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A Systematic Literature Review: Exploring Leadership and Organizational Factors Driving Innovative Work Behavior in SMEs

Tsabita Khwarazmita[1]

[1]Doctoral Program Universitas Negeri Malang

Corresonding author : tsabitaraz230@gmail.com

Abstract

This systematic literature review explores the relationship between transformational leadership and innovative work behavior (IWB) in small and medium enterprises (SMEs). The review identifies how transformational leadership fosters an environment conducive to employee innovation through intellectual stimulation, individualized consideration, and inspirational motivation. Key mediators like knowledge sharing and perceived organizational support enhance this relationship, creating a collaborative culture that empowers employees to generate and implement new ideas. The review also highlights other critical variables influencing IWB, including organizational justice, psychological capital, and a learning-oriented organizational culture. These variables act as mediators or moderators, further shaping employees' innovative capacities. Findings from the VOSviewer analysis reinforce the central role of transformational leadership in driving innovation within SMEs and emphasize the importance of a supportive organizational culture. Future research should explore interactions between leadership styles and organizational factors to maximize SMEs' innovative potential.

Keywords: systematic literature review, innovative work behavior, transformational leadership, SME

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INTRODUCTION

In the increasingly competitive landscape of today's business world, innovation is a critical driver of success, particularly for small and medium enterprises (SMEs). Barber et al. (2024) stated that innovation is a key for SME to acknowledge their ability and capability to improve their enterprises. It's the time for the SME to determine their innovation strategy. Innovation strategies must be implemented not only in big industries, but the strategy needs to apply in SME that are relevant to the progress of small and medium enterprises (Chege & Wang, 2020). Besides, Fu et al. (2021) are shown to attempt the innovation environment to create innovation aligned with the business focusing on the human resources inside. These enterprises often operate with limited resources, especially related to the innovation ability of human resources (Curado, 2018; De Massis et al., 2018). Therefore, one avenue through which SMEs can overcome these limitations is by fostering innovative work behavior (IWB) among their employees.

IWB, defined as the generation, promotion, and implementation of new ideas (Janssen, 2000), remains critical for organizations aiming to adapt and thrive in a dynamic business environment. Recent research highlights that innovative work behavior is a complex, multi-stage process involving idea generation, idea championing, and the actual implementation of innovations (Bos-Nehles et al., 2017). In the previous study, Yuan & Richard (2010) stated innovative work behavior is increasingly recognized as a vital contributor to organizational agility and resilience, especially in uncertain environments, with organizations leveraging employee-driven innovations to stay competitive and responsive to market shifts. However, creating an environment that nurtures such behavior requires effective leadership and a culture of collaboration. Afsar & Umrani (2020) declared recent findings emphasize the role of supportive organizational cultures and leadership in sustaining high levels of innovative work behavior.

Transformational leadership has been widely recognized as a key factor influencing innovative work behavior. Several studies prove the relationship between those variables (Greimel et al., 2023). Leaders who exhibit transformational qualities—such as inspiring a shared vision, encouraging creativity, and providing support—can significantly impact their employees' motivation to innovate (Bass & Avolio, 1994). Bakker et al. (2023) acknowledged this kind of leadership is broadly able to encourage employees to innovate more under their supervision, due to the leader's proactive and initiative behavior. Conversely, the leaders provide the biggest support and trust to the employees (Y. Yuan et al., 2022). By empowering employees and fostering a culture of

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trust, transformational leaders create the necessary environment for innovative thinking and action. Hence, the relationship between transformational leadership and innovative work behavior has been explored in various organizational contexts such as universities, multinational companies, schools, etc (Stanescu et al., 2021a; Sudibjo & Prameswari, 2021; Tan et al., 2021). There is still a need to deepen our understanding of how this leadership style particularly fosters innovation in SMEs.

This systematic literature review aims to address these gaps by investigating two core research questions: (1) How does transformational leadership in SMEs? And what variables influence innovative work behavior? By employing a structured approach to reviewing the literature, this study will utilize a framework inspired by the PICO model (Population, Intervention, Comparison, Outcome) to guide the selection and evaluation of relevant studies. This approach ensures a comprehensive and focused examination of the existing research, providing insights into how leadership drives innovation in SMEs.

Review questions and themes

Q1: How does transformational leadership in SMEs? And what variables influence innovative work behavior?

METHODOLOGY

This article uses the PICO (Population, Intervention, Comparison) approach. PICO is an approach that focuses on the first step of creating a framework about the population, the variable could intervene, the variable could compare with the other variables, and the variables become an outcome or highlight strong research. Based on the Frandsen et al. (2020), PICO is a model to guide the development of a search strategy to get the exact answers recommended to structure the search for a systematic review. However, in this research, the population is small and medium enterprises that focus on innovative work behavior and the interventions are transformational leadership and knowledge sharing. Meanwhile, the comparison is the organization that implements another leadership style or does not knowledge sharing, and the outcome is innovative work behavior on its own. In addition, this research would utilize the tools as Vosviewers to help visualize the result of this study.

Search strategy

Alshahranin (2023) shows that the search strategy for the journal articles was gathered based on dependability and credible sources, such as Sage, Science Direct,

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Emerald, Taylor& Franchise, Springer, Web of Science, and ProQuest. Theoretical conceptualizations of innovative work behavior and transformational leadership in SMEs. The phrase utilized in this research, including the keywords related to “innovative”, “innovative work behavior”, “innovation”, “work behavior”, “innovative behavior”, “transformational leadership”, “transformational leadership in SME”, “leadership on innovative work behavior” “transformational leadership and innovative work behavior in SME”. All the specific and general searches to narrow our findings to build a connection between the topics in this research.

Table 1. Review questions and themes

Review Question	Review themes	Sub-themes
How does transformational leadership in SMEs? And what variables influence innovative work behavior?	Innovative Work Behavior (IWB)	• The variables affect innovative work behavior
	Transformational Leadership in SME	• Transformational leadership dimensions • Transformational leadership on innovative work behavior

Source: Author

Selection criteria

To select previous research relevant to our research question, Alshahrani (2023) suggests that the researcher utilize several criteria, such as scientific criteria. Hence, the researcher in this research used the following criteria: (1) Studies or researches were required to have a comprehensive format of research which was assured by publishing in a journal with a good reputation. (2) Researchers were required to findings related to innovative work behavior and transformational leadership SMEs analysis. (3) At least one variable (IWB and TL) influences and it needs to be documented for analysis. Moreover, (4) The articles focus only on English as the first language to simplify data-gathering. Additionally, (5) The article period is extended from 2019 to the present (2024). Otherwise, (6) This research doesn’t determine the articles' non-English, due to the lack of the capability translation procedure. (7) Studies published before 2019 were excluded to increase recent and relevant literature. (8) This research only focuses on studies published during five years.

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RESULT AND DISCUSSION

A section of this article endeavors to describe the previous study on transformational leadership roles in SMEs worldwide. Transformational leadership in SME research is in small-medium-sized entrepreneurship. It is based on articles and conference papers collected and analyzed according to the strict criteria in Table 2.

Table 2. Criteria Studies

Review Element	Inclusion Criterion	Exclusion Criterion
Research focus	Innovative Work Behavior (IWB) and Transformational leadership in SMEs	Studies unrelated to Innovative Work Behavior (IWB) and Transformational leadership in SMEs
Language	**English**	**Studies in other languages**
Period	2019 to present (2024)	Studies before 2019
Sources	**Journal articles, Conference papers**	**Grey literature**
Total Reviewed	47	100

Source: Author

Figure 1 shows the criteria in detail about previous study had been reviewed for this research. It includes details about the reason behind the criterion. Moreover, after the process from 100 articles and conference papers into 47 that fit with the topic in this research.

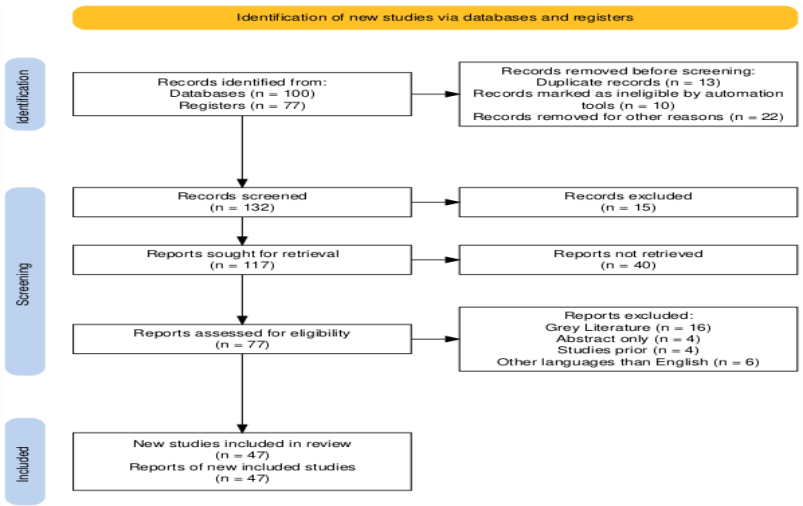


Figure 1. PRISMA Criteria Studies

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RESULT

The first theme focuses on the question of transformational leadership in SMEs. This research examines how transformational leadership works in SMEs. This systematic literature review highlights the role of transformational leadership in SMEs. Transformational leaders have drawn by several dimensions such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, so they create an environment where employees feel empowered to innovate (Abdullahi et al., 2020; Afriyie et al., 2019; Burawat, 2019; Cortes & Herrmann, 2020; Dartey-Baah, 2020; Gad David et al., 2023; Njaramba, 2024; Prabhu & Srivastava, 2023; Qalati et al., 2022). The reviewed studies consistently show that transformational leadership fosters a culture of trust and creativity, encouraging employees to contribute new ideas, take risks, and engage in innovation (Afriyie et al., 2019; Levy et al., 2020). In SMEs, where resources are often limited, this leadership style is particularly effective in comprehensively driving innovation and improving enterprises (Hidayat-ur-Rehman & Alsolamy, 2023).

Table 3. Transformational leadership in SMEs

No	Article Title	Author/Year	Sample/Context	Dimensions
1	Innovation and marketing performance of SME in an emerging economy: the moderating effect of transformational leadership	Afriyie et al. (2019)	SME Ghana	• Idealized Influence • Inspired Motivation • Intellectual Stimulation • Individualized Consideration
2	CEO Transformational Leadership and SME Innovation: The Mediating Role of Social Capital And Employee Participation	Cortes & Herrmann (2020)	Five SMEs Ecuador	• Idealized Influence • Inspired Motivation • Intellectual Stimulation • Individualized Consideration
3	The impact of leadership style on organizational citizenship behavior: does leaders' emotional intelligence play a moderating role?	Abdullahi et al. (2020)	SME Ghana	• Idealized Influence • Inspired Motivation • Intellectual Stimulation • Individualized Consideration
4	Leadership Styles and Workplace Wellness Among Ghanaian SME Workers	Dartey-Baah (2020)	SMEs Ghana	• Idealized Influence • Inspired Motivation • Intellectual Stimulation

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No	Article Title	Author/Year	Sample/Context	Dimensions
				• Individualized Consideration
5	A SEM-ANN analysis to examine sustainable performance in SMEs: The moderating role of transformational leadership	Hidayat-ur-Rehman & Alsolamy (2023)	SME Pakistan	•
6	The impact of servant leadership and transformational leadership on learning organization: a comparative analysis	Xie (2020)	SMEs (Jewelry Retailers and Electronic Manufactures) in China	•
7	The relationships among transformational leadership, sustainable leadership, lean manufacturing, and sustainability performance in Thai SME manufacturing industry	Burawat (2019)	Manufacturing Industries in Thailand	• Idealized Influence • Inspired Motivation • Intellectual Stimulation Individualized Consideration
8	Employee performance under transformational leadership and organizational citizenship behavior: A mediated model	Qalati et al. (2022)	SME in Pakistan	• Idealized influence • Inspirational Motivation
9	Transformational leadership in a crisis: Dimensional analysis with psychological capital	Njaramba (2024)	SME in Kenya	• Intellectual Stimulation • Individualized Consideration • Inspirational Motivation • Idealized Influence
10	Transformational leadership and innovation to boost business performance: The case of small Mexican firms	Cuevas-Vargas et al. (2023)	MSMEs Mexico	•
11	Transformational leadership and employee voice for product and process innovation in SMEs	Rasheed et al. (2021)	SMEs in Pakistan	•
12	CEO Transformational Leadership, Supply Chain Agility and Firm Performance: A TISM Modeling among SMEs	Prabhu & Srivastava (2023)	SME in India	• Inspirational Motivation • Intellectual Stimulation • Individual Consideration

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No	Article Title	Author/Year	Sample/Context	Dimensions
13	Effect of transformational leadership on open innovation through innovation culture: exploring the moderating role of absorptive capacity	Gad David et al. (2023)	SMEs Manufacturing in Kenya	• Intellectual Stimulation • Individualized Consideration • Inspirational Motivation • Idealized Influence
14	Developing a transformational digital strategy in an SME: The role of responsible management	Levy et al. (2020)	SME in UK	•
15	Relationship between transformational leadership, proactive personality, creative self-efficacy and employee creativity at food processing SMEs in Indonesia	Maria et al. (2022)	SME food processing in Indonesia	•

Source: Author

The next theme addresses innovative work behavior in several organizations. The research examined how leadership, environment support, and self-concept affect innovative work behavior (Akbari et al., 2021; Akram et al., 2020a; Anser et al., 2022a; Ekmekcioglu & Öner, 2024; Li et al., 2020; J. Stoffers et al., 2020; J. M. M. Stoffers et al., 2020; Volery & Tarabashkina, 2021a). The research articles that were collected provided more perspective on IWB. The article has been organized in Table 4, which includes several elements that show variables that affect innovative work behavior. It was related to innovative work behavior directly and indirectly.

Table 4. Innovative work behavior: analysis of innovative work behavior

No	Article Title	Author/Year	Sample/Context	Variables	Mediator/Moderator
1	Servant leadership, innovative work behavior, and innovative organizational culture: the mediating role of perceived organizational support	Ekmekcioglu & Öner (2024)	Technopark Company Turkey	Servant Leadership, Innovative Organizational culture	Perceived Organizational Support
2	The impact of organizational justice on employee innovative work behavior: Mediating role of knowledge sharing	Akram et al. (2020)	Telecommunication Sector China	Organizational justice	Knowledge Sharing

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No	Article Title	Author/Year	Sample/Context	Variables	Mediator/Moderator
3	How to unleash innovative work behavior of SMEs' workers through knowledge sharing? Accessing functional flexibility as a mediator	Anser et al. (2022)	SMEs (furniture and fixtures, chemicals, pharmaceutical instruments, office machinery and equipment, electrical machinery and transportation material) Pakistan	Knowledge Sharing	Functional Flexibility
4	Employability and innovative work behaviour in small and medium-sized enterprises	Stoffers et al. (2020)	SMEs (various industries) Netherland	Employability	
5	Does entrepreneurial leadership encourage innovation work behavior? The mediating role of creative self-efficacy and support for innovation	Akbari et al. (2021)	Information and Computer Technology SMEs Iran	Entrepreneurial Leadership	Creative Self-Efficacy, Support for Innovation
6	Impact of entrepreneurial leadership on innovative work behavior: Examining mediation and moderation mechanisms	Li et al. (2020)	Technology-based SMEs China	Entrepreneurial Leadership	Firms' Innovative Environment, Entrepreneurial Self-Efficacy (Mod)
7	The impact of organisational support, employee creativity and work centrality on innovative work behaviour	Volery & Tarabashkina (2021)	Various Companies China and Australia	Organizational climate, Rewards, Leader-Member Exchange, Employee Creativity	Work Centrality
8	The Influence of Psychological Capital on Employees' Innovative Behavior: Mediating Role of Employees' Innovative Intention and Employees' Job Satisfaction	Alshebami (2021)	Various SMEs Saudi Arabia	Psychological Capital	Employees' Job Satisfaction, Employees' Innovative Intention

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No	Article Title	Author/Year	Sample/Context	Variables	Mediator/Moderator
9	Towards teacher innovative work behavior: A conceptual model	Hosseini & Haghighi Shirazi (2021)	English Language Institutes Iran	Learning Organization	Work Engagement
10	Knowledge-oriented leadership, knowledge management behaviour and innovation performance in project-based SMEs. The moderating role of goal orientations	Zia (2020)	Software Company Pakistan	Knowledge Oriented Leadership	Knowledge Management Behavior, Learning Orientation (Mod), Performance orientation (Mod)
11	Towards innovative work behavior through knowledge management infrastructure capabilities: Mediating role of functional flexibility and knowledge sharing	Anser et al. (2020)	Manufacture Companies Pakistan	Infrastructure Capabilities	Knowledge Sharing (Mod), Functional Flexibility
12	Trust, knowledge sharing, and innovative work behavior: empirical evidence from Poland	Kmieciak (2020)	Large enterprise/Industries Poland	Knowledge Sharing	
13	Learning Climate and Innovative Work Behavior, the Mediating Role of the Learning Potential of the Workplace	Cangialosi et al. (2020)	Automatic Food Distribution Company Italy	Learning Climate	Learning Potential of The Workplace
14	Leading the innovation: role of trust and job crafting as sequential mediators relating servant leadership and innovative work behavior	M. M. Khan et al. (2020)	Software Company Pakistan	Servant Leadership	Trust, Job Crafting
15	Diversity, climate and innovative work behavior	Bogilović et al. (2021)	Multinational SME Italy, India, Slovenia, and the Republic of North Mcedonia	Visible Dissimilarity	Cognitive Group Diversity
16	Linking knowledge sharing to innovative work behaviour: The role of psychological empowerment	Almulhim (2020)	Telecommunication Enterprises Saudi Arabia	Knowledge Sharing	Psychological Empowerment

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No	Article Title	Author/Year	Sample/Context	Variables	Mediator/Moderator
17	Current Research in Behavioral Sciences The perceived overqualification's effect on innovative work behaviour: Do transformational leadership and turnover intention matter?	Kaymakc et al. (2022)	Telecommunication Industry Turkey	Perceived Overqualification	Turnover Intention, Transformational Leadership (Mod)
18	The role of knowledge sharing and creative self-efficacy on the self-leadership and innovative work behavior relationship	Salah et al. (2023)	Software Companies Pakistan	Self-Leadership	Knowledge Sharing (Mod), Creative Self-Efficacy
19	Entrepreneurial leadership and employees' innovative behavior: A sequential mediation analysis of innovation climate and employees' intellectual agility	Malibari & Bajaba (2022)	Companies US	Entrepreneurial Leadership	Innovation Climate, Employees' Intellectual Agility
20	The effect of servant leadership on employees' extra-role behaviors in NPOs: The role of work engagement	Aboramadan et al. (2022)	NPO (Non-Profit Organization Palestine	Servant Leadership	Work Engagement

In several sectors, including healthcare, technology, and education, transformational leadership was shown to positively influence IWB. In the healthcare sector, for instance, transformational leaders were found to enhance service delivery by encouraging innovative solutions to patient care challenges (Korku & Kaya, 2023; Usman et al., 2024). Similarly, in technology-driven industries, transformational leadership leads to greater problem-solving and the development of creative approaches to technical difficulties (Bin Saeed et al., 2019). The education sector also reflected similar trends, with transformational leaders fostering intellectual stimulation and enabling staff to explore innovative educational methods (M. A. Khan et al., 2020; Saif et al., 2024a). On the other side, Sudibjo & Prameswari (2021) didn't seem to agree because the result showed a negative effect on innovative work behavior. Although not too much research on transformational leadership on innovative work behavior has also been conducted in

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public government, SMEs, and retail banks (Bak et al., 2022; Mubarak et al., 2021; Srirahayu et al., 2024; Tan et al., 2024). These studies show positive and significant results.

Table 5. Transformational leadership on IWB

No	Article Title	Author/Year	Sample/Context	Mediator/Moderator
1	The effects of knowledge sharing and person – organization fit on the relationship between transformational leadership on innovative work behavior	Sudibjo & Prameswari (2021)	Elementary School Jakarta	Knowledge Sharing Behavior, Person-Organization Fit
2	The Interplay of Leadership Styles, Innovative Work Behavior, Organizational Culture, and Organizational Citizenship Behavior	Khan et al. (2020)	Universities Pakistan	Organizational culture, Organizational Citizenship Behavior (Mod)
3	Influence of transformational leadership on innovative work behavior and task performance of individuals: The mediating role of knowledge sharing	Saif et al. (2024)	Higher Education Pakistan	Knowledge Sharing
4	The pathways to innovative work behavior and job performance: Exploring the role of public service motivation, transformational leadership, and person-organization fit in Vietnam's public sector	Pham et al. (2024)	Public Service Vietnam	Psychological Empowerment, Public Service Motivation, Person Organization Fit
5	Innovative work behavior in SMEs: the role of transformational leadership	Knezović & Drkić (2021)	SME in Bosnia and Herzegovina	Psychological Empowerment, Participation in the Decision-Making Process, and Organizational Justice
6	Transformational leadership with innovative behaviour	Amankwaa et al. (2019)	Retail Bank in Ghana	Supportive Management, (Korku & Kaya, 2023; Saeed et al., 2019)Affective Commitment, Job Autonomy
7	Unpacking the Transformational Leadership-Innovative Work Behavior Relationship: The Mediating Role of Psychological Capital	Bak et al. (2022)	Korean Central and Local Government	Psychological Capital
8	Relationship between authentic leadership, transformational leadership	Korku & Kaya (2023)	Hospital in Turkey	Innovation Climate

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No	Article Title	Author/Year	Sample/Context	Mediator/Moderator
	and innovative work behavior: mediating role of innovation climate			
9	Role of safety-specific transformational leadership in fostering extra-role behaviors through psychological contract fulfillment among frontline workers during COVID-19	Usman et al. (2024)	Government Hospital in Pakistan	Psychological Fulfillment
10	Does transformational leadership foster innovative work behavior? The roles of psychological empowerment, intrinsic motivation, and creative process engagement	Bin Saeed et al. (2019)	IT Companies in China	Creative Process Engagement, Intrinsic Motivation (Mod), and Psychological Empowerment
11	Leadership as an Enabler of Innovation Climate and Innovative Work Behavior in Indonesia's Public Libraries	Srirahayu et al. (2024)	Public Library in Indonesia	Innovation Climate
12	Lean innovation training and transformational leadership for employee creative role identity and innovative work behavior in a public service organization	Tan et al. (2024)	Public Service Agency in Singapore	

Beyond leadership, various mediators and moderators also influence IWB. Perceived Organizational Support (POS) plays a crucial role in strengthening the relationship between transformational leadership and IWB. When employees feel supported by their organization, they are more likely to engage in innovative behaviors (Susomrith & Amankwaa, 2019). Knowledge sharing emerges as another significant factor, both as a direct influence on IWB and as a mediator that enhances the effects of leadership (Saif et al., 2024b; Sudibjo & Prameswari, 2021). By encouraging open communication and collaboration, transformational leaders can cultivate a knowledge-sharing culture that further fosters innovation. Additionally, variables such as organizational justice, psychological capital, and learning orientation were identified as important contributors to IWB (Bak et al., 2022; Knezović & Drkić, 2021; Pham et al., 2024b; Usman et al., 2024). These variables either mediate or moderate the impact of transformational leadership, providing employees with the necessary resources, fairness, and mindset to innovate (Korku & Kaya, 2023; Saeed et al., 2019).

Additionally, this research aims to employ Vosviewer to analyze and visualize the existing body of literature related to the previously described topics. It is enhancing the

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understanding of research trends and key relationships within the field. Vosviewer demonstrated that transformational leadership and innovative work behavior are interconnected with various other variables (Figures 2,3, and 4).

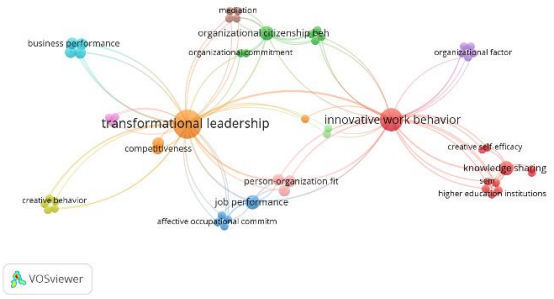


Figure 2. Network Visualization

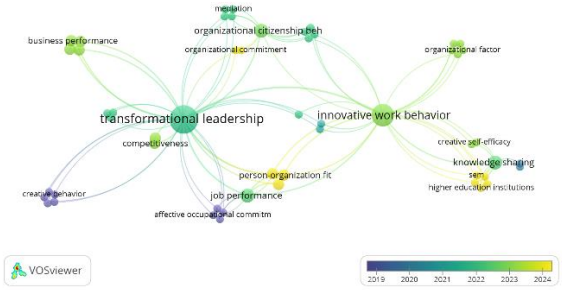


Figure 3. Overlay Visualization

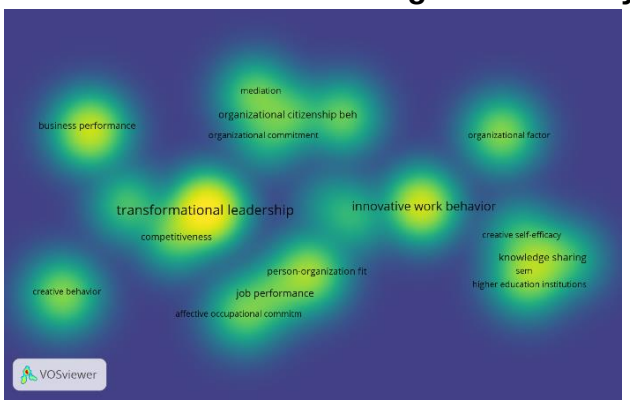


Figure 4. Density Visualization

The VOSviewer visualizations provide insightful data on the relationships between transformational leadership, knowledge sharing, and innovative work behavior (IWB), along with other related variables. In detail, the findings from Vosviewer merely support other findings that are explained above. Networking visualization emphasizes the importance of leadership. This highlights the importance of leadership in influencing various organizational behaviors, including performance and employee alignment with organizational values. Furthermore, innovative work behavior stands as a key outcome, associated with elements like knowledge sharing, organizational citizenship behavior (OCB), and creative self-efficacy (Aboramadan et al., 2021; Pradhan & Jena, 2019; Usmanova et al., 2021). These connections suggest that leadership and the way

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knowledge is shared in organizations are pivotal for fostering innovation among employees. Additionally, knowledge sharing appears as a critical factor that directly influences innovative behavior, showing that the dissemination of knowledge within teams is essential for nurturing creativity and innovation (Zainal & Lata, 2021). Another notable connection is between creative self-efficacy and IWB, suggesting that an individual's confidence in their creative abilities can mediate the impact of leadership and organizational practices on innovation (Khan et al., 2023).

Moreover, the overlay visualization highlights the research trend. This shift indicates that recent research has increasingly concentrated on how leadership affects specific employee behaviors, such as citizenship behavior and innovation or innovative work behavior (M. A. Khan et al., 2020; Saif et al., 2024b), rather than just general performance. It shows the growing recognition of more nuanced outcomes of leadership practices, including fostering innovative behaviors. Ultimately, the density visualization shows variables that must be examined in the research. These visualizations not only confirm existing knowledge but also point toward underexplored areas. For example, the role of person-organization fit and psychological empowerment in driving innovation within organizations remains less developed (Saif et al., 2024a; Tran Pham, 2023). Moreover, creative self-efficacy is highlighted as a key factor in the innovation process, emphasizing the need for leadership to foster employees' belief in their creative abilities to enhance innovative outcomes (Xiang et al., 2023).

DISCUSSION

The results of this review confirm the strong link between transformational leadership and innovative work behavior (IWB) in SMEs. However, separately, it shows significant results in the role of transformational leadership and innovative work behavior. Transformational leaders can create an environment where employees feel motivated and supported to engage in innovative tasks (Mahmood et al., 2019). This leadership style is particularly effective in fostering IWB due to its emphasis on trust, empowerment, and intellectual stimulation (Alwali, 2024). The core elements of transformational leadership, such as idealized influence and individualized consideration, directly encourage employees to take initiative and propose new ideas (Njaramba, 2024). However, the impact of transformational leadership on IWB is not linear and is significantly enhanced by mediating factors such as perceived organizational support (POS) and knowledge sharing (Haider et al., 2023; Musenze & Mayende, 2023). POS

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enhances the relationship by providing employees with the confidence that their efforts will be supported and valued by the organization. Likewise, knowledge sharing creates a collaborative environment where employees can exchange ideas and develop them further, amplifying the innovation process. These mediating variables suggest that SMEs can further enhance IWB by not only focusing on leadership development but also fostering a supportive and collaborative organizational culture (Abbas et al., 2020; Sharifirad, 2013).

In addition to leadership, this review identifies several key variables that independently influence IWB, including organizational justice, psychological capital, and learning orientation (Al Halbusi et al., 2020; Gelaidan et al., 2024; Slåtten et al., 2020). Organizational justice, in particular, plays a crucial role in fostering a sense of fairness and transparency, which encourages employees to take risks and engage in innovative work. Psychological capital, characterized by self-efficacy, optimism, and resilience, empowers employees to persist in their innovative efforts, even in the face of challenges. Meanwhile, learning orientation in SMEs provides an environment that prioritizes continuous improvement and development, further promoting innovation. When comparing findings across sectors, it is clear that transformational leadership consistently fosters IWB, regardless of the organizational context (Messmann et al., 2022; Stanescu et al., 2021b). In healthcare settings, transformational leaders have been shown to positively influence IWB by creating environments that prioritize patient care innovation (Korku & Kaya, 2023; Masood & Afsar, 2017). In technology firms, the encouragement of creative problem-solving has led to significant innovations in product development and operational efficiency (Afsar et al., 2014; Pradhan & Jena, 2019). This suggests that while the core principles of transformational leadership remain the same, the specific outcomes of IWB may vary depending on the sector's unique demands and challenges.

The findings of this review manually and Vosviewers have important implications for SMEs. In order to foster innovation, SMEs should invest in the development of transformational leadership capabilities within their management teams (Özer & Tınaztepe, 2014). Leaders who inspire trust, encourage knowledge sharing, and promote a culture of learning are more likely to see their employees engage in IWB. Additionally, organizational support systems must be strengthened to ensure employees feel empowered to innovate (Al-Husseini, 2024; Kennedy & Brewer, 2010). By fostering an environment of fairness and transparency, and promoting continuous learning, SMEs can create the conditions necessary for sustainable innovation (Chaurasia et al., 2020;

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Ciasullo & Troisi, 2013; Gao et al., 2021). The relationship between transformational leadership and IWB is complex and influenced by multiple factors, which suggests that future research could further explore the interactions between leadership styles and organizational variables. In particular, understanding how transformational leadership interacts with other leadership approaches, such as servant or transactional leadership, could provide deeper insights into how SMEs can best cultivate innovation (Alrowwad et al., 2020; Goestjahjanti et al., 2022; Ma & Jiang, 2018). Additionally, developing tools to effectively measure the impact of transformational leadership on IWB will be essential for refining leadership development programs in SMEs (Ajmal et al., 2024; Lin et al., 2023; Parnitvitidkun et al., 2024; Shahid et al., 2022; Wang & Wu, 2024).

CONCLUSION

This systematic literature review highlights the significant role of transformational leadership in fostering innovative work behavior (IWB) in SMEs, as corroborated by the VOSviewer findings. Transformational leaders, by providing intellectual stimulation, individualized consideration, and inspirational motivation, create an environment that promotes employee innovation. The VOSviewer network analysis illustrates the centrality of transformational leadership in driving innovation, with strong associations to critical variables like knowledge sharing and organizational support. Notably, knowledge sharing emerged as a key mediator in the relationship between leadership and IWB, indicating that leaders who encourage open communication and collaboration enhance employees' ability to generate and implement new ideas.

Beyond leadership, the review and VOSviewer analysis also identify other important variables influencing IWB, such as organizational justice, psychological capital, and learning-oriented organizational culture. These variables act as mediators or moderators, further shaping innovative capacities in SMEs. While leadership is a key driver, cultivating a supportive organizational culture that encourages fairness and continuous learning is equally critical. Future research should explore how different leadership styles interact with organizational factors, as well as the potential of emerging variables like organizational justice to enhance SMEs' innovative potential.

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