical structures, decentralizing authority, and providing resources that support independent thinking and problem-solving. Telecom firms that wish to remain competitive in a rapidly evolving digital landscape must see empowerment not as an HR initiative, but as a core driver of innovation and growth.

#### 7 | Limitations and Future Recommendations

While this study provides valuable insights into the role of authentic leadership and employee empowerment in enhancing innovation capability within Pakistan's telecommunication sector, several limitations should be acknowledged. First, the study utilized a cross-sectional research design, which restricts the ability to draw causal inferences between variables. Although significant relationships were identified, it is not possible to determine the directionality of these effects over time. Future studies are encouraged to adopt a longitudinal approach to better understand how leadership behaviours and empowerment evolve and influence innovation over an extended period. Second, the data were collected through self-reported questionnaires, which may be subject to common method bias and social desirability effects. Even though statistical checks were applied to minimize bias, future research could enhance the robustness of findings by incorporating multi-source data—for example, combining employee responses with supervisor evaluations or organizational performance metrics. Third, this study focused solely on executivelevel employees from telecommunication companies in Pakistan, which may limit the generalizability of the findings to other industries or cultural settings. Leadership styles and empowerment practices may vary across sectors and countries due to different organizational cultures and socio-economic dynamics. Future research could replicate the study in diverse industries or comparative international contexts to explore the universality or contextspecific nature of these relationships. Lastly, while this study concentrated on employee empowerment as a mediator, there may be other important psychological or organizational variables—such as job satisfaction, organizational commitment, or trust—that influence the leadership-innovation linkage. Future scholars are encouraged to explore alternative or multiple mediators and potential moderating variables such as organizational culture, employee tenure, or team dynamics to provide a more holistic understanding of how authentic leadership fosters innovation.

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#### REFERENCES

Afsar, B., Badir, Y. F., Saeed, B. B., & Hafeez, S. (2017). Transformational and transactional leadership and employee's entrepreneurial behavior in knowledge–intensive industries. The International Journal of Human Resource Management, 28(2), 307-332. https://doi.org/10.1080/09585192.2016.1244893

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for

- creativity. Academy of management journal, 39(5), 1154-1184. https://doi.org/10.5465/256995
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological bulletin, 103(3), 411. https://doi.org/10.1037/0033-2909.103.3.411
- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. The leadership quarterly, 16(3), 315-338. https://doi.org/10.1016/j.leaqua.2005.03.001
- Blau, P. M. (1964). Justice in social exchange. Sociological inquiry, 34(2). https://doi.org/10.1111/j.1475-682X.1964.tb00583.x
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. Journal of research in personality, 19(2), 109-134. https://doi.org/10.1016/0092-6566(85)90023-6
- Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. The leadership quarterly, 22(6), 1120-1145. https://doi.org/10.1016/j.leaqua.2011.09.007
- Hackman, J.R. & Oldham, G.R. (1980), Work redesign, Mass, Addison-Wesley.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European business review, 31(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203
- Hannah, S. T., Avolio, B. J., & Walumbwa, F. O. (2011). Relationships between authentic leadership, moral courage, and ethical and pro-social behaviors. Business Ethics Quarterly, 21(4), 555-578. https://doi.org/10.5840/beq201121436
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the academy of marketing science, 43(1), 115-135.
- Ikram, M., Kenayathulla, H. B., & Saleem, S. M. U. (2025). Unlocking the potential of technology usage in fostering education quality and students' satisfaction: a case of Pakistani higher education. Kybernetes, 54(3), 1938-1965. https://doi.org/10.1108/K-03-2023-0452
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader–follower outcomes. The leadership quarterly, 16(3), 373-394. https://doi.org/10.1016/j.leaqua.2005.03.002
- Iqbal, K., Munawar, H. S., Inam, H., & Qayyum, S. (2021). Promoting customer loyalty and satisfaction in financial institutions through technology integration: The roles of service quality, awareness, and perceptions. Sustainability, 13(23), 12951. https://doi.org/10.3390/su132312951
- Jabeen, M., & Ishaq, K. (2024). Internet of Things in telecommunications: From the perspective of an emerging market. Journal of Information Technology Teaching Cases, 14(1), 144-156. https://doi.org/10.1177/20438869231163601
- Kline, P. (2015). A handbook of test construction (psychology revivals): introduction to psychometric design. Routledge. https://doi.org/10.4324/9781315695990
- Laschinger, H. K. S., & Fida, R. (2014). A time-lagged analysis of the effect of authentic leadership on workplace bullying, burnout, and occupational turnover intentions. European Journal of work and organizational psychology, 23(5), 739-753. https://doi.org/10.1080/1359432X.2013.804646
- Laschinger, H. K. S., Wong, C. A., & Grau, A. L. (2012). The influence of authentic leadership on newly graduated nurses' experiences of workplace bullying, burnout and retention outcomes: A cross-sectional study. International journal of nursing studies, 49(10), 1266-1276. https://doi.org/10.1016/j.ijnurstu.2012.05.012
- Lee, D. Y., & Jo, Y. (2023). The job demands-resource model and performance: the mediating role of employee engagement. Frontiers in Psychology, 14, 1194018. https://doi.org/10.3389/fpsyg.2023.1194018
- Lei, S., Qin, C., Ali, M., Freeman, S., & Shi-Jie, Z. (2021). The impact of authentic leadership on individual and team creativity: a multilevel perspective. Leadership & Organization Development Journal, 42(4), 644-662. https://doi.org/10.1108/LODJ-12-2019-0519
- Lopes, J. M., Gomes, S., Pacheco, R., Monteiro, E., & Santos, C. (2022). Drivers of sustainable innovation strategies for increased competition among companies. Sustainability, 14(9), 5471. https://doi.org/10.3390/su14095471
- Migdadi, M. M. (2021). Organizational learning capability, innovation and organizational performance. European Journal of Innovation Management, 24(1), 151-172. https://doi.org/10.1108/EJIM-11-2018-0246
- Mumford, M. D., Scott, G. M., Gaddis, B., & Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. The leadership quarterly, 13(6), 705-750. https://doi.org/10.1016/S1048-9843(02)00158-3
- Mustafa, M. J., Hughes, M., & Ramos, H. M. (2023). Middle-managers' innovative behavior: the roles of psychological empowerment and personal initiative. The International Journal of Human Resource Management, 34(18), 3464-3490. https://doi.org/10.1080/09585192.2022.2126946



- Rego, A., Sousa, F., Marques, C., & e Cunha, M. P. (2012). Authentic leadership promoting employees' psychological capital and creativity. Journal of business research, 65(3), 429-437. https://doi.org/10.1016/j.jbusres.2011.10.003
- Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: a meta-analytic review. Journal of applied psychology, 96(5), 981.
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. Academy of management Journal, 38(5), 1442-1465. https://doi.org/10.5465/256865
- Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. Academy of management review, 15(4), 666-681. https://doi.org/10.5465/amr.1990.4310926
- Ugwu, F. O., & Onyishi, I. E. (2020). The moderating role of person-environment fit on the relationship between perceived workload and work engagement among hospital nurses. International Journal of Africa Nursing Sciences, 13, 100225. https://doi.org/10.1016/j.ijans.2020.100225
- Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. Journal of management, 34(1), 89-126. https://doi.org/10.1177/0149206307308913
- Zhang, J., Lü, F., Shao, L., & He, P. (2014). The use of biochar-amended composting to improve the humification and degradation of sewage sludge. Bioresource technology, 168, 252-258. https://doi.org/10.1016/j.biortech.2014.02.080
- Zhou, X., Rasool, S. F., Yang, J., & Asghar, M. Z. (2021). Exploring the relationship between despotic leadership and job satisfaction: the role of self efficacy and leader–member exchange. International journal of environmental research and public health, 18(10), 5307. https://doi.org/10.3390/ijerph18105307
- Zubair, A., & Kamal, A. (2015). Authentic leadership and creativity: mediating role of work-related flow and psychological capital. Journal of Behavioural Sciences, 25(1).