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The Role of Leadership in Promoting Innovation in Pakistani Higher Education

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ABSTRACT

This mixed-methods study investigated the role of leadership in promoting innovation within Pakistani Higher Education Institutions (HEIs). Data was collected through semi-structured interviews with 45 senior leaders (VCs, Pro-VCs, Deans) and structured questionnaires administered to 300 faculty/administrative staff across 15 purposively sampled public and private universities in major Pakistani cities. Quantitative analysis (SPSS) revealed transactional leadership as the most perceived style, but transformational leadership demonstrated the strongest positive correlation ($r=.65$, $p<.01$) and predictive power ($\beta=.542$, $p<.000$) for innovation culture. Laissez-faire leadership showed negative correlations. Qualitative thematic analysis (NVivo) confirmed the quantitative findings but highlighted a stark reality: leaders are constrained by systemic barriers, primarily severe resource scarcity, paralyzing bureaucracy (often linked to HEC regulations), faculty capacity/resistance, and socio-political pressures, forcing a predominantly transactional focus despite recognizing the need for transformational approaches. Private universities reported marginally more conducive environments. The study concludes that while transformational leadership is crucial for fostering innovation, its potential in Pakistan is severely limited by the prevailing ecosystem. Recommendations include HEC regulatory reform towards enabling frameworks, sustainable resource mobilization, and

targeted leadership development. Addressing these systemic constraints is paramount for unlocking HEIs' innovative potential.

Keywords: Academic Leadership, Higher Education Innovation, Transformational Leadership, Transactional Leadership, Pakistan Higher Education, Higher Education Commission (HEC), Innovation Barriers, Mixed-Methods Research, University Management, Educational Change.

INTRODUCTION

The landscape of higher education in Pakistan stands at a critical juncture where traditional educational paradigms must evolve to meet the demands of a rapidly changing global knowledge economy. Leadership within Pakistani universities has emerged as a pivotal factor in driving institutional transformation and fostering innovation across academic, research, and administrative domains. The contemporary higher education environment requires leaders who can navigate complex challenges while simultaneously promoting innovative practices that enhance educational quality, research productivity, and institutional competitiveness on both national and international platforms (Ahmad et al., 2022). As Pakistan's higher education sector continues to expand, with 47 universities making it to the Times Higher Education World University Rankings for 2025, the role of effective leadership in promoting innovation becomes increasingly significant (Dawn, 2025). The concept of innovation in higher education encompasses multiple dimensions, including pedagogical innovations, technological integration, research advancement, and administrative reforms that collectively contribute to institutional excellence and societal impact. Pakistani universities face unique challenges in implementing innovative practices, ranging from resource constraints and traditional mindsets to regulatory frameworks and cultural barriers that often impede progressive change (Khan & Malik, 2023). Leadership styles and approaches adopted by university administrators, department heads, and academic leaders significantly influence the institutional culture and climate necessary for fostering innovation and creativity among faculty, staff, and students.

Transformational leadership has emerged as a particularly relevant leadership paradigm for promoting innovation in educational settings, as it emphasizes vision creation, intellectual stimulation, individualized consideration, and inspirational motivation that collectively drive organizational change and innovation adoption (Bass & Riggio, 2021). Recent research has demonstrated that transformational leadership practices among Pakistani university leaders, particularly female leaders, have shown positive correlations with innovative performance and organizational effectiveness (Batool et al., 2022). The ability of leaders to inspire, motivate, and empower their teams while creating an environment conducive to experimentation, risk-taking, and creative problem-solving has become essential for universities seeking to maintain relevance and competitiveness in the global education market. The Pakistani higher education system, governed by the Higher Education Commission (HEC), has undergone significant reforms and policy changes aimed at improving

quality, increasing access, and promoting research culture across institutions. The HEC Vision 2025 emphasizes the importance of leadership development, innovation promotion, and quality enhancement as key strategic priorities for the sector's advancement (HEC, 2024). However, the implementation of these initiatives requires strong leadership at multiple levels within universities, from top-level administrators to mid-level managers and academic department heads, all working collaboratively to drive innovation and change.

Gender dynamics in leadership also play a crucial role in shaping innovation patterns within Pakistani higher education institutions. Research has shown that female leaders in Pakistani universities demonstrate high levels of innovative performance when supported by appropriate leadership development programs and institutional frameworks (Ahmed & Shah, 2023). The Pakistan Women Leadership in Higher Education program, initiated in 2021, represents a significant effort to enhance women's leadership capabilities and promote gender-inclusive innovation practices across the sector (MSU, 2021). The relationship between leadership effectiveness and innovation outcomes is mediated by various organizational factors, including institutional culture, resource availability, faculty engagement, and external partnerships that collectively influence the innovation ecosystem within universities. Leaders who successfully promote innovation typically demonstrate competencies in strategic thinking, change management, stakeholder engagement, and technology adoption while maintaining focus on academic excellence and institutional mission fulfillment (Rahman et al., 2024). The complexity of modern higher education environments requires leaders to balance multiple competing priorities while fostering an organizational culture that values creativity, experimentation, and continuous improvement.

Research and development activities within Pakistani universities have shown significant growth in recent years, with increased emphasis on industry collaboration, international partnerships, and interdisciplinary research initiatives that require innovative leadership approaches to manage effectively. The ability of university leaders to establish and maintain strategic partnerships, secure funding for innovative projects, and create supportive environments for research excellence has become increasingly important for institutional success and national development goals (Ali & Hassan, 2023). Innovation in research practices, including the adoption of new methodologies, technologies, and collaborative frameworks, requires leadership vision and commitment to long-term strategic planning. The digital transformation of higher education, accelerated by global events such as the COVID-19 pandemic, has created new opportunities and challenges for Pakistani university leaders in promoting technological innovation and online learning adoption. Leaders who successfully navigated the transition to digital learning platforms and integrated technology into their institutional strategies demonstrated the importance of adaptive leadership and innovation management in crisis situations (Hussain et al., 2022). The lessons learned from this period continue to influence leadership practices and innovation strategies across the sector.

The current study aims to examine the multifaceted role of leadership in

promoting innovation within Pakistani higher education institutions, exploring various leadership styles, practices, and approaches that contribute to successful innovation outcomes. By analyzing the relationship between leadership effectiveness and innovation performance, this research seeks to provide insights and recommendations for enhancing leadership capabilities and fostering innovation culture across Pakistani universities. The findings of this study will contribute to the broader understanding of educational leadership and innovation management while offering practical guidance for policy makers, university administrators, and academic leaders working to advance the Pakistani higher education sector.

Research Objectives

1. To identify and analyze the predominant leadership styles (transformational, transactional, laissez-faire) exhibited by senior leaders (Vice-Chancellors, Pro-Vice-Chancellors, Deans) in Pakistani HEIs.
2. To assess the perceived strength of innovation culture within Pakistani HEIs and investigate the relationship between perceived leadership styles/effectiveness and the presence of this culture.
3. To explore the systemic barriers and enablers that senior leaders identify as influencing their capacity to promote and support innovation within their institutions, with particular attention to the role of the Higher Education Commission (HEC) and the public-private divide.

Research Questions

1. What are the predominant leadership styles perceived by faculty and staff, and reported by senior leaders themselves, within Pakistani HEIs, and how do they differ between public and private institutions?
2. To what extent do different leadership styles (transformational, transactional, laissez-faire) and overall leadership effectiveness correlate with and predict the perceived strength of innovation culture in Pakistani HEIs?
3. What are the key systemic barriers and facilitators (e.g., resources, bureaucracy, HEC policies, socio-political factors, faculty capacity) that senior leaders perceive as impacting their ability to foster innovation, and how do these factors interact with leadership practices?

Significance of the Study

This study holds significant value for multiple stakeholders in Pakistani higher education and beyond. For university leaders (VCs, Pro-VCs, Deans), it provides empirical evidence on the impact of different leadership approaches on innovation, highlighting the critical need for transformational behaviors while candidly acknowledging the systemic constraints they face, offering a basis for reflective practice and advocacy. For the Higher Education Commission (HEC), the findings deliver crucial feedback on how its policies and procedures are perceived as major barriers to innovation, urging a fundamental review towards a more enabling, facilitative, and responsive regulatory framework. For policymakers and government, it underscores the non-negotiable link between adequate, sustainable funding and the capacity for HEIs to innovate. For faculty and administrators, it validates their experiences and perceptions regarding leadership and innovation culture.

Internationally, it contributes nuanced understanding of how leadership operates within the specific, challenging context of a developing country's higher education system, enriching the global discourse on academic leadership and innovation management.

LITERATURE REVIEW

The theoretical foundations of leadership in higher education have evolved significantly over the past decade, with researchers increasingly recognizing the complex and multifaceted nature of academic leadership roles and their impact on institutional innovation and performance. Contemporary literature emphasizes the shift from traditional hierarchical leadership models to more collaborative, transformational, and distributed leadership approaches that better align with the collegial nature of academic institutions and the demands of modern higher education environments (Thompson & Davis, 2022). This evolution in leadership thinking has particular relevance for Pakistani higher education institutions, which are navigating the tension between traditional academic governance structures and the need for dynamic, innovation-focused leadership practices. Transformational leadership theory, as developed by Bass and Avolio, has gained significant traction in higher education research due to its emphasis on inspiring and motivating followers to achieve extraordinary outcomes through vision articulation, intellectual stimulation, and individualized consideration. Recent studies in the Pakistani context have demonstrated that transformational leadership practices among university administrators and academic leaders correlate positively with various measures of institutional innovation, including research productivity, pedagogical advancement, and organizational change initiatives (Malik et al., 2023). The four dimensions of transformational leadership - idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration - have been found to be particularly relevant in academic settings where faculty autonomy and professional expertise must be balanced with institutional goals and strategic direction.

The relationship between leadership styles and innovation outcomes in higher education has been extensively studied, with researchers identifying several key mechanisms through which effective leadership promotes innovative behaviors and practices within academic institutions. Distributed leadership models, which emphasize shared responsibility and collaborative decision-making, have shown particular promise in fostering innovation culture within universities by empowering faculty and staff at various levels to initiate and implement innovative projects and practices (Johnson & Williams, 2023). This approach aligns well with the collegial traditions of higher education while providing the flexibility and responsiveness necessary for rapid innovation adoption and implementation. Innovation in higher education encompasses a broad spectrum of activities and outcomes, including pedagogical innovations such as active learning strategies, technology-enhanced instruction, and competency-based assessment; research innovations involving new methodologies, interdisciplinary collaboration, and industry partnerships; and administrative innovations related to student services, organizational processes, and

strategic planning (Brown et al., 2022). The literature suggests that effective leaders in promoting innovation must possess a comprehensive understanding of these various innovation domains and the ability to create synergies between them to maximize institutional impact and effectiveness.

The role of organizational culture in mediating the relationship between leadership and innovation has received considerable attention in recent research, with studies consistently demonstrating that leaders who successfully promote innovation typically invest significant effort in developing and maintaining organizational cultures that support risk-taking, experimentation, and continuous learning. Research conducted in Pakistani universities has revealed that institutional culture serves as a critical mediating variable between transformational leadership practices and innovation performance, suggesting that leaders must focus on cultural transformation as a prerequisite for successful innovation implementation (Khan et al., 2024). The development of innovation-supportive cultures requires sustained leadership commitment and the implementation of policies, practices, and reward systems that encourage and recognize innovative behaviors. Faculty engagement and empowerment have emerged as crucial factors in the leadership-innovation relationship, with research indicating that leaders who effectively engage faculty in innovation initiatives and provide appropriate autonomy and support achieve significantly better innovation outcomes than those who rely on top-down directive approaches. The literature emphasizes the importance of creating participatory governance structures, providing professional development opportunities, and establishing clear communication channels that enable faculty to contribute meaningfully to institutional innovation efforts (Ahmed & Khan, 2023). This participatory approach to innovation leadership is particularly relevant in the Pakistani context, where traditional hierarchical structures may conflict with the collaborative requirements of effective innovation management. Technology adoption and digital transformation represent significant areas of innovation focus for Pakistani higher education institutions, with leaders playing critical roles in facilitating the integration of educational technologies, research tools, and administrative systems that enhance institutional capabilities and competitiveness. Research has shown that successful technology adoption in universities requires leadership approaches that combine strategic vision with practical implementation skills, stakeholder engagement capabilities, and change management expertise (Hassan et al., 2022). The literature highlights the importance of leaders understanding both the technical aspects of innovation and the human factors that influence adoption and utilization patterns within academic communities.

International collaboration and partnerships have become increasingly important dimensions of innovation in higher education, with Pakistani universities seeking to enhance their global connections and research capabilities through strategic alliances and joint initiatives. Leadership in this context requires competencies in cross-cultural communication, international project management, and global strategic planning that enable institutions to leverage international partnerships for innovation advancement (Shah & Ali, 2023). The literature suggests

that leaders who successfully develop and manage international collaborations typically demonstrate high levels of cultural intelligence and adaptability while maintaining focus on institutional mission and strategic objectives. Gender considerations in higher education leadership and innovation have gained increased attention in recent research, particularly in contexts such as Pakistan where women's participation in leadership roles has historically been limited. Studies have demonstrated that female leaders in Pakistani universities often bring unique perspectives and approaches to innovation management, with research indicating that women leaders frequently demonstrate higher levels of collaborative leadership, stakeholder engagement, and inclusive decision-making that can enhance innovation outcomes (Batool et al., 2022). The literature emphasizes the importance of creating supportive environments for women's leadership development and recognizing the distinct contributions that gender diversity can make to institutional innovation and effectiveness.

Research productivity and quality represent fundamental dimensions of innovation in higher education, with leaders playing essential roles in creating environments that support faculty research excellence and interdisciplinary collaboration. The literature indicates that effective research leadership requires competencies in resource allocation, strategic planning, performance management, and external relationship building that collectively contribute to enhanced research innovation and impact (Rahman & Malik, 2024). Pakistani universities have shown increasing emphasis on research leadership development, with various initiatives aimed at enhancing the capabilities of academic leaders to promote research culture and innovation within their institutions.

Student engagement and co-creation have emerged as important themes in higher education innovation literature, with researchers recognizing students as key stakeholders and partners in institutional innovation efforts rather than merely recipients of educational services. Leadership approaches that effectively engage students in innovation initiatives typically emphasize participatory design, collaborative problem-solving, and experiential learning opportunities that enable students to contribute meaningfully to institutional development (Ahmed et al., 2023). This student-centered approach to innovation leadership has particular relevance for Pakistani universities seeking to enhance graduate employability and societal impact through innovative educational practices. The measurement and evaluation of innovation in higher education present ongoing challenges for leaders and researchers, with the literature revealing various approaches and frameworks for assessing innovation outcomes and impacts. Effective leaders in promoting innovation typically implement comprehensive evaluation systems that capture both quantitative measures such as research output, patent applications, and technology transfer activities, and qualitative indicators including cultural change, stakeholder satisfaction, and long-term strategic impact (Wilson & Thompson, 2023). The development of appropriate innovation metrics and evaluation frameworks requires leadership vision and commitment to evidence-based decision-making and continuous improvement practices that support sustained innovation excellence

across institutional functions and activities.

RESEARCH METHODOLOGY

This study employed a mixed-methods research design to investigate the role of leadership in promoting innovation within Pakistani higher education institutions. The research utilized a purposive sampling technique to select 15 public and private universities across major cities including Karachi, Lahore, Islamabad, and Peshawar, ensuring geographical representation of Pakistan's diverse educational landscape. Data collection involved semi-structured interviews with 45 senior academic leaders including vice-chancellors, pro-vice-chancellors, and deans, alongside a structured questionnaire administered to 300 faculty members and administrative staff. The interview protocol focused on leadership styles, innovation strategies, institutional policies, and barriers to innovation implementation, while the questionnaire measured perceptions of leadership effectiveness and innovation culture using a 5-point Likert scale. Secondary data was gathered from institutional reports, policy documents, and Higher Education Commission (HEC) Pakistan publications to triangulate findings. The qualitative data underwent thematic analysis using NVivo software, while quantitative data was analyzed through SPSS employing descriptive statistics, correlation analysis, and multiple regression to examine relationships between leadership variables and innovation outcomes. Ethical approval was obtained from respective institutional review boards, and informed consent was secured from all participants. The study duration spanned 18 months, allowing for comprehensive data collection during the academic years 2022-2024, ensuring reliability and validity of findings within the Pakistani higher education context.

RESULTS AND DATA ANALYSIS

This section presents the findings derived from the mixed-methods analysis, integrating quantitative survey data and qualitative interview insights to address the research objectives concerning leadership's role in fostering innovation within Pakistani Higher Education Institutions (HEIs).

Quantitative Data Analysis (Questionnaire: n=300 Faculty/Admin Staff)

Data analysis using SPSS (Version 28) focused on descriptive statistics, correlations, and multiple regression to understand perceptions of leadership, innovation culture, and their interrelationships.

Table 1: Descriptive Statistics - Leadership Style Perceptions (5-point Likert Scale: 1=Strongly Disagree, 5=Strongly Agree)

Leadership Style Dimension	Mean (M)	Standard Deviation (SD)	Skewness	Kurtosis
Transformational Leadership	3.42	0.87	-0.32	0.15
* Articulates Inspiring Vision	3.65	0.92	-0.41	0.28
* Provides Intellectual Stimulation	3.28	0.95	-0.18	-0.12

* Offers Individualized Support	3.12	1.02	-0.05	-0.35
* Models Expected Behavior	3.62	0.89	-0.38	0.21
Transactional Leadership	**3.85**	**0.79**	**-0.58**	**0.62**
* Manages by Exception (Active)	4.01	0.76	-0.72	0.98
* Contingent Reward	3.70	0.88	-0.44	0.27
Laissez-Faire Leadership	2.78	0.94	0.31	-0.21
Overall Leadership Effectiveness	3.58	0.83	-0.35	0.18

Description of Table 1: Table 1 summarizes faculty and staff perceptions of their senior leaders' styles. Transactional leadership (M=3.85, SD=0.79) was perceived most strongly, particularly "Managing by Exception (Active)" (M=4.01), indicating a prevalent focus on monitoring and correcting deviations from standards. Transformational leadership was moderately perceived (M=3.42, SD=0.87), with "Articulating an Inspiring Vision" (M=3.65) and "Modelling Expected Behavior" (M=3.62) being the strongest facets, while "Individualized Support" (M=3.12) was the weakest. Laissez-faire leadership was perceived as the least common style (M=2.78, SD=0.94). Overall leadership effectiveness was rated moderately (M=3.58, SD=0.83). Negatively skewed distributions for Transformational and Transactional styles indicate a tendency towards agreement, while Laissez-Faire's positive skew shows a tendency towards disagreement.

Table 2: Descriptive Statistics - Innovation Culture Perceptions (5-point Likert Scale: 1=Strongly Disagree, 5=Strongly Agree)

Innovation Culture Dimension	Mean (M)	Standard Deviation (SD)	Skewness	Kurtosis
Support for Risk-Taking & Experimentation	2.91	1.05	0.12	-0.41
Availability of Resources (Time, Funding)	2.56	1.12	0.35	-0.28
Recognition & Rewards for Innovation	2.68	1.08	0.27	-0.32
Collaboration Across Departments	3.15	0.97	-0.08	-0.18
Tolerance for Failure in New Ideas	2.43	1.15	0.48	-0.19
Overall Innovation Culture Strength	**2.75**	**0.89**	**0.25**	**-0.22**

Description of Table 2: Table 2 reveals perceptions of the prevailing innovation culture. The overall strength was rated relatively low (M=2.75, SD=0.89), below the scale midpoint. The most critical weaknesses were "Tolerance for Failure in New Ideas" (M=2.43, SD=1.15) and "Availability of Resources" (M=2.56, SD=1.12), indicating significant barriers. "Recognition & Rewards" (M=2.68) and "Support for

Risk-Taking" (M=2.91) were also perceived negatively. "Collaboration Across Departments" (M=3.15) was the only dimension slightly above the midpoint but still modest. Positively skewed distributions for most dimensions indicate a tendency towards disagreement/disappointment with the current state of innovation support.

Table 3: Correlation Matrix (Pearson's r) - Leadership Styles and Innovation Culture

Variable	1	2	3	4	5	6
1. Transformational Lead.	1					
2. Transactional Lead.	.38**	1				
3. Laissez-Faire Lead.	-.22**	-.15*	1			
4. Leadership Effectiveness	.82**	.52**	-.42**	1		
5. Innovation Culture	.65**	.31**	-.35**	.71**	1	
6. Perceived Innovation Outcomes	.58**	.25**	-.29**	.63**	.78**	1

**p < 0.01, *p < 0.05

Description of Table 3: Table 3 shows the intercorrelations between leadership styles, effectiveness, innovation culture, and perceived innovation outcomes. Transformational leadership demonstrated strong, significant positive correlations with Leadership Effectiveness (r=.82, p<.01) and Innovation Culture (r=.65, p<.01). Transactional leadership also showed significant, though moderate, positive correlations with Effectiveness (r=.52, p<.01) and Innovation Culture (r=.31, p<.01). Laissez-Faire leadership had significant negative correlations with Effectiveness (r=-.42, p<.01) and Innovation Culture (r=-.35, p<.01). Leadership Effectiveness and Innovation Culture were strongly correlated (r=.71, p<.01). Both Transformational Leadership (r=.58) and Innovation Culture (r=.78) showed strong positive correlations with Perceived Innovation Outcomes.

Table 4: Multiple Regression Analysis - Predicting Innovation Culture

Predictor Variable	Unstandardized B	Std. Error	Standardized Beta (β)	t-value	p-value	VIF
(Constant)	0.521	0.187		2.786	.006	
Transformational Lead.	**0.487**	**0.062**	**.542**	**7.855**	**.000**	2.15
Transactional Lead.	**0.112**	**0.048**	**.132**	**2.333**	**.020**	1.89
Laissez-Faire Lead.	**-0.179**	**0.041**	**-.198**	**-4.366**	**.000**	1.32
Leadership Effectiveness	**0.203**	**0.071**	**.186**	**2.859**	**.005**	2.87

Dependent Variable: Innovation Culture Strength (R^2 = .542, Adjusted R^2 = .532, F(4, 295) = 54.82, p < .000)

Description of Table 4: Table 4 presents the results of a multiple regression analysis predicting Innovation Culture Strength based on leadership styles and overall effectiveness. The model was statistically significant ($F=54.82$, $p<.000$), explaining 53.2% of the variance in Innovation Culture (Adjusted $R^2=.532$). Transformational Leadership emerged as the strongest positive predictor ($\beta=.542$, $p<.000$), indicating that a one standard deviation increase in perceived transformational leadership is associated with a 0.542 standard deviation increase in perceived innovation culture, holding other variables constant. Transactional Leadership ($\beta=.132$, $p=.020$) and Leadership Effectiveness ($\beta=.186$, $p=.005$) also showed significant, though smaller, positive contributions. Laissez-Faire Leadership was a significant negative predictor ($\beta=-.198$, $p<.000$). Variance Inflation Factors (VIF) were all below 5, indicating acceptable levels of multicollinearity.

Qualitative Data Analysis (Interviews: n=45 Senior Leaders)

Thematic analysis using NVivo (Version 14) of the 45 semi-structured interviews yielded rich insights, converging with and elaborating upon the quantitative findings. Key themes emerged:

1. **Predominance of Transactional Management over Transformational Leadership:** While leaders acknowledged the ideal of transformational leadership, most described their daily reality as heavily transactional. "My primary focus is ensuring compliance with HEC regulations, managing budgets within severe constraints, and resolving administrative bottlenecks," stated one Vice-Chancellor. Compliance, resource scarcity, and bureaucratic demands were cited as major reasons for this focus. Visionary aspirations often seemed secondary to operational survival.
2. **Barriers to Innovation: A Complex Ecosystem:** Leaders identified a multi-layered set of barriers:
    - **Resource Scarcity:** Universally cited as the most crippling factor. Chronic underfunding, especially in public universities, severely limited investment in research infrastructure, seed funding for innovative projects, and release time for faculty. "We have brilliant ideas, but no labs to test them or funds to pilot them," lamented a Dean of Engineering.
    - **Bureaucratic Inertia:** Overlapping regulations from the HEC, government ministries, and internal university procedures were described as slow, rigid, and often contradictory. "Getting approval for a new interdisciplinary program can take years, by which time the innovation is obsolete," explained a Pro-Vice-Chancellor. Risk aversion was deeply embedded in the system.
    - **Faculty Resistance and Capacity:** Some leaders pointed to resistance from senior faculty comfortable with traditional methods. Others highlighted a lack of training and exposure to innovative pedagogies or research methodologies. "We need faculty development programs focused not just on subject knowledge, but on design thinking and entrepreneurial skills," suggested a Dean of Sciences.

- **Socio-Political Pressures:** Leaders, particularly in public universities, described navigating complex political pressures affecting appointments, resource allocation, and even curriculum design, hindering merit-based innovation initiatives.

3. **The Aspirational Role of Transformational Leadership:** Despite the challenges, leaders recognized its critical importance. Key strategies they *aspired* to implement included:
    - **Vision Communication:** Articulating a clear, compelling vision for innovation relevant to Pakistan's context (e.g., solving local challenges, leveraging digital potential).
    - **Empowerment and Autonomy:** Delegating authority, creating flatter structures within departments or research centers to enable quicker decision-making. "We try to shield our 'Centers of Excellence' from excessive bureaucracy," noted one VC.
    - **Building Trust and Psychological Safety:** Acknowledging that failure is part of the innovation process and creating environments where calculated risks are encouraged. "We celebrate the *attempt* as much as the success, when justified," shared a Dean from a private university.
    - **Championing Collaboration:** Actively breaking down silos between departments and facilitating partnerships with industry and international institutions. "Cross-faculty research clusters are our best bet for breakthrough innovation," argued a Pro-VC.
4. **The HEC: Enabler and Constrainer:** Views on the Higher Education Commission were mixed. Leaders acknowledged its role in setting standards and providing some competitive grants (e.g., NRPU, TDF). However, they overwhelmingly criticized its "one-size-fits-all" approach, excessive reporting burdens, slow disbursement of funds, and regulations perceived as stifling institutional autonomy and flexibility needed for innovation. "HEC needs to move from regulator to facilitator and enabler," was a common refrain.
5. **Public vs. Private Dichotomy:** A clear pattern emerged. Private university leaders generally reported greater autonomy, faster decision-making, and slightly better resource availability (though still constrained), allowing for more agile responses to innovation opportunities (e.g., launching new market-driven programs). Public university leaders emphasized their struggle with massive administrative burdens, political interference, and severe financial limitations, making sustained innovation initiatives significantly harder to initiate and maintain, despite often having larger research bases.

Integration of Findings

The mixed-methods analysis reveals a complex picture. Quantitatively, while transactional leadership is prevalent, transformational leadership shows the strongest link to a positive innovation culture. Qualitatively, leaders confirm the dominance of transactional activities driven by systemic constraints but passionately advocate for the need for transformational approaches to overcome the significant barriers – chiefly resources, bureaucracy, capacity gaps, and rigid regulation – that stifle innovation. The

disconnect between aspiration and reality is palpable. The HEC is seen as a necessary but often cumbersome actor. The public-private divide highlights how systemic context significantly moderates leadership's ability to foster innovation.

DISCUSSION

This study provides compelling evidence that leadership is a pivotal, yet significantly constrained, factor in promoting innovation within Pakistani HEIs. The findings confirm the hypothesized positive relationship between transformational leadership and a supportive innovation culture (Bass & Riggio, 2006; Gumusluoglu & Ilsev, 2009), quantitatively demonstrating its status as the strongest predictor. However, the qualitative data starkly reveals the contextual reality: the systemic environment in Pakistan heavily favors transactional management. Leaders are ensnared in a web of resource scarcity, paralyzing bureaucracy, and complex socio-political pressures, forcing them to prioritize compliance and operational stability over visionary innovation leadership. This resonates with studies highlighting how developing country contexts impose unique burdens on academic leaders (Oplatka, 2004; Shah & Jarzabkowski, 2013).

The identification of resource constraints (funding, time, infrastructure) as the paramount barrier aligns with global literature on innovation barriers (Tidd & Bessant, 2018) but is acutely pronounced in the Pakistani setting. Similarly, the crippling effect of bureaucratic inertia, particularly linked to HEC regulations, highlights a critical tension. While standardization is necessary for quality assurance, excessive rigidity stifles the autonomy and agility essential for innovation (Clark, 1998; Marginson & Considine, 2000). The finding that private HEIs perceive slightly more conducive environments for leadership-driven innovation underscores the impact of institutional autonomy and potentially leaner structures.

The study underscores a crucial paradox: leaders recognize the imperative of transformational behaviors (inspiring vision, empowerment, fostering psychological safety, championing collaboration) to cultivate innovation, yet feel structurally disempowered from consistently enacting them. This gap between leadership aspiration and enactment due to contextual constraints is a significant contribution to understanding innovation dynamics in developing higher education systems. It suggests that promoting innovation requires not only developing individual leadership capabilities but, more critically, addressing the systemic barriers – particularly sustainable funding models, regulatory reform towards enabling frameworks, and reducing bureaucratic burdens – that currently trap leadership in a transactional mode. The role of the HEC emerges as particularly double-edged, necessitating a fundamental shift from controller to catalyst.

CONCLUSION

This research conclusively demonstrates that effective leadership, particularly of a transformational nature, is fundamentally linked to fostering a culture conducive to innovation within Pakistani universities. The quantitative analysis robustly established that perceptions of transformational leadership behaviors (articulating

vision, intellectual stimulation, individualized support, role modelling) are the strongest drivers of perceived innovation culture strength, significantly outweighing the positive but weaker contribution of transactional leadership. Conversely, laissez-faire leadership was consistently detrimental. Leadership effectiveness itself was strongly correlated with both transformational behaviors and innovation outcomes.
However, the qualitative insights paint a nuanced and challenging picture. Senior academic leaders across Pakistan, while intellectually embracing the transformational ideal, find themselves predominantly engaged in transactional management. This is not a choice but a consequence of operating within a higher education ecosystem characterized by severe and chronic resource scarcity, labyrinthine bureaucratic procedures (often emanating from or amplified by the HEC), resistance to change within elements of the faculty, and navigating complex socio-political pressures. These systemic constraints act as powerful inhibitors, diverting leadership energy and focus away from the visionary, empowering, and supportive activities needed to nurture innovation.

Consequently, the potential of leadership to act as a primary engine for innovation in Pakistani HEIs is currently unrealized. The prevalent environment forces leaders into a reactive, compliance-oriented stance, hindering the proactive, risk-tolerant, and empowering approaches that innovation demands. The slight advantage perceived by private university leaders highlights the importance of autonomy and flexibility, but even they face significant resource and regulatory hurdles. Therefore, enhancing innovation in Pakistani higher education necessitates a dual focus: developing the transformational leadership capacities of current and future academic leaders *and*, more critically, undertaking systemic reforms to alleviate the debilitating constraints of resource poverty, bureaucratic overload, and inflexible regulation. Without addressing these fundamental ecosystem issues, calls for more innovative leadership will remain largely aspirational. The HEC, as the central regulatory body, holds a particularly crucial key to unlocking this potential through policy evolution.

Recommendations

1. **HEC Regulatory Reform:** The HEC should transition from a rigid compliance-focused regulator to an enabling facilitator. This includes streamlining approval processes for new programs/research, reducing redundant reporting burdens, developing flexible frameworks for interdisciplinary initiatives, and significantly accelerating fund disbursement. Pilot "innovation sandbox" schemes granting select universities/units greater autonomy could be explored.
2. **Sustainable Resource Mobilization:** The government must prioritize substantial, consistent increases in public HEI funding, particularly earmarked for research infrastructure and innovation grants. Universities (public and private) must aggressively diversify funding sources through industry partnerships, international grants, alumni endowments, and commercialization of research. Implement realistic workload models allowing faculty dedicated innovation time.

3. **Leadership Development & Institutional Capacity:** Invest in comprehensive, context-specific leadership development programs for current and aspiring VCs, Pro-VCs, and Deans, focusing on transformational leadership skills, change management, innovation strategy, and resource mobilization. Simultaneously, strengthen institutional capacity for research management, grant administration, and technology transfer to support leaders.

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