

The Relationship Between Transformational Leadership and Innovative Behaviour: The Mediating Role of Innovative Climate and Person-Organization Fit

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Abstract

The purpose of this research is to investigate the impact of transformational leadership on employees' innovative work behaviour, alongside the mediating role of innovative climate and person-organization fit. A questionnaire, designed as a self-reported survey, was distributed to full-time employees working in two prominent state-owned corporations in Vietnam, namely Electricity of Vietnam (EVN) and PetroVietnam (PVN). Data were collected from 255 employees and analyzed by Smart PLS software 4. The findings revealed that all three proposed antecedents significantly impacted innovative behaviour. Notably, while an innovative climate significantly impacted person-organization fit, no statistical evidence exists to confirm the relationship between transformational leadership and person-organization fit.

Keywords: transformational leadership, innovative climate, person-organization fit, innovative behaviour

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1. INTRODUCTION

In today's rapidly evolving business environment, characterized by continual fluctuations in market conditions (Iqbal et al., 2020; Nain, 2014; Al Sayah et al., 2020), organizations are constantly seeking to maintain a competitive edge (Rua & Santos, 2022). Within this context, the significance of fostering innovative behaviour cannot be neglected (Zhang and Yang, 2021). Innovative behaviour, which encompasses the generation and implementation of novel ideas (Scott and Bruce, 1994), is widely recognized as a critical driver of organizational success and adaptability (Chou et al., 2017; Carvalho & Sarkar, 2018; Zhang & Yang, 2021).

Empirical research provides substantial evidence for the significance of innovative behaviour within organizational settings. Damanpour (2014) sheds light on the crucial role of innovation in enhancing organizational performance and survival in turbulent environments. Furthermore, Helfat and Peteraf (2015) emphasize the strategic value of innovation as a means for organizations to create and sustain a competitive advantage. It not only enables organizations to adapt to changing market dynamics but also allows them to effectively address customer demands and seize on emerging opportunities (Damanpour, 2014). Consequently, both researchers and practitioners have shown a keen interest in understanding the factors that facilitate the promotion of innovative behaviour.

Although several key factors that foster innovation, including transformational leadership, working climate, and person-organization fit, have been discovered (Damanpour, 2014; Helfat & Peteraf, 2015), few efforts have been made to provide a holistic understanding by examining these antecedents simultaneously and the causal relationships among them. Additionally, existing literature has produced inconsistent findings regarding transformational leadership studies. Particularly, some results indicate that transformational leadership styles are not necessarily linked to positive outcomes and can even be disastrous for organizations (Elbanna & Newman, 2022; Khoo & Burch, 2008). The present study, therefore, aims to explore the relationships among transformational leadership, innovative climate, person-organization fit, as well as their collective impact on employees' innovative behaviour. Moreover, while the direct influences of working climate and person-organization fit on innovative behaviour have been established, the comprehensive understanding of their roles as mediators within the transformational leadership-innovative behaviour relationship remains ambiguous. Hence, this study aims to examine the relationship between transformational leadership and innovative behaviour through the mediating mechanism of innovative climate and person-organization fit. By doing so, this research seeks to provide a comprehensive understanding in this field, particularly within the context of state-owned corporations.

State-owned corporations, which operate within a distinct institutional setting, governed by specific regulations, governance structures, and political influences (Andrews & Boyne, 2010; Wright & Pandey, 2010), markedly differ from privately-owned companies (Belloc, 2014). These state-owned corporations play a vital role in national economies, driving economic development and providing essential services to the public (Kane & Christiansen, 2015). Understanding the factors that foster innovative behaviour in state-owned corporations can contribute to the broader organizational innovation literature. Despite its importance, discussion concerning the innovation activities of state-owned corporations remains relatively sparse in economic literature in comparison to those of their privately-owned counterparts (Belloc, 2014).

We primarily borrow from Leader-member exchange theory (LMX) to elucidate relationships among transformational leadership, person-organization fit, and innovative behaviour. According to Power (2013), LMX has been described as a perfect complement to transformational leadership, offering additional insights into the influence of leaders on individual outcomes. The quality of interaction between supervisors and subordinates holds considerable implications for organizational results (Jha & Jha, 2013).

Our research makes several contributions to the literature. While the positive impact of transformational leadership on employees' innovative behaviour has been established, some studies have failed to confirm this relationship. The current study, therefore, advances research in the field of innovation by proposing a holistic model of innovative behaviour rooted in transformational leadership, integrated with an innovative climate, and person-organization fit. The mediating mechanism of an innovative climate and person-organization fit will also be tested. Moreover, the fieldwork conducted in two prominent state-owned corporations in Vietnam provides better insights and practical implications for this public field. Hence, this study fills the gap in innovation research, as highlighted by Ricard et al. (2017), who underscored the necessity for more extensive exploration of the influence of leadership style on public innovation. The subsequent sections of this paper will present a comprehensive literature review, the methodology employed, the results of our empirical analysis, and a discussion of the findings.

2. LITERATURE REVIEW AND HYPOTHESES

2.1 Leader-Member Exchange Theory

Leader-member exchange (LMX) has its roots in social exchange theory and role theory (Khorakian & Sharifirad, 2019), emphasizing the exchange of resources and the cultivation of relationships (Usman et al., 2021). While most theories focus on the characteristics of effective leaders, LMX directs its attention towards the

relationships that can be influenced by personal characteristics existing between leaders and followers (Power, 2013). Particularly, LMX focuses on the unique and dyadic relationship between leaders and followers. According to Graen and Uhl-Bien (1995), LMX incorporates a relation-based approach to leadership, where both leaders and followers benefit from the relationship.

The dynamics of relationships exhibit variations among individual followers, with some being of higher quality than others. Those followers engaged in high-quality relationships are part of an “in-group” or high-quality relationship, while those experiencing lower-quality relationships are categorized as members of the “out-group” or associated with low-quality relationships (Lunenburg, 2010). High-quality relationships go beyond the contractual agreement, demonstrating attributes such as reciprocal influence, negotiability, trust, and respect (Anand et al., 2011). In-group followers enjoy a range of benefits including heightened job latitude, more open communications, and greater confidence from leaders. Notably, employees have easier access to social and financial resources, support, and autonomy at work, providing them with more opportunities to contribute positively (Tummers & Knies, 2013). This often results in reciprocation from in-group followers, who assume “greater responsibility, and commitment to the success of the organization”. On the other hand, low-quality relationships are bound by the terms of the employment contract. Relationships with out-group members, therefore, are typically governed “within the narrow limits of their formal employment contract”. Firms that establish a high-quality LMX relationship can transform their partnership structure from being unfamiliar or acquaintanceship-oriented to a mature, long-term partnership. In such partnerships, there is a collective entity that practises mutual respect and appreciation for common goals (Shin & Park, 2021).

2.2 Innovation

Innovation stands as a crucial determinant for the long-term survival, growth, and overall effectiveness of an organization (Nazir et al., 2019). At its core, innovation involves the creation of something new (Torres & Jasso, 2017) or the adoption of a new idea or behaviour within the organization (Hage, 1999). This concept has attracted the attention of both researchers and practitioners for many years (de Jong and Den Hartog, 2007; Saeed et al., 2019). According to Samad (2012), innovation has been defined from different viewpoints depending on the type of analysis employed. The broader the approach taken, the greater the diversity of definitions. Embedded within an organizational context, innovation encompasses the implementation of ideas to restructure or reduce costs, enhance communication, adopt new production technologies, establish new organizational structures, and develop new personnel plans or programs (Langton & Robbins, 2007). Innovation can be seen as a distinct product or outcome, such as a new device, method, idea, or as a process of introducing novelty (Grošelj et al., 2021). Johnson (2001) provides further clarity by categorizing innovation as (1) a change in the range of products/services offered to markets, (2) a change in the application of a product/service from its original purpose, (3) a change in the target market for a product/service, (4) a change in the way a product/service is developed and delivered, and (5) a change in the business model.

According to Echebiri et al. (2020), innovation involves the development and implementation of a new idea, product, or procedure by an individual employee or a group of employees. Employees’ innovative behaviour not only plays a critical role in ensuring the sustainable development of an organization (Singh and Sarkar, 2019) but also has implications for short-term organizational performance (Podsakoff et al., 2009). According to Maqbool et al. (2019), innovative work behaviour encompasses the process of generating, modifying, communicating, and implementing novel ideas. Since innovative work behaviour constitutes a foundational element for successful organizations, identifying the factors and mechanisms that stimulate it significantly contributes to understanding individual-level innovativeness (Wu et al., 2014).

2.3 Transformational Leadership

Leadership is considered to be a factor of change (Bass & Bass, 2008) and one of the most critical factors in determining the degree to which employees strive for innovation (Amabile et al. 2004; Peterson et al. 2009). According to Chan et al. (2014), leadership is essential for creating and implementing an innovative organizational strategy, facilitating organizational learning of innovation, motivating team expectations toward innovations, and so on. Different leadership styles have varying influences on innovation. Among them, transformational leadership has frequently received attention from innovation researchers (Samad, 2012; Lei et al., 2020; Grošelj et al., 2021; Rafique et al., 2022). The concept of transformational leadership, initially conceptualized by Burns (1978), has received considerable research attention (Hoogeboom & Wilderom, 2019). Transformational leadership refers to leaders who emphasize fostering the higher-order intrinsic needs of their followers, prioritizing short-term needs (Chan et al., 2014).

Transformational leadership can be categorized into four key dimensions: charisma, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Bass, 2008). Charisma entails the leader's ability to attract followers through their charming personality and admirable behaviour. Charismatic leaders possess the ability to articulate a vision in line with the values and beliefs of the organization, thereby earning the respect of their subordinates. Inspirational motivation involves creating an environment that captivates followers'

attention and fosters their understanding of compelling and inspiring shared goals. These leaders can raise hope, enthusiasm, and optimism among employees. They clarify the organizational vision and depict it as an achievable goal. Through the ability to convey an optimistic view of the future, and use emotional arguments, these leaders can encourage employees to increase their expectations. Intellectual stimulation denotes a leader's encouragement for followers to question their beliefs, values, and current practices before taking action. By inspiring subordinates to cultivate intellectual curiosity and critically evaluate conventional assumptions from diverse perspectives, such leaders enhance the employees' awareness of challenges and view problems from a novel point of view. Lastly, individualized consideration refers to a leader who personally engages with each subordinate, providing them with support and clear guidelines. Leaders who practise individualized consideration typically invest time in developing the unique strengths of their subordinates, considering their specific needs, abilities, and aspirations.

2.4 Transformational Leadership and Innovative Behaviour

According to Samad (2012), transformational leaders integrate persistence, sensitive and creative insight into the followers, ultimately enhancing the adoption of generative thinking and pursuit of innovation (Zuraik & Kelly, 2019). Based on LMX theory, the relationship between superior and subordinate is mainly developed due to their workplace interactions (Jha & Jha, 2013). Transformational leaders who exhibit individualized consideration characteristics are likely to foster strong relationships with their subordinates. Furthermore, employees tend to align themselves with leaders who share identical personality traits, such as openness, optimism, extroversion/introversion, conscientiousness, self-esteem, and worldview (Jha & Jha, 2013), which are dimensions of transformational leadership. As per LMX theory, high-quality relationships are cultivated through mutual exchange or reciprocity. Consequently, subordinates are likely to feel obliged to reciprocate the preferential treatment they receive from their managers by exceeding their contributions beyond the boundaries of the formal employment contract (Jha & Jha, 2013).

In other words, when employees perceive that their organization recognizes and values their contributions while genuinely caring about their well-being, they feel compelled to enhance their performance not only within their designated roles but also in additional responsibilities or extra-role performance (Rousseau, 1995). Coupled with the support, inspiration, and stimulating intellectual curiosity from transformational leaders, employees may go beyond their self-interests to pursue collective goals, given suitable conditions to enhance their innovation (Bass & Riggio, 2006). Concerning supportive leadership, employees may reciprocate the genuine attention of the leader by dedicating themselves to their work (Ghadi et al., 2013). In the case of personal recognition, if the leader provides a benefit (e.g. praise, acknowledgment, etc.), the employee should respond similarly, such as investing themselves in their work role (Balwant et al., 2020). Moreover, LMX indicates that subordinates who establish strong and positive working relationships with their superiors demonstrate higher levels of satisfaction and performance, reduced turnover rates, and, most importantly, an improved quality of assignments (Jha & Jha, 2013).

Supportive and empowering behaviours exhibited by transformational leaders are anticipated to boost employees' confidence, creativity, and willingness to participate in innovative activities (Afsar et al., 2014). Transformational leaders with idealized influence demonstrate optimism and excitement towards novel perspectives, and this "championing role" fosters organizational innovation through intellectual stimulation (Elkins and Keller, 2003).

Therefore, we hypothesize that:

H1. Transformational leadership is positively related to innovative behaviour

2.5 Transformational Leadership, Innovative Climate, and Innovative Behaviour

An innovative climate pertains to an organizational environment that nurtures and values innovation (Martins and Terblanche, 2003; Mumford and Gustafson, 1988; Übius and Alas, 2010). Transformational leaders, through their vision, moral clarity, motivational inspiration, and supportive behaviours, can shape the organizational culture, create an environment that fosters innovation, encourages idea generation and embraces change (Puni et al., 2022). Transformational leadership has a substantial impact on the organizational climate (Gaviria-Rivera & Lopez-Zapata, 2019) by promoting values such as innovation, risk-taking, and creativity (Zuraik & Kelly, 2019). In addition to rewarding innovative ideas and behaviours, transformational leadership can facilitate an innovative organizational climate supporting open communication and collaborative efforts across functional teams (Zuraik & Kelly, 2019). Several studies have substantiated the relationship between transformational leadership and innovative climate. For instance, Sheehan et al. (2020) discovered that transformational leaders significantly contribute to cultivating a climate that promotes knowledge-sharing within organizations. Similarly, Carmeli and Schaubroeck (2007) demonstrated that transformational leadership positively predicts the perceived level of an innovative climate. These findings highlight the role of transformational leaders in fostering an organizational context that supports and encourages innovation.

H2: Transformational leadership is positively related to innovative climate

In addition to transformational leadership, an innovative climate has been identified as a critical factor in promoting innovative behaviour. According to Chan et al. (2014), an innovative organizational climate facilitates employees' adaptation toward changes, creative behaviour, and eventually leads to innovative behaviour in the organization. By ensuring that employees have adequate resources, the innovative climate could nurture innovation among employees (Gao et al., 2020). Notably, when organizations consistently emphasize the importance of innovation in problem-solving, employees are more inclined to actively generate novel and valuable ideas as part of their daily work (Liu et al., 2019). Research suggests that an innovative climate encourages employees to think outside the box, share ideas, and take calculated risks, thereby fostering higher levels of innovative behaviour (Xu & Suntrayuth, 2022). Therefore, when employees perceive autonomy and a lack of fear in presenting unconventional ideas, their innovativeness is boosted, stimulating innovative behaviour (Sarwar et al., 2020).

Numerous studies have examined the impact of an innovative climate on innovative behaviour. For example, Liu et al. (2019) found a positive relationship between the perceived level of an innovative climate and individual innovative behaviour. Similarly, Mutonyi et al. (2020) demonstrated that the climate for innovation positively predicts employees' creative performance in the public sector. These findings support the notion that an organizational climate conducive to innovation can significantly enhance employees' propensity to engage in innovative behaviour.

H3: Innovative climate is positively related to innovative behaviour

2.6 Transformational Leadership, Person-Organization Fit, and Innovative Behaviour

In her integrative review, Kristof (1996) defines Person-Organization fit (P-O fit) as the "compatibility between people and organizations that occurs when at least one entity provides what the other needs or they share similar fundamental characteristics or both" (Morley, 2007). Derived from the central premise that different types of individuals are attracted to different types of organizations, P-O fit emphasizes the significance of alignment between employees and work processes, as well as the importance of creating an organizational identity through the institutionalization of consistent values that permeate an organization's culture (Werbel and DeMarie, 2005)

Through demonstrating a strong commitment to the organization's values, providing individualized consideration, and fostering a sense of purpose, transformational leaders tend to engage in increased interactions with their subordinates and are likely to have more interaction with their subordinates. LMX theory posits that workplace interactions primarily foster the relationship between superiors and subordinates (Jha & Jha, 2013), eventually enhancing the employee's perception of congruence with the leader. According to Morley (2007), the value 'congruence' has become "widely accepted as the defining operationalization of P-O fit". In addition, P-O fit can be formed when employees' needs align with the resources provided by the organization (Singhal & Chatterjee, 2006). Accordingly, transformational leaders can enhance P-O fit among employees by offering supportive behaviours and considering their distinct needs, abilities, and aspirations (Bass & Bass, 2008). Inspirational motivation, a dimension of transformational leadership, signifies the leader's ability to foster enthusiasm, optimism, and cohesion among the group of employees, which supports their feeling of being part of the family (Fries et al., 2021), eventually leading to a feeling of P-O fit. Moreover, the fact that transformational leaders typically attract followers through their charming personality and admirable behaviour (Bass & Bass, 2008) can contribute to nurturing employees' perception of P-O fit.

Studies in the literature support the link between transformational leadership and P-O fit. For instance, Lim et al. (2019) found that transformational leadership behaviours positively predict employees' perceived fit with the organization. Similarly, Sudibjo & Prameswari (2021) confirmed the mediating role of P-O fit in the relationship between transformational leadership and innovative behaviour. These studies emphasize the role of transformational leaders in enhancing the alignment between employees and the organizational context.

H4: Transformational leadership is positively related to Person-Organization Fit

Person-organization fit pertains to the aligning of an individual's values, skills, and goals with those of the organization. If individuals perceive a strong fit between themselves and the organization, they are more inclined to experience a sense of belonging and commitment, resulting in heightened motivation and engagement in innovative activities. Employees perceiving P-O fit might share understanding with other organizational members, enhance communication, satisfaction (Erdogan et al., 2020), and possess intrinsic motivation (Afsar et al., 2015). According to Palo (2003), creative individuals are primarily motivated by intrinsically interesting aspects of the work, such as interest, enjoyment, challenge, appreciation, and satisfaction. Hence, this motivation is more likely to manifest as creative job performance (De Jong and Den Hartog, 2007), eventually resulting in innovative behaviour (Afsar et al., 2018).

Research has demonstrated a positive relationship between person-organization fit and innovative behaviour. For instance, Afsar et al. (2018) found that employees who perceived a strong alignment with their organization were more likely to engage in innovative behaviours. Additionally, Kasekende et al. (2005) emphasized the mediating role of person-organization fit in the relationship between strategic human resource practices and

individual innovative behaviours. These studies provide compelling evidence for the positive association between P-O fit and employees' innovative behaviour.

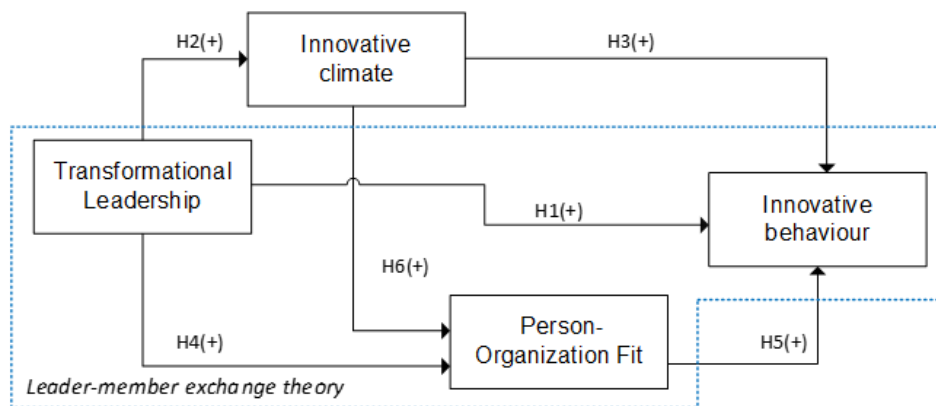
H5: Person-Organization Fit is positively related to innovative behaviour

2.7 Innovative Climate and Person-Organization Fit

An innovative climate refers to an organizational environment that fosters and supports creativity, experimentation, and the generation of new ideas. When an individual receives organizational support, they are inclined to trust and align themselves with the organizational values, thereby resulting in improved value congruence between them (Karatepe, 2012). Consequently, this enhances the employee's perception of P-O fit, signifying the alignment of individual values and goals with the organization's values and culture (Saraç et al., 2014). According to Afsar & Badir (2017), if employees are appreciated and rewarded, they are likely to sense a duty to reciprocate by enhancing extra-role performance, embracing a strong exchange ideology, and achieving high P-O fit.

H6: Innovative climate is positively related to Person-Organization Fit

Figure 1. Conceptual framework



3. RESEARCH METHODOLOGY

This section encompasses a discussion of the variable measurement and the questionnaire, followed by an overview of the research setting, data collection, and sample profile.

3.1 Research Measures and Questionnaire Design

The constructs in this study were based on well-established measurement scales in the existing literature. The measurement utilized five-point Likert scales, with response categories ranging from "1 - strongly disagree" to "5 - strongly agree" for all variables. In line with prior research (Yuan and Woodman, 2010; Nazir et al., 2019; Iqbal et al., 2020), a six-item scale adapted from Scot and Bruce (1994) was employed to measure employees' innovative behaviour. Sample items included statements such as "I generate new ideas for challenging problems". To assess transformational leadership, a seven-item scale developed by Sudibjo & Prameswari (2021) was employed. An example item was "Leaders can invite employees to work together to work for the vision of the organization's mission". The measurement of the innovative climate was adopted from Oke et al. (2013) and consisted of four items. Examples of items included statements like "Our company provides time and resources for employees to generate, share/exchange, and experiment with innovative ideas/solutions" and "Our employees are working in diversely skilled work groups where there is free and open communication among the group members". The perceived P-O fit scale was adopted from Al Halbusi et al. (2021) and included four items. An example item was: "I feel my values match or fit this organization's values".

To ensure the scale items used in the field study conducted in Vietnam were accurate, the authors employed a double back-translation technique to translate them from English (the original language) into Vietnamese. Initially, the scale items were translated from English to Vietnamese, and then two bilingual individuals translated them back into English. We compared and adjusted the two versions until the translation and terminology were appropriate for the Vietnamese language. This rigorous process ensured that the translated scales were suitable for use in Vietnam.

Following the completion of the initial version of the questionnaire, a pilot test was conducted in November 2022 with twenty-six employees ranging in age from 20 to 49. Based on the feedback received, several modifications, corrections, and adjustments were made to the questionnaire. Inappropriate items were removed,

ambiguous statements were clarified, terminology was improved, formatting was enhanced, and typos were corrected. These revisions contributed to the finalization of the questionnaire.

3.2 Sample and Data Collection

This study investigated the interrelationships among Transformational leadership, Innovative climate, P-O fit and Innovative behaviour. The data were collected from two prominent state-owned corporations in Vietnam, namely Electricity of Vietnam (EVN) and PetroVietnam (PVN) (Ngoc Thuy, 2021). These corporations are actively undertaking transformative efforts to enhance operational efficiency and improve customer service (Dinh Thuy, 2021; VietnamEnergy, 2023), making them suitable for research in the field of innovation.

Data was collected between October 2022 and February 2023, utilizing a questionnaire with 21 items. To enhance the response rate, various techniques were employed, including the inclusion of a cover letter, a stamped and addressed return envelope, and sending follow-up reminders. A total of 400 questionnaires was distributed to full-time employees working in firms affiliated with either EVN or PVN. A total of 278 questionnaires were received, resulting in a response rate of 69.5%. After excluding invalid surveys, 255 completed questionnaires were used for further analysis. The age range of the participants varied from 20 years to 55 years or above. Among the 255 respondents, 134 were male (52.55%) and 121 were female (47.45%). Initial screening of the data also indicated that the majority of employees had work experience ranging from 3 years to over 15 years.

3.3 Common Method Variance

Some procedural remedies and statistical analyses were employed to reduce common method variance (hereinafter, CMV) and assess its seriousness in our research. For procedural remedies, the questionnaire was developed with caution including verbal midpoints for measures, a double back-translation technique, and pre-validated scales. For statistical analyses, the authors employed Harman's single-factor test to check CMB. The first unrotated factor captured only 28.26% of the variance in the data (i.e., it did not capture most of the variance); thus, no single factor emerged. These results suggest that CMB is not an issue in this study.

4. RESULTS

A Partial Least Squares (PLS) analysis with standard bootstrapping (5000 random samples) using the SmartPLS program (Becker et al., 2023) was implemented to evaluate the measurement, the proposed model, and the direct impacts of the proposed hypotheses.

4.1 Scale Accuracy Analysis

Tables I and II show the reliability and validity of the constructs from the conceptual model. Reliability was measured by Cronbach's Alpha values (CA) and average variance extracted (AVE), while AVE square roots and Heterotrait–Monotrait (HTMT) ratios were employed to assess validity. As demonstrated in Table I, all CA values were above the commonly suggested threshold (.70), while the AVE values were higher than the recommended value (.5), which indicates satisfactory reliability. The results from Table II show that the AVE square roots of the constructs were higher when compared to the correlations between any pair of constructs. Furthermore, the HTMT ratios between constructs did not exceed 0.9. Generally, the results above confirm the achievement of scale accuracy.

Table 1. Scale Accuracy Analysis – Reliability Assessment

Latent variables and sources	Measure items	Mean	CA ^a	AVE ^b	Factor loadings
Transformational leadership (LEA)	Leaders can clearly explain the vision and mission of the organization to employees	2.82	0.878	0.668	(*)
	Leaders can invite employees to work together to work for the vision of the organization's mission.				0.808
	Leaders demonstrate integrity in their work				(*)
	Leaders show behaviour that is in accordance with the values adopted by the organization.				0.777
	Leaders show responsibility to make improvements in the organization.				0.85
	Leaders provide opportunities for employees to work together.				0.815
	Leaders encouraged me to work with other employees.				0.834
Innovative climate (INC)	My company provides time and resources for employees to generate, share/exchange, and experiment with innovative ideas/solutions	3.10	0.888	0.748	0.865
	I and my colleagues are working in diversely skilled work groups where there is free and open communication among the group members				0.864
	I and my colleagues frequently encounter non-routine and challenging work that stimulates creativity.				0.872
	I and my colleagues are recognized and rewarded for their creativity and innovative ideas				0.859
P-O Fit (POF)	I feel my values match or fit this organization's values	3.03	0.892	0.755	0.889
	My organization's objective reflects my own objectives				0.874
	The personality of this organization reflects my own personality				0.888
	My organization's values and culture provide a good fit with the things that I value in life				0.824
Innovative behaviour (IB)	I create new ideas for difficult issues	3.20	0.944	0.783	0.896
	I usually generate creative ideas				0.881
	I promote and champion ideas to others.				0.907
	I try to implement new ideas in the workplace				0.867
	I develop adequate plans and schedules for the implementation of new ideas				0.872
	I am able to try out new ways to solve problems				0.885

(*) deleted items by scale accuracy analysis; ^a Cronbach's Alpha; ^b Average Variance Extracted

Table 2. Scale Accuracy Analysis - Discriminant Validity Assessment

Studied constructs	LEA	INC	POF	IB
LEA	0.817	0.304	0.232	0.372
INC	0.268	0.865	0.417	0.593
POF	0.205	0.370	0.869	0.477
IB	0.339	0.542	0.437	0.885

Note: the diagonal bolded-elements refer to the square root of AVE while the lower and higher parts of the diagonal are bivariate correlations and HTMT, respectively.

4.2 Research Model Quality

Three criteria were employed to assess the quality of the research model: Standardized Root Mean Square Residual (SRMR), R square, and Q square. The value of SRMR was calculated to be 0.058, which met the threshold of 0.08 (Henseler et al., 2009). The adjusted R² value of Innovative behaviour was 0.39, satisfying the minimum value of 10% (Dang et al., 2021) while its Q² value was 0.304, above the required value of zero (Henseler et al., 2009). All of these ensured a good model fit of the research framework.

4.3 Hypothesis Testing

The results in Table III demonstrate that almost all direct relations including H1, H2, H3, H5, and H6 were significantly supported, with a 95% confidence level. Particularly, among three direct antecedents of innovative behaviour, innovative climate (*H3*, $\beta = 0.4$, $t\text{-value} = 6.17$) had the strongest effect. The second and third strongest effects were P-O fit (*H5*, $\beta = 0.25$, $t\text{-value} = 3.54$), and transformational leadership (*H1*, $\beta = 0.19$, $t\text{-value} = 3.10$), respectively. The relationships between transformational leadership and innovative climate (*H2*, $\beta = 0.28$, $t\text{-value} = 4.61$) and between innovative climate and person-organization fit (*H6*, $\beta = 0.34$, $t\text{-value} = 5.99$) were also significantly supported. Notably, the relationship between transformational leadership and P-O fit (*H4*, $\beta = 0.13$, $t\text{-value} = 1.84$) was not supported, with a 95% confidence level. The Cohen’s effect sizes (f^2) were equal to or higher than the minimum threshold of 0.02 (Hair et al., 2021), except for the link from transformational leadership to person-organization fit. Table IV demonstrates the specific indirect path coefficients. Accordingly, there was no evidence to confirm the mediating role of P-O fit for the specific link transformational leadership → person-organization fit → innovative behaviour. The remaining specific indirect paths were significant with a 95% confidence level.

Table 3. Standardized path coefficients

Direct Paths	Std Coefficient	t-value	p-value	Hypotheses	Result
LEA -> IB	0.19	3.10	0.00	H1	Supported
LEA -> INC	0.28	4.61	0.00	H2	Supported
INC -> IB	0.40	6.17	0.00	H3	Supported
LEA -> POF	0.13	1.84	0.07	H4	Not Supported
POF -> IB	0.25	3.54	0.00	H5	Supported
INC -> POF	0.34	5.99	0.00	H6	Supported

Note: LEA: Transformational leadership; INC: Innovative Climate; POF: Person-Organization Fit; IB: Innovative Behaviour

Table 4. Specific indirect path coefficients

Specific indirect Paths	Std Coef.	t-value	p-value
LEA -> INC -> POF -> IB	0.024	2.40	0.02
INC -> POF -> IB	0.085	3.08	0.00
LEA -> INC -> POF	0.096	3.58	0.00
LEA -> POF -> IB	0.031	1.51	0.13
LEA -> INC -> IB	0.111	3.98	0.00

5. DISCUSSION AND IMPLICATIONS

Employee innovative behaviour stands as a critical element ensuring an organization’s competitive advantage in today’s uncertain and complex economic environment (Montani et al., 2020). While the positive impact of transformational leadership on employees' innovative behaviour has been established, some studies have failed to confirm this relationship. This study utilizes LMX to provide a holistic model, including transformational leadership, innovative climate, and P-O fit as antecedents of innovative behaviour. The present study's findings contribute to the understanding of innovative behaviour, particularly in the context of state-owned corporations, which differ from private enterprises. Moreover, besides their direct impact on innovative behaviours, this study also investigates how the work climate and person-organization fit mediate the relationship between transformational leadership and innovative behaviour. Collectively, this paper provides valuable evidence within the setting of state-owned corporations in Vietnam, a developing country.

5.1 Theoretical Contribution

By providing a holistic picture of the factors influencing innovative behaviour within the context of state-owned corporations in Vietnam, the current research fills the gap in the innovation field as pointed out by Ricard et al. (2017), who emphasized the need for deeper exploration of leadership styles’ effects on public innovation. The results also contribute to innovative theory by confirming the mediating role of an innovative climate and P-O fit in the relationship between transformative leadership and innovative behaviour. Particularly, the patterns of the relations are largely consistent with our general expectations. In line with previous studies (Afsar et al., 2014; Liu et al., 2019; Afsar et al., 2018), the findings demonstrate that innovative behaviour was significantly impacted by transformational leadership, innovative climate, and P-O fit. Notably, transformational leadership not only impacts innovative behaviour directly but also through indirect paths. Innovative climate and person-organization fit, recognized as critical drivers of innovative behaviour (Afsar et al. 2018; Karatepe et al. 2020), are not only examined for their direct effects on innovative behaviour but also tested as mediating roles in the relationships between both innovative climate and person-organization fit and innovative behavior. All of the specific indirect paths were significantly supported, with the exception of the link from transformational leadership to P-O fit,

which did not yield confirmation. Notably, while innovative climate significantly impacted P-O fit, no statistical evidence exists to confirm the relationship between transformational leadership and P-O fit.

5.2 Practical Implications

The results provide some practical implications for employees, managers, and organizations. This study has confirmed that transformational leadership, innovative climate, and P-O fit work together to foster innovative behaviour.

First, despite the potential bureaucratic nature of public sector organizations as compared to their private counterparts, which might seem to hinder the practice of transformational leadership (Wright & Pandey, 2010), the results suggest that transformational leaders not only exhibit a direct influence on innovative behaviour but also demonstrate indirect effects through innovative climate and P-O fit. As a result, fostering the growth of transformational leaders becomes pivotal. Organizations, therefore, should pay attention to leadership development initiatives, frequently encompassing aspects of transformational leadership training and counselling. Moreover, leaders should provide individualized support to their subordinates and articulate a vision (Newman et al., 2020). Second, companies that cultivate a robust environment for innovation can foster creative thinking and a willingness to take risks (Oke et al., 2013). This, in turn, motivates companies to leverage external knowledge (Carayannis et al., 2017; Laursen and Salter, 2006). Consequently, companies should establish an atmosphere that fosters innovation by allocating time and resources to employees, promoting open and unrestricted communication within teams, assigning non-standard and challenging tasks, and recognizing and rewarding creativity and innovative concepts (Popa et al., 2017). Third, the compatibility between individuals and their organization, known as P-O fit, also influences their inclination towards innovation. Hence, managers should concentrate on cultivating a strong sense of identity and affiliation among employees and the organization. Studies indicate that when employees possess a strong sense of identity and affiliation with their organization, they tend to exhibit greater willingness to share knowledge with colleagues (Abbasi, 2021) and actively acquire knowledge from their peers, eventually amplifying their propensity for innovative behaviour. This outcome can be achieved through various methods, including training programs and frequent social gatherings organized by the company (Afsar, 2018). Additionally, organizations can enhance P-O fit by recruiting and retaining individuals who closely align themselves with the organization's values and culture (Afsar, 2015). This approach heightens the likelihood of employees identifying with and feeling emotionally connected to their organization, thereby promoting innovative behaviour. Furthermore, managers need to recognize that P-O fit is a dynamic and evolving process (Rothbard, 2001). As employees acquire more experience and knowledge about the organization, their perception of fit may change. Hence, managers must consistently monitor and evaluate the fit between employees and the organization, making the necessary adjustments to maintain a strong alignment. Regular feedback sessions and effective communication channels that enable employees to express their opinions and concerns about the organization can help achieve this goal.

5.3 Limitations and Future Research

This research has certain limitations that pave the way for future investigations. First, the study's scope is limited by its focus on the public sector in developing countries, especially in Vietnam. Cultural and leadership disparities among various countries have been observed (e.g., Ozorovskaja et al., 2007). Consequently, future research conducted on the public sector in other nations (such as Western nations) will probably be valuable for validating these research results and generalizing the application of the proposed framework. This broader perspective could facilitate an in-depth exploration of the interactions and relationships between varied leadership styles, P-O fit, and the innovation climate across the public sector. Second, in this study, self-report measures were utilized in the survey, which may result in common method variance. Nonetheless, all measurement scales employed in this research have been thoroughly validated in the extensive literature on organizational management, which may diminish the probability of bias. Lastly, as far as the moderating factors are concerned, the incorporation of variables such as employees' psychological empowerment or workaholic behaviours holds the potential to enrich our comprehension and yield deeper insights into the operationalization of the proposed framework. This is due to the fact that these variables have the capacity to impact innovative behaviours and potentially serve as moderators in the relationships within this domain.

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