



Leading Innovation Through Safety and Sharing: How Transformational Leadership and Leaders Humility Drive Innovative Work Behavior in Emerging Economies

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ABSTRACT

In this research, the mediating role of psychological safety and knowledge sharing in transformational leadership in promoting innovative work behavior in Pakistani organizations is investigated by mediating their role in the sequential manner and the moderating condition of humility among leaders. Based on the Social Exchange Theory, Psychological Safety Theory and the Componential Theory of Creativity, the study will fill a critical gap in the high power-distance, hierarchy-driven environment in which employee voice and innovation are usually limited in Pakistan. A quantitative, cross-sectional research design and PLS-SEM were employed to gather the data of employees in the most important sectors in Pakistan to test the given serial moderated mediation model. The results indicate that transformational leadership is important in improving psychological safety that facilitates knowledge sharing and eventually increases the innovative work behavior. The humility of leaders enhances the process of translating the psychological safety into knowledge-sharing practices that increases innovation outcomes. The research has theoretical value of incorporating the concept of leadership humility in leadership-innovation models in the emerging economies as well as providing practical recommendations on how to develop psychologically safe, collaborative, and innovation-focused organizational cultures in Pakistan.

Keywords: Psychological Safety, Transformational Leadership, Knowledge Sharing, Leaders Humility, and Innovative Work Behavior.



Introduction

The work behavior has been identified as an important aspect of organizational survival and development in the competitive and dynamic organizational environment in SMEs and service based firms especially in Pakistan. Pakistani companies exist in extreme uncertainty with resource limitations, strict hierarchies, and weak practices of the innovation-driven human capital, which can typically impede employee innovation and positive problem-solving (Saeed et al., 2021; Khan & Anwar, 2022). Therefore, the creation of an organizational environment that promotes innovation is becoming a more strategic focus of Pakistani organizations that want to pursue sustainable performance and competitiveness on the global scene.

Such environments are shaped by the leadership. Transformational leadership is a progressive way of leadership in Pakistan where the organizational frameworks are conservative and traditionally authority-centric, as it promotes involvement by employees, motivation, and innovation (Riaz & Haider, 2020). Nevertheless, even with the increasing popularity of the role of transformational leadership, there is still a gap in the state of knowledge in the empirical explanation of how it is transformed into innovative work behavior in the Pakistani context.

The current body of research in Pakistan is also more about direct influence of leadership on performance or job satisfaction, without paying much attention to the psychological process underlying them to be able to be involved in innovation (Javed et al., 2021). The most common is psychological safety, which embodies the way employees feel free to share their ideas without the risk of being criticized, which in Pakistani workplaces is rather low because of power distance and fear of authority (Asif & Searcy, 2020). This psychological insecurity will not foster knowledge sharing, which is a fundamental behavioral process whereby innovative ideas are generated, developed, and put into practice.

In addition, leader humility, a leadership quality that involves being open, appreciating employee input, and acknowledging limitations, is a topic that has been given little academic coverage by the Pakistani leadership literature, although it could help eliminate the barriers of hierarchy, as well as improve trust-based relationships (Shah & Ali, 2022). This loophole is particularly serious in Pakistan where employee voice is frequently repressed by the cultural norms and inflexible power structures.

Based on the Social Exchange Theory, Psychological Safety Theory, and Componential Theory of Creativity, this study hypothesizes a sequential mediated model in which, transformational leadership and innovative work behavior are serially mediated by psychological safety and knowledge sharing, which is moderated by leader humility. Placing this framework into the context of Pakistan, this study would add to the scarcity of empirical studies on leadership and innovation in the context of emerging economies and provide useful recommendations to Pakistani organizations eager to develop innovation oriented cultures despite the impediments of structure and culture.

Research Questions

RQ1: How does transformational leadership influence innovative work behavior in Pakistani organizations?

RQ2: Does psychological safety mediate the relationship between transformational leadership and knowledge sharing among Pakistani employees?

RQ3: Does knowledge sharing mediate the relationship between psychological safety and innovative work behavior in Pakistan?



RQ4: Do psychological safety and knowledge sharing sequentially mediate the relationship between transformational leadership and innovative work behavior in Pakistani firms?

RQ5: Does leader humility strengthen the relationship between psychological safety and knowledge sharing in the Pakistani workplace context?

Research Objectives

General Objective

To examine how transformational leadership influences innovative work behavior through the serial mediating roles of psychological safety and knowledge sharing, and to assess the moderating effect of leader humility in Pakistani organizations.

Specific Objectives

To analyze the effect of transformational leadership on psychological safety in Pakistani workplaces

To examine the influence of psychological safety on knowledge-sharing behavior among Pakistani employees

To determine the impact of knowledge sharing on innovative work behavior in Pakistan.

To investigate the serial mediating effect of psychological safety and knowledge sharing between transformational leadership and innovative work behavior.

To evaluate the moderating role of leader humility on the relationship between psychological safety and knowledge sharing

Literature Review

Innovative work behavior (IWB) has taken a central role in the sustainability of organizations in new economies like Pakistan, when organizations have high competition forces, changes in technology and speed of structural inefficiencies. Nevertheless, the low level of employee-driven innovation remains an issue in the Pakistani organizations because of inflexible hierarchical models, fear-based communication, and the lack of knowledge sharing cultures. The recent research in Pakistan also explains that employees are reluctant to present new ideas because of the conservative style of leadership and the fear of negative outcomes, which are weak psychological safety climates (Khan et al., 2021; Raza & Nawaz, 2022). This explains why leadership strategies that can promote employee-level innovation are urgently required.

Transformational leadership has always been identified as a facilitator of innovation-friendly conditions through inspiration, autonomy, and intellectual stimulation. In the Pakistani setting, the emergent data indicate that transformational leaders have a positive impact on employee creativity and engagement, but the impact often is limited by psychological empowerment lack and interpersonal distrust (Javed et al., 2021; Riaz & Haider, 2020). Majority of the empirical studies in Pakistan are concerned with the outcome of leadership e.g. job satisfaction or commitment to an organization but overlooks the underlying psychological processes by which leadership triggers innovation behavior.

In the Pakistani organizations, the psychological safety is especially weak because of the authoritarian management tradition and high power distance. Employees usually feel unsafe to express ideas or offer original suggestions, thus restricting the potential of innovation (Asif and Searcy, 2020). Psychological safety is a very important factor in the ability to share knowledge because employees should feel safe to share their experiences, errors, and ideas without being mocked or punished. Nevertheless, Pakistani companies



have a low level of trust and fear of the misuse of their ideas, which limits the spread of learning and the dissemination of innovation.

The concept of leader humility is a new leadership concept that has a profound implication on the hierarchical culture in Pakistan. Humble leaders can undermine the strict power hierarchies and promote a safer culture of communication by demonstrating openness, appreciation of employee feedback, and readiness to teach (Shah & Ali, 2022). However, there is little evidence on integrating leader humility in innovation-oriented leadership approaches in Pakistan, and it signifies a significant gap in the empirical evidence.

Together, the available literature indicates a disrupted awareness of the way in which transformational leadership contributes to an innovative work behavior in Pakistan, based on the psychological safety and knowledge sharing mechanisms. The study hence bridges an important gap in that, it constructs a context-specific serial model of mediation that combines the psychological and behavioral processes whilst considering the concept of leader humility as a boundary condition, thus enhancing the process of conceptualizing innovation leadership in the contexts of emerging markets.

Hypotheses Development

Transformational leadership positively influences psychological safety.

High power distance and authority-focused working environments of Pakistan countries make people feel shy to talk openly because they might be criticized or even retaliated against. This fear can be overcome with the help of transformational leadership (TL) as inspirational motivation, individualized consideration, and supportive communication, which would signal the followers about the respect and care they deserve (Riaz & Haider, 2020). According to the recent research in South Asian and Pakistani settings, TL improves trust, openness, and perceived fairness as essential antecedents of psychological safety (Khan et al., 2021; Saeed, Afsar, & Cheema, 2023). By encouraging voice, listening to dissenters, and making mistakes look like learning opportunities, when leaders do this, employees start to perceive interpersonal risk-taking (e.g. proposing new ideas or challenging routines) as normal instead of threatening (Newman, Donohue, & Eva, 2020). Thus, TL should be very instrumental in creating psychologically safe climates in the hierarchical culture of Pakistan.

H1: Transformational leadership positively influences psychological safety among employees in Pakistani organizations.

Psychological safety positively influences knowledge sharing.

In Pakistan, psychological safety (PS) is of particular concern because employees tend to keep information and experience secret that can reveal their weaknesses or be blamed. When workers feel that they do not risk being embarrassed or punished after disclosing the information, they become generally ready to share knowledge, both positive and negative experiences, lessons learned, and even innovative concepts (Lei, Haider, & Tian, 2020). Empirical studies in the emerging markets show that PS can be a significant predictor of knowledge-sharing behaviors through the decrease of the fear of negative evaluation and the increase of interpersonal trust (Chen, Wang, & Huang, 2022; Rafique & Agha, 2021). When mistrust and political behavior may influence cooperation in a Pakistani organization, PS is a psychological stimulus that transforms passive obedience into involvement. Therefore, the increased quantities of PS are expected to lead to the increase in the number and diversity of knowledge-sharing interactions between employees.



H2: Psychological safety positively influences knowledge sharing in Pakistani organizations.

Knowledge sharing positively influences innovative work behavior.

The resource-constrained Pakistani firms tend to be innovative by means of less structured R&D than through creative recombination of knowledge held by employees. Knowledge sharing (KS) helps to share various points of view, contextual data, and experience, which increases the ability of employees to develop and introduce new ideas (Iqbal, Abid, & Contreras, 2021). The Pakistani and more general Asian evidence has demonstrated that when employees share knowledge regularly, they tend to undergo idea generation, solution refinement, and experimentation- the main parts of innovative work behavior (Khan, Hussain, & Sheikh, 2020; Yao, Yang, & Guo, 2022). Grouping learning and solving problems together is especially significant in collectivist cultures, like Pakistan, because it can help to overcome structural obstacles and informal resistance against change. Therefore, KS will play a role of a direct behavioral innovation driver at individual level.

H3: Knowledge sharing positively influences innovative work behavior among employees in Pakistani organizations.

Transformational leadership positively influences innovative work behavior.

Empirical research in recent times in Pakistan and other developing economies indicates that transformational leadership has a close connection with innovative work behavior (IWB), since it encourages a strong vision, challenges the status quo, and fosters autonomy (Al-Husseini and Elbeltagi, 2020; Jada & Mukhopadhyay, 2022). In Pakistani organizations, where risk-aversion and compliance are generally the standard procedures, the TL can justify the experimentation and the implementation of ideas by explicitly appreciating creativity and learning to take failures into consideration (Soomro, Breitenecker, & Shah, 2023). Transformational leaders provide psychological empowerment and intrinsic motivation which motivates employees to shift the normative work of doing tasks, instead of delving into new prospects, making new processes, and coming up with new solutions (Gong, Kim, & Lee, 2023). Therefore, it is anticipated that TL will have a positive direct influence on IWB.

H4: Transformational leadership positively influences innovative work behavior in Pakistani organizations.

Psychological safety and knowledge sharing sequentially mediate the relationship between transformational leadership and innovative work behavior.

Transformational leadership is unlikely to affect innovative work behavior in Pakistan in a strictly direct manner, but rather in an indirect manner that occurs through a series of psychological and behavioral processes. TL initially boosts a positive climate of psychological safety by promoting an environment that is not punitive (Newman et al., 2020). Feeling safe also makes the employees more open to the idea of sharing knowledge because the perceived interpersonal risk of revealing problems, suggestions, or partial ideas is minimized (Lei et al., 2020; Chen et al., 2022). Sharing knowledge, in its turn, allows the employees to streamline and adopt new solutions, especially in the case of Pakistani companies where informal collaboration is the key to ensuring that structural limitations are eliminated (Iqbal et al., 2021; Soomro et al., 2023). This



indicates a sequential mediating process in which PS acts as a middle ground psychological state and KS is a middle ground behavioral condition between TL and IWB.

H5: Psychological safety and knowledge sharing sequentially mediate the relationship between transformational leadership and innovative work behavior in Pakistani organizations.

Leader humility moderates the relationship between psychological safety and knowledge sharing such that the relationship is stronger when leader humility is high.

Leader humility may also have a significant influence on the way psychological safety is converted into real action in the context of hierarchical, status-sensitive Pakistan. Humble leaders are open-minded, they recognize their weaknesses, and they are sincerely appreciative of the contributions of the employees (Owens & Baker, 2020). According to recent research, leader humility enhances collaborative behaviors and decreases the perceptions of power distance, which pushes employees to work on their perceptions of safety by sharing knowledge more openly (Zhang, Waldman, & Han, 2021; Rabiul & Yean, 2023). With high levels of humility, the employees will tend to decipher the psychological safety cues as genuine and long-term, leading to more knowledge sharing. On the other hand, in low humility, employees could still be unwilling to talk, even when they feel that a degree of safety is present, because they are still threatened by the fear of ego-threat or status punishment.

H6: Leader humility positively moderates the relationship between psychological safety and knowledge sharing, such that the relationship is stronger at higher levels of leader humility in Pakistani organizations.

Leader humility moderates the indirect effect of transformational leadership on innovative work behavior via psychological safety and knowledge sharing.

Based on the moderated mediation argument, it is anticipated that the strength of an indirect impact of transformational leadership in innovative work behavior via psychological safety and knowledge sharing will be contingent on leader humility. The high level of humility will support the trust and openness that transformational leadership has introduced, and thus there is a greater probability that the psychological safety will culminate into an active sharing behavior of knowledge and eventually result in innovative work performance (Zhao, Liu, & Ma, 2022; Bai, Lin, & Li, 2023). Conversely, in the case of low leader humility, the psychological safety produced by TL might not translate into knowledge sharing or innovation entirely as employees are still afraid of leader reactions. Such a process is most apt in the case of Pakistan where the role of leadership character has been instrumental in both influencing the desire of employees to translate their perceptions into behavior.

H7: Leader humility moderates the indirect relationship between transformational leadership and innovative work behavior via psychological safety and knowledge sharing, such that the indirect effect is stronger at higher levels of leader humility in Pakistani organizations.



Theoretical Linkage of the Framework

The present framework is theoretically based on a holistic approach based on the combination of Social Exchange Theory (SET), Psychological Safety Theory, Componential Theory of Creativity, and new Leader Humility Theory to understand how transformational leadership can result in innovative work behavior by the employees of the Pakistani organizations.

Social Exchange Theory (Blau, 1964) explains that employees will give back positive holistic actions that are not inclusive in their job descriptions with supportive leadership behaviors. The transformational leaders who show concern, respect and empowerment instil in the followers a sense of obligation and trust in the Pakistani context where relationship and power distance are strong. According to recent empirical research in the developing economies, such leadership enhances relation bonds and motivates employees to perform extra-role activities, such as knowledge exchange and innovation (Saeed, Afsar, & Cheema, 2023; Riaz & Haider, 2020). This mechanism of exchange gives the logic on which transformational leadership is connected to psychological statuses of the employees and their behavior.

Transformational leadership has an impact on psychological safety because the Psychological Safety Theory (Edmondson, 1999) is a theory that suggests that people will take interpersonal risks should they feel their environment to be safe. The culture of authority in Pakistan is such that employees usually suppress any ideas because of the fear of being punished. Transformational leadership manages to overcome this by making the open dialog normal, and the error as a learning experience, which reinforces the perception of safety and trust (Newman et al., 2020; Detert & Edmondson, 2021).

Achieving psychological safety and switching to knowledge sharing is a very important behavior mechanism. Feeling safe, employees are more likely to exchange their ideas, insights, and experiences without being afraid of criticism. It is congruent with the study of emerging markets as it has been determined that psychologically safe climates can stimulate collaborative learning and knowledge exchange significantly (Lei et al., 2020; Chen et al., 2022). The psychological safety is one of the conditions in Pakistan in which knowledge hoarding and mistrust are widespread.

The connection between innovative work behavior and knowledge sharing is explained by Componential Theory of Creativity (Amabile, 1996) that explains that innovation occurs due to availability of a variety of knowledge, intrinsic motivation and cognitive flexibility. Knowledge sharing increases cognitive resource, facilitates idea refinement, and experimentation all of which amplify innovative behavior (Iqbal et al., 2021; Soomro et al., 2023).

Lastly, the moderating effect of leader humility is demonstrated by the emerging theory of leadership, where humble leaders minimize power distance, exemplify openness and increase trust. The humility of leaders enhances the transformation of psychological safety into knowledge-sharing behavior in Pakistani organizations by supporting the authenticity and psychological openness (Zhang et al., 2021; Rabiul & Yean, 2023). Therefore, humility is a vital boundary condition that enhances the efficiency of the psychological safety in fostering collaborative behaviors.

All these theories together form a logical chain process by which transformational leadership develops innovativeness on work behavior through repeated psychological and behavioral processes and explain the situational impact of leader humility in the hierarchical organizational culture of Pakistan. This unified frame develops the theory of leadership and innovation by putting global constructs in situational contexts of the emergent socio-organizational realities of the emerging economies.

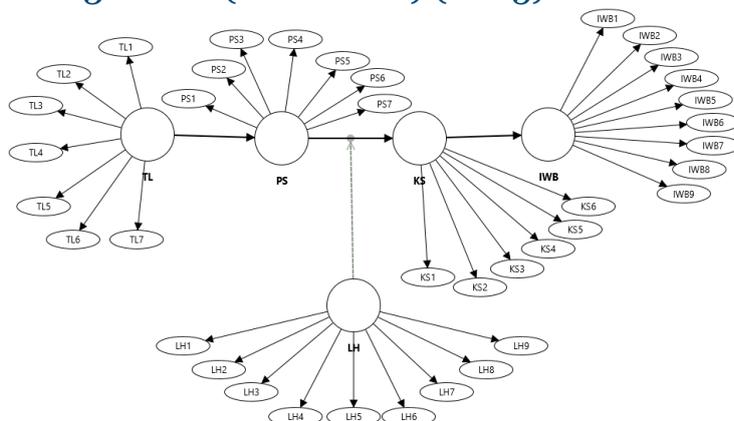


Figure # 01: Conceptual Model

Methodology

Research Design

The proposed study has a quantitative, explanatory, cross-sectional research design to test the effects of transformational leadership on the innovative work behavior using the serial mediating purposes of psychological safety and knowledge sharing, and moderating purpose of leader humility in Pakistani organizations. The survey-based method was chosen because it allows the systematic gathering of data on a large group of respondents and makes it possible to perform powerful statistical testing of non-trivial structural relationships with the help of structural equation modeling (Hair et al., 2021).

Population and Sampling

The target population will be full time employees in medium and large organizations and SMEs in Pakistan, especially service and manufacturing sector, where innovation and leadership practice plays a critical role in competitiveness. The industries that were chosen to select the respondents included: banking, telecommunication, education, pharmaceutical industry and manufacturing and these are the industries that have different organizational setups.

To guarantee that the respondents were able to assess leadership behaviors and workplace climate, a non-probability purposive sampling method was employed to make sure that the participants had adequate contact with their immediate supervisors. In order to have statistical power, the recommendation of Hair et al. (2021) on the models with the mediation and moderation of variables was followed, and the sample size was aimed at 520. The overall sample size would have been between 350-600 respondents, which is sufficient to be analyzed using PLS-SEM.

Data Collection Procedure

A self-administered structured questionnaire was used as a source of collecting data in electronic and printed format. The respondents were told that their anonymity and confidentiality were guaranteed to minimize social desirability bias. The engagement was determined by free will and informed consent was given before data gathering.

To minimize common method bias, procedural remedies were applied, including:

- Assuring anonymity and confidentiality
- Separating sections for IV, mediators, and DV
- Using clear and neutral wording



Measurement of Variables

The measurement of all constructs in this research was done with highly proven and prior validated measures that were customized to the contextual realities of Pakistani organizations. The answers were measured using a Seven-point Likert level of 1 = Strongly Disagree to 7 = Strongly Agree in order to give uniformity and comparability across constructs.

The items of transformational leadership were assessed with seven items based on Multifactor Leadership Questionnaire (MLQ) created by Bass & Avolio. The scale has been extensively employed in the field of leadership research and has been able to help measure some important dimensions of transformational leadership such as inspirational motivation, individualized consideration, and intellectual stimulation. They were administered seven items to determine the perception of employees towards transformational behaviors of their supervisors in terms of encouraging innovative thinking and motivating support.

Psychological safety was measured with the help of a seven-item scale, which was developed by Edmondson (1999) and evaluated the perception of employees towards interpersonal safety at work place. The scale measures how much the employees feel comfortable sharing ideas, speaking freely, and committing mistakes without feeling embarrassed or being punished, which is an overall measure of openness and trust in the organizational climate.

The scales used to measure knowledge sharing were a six-item scale modified by Lei et al. (2020) and aimed at measuring the willingness of the employees to share their work-related knowledge, insights, and expertise with their coworkers. The scale measures the level of collaborative communication and voluntary sharing of information that is essential in developing collective learning and innovation.

The innovativeness of work behavior was measured based on the nine item scale by Janssen (2000) that was used to measure the engagement of employees as regards to generating ideas, promoting ideas as well as implementing them. This scale indicates how much the employees are willing to contribute innovative ideas, promote innovative solutions, and use creative strategies to enhance work processes.

A nine-item practical scale of leader humility was based on the work by Owens and Baker (2020) that measures the level of openness to feedback, recognition of the employees and acceptance of personal restrictions in the leader. This scale reflects the impressions of employees concerning the humility related practices of their immediate supervisors that are central to the development of the interpersonal trust and climate of cooperation.

Data Analysis Technique

Partial Least Squares Structural Equation Modeling (PLS-SEM) of SmartPLS 4.0 was appropriate to analyze the data and is appropriate in complex models that include mediation and moderation. Two-stage methodology was used. To evaluate the measurement model, Cronbach alpha and composite reliability were used ([0.70), Average Variance Extracted ([0.50) for convergent validity, and HTMT ratio (less than 0.85) for discriminant validity were used. Second, path significance was tested with the use of bootstrapping with 10,000 resamples to evaluate the structural model. R^2 , and f^2 , values were used to determine the explanatory power, effect size and prediction relevance including the moderated mediations effect.



Findings and Analysis

Measurement Model

The measurement model was tested in order to determine the reliability and convergent validity of all measures, such as Innovative Work Behavior (IWB), Knowledge Sharing (KS), Leader Humility (LH), Psychological Safety (PS), and Transformational Leadership (TL). Hair et al. (2021) posit that setting internal consistency and convergent validity are the conditions of proceeding to structural model analysis in PLS-SEM.

All the indicator factor loadings were higher than the recommended level of 0.70 and they were between 0.761 and 0.835 which demonstrates high item reliability and proves that each item has a significant contribution to its respective latent variable (Hair et al., 2021; Sarstedt et al., 2020). All constructs had alpha values of 0.897 to 0.932, which indicates very high levels of internal consistency and reliability, which is consistent with the established value of above 0.70 as an adequate level of reflective constructs (Nunnally & Bernstein, 1994; Hair et al., 2021).

The Composite Reliability (CR) values were between 0.920 and 0.943, which once again proved the strength of the scales of measurements and once more supported the consistency of construct measurement (Henseler et al., 2015). Averaged Varied Extracted (AVE) was used to test convergent validity, and the values were between 0.621 and 0.662, more than half a value of the threshold of 0.50, which was the minimum required to verify that every construct accounts for more than half of the variance of its indicators (Fornell & Larcker, 1981; Hair et al., 2021).

On the whole, the outcomes indicate that the measurement model has the high psychometric properties, as it meets all the requirements of reliability and convergent validity. Such findings are a strong empirical argument in favor of the appropriateness of the measurement scales and enable proceeding to structural model assessment and hypothesis testing without any doubts.

Table # 01

Reliability and Validity

Factor	Loading	alpha	CR	AVE
IWB		0.929	0.941	0.639
IWB1	0.827			
IWB2	0.798			
IWB3	0.821			
IWB4	0.788			
IWB5	0.766			
IWB6	0.829			
IWB7	0.762			
IWB8	0.823			
IWB9	0.779			
KS		0.897	0.921	0.660
KS1	0.819			
KS2	0.817			
KS3	0.821			
KS4	0.783			
KS5	0.830			
KS6	0.804			
LH		0.932	0.943	0.646
LH1	0.829			



LH2	0.789		
LH3	0.797		
LH4	0.799		
LH5	0.788		
LH6	0.780		
LH7	0.814		
LH8	0.835		
LH9	0.801		
PS		0.915	0.932
PS1	0.826		
PS2	0.810		
PS3	0.823		
PS4	0.793		
PS5	0.825		
PS6	0.824		
PS7	0.797		
TL		0.898	0.920
TL1	0.812		
TL2	0.764		
TL3	0.782		
TL4	0.761		
TL5	0.809		
TL6	0.817		
TL7	0.768		

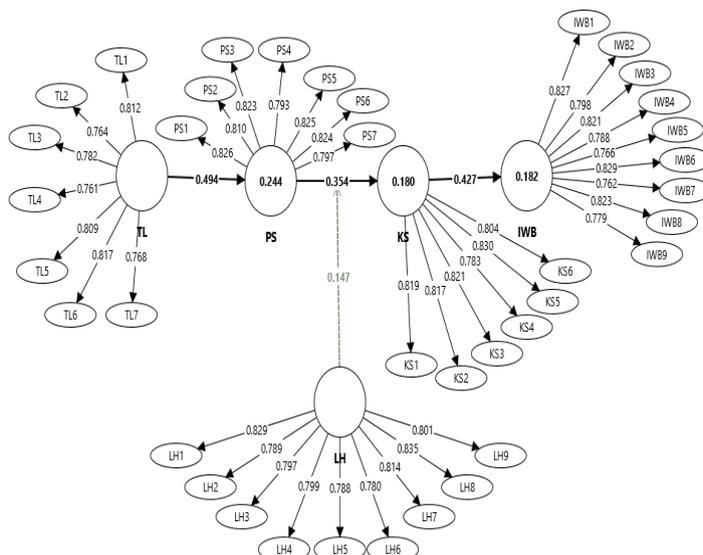


Figure #02: Measurement Model

Discriminant Validity

The Heterotrait-Monotrait (HTMT) ratio is generally viewed as a powerful measure of discriminant validity when used to measure the uniqueness of the latent constructs in PLS-SEM, and so it was used to measure discriminant validity (Henseler et al., 2015; Hair et al., 2021). Table 02 demonstrates that all the HTMT values take values that are lower than the recommended value of 0.85, suggesting satisfactory discriminant validity.



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This proves that the constructs of Innovative Work Behavior, Knowledge Sharing, Leader Humility, Psychological Safety, and Transformational Leadership are conceptually different. Low levels of inter-construct correlations indicate that each construct is unique in terms of the variance and it does not overlap as much with the other thus validating the model of structural relationships and making the model clear and transparent.

Table # 02

HTMT Criteria

	IWB	KS	LH	PS	TL
IWB	■				
KS	0.465	■			
LH	0.060	0.197	■		
PS	0.308	0.374	0.082	■	
TL	0.362	0.246	0.073	0.541	■

Variance in endogenous variable

The coefficient of determination (R^2) represents the capacity of the structural model to explain each endogenous construct. As Table 03 indicates, Transformational Leadership captures 24.4% of the difference in Psychological Safety ($R^2 = 0.244$), which is also a moderate predictive effect and indicates the high impact of leadership behavior on the perception of the interpersonal safety by employees. Knowledge Sharing has $R^2 = 0.180$ which is 18.0 percent of the variance that is shared by Psychological Safety and the moderator meaning it has an acceptable predictive relevance. In the same vein, the R^2 of Innovative Work Behavior is 0.182 meaning that the model accounts 18.2% of the innovation behavior of employees. These values show a moderate level of explanatory power, which is deemed as reasonable in the context of behavioral and organizational studies and justifies the sufficiency of the proposed framework in terms of its predictive power.

Table # 03

R-Square

Factor	R-Square	Adjusted R- Square
IWB	0.182	0.181
KS	0.180	0.175
PS	0.244	0.242

Effect Size

The values of f-square (f^2) evaluate the contribution of each exogenous variable to the explained variance of endogenous constructs. As Table 04 indicates, Transformational Leadership and Psychological Safety have a medium effect size ($f^2 = 0.322$), which means that leadership plays an important role in improving the psychological safety of employees. There is also a significant relationship between Knowledge Sharing and Innovative Work Behavior ($f^2 = 0.223$) which points to its moderate effect and indicates the significance of the latter in the promotion of innovation. Knowledge Sharing has a small-to-moderate effect of Psychological Safety ($f^2 = 0.152$), whereas Leader Humility and the interaction term (LH*PS) have small effect sizes (0.051 and 0.026), respectively,



which demonstrate that the former is supportive but not a dominant factor. These findings accept the fact that the variables related to leadership have an impactful influence on the predictive structure of the model.

Table # 04 F-Square

Factor	effect size
KS→IWB	0.223
LH→KS	0.051
PS→KS	0.152
TL→PS	0.322
LH*PS→KS	0.026

Structural Model

The structural model was assessed to see the hypothesized relationship between transformational leadership, psychological safety, knowledge sharing, and leader humility, and innovative work behavior. As shown in Table 05, there is strong empirical evidence which supports all the proposed direct, indirect and moderated paths showing that the theoretical framework is robust enough.

The positive correlation between Knowledge Sharing and Innovative Work Behavior is of high significance and has a positive relationship ($b = 0.427$, $t = 11.801$, $p < 0.001$), which means that the more an employee actively shares knowledge, the higher the chances he/she will engage in innovative activities like idea generation and implementation. Knowledge Sharing is also significantly positively impacted by Psychological Safety ($b = 0.354$, $t = 9.490$, $p < 0.001$), the fact that employees feel safe to share information with others indicates that they are more ready to share knowledge. Moreover, Psychological Safety is highly predicted by Transformational Leadership ($b = 0.494$, $t = 14.317$, $p < 0.001$), which demonstrates that psychological safety is one of the key aspects of supportive and inspirational leadership in the development of a safe working environment.

The Leadership Humility moderating the Psychological Safety-Knowledge Sharing relationship is also substantial ($b = 0.147$, $t = 3.974$, $p < 0.001$), which implies that the positive influence of psychological safety on knowledge sharing is reinforced by the humility. This affirms that in the event that leaders are humble, chances are higher that the employees would convert psychological safety into factual sharing behavior.

The serial mediation mechanism is supported by the indirect effects too. The relationship between TL - PS - KS - IWB ($b = 0.075$, $t = 5.598$) is important ($p < 0.001$); it proves that transformational leadership promotes innovation via psychological safety and sharing knowledge. On the same note, indirect correlations PS - KS - IWB and TL - PS - KS are also meaningful and support the sequencing effect of psychological safety and sharing of knowledge to stimulate innovation behavior.

Altogether, these findings prove that the model is successful in explaining how leadership behaviors can be applied to innovation using psychological and behavioral mechanisms, and leader humility is one of the most important factors of strengthening in the given process.



Table # 05 Path co-efficient

Path	Beta	STDV	T Value	P Value	
KS→IWB	0.427	0.036	11.801	0.000	
PS→KS		0.354	0.037	9.490	0.000
TL→PS		0.494	0.034	14.317	0.000
LH*PS→KS	0.147	0.037	3.974	0.000	
TL→PS→KS→IWB	0.075	0.013	5.598	0.000	
PS→KS→IWB	0.151	0.023	6.657	0.000	
TL→PS→KS	0.175	0.024	7.409	0.000	

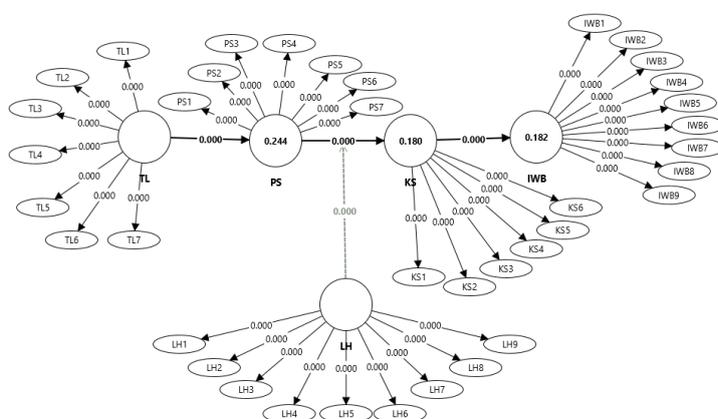


Figure # 03: Structural Model

Discussion of Hypotheses

H1: Transformational Leadership→Psychological Safety

The results affirm that psychological safety among employees is greatly promoted by transformational leadership justifying H1. This finding is consistent with the present-day organizational literature indicating that transformational leadership builds open communication, trust, and respect towards others by empowering employees and positioning errors as learning experiences (Newman et al., 2020; Detert & Edmondson, 2021). Such leadership practices especially become critical in high power-distance environments of Pakistan where traditional hierarchical norms tend to silence employees. To minimize fear of negative response, transformational leaders showcase individualized attention and intellectual involvement, which enhances the ability of employees to express themselves openly (Saeed et al., 2023). New empirical studies within South Asian settings also demonstrate that leadership that focuses on empowerment and empathy has a great effect in enhancing psychological safety perceptions (Khan & Anwar, 2022). Thus, the paper supports the fact that transformational leadership is a psychological facilitator that enables employees to act in risky ways that are necessary to facilitate innovation. This confirms the assumption that safe psychological working conditions in Pakistan can only be developed due to the leadership behavior.

H2: Psychological Safety→Knowledge Sharing

The significant and positive correlation of psychological safety with knowledge sharing supports H2, stating that the more employees feel that the environment is safe the more ready they will be to share ideas, experiences and expertise. This result aligns with recent articles that affirm that psychological safety decreases the fear of embarrassment, loss of status and interpersonal conflict, thus facilitating collaborative knowledge sharing (Lei et



al., 2020; Chen et al., 2022). Psychologically safe environments can be used to overcome the reluctance to participate effectively in shared learning and contribute to the learning process, therefore, in Pakistan, where mistrust and defensive communication are widespread, such environments can be created. According to Raza and Nawaz (2022), staff members in psychologically safe environments will find greater chances to share their insights and openly discuss errors, which enhances organizational learning. Therefore, psychological safety is an initiating psychological situation that converts dormant employees into active knowledge contributors. This finding is a factual implication that the effectiveness of knowledge-sharing systems in Pakistani organizations is largely determined by the perceptions of employees on interpersonal safety.

H3: Knowledge Sharing → Innovative Work Behavior

The strong positive correlation existing between the knowledge sharing and innovative work behavior can support H3 and prove that the active knowledge exchange between employees is one of the key drivers of their innovation. This observation is personal to the Componential Theory of Creativity, which holds that the availability of a variety of knowledge increases the production and execution of ideas (Amabile, 1996). Recent research in emerging markets proves that more often employees can exchange insights and create new solutions, as well as enhance processes (Iqbal et al., 2021; Yao et al., 2022). Informal cooperation is a common way that has seen innovation in resource-strained organizations in Pakistan and not through formal structures of R&D. Sharing knowledge helps one to combine various viewpoints and strengthen the ability to solve problems and experiment (Soomro et al., 2023). Consequently, it can be concluded that the current research provides empirical confirmation of the importance of knowledge sharing as a very important behavioral mechanism that results in innovative work behavior which is important in enhancing the ability of innovation in Pakistani firms.

H4: Transformational Leadership → Innovative Work Behavior

These findings confirm H4, which proves that transformational leadership has a strong positive influence on innovative work behavior. This result corresponds to the modern literature that states that transformational leaders provoke the creativity of staff members by presenting an impressive vision, promoting intellectual stimulation, and providing motivation (Gong et al., 2023; Jada & Mukhopadhyay, 2022). Transformational leaders in Pakistan justify innovation by making experiments and initiative normal practices, since employees in these countries tend to be constrained by processes and procedures (Saeed et al., 2023). This kind of leadership will enable employees to do more than usual and be involved in creativeness when solving problems. Therefore, the transformational leadership directly increases the desire of employees to produce and apply new ideas, which proves its strategic relevance in promoting the culture of innovation in the Pakistani organizations.

H5: Serial Mediation of PS and KS

The high value of the serial mediation (TL → PS → KS → IWB) supports H5, which means that transformational leadership positively influences the innovative behavior by causing the successive process of psychological and behavioral. The discovery is consistent with the recent research in the field of mediation, which focuses on the notion that psychological safety in the first place leads to the development of the openness state, which consequently allows the sharing of knowledge and, finally, brings about



innovation (Newman et al., 2020; Chen et al., 2022). Transformational leadership in Pakistan has provided employees with a safe and valued working environment where they are free to share knowledge. Such interaction contributes to creativity and experimentation, which result in creative work conduct (Iqbal et al., 2021). The outcome emphasizes that transformational leadership is not working in a vacuum regarding its impact on innovation; instead, it acts in organized psychological directories, which confirms the effectiveness of sequential mediation processes in leadership-innovation models.

H6: Moderation of Leader Humility

H6 is confirmed by the fact that the moderating role of leader humility gives weight to the relationship between psychological safety and knowledge sharing. This result aligns with the recent studies in leadership, which point at the fact that humble leaders decrease the perception of power distance and promote genuine communication (Owens & Baker, 2020; Zhang et al., 2021). Leader humility is another way of ensuring employees in hierarchical workplaces have confidence that there will be no punishment or criticism in case they share ideas. Employees develop a sense of validation by leaders being open and appreciative of them translating psychological safety into knowledge-sharing behavior. This paper validates the hypothesis that the leader humility is a buttoning condition, which increases the positive relationship between psychological safety and collaborative behavior.

H7: Moderated Mediation

The moderated mediation effect proves H7, which says that the transformational leadership indirect influence on innovative work behavior is greater in the conditions of high leader humility. This is in line with the recent findings, according to which humble leadership improves trust, honesty, and readiness to share knowledge (Zhao et al., 2022; Bai et al., 2023). Humble leaders make sure that psychological safety becomes veritable cooperation in Pakistan where leadership personality is a key determinant of employee behavior, which exacerbates the impact of innovation. It establishes the conditional status of leadership effectiveness, it indicates the importance of humility as a strategic leadership characteristic contributing to the innovative process.

Theoretical Implications

This research contributes to the literature of organizational behavior through combining transformational leadership, psychological safety, knowledge sharing, and innovative work behavior into a serial mediation model, which is mediated by leader humility. It builds upon the Social Exchange Theory by showing that leadership behaviors trigger psychological processes that result in the creation of collaborative behavior and innovation. The results support the Psychological Safety Theory of Edmondson through the affirmation of its behavioral implications in the developing economies. In addition, inclusion of leader humility makes leadership theory much more enriched since humility is suggested as one of the important boundaries in effectiveness of leadership. The study adds to the existing body of research on innovation by viewing knowledge sharing as a spatial process that connects leadership to innovation by a step by step process with particular reference to high power distance cultures like Pakistan where interpersonal relations determine the conduct of employees.



Practical Implications

In practice, this research emphasizes the need to promote psychologically secure settings to increase innovation. Leadership development programs should be the priority in organizations focusing on supportive communication, trust building and promotion of open dialogue. Promoting organized methods of knowledge sharing like team building sessions, collaborative digital and learning forums may go a long way in enhancing innovative work. Moreover, a culture of treating mistakes as learning experience can be encouraged with the results of more employees becoming active and creative. These insights will help the Pakistani organizations to re-engineer internal communication systems, performance feedback systems and team structures to enhance collaborative behavior to enhance employee innovation and overall organizational competitiveness.

Managerial Implications

Management-wise, the leaders are supposed to embrace transformational behaviors that make them open, empathetic, and thought-provoking. Managers should be prepared to exercise humility by admitting their own shortcomings, putting importance on the input of employees and promoting an upward communication of employees. Such conduct reinforces the knowledge-sharing practices and makes the employees more open to the attitude to offer innovative ideas. The supervisors must concentrate on creating psychologically safe working groups in which employees can feel free to make new suggestions without being embarrassed. Soft skills leadership, emotional intelligence, and ethical leadership training programs should be taken to enhance innovation capacity. Psychological safety is a strategic tool that can be used by managers to promote sustained performance of continuous improvement and sustainable innovations.

Policy Implications

At the policy level, the organizations and the institutions of the Pakistani state in the public sector should establish systems, which facilitate participative leadership and psychological safety. HR policies ought to promote open communication, participative decision-making and official acknowledgment of the employee ideas. The government bodies and the regulating authorities might establish policies to further ethical and transformational leadership in the organizational systems. There is the need to integrate leadership humility and knowledge-sharing practices into the codes of corporate governance at the national level to boost productivity and innovation on a macro level. Leadership and innovation competencies are to be included in the training programs of universities and professional associations so that to supply future leaders who could create innovative and psychologically safe working conditions.

Limitations and Recommendations

This study has its limitation despite its contribution. Causal conclusions cannot be made due to the cross-sectional nature of the data and self-reported measures may lead to the common method bias. Future studies should be based on longitudinal designs to determine the dynamic relationships between leadership and innovation over time. Comparative research, in terms of industries and cultural background, is also proposed to be conducted to make the research more generalized. Emotional intelligence or organizational culture are other moderators that ought to be considered by future scholars. Mixed-method designs may provide a more comprehensive information on the psychological processes. It is possible to further expand the sample size and to take into account the views of different stakeholders (e.g. supervisors, peers) which will underpin



the validity of the conclusions that will be made in the future.

Conclusion

This paper supports the assumption that transformational leadership has a significant positive effect on innovative work behavior with the serial mediation mechanism of psychological safety and knowledge sharing, and leader humility reinforces this mechanism. The results emphasize that innovation is not the only thing that is motivated by technical systems, but also psychological and relational processes in organizations. The hierarchical work culture of Pakistan requires leadership that is supportive and safe interpersonal environment to enhance employee creativity and innovativeness. Organizations can develop sustainable competitive advantage by focusing on the humility of leadership and sharing of knowledge. On the whole, the research offers some nice theoretical and practical implications of how the innovation of emerging economy is supported by the psychological mechanisms that are led by leaders.

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