Research Article

HUMBLE LEADERSHIP AND INNOVATION IN IT: A CONCEPTUAL FRAMEWORK OF MEDIATING AND MODERATING MECHANISMS

* Nguyen Vy Ha, MSc

International School – Vietnam National University, Hanoi, Vietnam.
Faculty of Business English – Foreign Trade University, Hanoi, Vietnam.

ABSTRACT

In today's dynamic and knowledge-intensive IT industry, fostering innovation is critical to maintaining competitive advantage. While prior research has examined transformational and servant leadership in promoting innovative work behavior (IWB), the role of humble leadership remains has not been sufficiently theorized in IT-specific context. This conceptual paper develops a theoretical model to explain how humble leadership fosters IWB by enhancing psychological safety and team information sharing, with the moderating influence of organizational support. Grounded in Social Exchange Theory, Leader-Member Exchange (LMX) theory, and Uncertainty Management Theory, the proposed model identifies two key mediators and a contextual moderator that jointly shape the leadership–innovation relationship. Specifically, the model posits that humble leaders—through self-awareness, appreciation of others, and openness to feedback—promote a psychologically safe environment and facilitate knowledge exchange, which in turn stimulate innovative behaviors. Furthermore, the presence of strong organizational support is expected to strengthen these indirect effects. This study contributes to leadership and innovation literature by clarifying the mechanisms and boundary conditions through which humble leadership influences innovation in IT contexts. Practical implications suggest that IT organizations should invest in cultivating humble leadership and aligning support systems to foster a climate conducive to innovation.

Keywords: Humble leadership, innovative work behavior, psychological safety, team information sharing, organizational support, IT industry, conceptual model.

INTRODUCTION

In the rapidly evolving landscape of information technology, organizational survival and competitive advantage increasingly depend on continuous innovation (Bharadwaj et al., 2013). The IT sector faces unique challenges characterized by exponential technological change, shortened product lifecycles, and intense global competition (Gartner, 2024). Within this context, the ability of organizations within the IT sectors to foster and sustain innovative behaviors among their employees has become a critical determinant of success (Jadhav et al., 2017). The traditional emphasis on technical prowess and operational efficiency is no longer sufficient to maintain a competitive edge; instead, organizations must cultivate a culture that encourages creativity, experimentation, and the proactive generation of novel ideas (Palazzeschi et al., 2018). Leadership, particularly the style and approach adopted by those in positions of authority, plays a pivotal role in shaping this innovative climate (Sharma et al., 2023).While prior research has examined transformational and servant leadership in innovation (Gumusluoğlu & İlsev, 2009; Mallén et al., 2019), humble leadership—characterized by self-awareness, openness to feedback, and empowerment (Owens & Hekman, 2016)— has been neglecting from current studies. This theoretical gap is particularly salient in IT organizations, where the nature of knowledge work demands leadership approaches that facilitate psychological safety, open knowledge exchange, and collaborative problem-solving. Recent studies have begun to establish preliminary connections between leader humility and innovation outcomes (Qian et al., 2018; Liu et al., 2017), yet critical questions remain unanswered regarding the specific mechanisms through which humble leaders influence innovative behaviors in high-tech contexts.

*Corresponding Author: Nguyen Vy Ha, MSc,
International School – Vietnam National University, Hanoi, Vietnam.
Faculty of Business English – Foreign Trade University, Hanoi, Vietnam.

Humble leadership, characterized by traits such as self-awareness, openness to feedback, appreciation of others' strengths, and a focus on collective goals, has emerged as a particularly promising leadership paradigm for promoting innovative behaviors within organizations (Wang et al., 2018). This conceptual paper addresses three significant gaps in the existing literature. First, while the direct effects of humble leadership on individual performance have been documented (Owens et al., 2013), the pathways through which humility translates into team-level innovation remain underexplored. Second, the unique contextual factors of IT organizations—including their reliance on distributed expertise, rapid iteration cycles, and complex problem-solving—create specific conditions that may amplify or constrain the effects of humble leadership. Third, existing research has paid insufficient attention to how organizational-level factors, particularly support systems and resource allocation, might moderate the relationship between leadership style and innovation outcomes (Li & Tang, 2022).

The present study makes several contributions to both academic scholarship and organizational practice. Theoretically, it advances leadership research by integrating social exchange theory (Blau, 1964) with the knowledge-based view of organizations (Grant, 1996) to explain how humble leaders create environments conducive to innovation. The proposed model identifies psychological safety (Edmondson, 1999) and team information sharing (Hu et al., 2017) as critical mediating mechanisms that translate humble leadership behaviors into innovative outcomes. Furthermore, the model introduces organizational support as a boundary condition that enhances or constrains these effects, addressing calls for more context-sensitive leadership research (Johns, 2006).

For practitioners in IT organizations, this research provides actionable insights into how developing humble leadership competencies can foster innovation cultures. The findings suggest that beyond technical skills, IT leaders must cultivate interpersonal behaviors that create

safe spaces for experimentation and promote open knowledge exchange. At the organizational level, the model highlights the importance of aligning leadership development initiatives with support systems that provide the necessary resources and cultural reinforcement for innovation.

THEORETICAL BACKGROUND

Humble Leadership: A Catalyst for Innovation

Humble leadership represents a distinct approach to organizational leadership that emphasizes accurate self-assessment, appreciation of others' contributions, and openness to new ideas (Owens & Hekman, 2016). When leaders model humble behaviors, such as admitting mistakes, seeking feedback, and acknowledging the contributions of others, employees are more likely to adopt these behaviors themselves, leading to a more innovative and collaborative work environment (Qian *et al.,* 2018). Unlike traditional leadership models that emphasize authority and control, humble leadership emerges from a recognition of one's limitations and a genuine willingness to learn from others (Morris *et al.,* 2005). This leadership style comprises three core behavioral dimensions:

First, self-awareness involves leaders' ability to recognize their own strengths and weaknesses without distortion (Owens *et al.,* 2013). In IT contexts, this manifests when project managers openly acknowledge gaps in their technical knowledge and seek input from team members with relevant expertise. Second, appreciation of others reflects the leader's tendency to recognize and value team members' unique contributions (Waters *et al.,* 2021). This is particularly crucial in IT settings where cross-functional collaboration often determines project success. Third, teach ability represents the leader's openness to feedback and continuous learning (Ou *et al.,* 2014), a critical attribute in industries characterized by rapid technological change.

The theoretical distinctiveness of humble leadership becomes apparent when contrasted with related leadership constructs. While transformational leadership emphasizes vision and inspiration (Bass, 1985), humble leadership focuses on creating conditions for collaborative learning. Similarly, servant leadership prioritizes follower needs (Greenleaf, 1977), whereas humble leadership emphasizes mutual growth through knowledge exchange. These distinctions are particularly relevant in IT environments where innovation often emerges from distributed expertise rather than top-down direction.

Innovation in Knowledge-Intensive Contexts

Innovative work behavior (IWB) in IT organizations represents a multi-stage process encompassing idea generation, promotion, and implementation (Janssen, 2000). The unique nature of IT work necessitates a theoretical understanding of innovation that accounts for several industry-specific characteristics:

First, the rapid obsolescence of technical knowledge creates constant pressure for skill renewal and creative problem-solving (Bharadwaj *et al.,* 2013). Second, the modular nature of software development enables and requires continuous incremental innovation (MacCormack *et al.,* 2001). Third, the collaborative nature of IT projects means that innovation often emerges from the recombination of diverse knowledge sets (Tiwana, 2008).

From a theoretical perspective, IT innovation can be understood through the lens of the knowledge-based view of the firm (Grant, 1996), which posits that organizational capabilities emerge from the integration of specialized knowledge. This perspective helps explain why leadership approaches that facilitate knowledge sharing—such as humble leadership—may be particularly effective in IT contexts.

Theoretical Integration

The proposed model integrates three complementary theoretical perspectives to explain the humble leadership-innovation relationship: Social Exchange Theory (Blau, 1964) provides the foundation for understanding how humble leaders establish high-quality relationships with team members. When leaders demonstrate humility by acknowledging their limitations and valuing others' expertise, they initiate a reciprocal exchange process wherein team members feel obligated to contribute their best ideas and efforts (Liden *et al.,* 2014). This theoretical lens helps explain why humble leaders may be more effective at eliciting innovative behaviors than traditional leaders.

Leader-Member Exchange (LMX) theory (Graen & Uhl-Bien, 1995) extends this understanding by emphasizing the dyadic nature of leader-follower relationships. High-quality LMX relationships, which humble leaders are particularly adept at establishing, create the trust and mutual obligation necessary for knowledge workers to engage in risky innovative behaviors (Volmer *et al.,* 2012).

Finally, the model incorporates elements of Uncertainty Management Theory (Lind & Van den Bos, 2002) to explain how humble leaders help team members navigate the inherent uncertainties of innovation processes. By modeling vulnerability and normalizing failure, humble leaders reduce the perceived risks associated with innovation attempts, thereby increasing psychological safety (Edmondson, 1999).

Table 1. Theoretical Foundations Linking Humble Leadership to Innovative Work Behavior

Theory	Key Tenet	Application to Humble Leadership & Innovation
Social Exchange Theory (Blau, 1964)	Relationships are governed by reciprocity and mutual benefit.	Humble leaders who show appreciation and openness stimulate reciprocal behavior, encouraging employees to go beyond formal roles and engage in innovation.
Leader-Member Exchange Theory (Graen &Uhl-Bien, 1995)	High-quality leader-member relationships foster trust and role expansion.	Humble leadership promotes strong LMX by valuing input and creating individualized exchanges, which are conducive to innovation.
Uncertainty Management Theory (Lind & Van den Bos, 2002)	In uncertain contexts, fair and supportive leadership enhances psychological security.	Humble leaders reduce fear of failure and normalize risk-taking, thereby fostering a psychologically safe environment for innovation.

This theoretical integration provides a comprehensive framework for understanding why humble leadership may be particularly effective in fostering innovation within IT organizations. The combination of social exchange processes, high-quality leader-member relationships, and effective uncertainty management creates the ideal conditions for continuous innovation in knowledge-intensive environments.

CONCEPTUAL MODEL AND HYPOTHESES

Building upon the integrated theoretical foundation—Social Exchange Theory (SET), Leader-Member Exchange (LMX) theory, and

Uncertainty Management Theory (UMT)—this paper proposes a conceptual model to explain how humble leadership fosters innovative work behavior (IWB) in IT organizations. The model posits that humble leaders influence innovation indirectly through two mediators—psychological safety and team information sharing—with the strength of these indirect effects contingent upon the level of organizational support.

Humble Leadership and Psychological Safety

Psychological safety refers to a shared belief that individuals can express ideas, take risks, and admit mistakes without fear of embarrassment or punishment (Edmondson, 1999). Humble leaders contribute to psychological safety by modeling vulnerability, acknowledging their limitations, and encouraging open dialogue (Wang et al., 2018). These behaviors signal to team members that their input is valued and failure is treated as a learning opportunity, thereby reducing interpersonal risk.

H1: Humble leadership is positively associated with psychological safety among team members.

Humble Leadership and Team Information Sharing

Team information sharing involves the proactive exchange of knowledge, expertise, and feedback among team members. In IT organizations, where knowledge is often decentralized and task interdependence is high, effective innovation depends on transparent and ongoing communication. Humble leaders create an environment that supports such exchanges by showing appreciation for others' knowledge, soliciting diverse input, and flattening traditional hierarchies (Hu et al., 2017).

H2: Humble leadership is positively associated with team information sharing.

Psychological Safety and Innovative Work Behavior

When employees perceive high psychological safety, they are more likely to propose novel ideas, take initiative, and engage in creative experimentation. This sense of safety reduces the fear of failure or rejection, which are common barriers to innovation, particularly in high-stakes and rapidly evolving environments like IT (Xu & Suntrayuth, 2022).

H3: Psychological safety is positively related to innovative work behavior.

Team Information Sharing and Innovative Work Behavior

Information sharing facilitates the integration of diverse perspectives, which can spark creative solutions and accelerate innovation. When team members openly share information, they are better able to identify opportunities, avoid redundancy, and co-develop ideas into actionable outcomes (Tiwana, 2008).

H4: Team information sharing is positively related to innovative work behavior.

The Mediating Role of Psychological Safety and Information Sharing

The impact of humble leadership on innovation is not necessarily direct but rather channeled through interpersonal and team-level mechanisms. Hu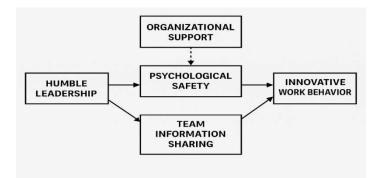mble leadership enhances psychological safety and team information sharing, which in turn foster conditions favorable for IWB.

H5: Psychological safety mediates the relationship between humble leadership and innovative work behavior.

H6: Team information sharing mediates the relationship between humble leadership and innovative work behavior.

The Moderating Role of Organizational Support

Organizational support, defined as the extent to which employees perceive that their organization values their contributions and provides the necessary resources, can significantly enhance or hinder the effectiveness of leadership behaviors (Li & Tang, 2022). When organizational support is high, the positive effects of humble leadership on psychological safety and information sharing—and consequently on innovation—are likely to be amplified. Conversely, in low-support environments, even well-intentioned leadership behaviors may not translate into innovative outcomes due to systemic constraints.

H7: Organizational support moderates the indirect relationship between humble leadership and innovative work behavior through psychological safety, such that the indirect effect is stronger when organizational support is high.

H8: Organizational support moderates the indirect relationship between humble leadership and innovative work behavior through team information sharing, such that the indirect effect is stronger when organizational support is high.

Figure 1: The proposed conceptual model of Humble Leadership and Innovative Work Behavior

THEORETICAL AND PRACTICAL CONTRIBUTIONS

Theoretical Contributions

This study offers significant contributions to both theory and practice. From a theoretical perspective, it advances the understanding of leadership and innovation in organizational contexts by integrating three complementary lenses—Social Exchange Theory, Leader-Member Exchange Theory, and Uncertainty Management Theory—to explain how and why humble leadership fosters innovative work behavior (IWB). The integration of these theories enables a deeper examination of the relational, contextual, and emotional mechanisms underlying this dynamic. Moreover, by situating the analysis in IT work environments—where knowledge intensity, ambiguity, and interdependence are particularly high—the paper highlights the contextual relevance of humility as a critical leadership trait. The proposed moderated mediation model further contributes to the literature by identifying psychological safety and team information sharing as key mediating mechanisms, while emphasizing

organizational support as a vital boundary condition that enhances the effectiveness of humble leadership in driving innovation.

Practical Contributions

Practically, this research provides actionable insights for organizations aiming to cultivate innovation through leadership development. It underscores the importance of fostering specific humble behaviors among leaders, such as openness to feedback, acknowledgment of team contributions, and a willingness to learn from others. These behaviors not only strengthen interpersonal relationships but also create a psychologically safe and communicative environment that encourages employees to experiment and share ideas. Additionally, the study highlights the value of designing supportive organizational systems—such as recognition programs, autonomy-enhancing practices, and adequate resource allocation—that amplify the positive influence of humble leadership. By shifting the leadership paradigm from authority-driven control to humility-driven collaboration, this paper offers a timely and impactful perspective for organizations navigating complex, innovation-dependent environments.

FUTURE RESEARCH DIRECTIONS

As a conceptual paper, this study provides a theoretical foundation for understanding how humble leadership fosters innovative work behavior in IT organizations. However, future research is essential to empirically validate and extend the proposed framework. Several avenues are recommended:

Empirical Testing of Hypotheses

The hypotheses presented—ranging from the mediating roles of psychological safety and team information sharing to the moderating effect of organizational support—should be tested using quantitative methods. Researchers may adopt a multi-level structural equation modeling (SEM) approach to capture the dyadic and team-level interactions inherent in the model. Longitudinal designs could also be employed to establish causal relationships between leadership behaviors and innovation outcomes over time.

Suggested Measurement Scales

To ensure consistency and reliability, future studies could utilize established and validated instruments such as:

- Humble Leadership: Owens *et al.,* (2013) 9-item Humility in Leadership Scale.
- Psychological Safety: Edmondson's (1999) 7-item Team Psychological Safety Scale.
- Team Information Sharing: Adapted from Srivastava *et al.,* (2006).
- Innovative Work Behavior: Janssen's (2000) 9-item scale capturing idea generation, promotion, and implementation.
- Perceived Organizational Support: Eisenberger et al.'s (1986) Survey of Perceived Organizational Support (SPOS).

Sampling and Contextual Considerations

Future empirical work should focus on:

- Sample Types: Knowledge workers in IT firms, particularly software engineers, UX designers, and agile team leads.
- Industries: Although this paper focuses on IT, comparisons across knowledge-intensive sectors such as biotech, fintech, and digital media could enhance generalizability.
- Geographic Scope: Studies in emerging markets (e.g., Vietnam, India) vs. developed economies (e.g., U.S., Germany) could offer insights into cultural moderating variables such as power distance.

Mixed-Methods and Experimental Designs

Beyond survey-based methods, future research could employ:

- Qualitative interviews to explore how humble leadership is perceived and enacted in practice.
- Field experiments or vignette studies to assess how different leadership behaviors influence team innovation under varying levels of organizational support.

By pursuing these directions, future scholars can not only validate the model proposed here but also deepen understanding of the nuanced pathways through which humble leadership fosters innovation in dynamic, knowledge-intensive environments.

REFERENCES

Blau, P.M. (1964). Justice in Social Exchange. Sociological Inquiry, 34, 193-206. https://doi.org/10.1111/j.1475-682X.1964.tb00583.x

Bharadwaj, Anandhi & Sawy, Omar & Pavlou, Paul & Venkatraman, N.(2013). Digital Business Strategy: Toward a Next Generation of Insights. MIS Quarterly: Management Information Systems. 37, 471-482. 10.25300/MISQ/2013/37:2.3.

Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. Administrative Science, 44(4), 350–383.

Gartner. (2024). Spotlight on 2024 Gartner Hype Cycle™ for Emerging Technologies. https://www.gartner.com/en/articles/hype-cycle-for-emerging-technologies.

Gumusluoğlu, L., & İlsev, A. (2009). Transformational Leadership and Organizational Innovation: The Roles of Internal and External Support for Innovation. Journal of Product Innovation Management, 26(3), 264. https://doi.org/10.1111/j.1540-5885.2009.00657.x

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. Strategic Management Journal, 17 (Suppl 2), 109–122. https://https://doi.org/10.1002/smj.4250171110

Hu, J., Erdoğan, B., Jiang, K., Bauer, T. N., & Liu, S. (2017). Leader humility and team creativity: The role of team information sharing, psychological safety, and power distance. Journal of Applied Psychology, 103(3), 313. https://doi.org/10.1037/apl0000277

Jadhav, V., Seetharaman, A., & Rai, S. (2017). Employee Expectation to Demonstrate Innovative Work Behaviour in Asia. Journal of Asian Finance Economics and Business, 4(1), 67. https://doi.org/10.13106/jafeb.2017.vol4.no1.67

Johns, G. (2006) The Essential Impact of Context on Organizational Behavior. Academy of Management Review, 31, 386-408.

Li, M., Khan, H. S. ud din, Chughtai, M. S., & Le, T. T. (2022). Innovation Onset: A Moderated Mediation Model of High-Involvement Work Practices and Employees' Innovative Work Behavior. Psychology Research and Behavior Management, 471. https://doi.org/10.2147/prbm.s340326

Li, T., & Tang, N. (2022). Inclusive Leadership and Innovative Performance: A Multi-Level Mediation Model of Psychological Safety. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.934831

Liu, W., Mao, J., & Chen, X. (2017). Leader Humility and Team Innovation: Investigating the Substituting Role of Task Interdependence and the Mediating Role of Team Voice Climate. Frontiers in Psychology, 8. https://doi.org/10.3389/fpsyg.2017.01115

Lukoschek, C. S., Gerlach, G., Stock, R., & Xin, K. (2018). Leading to sustainable organizational unit performance: Antecedents and outcomes of executives' dual innovation leadership. Journal of Business Research, 91, 266. https://doi.org/10.1016/j.jbusres.2018.07.003

Mallén, F., Domínguez-Escrig, E., Alcamí, R. L., &Chiva, R. (2019). Does leader humility matter? Effects on altruism and innovation. Management Decision, 58(5), 967. https://doi.org/10.1108/md-11-2018-1180

Morris, M. H. et al. (2005). The Entrepreneur's Business Model Toward a Unified Perspective. Journal of Business Research, 58, 726-735.

Owens, B. P., Yam, K. C., Bednar, J., Mao, J., & Hart, D. W. (2018). The impact of leader moral humility on follower moral self-efficacy and behavior. Journal of Applied Psychology, 104(1), 146. https://doi.org/10.1037/apl0000353

Palazzeschi, L., Bucci, O., & Fabio, A. D. (2018). Re-thinking Innovation in Organizations in the Industry 4.0 Scenario: New Challenges in a Primary Prevention Perspective. Frontiers in Psychology, 9. https://doi.org/10.3389/fpsyg.2018.00030

Qi, L., Liu, B., Wei, X., & Hu, Y. (2019). Impact of inclusive leadership on employee innovative behavior: Perceived organizational support as a mediator. PLoS ONE, 14(2). https://doi.org/10.1371/journal.pone.0212091

Qian, J., Li, X., Song, B., Wang, B., Wang, M., Chang, S., &Xiong, Y. (2018). Leaders' Expressed Humility and Followers' Feedback Seeking: The Mediating Effects of Perceived Image Cost and Moderating Effects of Power Distance Orientation. Frontiers in Psychology, 9. https://doi.org/10.3389/fpsyg.2018.00563

Sharma, L., Agarwal, P., Joshi, B. P., Kumar, N., & Tiwari, S. (2023). A study of impact of inclusive leadership on innovative behaviors and diversity at workplace. Environment and Social Psychology, 9(1). https://doi.org/10.54517/esp.v9i1.1721

Ströbl, A., Niedermair, J., Matzler, K., &Mussner, T. (2018). Triggering subordinate innovation behavior: the influence off leader's dark personality traits and level 5 leadership behavior. International Journal of Innovation Management, 23(5), 1950045. https://doi.org/10.1142/s1363919619500452

Wang, Y., Liu, J., & Zhu, Y. (2018). Humble Leadership, Psychological Safety, Knowledge Sharing, and Follower Creativity: A Cross-Level Investigation. Frontiers in Psychology, 9. https://doi.org/10.3389/fpsyg.2018.01727

Wang, Y., Yi, C., & Zhu, Y. (2021). Promoting Innovative Behavior in Employees: The Mechanism of Leader Psychological Capital. Frontiers in Psychology, 11. https://doi.org/10.3389/fpsyg.2020.598090

Westover, J. (2024). Cultivating Surprising Sources of Innovation Within Your Organization. Human Capital Leadership., 11(3). https://doi.org/10.70175/hclreview.2020.11.3.6

Wing, L. S. (2005). Leadership in high-performance teams: a model for superior team performance. Team Performance Management, 11, 4. https://doi.org/10.1108/13527590510584285

Xu, Z., & Suntrayuth, S. (2022). Innovative work behavior in high-tech enterprises: Chain intermediary effect of psychological safety and knowledge sharing. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.1017121

****