

The Effect of Sustainable Leadership on Knowledge Sharing - Testing Mediation and Moderation Processes

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Abstract

In the context of the knowledge economy and escalating demands for sustainable development, knowledge sharing (KS) has emerged as a critical determinant of the competitiveness and innovation capabilities of small and medium-sized enterprises (SMEs). This study aims to analyze the impact of Sustainable Leadership (SL) on employee knowledge sharing behavior, while concurrently examining the mediating role of Cultural Trust (CT) and the moderating role of Cultural Diversity Level (CDL) within this relationship. Data were collected from SMEs in Vietnam through a survey questionnaire. The Partial Least Squares Structural Equation Modeling (PLS-SEM) technique was employed to test the proposed research model and hypotheses. The findings indicate that SL, operationalized through its components of Cultural Intelligence (Metacognitive, Cognitive, Motivational, and Behavioral CQ), exerts a positive and statistically significant influence on employee KS behavior. Crucially, CT is confirmed to play a mediating role in the SL-KS relationship. Furthermore, the CDL is validated to have a moderating effect, strengthening the positive influence of SL on KS behavior in environments characterized by high cultural diversity. These findings not only contribute to expanding the theoretical foundations of sustainable leadership and knowledge management but also offer significant practical implications for managers seeking to cultivate a knowledge-sharing culture to enhance the competitiveness and sustainable development of Vietnamese SMEs.

Keywords: Sustainable leadership, Knowledge Sharing, Cultural Trust, Cultural Diversity Level, SMEs

1. Introduction

The rapid transition of the global economy toward knowledge-based and sustainable models has made improving the operational efficiency of Vietnamese SMEs an urgent imperative, particularly within a developing economy like Vietnam. As of December 31, 2024, the nation hosted 921,372 enterprises, with SMEs constituting approximately 893,730 (97% of the total). This sector contributes about 50% of the country's GDP, over 30% of total state budget revenue, and generates more than 30 million jobs (60% of the total labor force). SMEs are thus pivotal in fostering economic growth, shifting labor structure, and ensuring social security. However, this sector continues to grapple with challenges related to management capacity, competitiveness, innovation, and sustainable development. The annual report by VCCI indicates that roughly 70% of SMEs reported difficulties in maintaining stable growth due to resource constraints, notably in managerial competence, access to and application of modern management paradigms, and knowledge accessibility.

Sustainable Leadership (SL) is a contemporary leadership paradigm that focuses on managing the enterprise to achieve equilibrium across three dimensions: organizational development, society, and the environment. According to Avery and Bergsteiner (2011), SL is concerned not only with immediate profitability but also with building organizations that possess a long-term capacity for learning, innovation, and adaptation. Achieving this necessitates the integration of social responsibility and environmental stewardship into core business strategies.

Knowledge Sharing (KS) is recognized as a foundational factor for organizations to maintain competitive advantage, foster innovation, and achieve sustainable growth. Nonaka & Takeuchi (1995) define KS as the process of disseminating experience, skills, and understanding among individuals, groups, and managerial levels to enhance organizational competitiveness and efficiency. KS encompasses both internal knowledge sharing (exchange among internal members) and external knowledge sharing (exchange with external agents such as partners, customers, and suppliers). Effective management and encouragement of the KS process are essential for creating added value and a sustainable competitive advantage.

Vietnamese SMEs are typified by limited resources, a shortage of capital, technology, and highly specialized personnel. They often lack the capacity to implement sophisticated, high-tech management models. Their organizational structure tends to be less hierarchical, with employees performing multifaceted roles and managers frequently intervening directly in operational activities. Within this context, knowledge is a core strategic resource determining the enterprise's ability to survive, innovate, and develop sustainably. Given that much of this knowledge is tacit and rooted in individual experience, SMEs are vulnerable to developmental stagnation if the SL role is neglected. For instance, an over-focus on short-term gains, a decline in KS processes, or the loss of intellectual assets upon employee turnover can severely impair innovation capability and result in significant organizational damage.

These factors underscore the critical importance of Sustainable Leadership, which directly and indirectly affects KS activities and demands that managers possess vision, strategy, and methodology. This highlights the urgent necessity of investigating the influence of SL on KS in the Vietnamese SME context.

2. Theoretical Foundation and Hypotheses Formulation

Globally, research on the impact of SL on KS has gained considerable traction, driven by the need for organizational innovation, adaptation, and sustained growth. International studies often demonstrate that SL optimizes resources, while KS facilitates accurate managerial decision-making in volatile business environments. However, most extant research focuses on large-scale organizations, which typically have established management systems and abundant resources. Furthermore, the relationship between SL and KS is often examined from disparate perspectives, with limited attention paid to their interlinkage within SMEs. Yet, a core output of the SL process, beyond providing orientation and vision, is the creation of an environment conducive to knowledge exchange among members.

In Vietnam, research predominantly addresses traditional leadership styles (democratic, autocratic, laissez-faire), and KS studies primarily focus on behavioral and technological factors, seldom considering the pivotal role of leadership in building a learning culture and knowledge-sharing environment. The characteristics of Vietnamese SMEs—limited resources, unstandardized organizational structures, and high dependence on the competence of the leadership team—render the formation of a learning and KS culture a significant challenge.

Synthesizing theoretical literature and analyzing domestic and international practices, the authors posit a relationship between SL and KS in Vietnamese SMEs, leading to the following conceptual model:

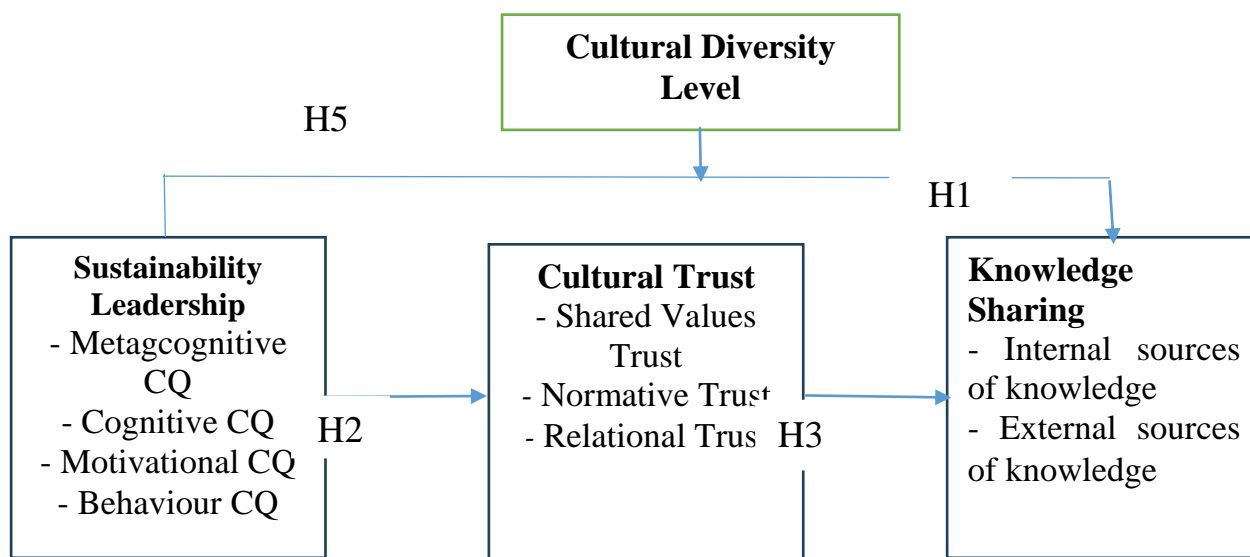


Table: Model of the influence of sustainable leadership style on knowledge sharing in SMEs

2.1. Sustainability Leadership and Knowledge Sharing

H1: The perception of sustainability leadership will be positively related to Knowledge Sharing

SL fosters an organizational environment that promotes trust, cooperation, and cultural commitment. When employees perceive that SL respects and leverages knowledge from diverse sources, they are more inclined to actively share knowledge (both internal and external), thereby enhancing the enterprise's competitiveness, innovation, and sustainable development. SL, through its Cultural Intelligence (CQ) components, not only encourages but also shapes employee KS behavior, establishing a virtuous cycle between leadership and organizational knowledge.

Metacognitive CQ: Reflects the leader's ability to perceive, assess, and adjust knowledge management strategies based on an understanding of internal cultural differences. High Metacognitive CQ leaders create an open environment where employees feel respected and encouraged to share knowledge, promoting both internal and external knowledge sources.

Cognitive CQ: Encompasses knowledge about cultural rules, values, beliefs, and norms, both internal and external. Leaders with Cognitive CQ help employees understand the importance of KS according to appropriate norms and guide them in effectively utilizing and sharing information.

Motivational CQ: Represents the leader's drive and commitment to interact and learn from different cultural contexts. High Motivational CQ leaders inspire active participation in KS, both internally and with external partners, fostering creativity and innovation in knowledge management.

Behavioral CQ: Relates to the leader's ability to adjust behavior, communication, and interaction to suit various cultural contexts. Leaders with strong Behavioral CQ can readily establish flexible KS mechanisms, making KS a cultural habit within the organization

2.2. Sustainability Leadership and Cultural trust

H2: The perception of sustainability leadership will be positively related to Cultural trust

SL positively impacts Cultural Trust (CT) in several ways:

SL involves adjusting behavior to conform to cultural values and rules, enabling fair decision-making, respect for norms, proactive conflict prediction, and the building of trusting relationships.

Commitment to social and environmental values through SL helps employees perceive a unity of values and common goals. Metacognitive and Cognitive CQ assist leaders in bridging perceptual differences, fostering Shared Values Trust.

Compliance with sustainable rules and norms creates a perception of an accountable and consistent enterprise, cultivating Normative Trust.

When leaders demonstrate respect, fairness, and mutual support, employees will trust and cooperate with each other more (Relational Trust)

2.3. Mediating role of Cultural Trust

H3: Cultural trust will be positively related to employee knowledge sharing

CT positively correlates with employee KS because it creates a safe, transparent, and collaborative work environment—core preconditions for voluntary knowledge exchange. When CT is high, employees believe common organizational values are respected, viewing KS as aligned with organizational norms. This mitigates the fear of judgment or loss of personal advantage. CT also enhances psychological safety, assuring employees that sharing information or perspectives will not be misunderstood or exploited. An environment based on respect and trust increases willingness to share even tacit knowledge, which requires a higher level of trust. Furthermore, trust in organizational norms ensures that shared knowledge is used appropriately and that contributions are fairly recognized, encouraging active seeking and transferring of knowledge from both internal and external sources

H4: Cultural Trust mediates the relationship between Sustainable Leadership and Knowledge Sharing

CT acts as a crucial mediator. When SL successfully creates a trusting environment, it increases psychological safety and institutionalizes knowledge exchange as an organizational norm. Employees subsequently become more voluntary and proactive in contributing, receiving, and disseminating knowledge

2.4. Moderating role of Cultural Diversity Level

H5: Cultural Diversity Level moderates the effect of sustainability leadership on Knowledge sharing in a way that the relationship is strengthened when Cultural Diversity Level is higher rather than lower

The Cultural Diversity Level (CDL) is hypothesized to be a positive moderator. In enterprises with low CDL (high similarity in experience and perspectives), KS occurs relatively naturally, requiring less intensive intervention from leaders. Conversely, a high CDL presents a dual challenge: while it offers a richer source of knowledge and superior creative potential, it also introduces significant psychological and social barriers, increasing the risk of misunderstanding, distrust, and conflict. Sustainable Leadership with high Cultural Intelligence is specifically equipped to address these barriers. When leaders can effectively create a "safe zone" and "motivation" to bridge deep differences, individuals are willing to share their diverse knowledge. Therefore, in a highly diverse environment, SL acts as a powerful catalyst, converting potential challenges into advantages, thus strengthening the relationship between SL and KS

3. Research method

3.1. Sample selection and data collection

Research Subjects: The study targets groups directly involved in SL and KS: Employees (direct KS implementers) and Leaders.

Sampling Criteria:

SMEs in Vietnam.

Employees with at least 6 months of tenure to ensure exposure to the leadership style.

Selected from industries where KS is critical (technology, manufacturing, services, etc.).

Sample Size: Given 6 main latent variables (4 SL + 2 KS) and 3 mediating latent variables (CT components), the minimum required sample size is estimated to be approximately 90 participants.

3.2. Measures

The study employs a mixed-methods approach:

Qualitative Research: Used to analyze, synthesize, and evaluate foundational theories (Resource-Based View - RBV, Visionary Leadership Theory) to construct the theoretical framework and research model. The scales for SL and KS were adapted and standardized through specialized literature review, group discussions, and in-depth interviews to ensure their appropriateness for the management and resource characteristics of Vietnamese SMEs.

Quantitative Research: Utilized to test the direct and mediating/moderating hypotheses, and to determine the intensity and direction of the impact of SL on KS. Data will be collected via questionnaires administered to a representative sample and analyzed using statistical software (e.g., SPSS, AMOS, SmartPLS).

Synthesis Method: Applied in the final stage to convert quantitative results into high-value management and policy recommendations. This involves synthesizing findings from both qualitative and quantitative phases, drawing scientific conclusions about the impact mechanism, and verifying the feasibility of strategic orientations with policymakers (VCCI, Ministry of Planning and Investment, SME associations) and successful managers

3.3. Control variables

Knowledge-sharing behavior is influenced not only by sustainability leadership styles but also by control variables. Previous studies have identified five control variables that are considered relevant to the research context and are included in order to eliminate potential confounding effects on knowledge-sharing behavior. These control variables include:

- Gender:

Gender is regarded as a basic demographic factor that may influence employees' communication styles and social behaviors. Prior research suggests that males and females may differ in their tendencies toward information sharing, cooperation, and workplace interactions. Therefore, gender is included in the research model as a control variable to account for its potential influence on knowledge-sharing behavior.

- Age:

Age reflects an employee's career stage and accumulated knowledge. Older employees generally possess a greater amount of tacit knowledge but may be less proactive in sharing it due to established work habits or a tendency to maintain personal advantages. In contrast, younger employees are often more open to

exchanging knowledge. As a result, age may affect the level of knowledge sharing and is controlled for in this study.

- Educational level:

Educational level indicates an individual's capacity to acquire, process, and communicate knowledge. Employees with higher educational attainment tend to be more confident in sharing professional knowledge and are more familiar with learning and collaborative activities. Thus, educational level is considered a factor that may independently influence knowledge-sharing behavior and is included as a control variable.

Organizational tenure:

Organizational tenure reflects the degree of an employee's attachment to the organization as well as their understanding of internal processes, culture, and relational networks. Employees with longer tenure typically possess substantial organizational knowledge, which enhances their ability and opportunities to share knowledge. However, longer tenure may also be associated with more conservative attitudes toward knowledge sharing. Therefore, tenure is controlled for in the analysis.

- Job position:

Job position determines an employee's role, responsibilities, and authority within the organization. Employees in managerial positions usually have greater opportunities to exchange information, coordinate knowledge, and engage in knowledge-sharing activities compared to non-managerial employees. Accordingly, job position may influence the level of knowledge sharing and is controlled for in the research model.

3.4. Data Analytic Strategy

This study employs the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach to analyze the data and test the proposed research hypotheses. The analytical procedure involves descriptive statistical analysis, assessment of the measurement model, and evaluation of the structural model. The mediating effects are examined using the bootstrapping procedure to test the significance of indirect effects, while moderating effects are tested by incorporating interaction terms into the model. In addition, control variables are included to account for the potential influence of individual-related factors on knowledge-sharing behavior

4. Results

4.1. Descriptive statistics

The results present the means, standard deviations, and the correlation matrix of the study variables, including sustainability leadership (comprising four dimensions: Metacognitive CQ, Cognitive CQ, Motivational CQ, and Behavioral CQ), cultural trust (Shared Values Trust, Normative Trust, and Relational Trust), and knowledge sharing (internal knowledge sources and external knowledge sources).

The descriptive statistics indicate that all variables exhibit moderate to relatively high mean values, suggesting that employees generally perceive their organizations as adopting sustainability-oriented leadership behaviors. The initial correlation matrix also provides supporting evidence for the proposed hypotheses of the model, as all dimensions of sustainability leadership show positive and statistically significant correlations with the components of cultural trust and knowledge-sharing behavior.

Furthermore, none of the correlation coefficients exceeds the threshold of 0.85, indicating that multicollinearity is not a concern in the dataset and that subsequent analyses can be conducted without risk.

4.2. Convergent and discriminant validity

To assess the measurement model, Confirmatory Factor Analysis (CFA) was conducted. The results indicate that the model demonstrates a good fit to the data ($\chi^2/df < 3.0$, CFI > 0.90 , TLI > 0.90 , RMSEA < 0.08), confirming that the measurement structure is appropriate.

Convergent validity is established based on three criteria. First, all factor loadings exceed 0.60 and are statistically significant ($p < 0.001$). Second, composite reliability (CR) values range from 0.78 to 0.93, surpassing the recommended threshold of 0.70. Third, the average variance extracted (AVE) values fall between 0.51 and 0.72, exceeding the minimum requirement of 0.50. These results confirm that the observed variables adequately measure their corresponding latent constructs.

Discriminant validity is examined using the Fornell–Larcker criterion and the heterotrait–monotrait (HTMT) ratio. The square root of the AVE for each construct is greater than its correlations with other constructs, indicating satisfactory discriminant validity. In addition, all HTMT values are below 0.85, further confirming that the study constructs are empirically distinct.

Overall, these results support the adequacy of the measurement model and justify its use in subsequent hypothesis-testing analyses.

4.3. Hypothesis testing

Structural equation modeling (SEM) analysis was conducted to test the research hypotheses. The structural model demonstrates a good fit to the data ($\chi^2/df < 3.0$, CFI > 0.90 , TLI > 0.90 , RMSEA < 0.08).

Direct effects (H1, H2)

Sustainability leadership has a positive and statistically significant effect on knowledge sharing ($\beta = \dots$, $p < 0.001$), providing support for H1.

In addition, sustainability leadership exerts a positive and significant effect on cultural trust ($\beta = \dots$, $p < 0.001$), thus supporting H2.

Mediation analysis (H3)

The bootstrapping method with 5,000 resamples was employed to examine the mediating role of cultural trust. The results indicate that the indirect effect of sustainability leadership on knowledge sharing through cultural trust is statistically significant ($\beta = \dots$, 95% confidence interval does not include zero). Therefore, H3 is supported, and cultural trust plays a partial mediating role in the examined relationship.

Moderation analysis (H4)

Cultural diversity level was tested as a moderating variable by creating an interaction term between sustainability leadership and cultural diversity. The results show that the interaction effect is statistically significant ($\beta = \dots$, $p < 0.01$), indicating that cultural diversity level strengthens the relationship between sustainability leadership and knowledge sharing. Slope analysis further reveals that when cultural diversity is high, the positive effect of sustainability leadership on knowledge sharing is significantly stronger. Accordingly, H4 is supported.

5. Discussion

5.1. Theoretical implications

The study on factors influencing the impact of sustainability leadership on knowledge sharing in Vietnamese small and medium-sized enterprises (SMEs) clearly highlights the role and mechanisms through which sustainability leadership affects knowledge sharing in these enterprises, contributing both theoretically and practically in several aspects. The research fills the theoretical gap regarding the relationship between sustainability leadership and knowledge sharing in Vietnamese SMEs. The results indicate that both sustainability leadership and knowledge sharing have a positive impact on business operational efficiency and the enterprise's capacity for innovation.

5.2. Practical implications

To maximize the effectiveness of SL on KS, enterprise managers are advised to focus on:

Cultivating Cultural Trust: Actively building a friendly, comfortable, and psychologically safe working environment to foster trust in shared values, organizational norms, and interpersonal relationships.

Developing Cultural Intelligence in Leaders: Investing in training for leaders to enhance their Metacognitive, Cognitive, Motivational, and Behavioral CQ so they can effectively manage diverse teams and leverage different knowledge sources.

Leveraging Diversity: Recognizing that in highly diverse environments (high CDL), SL becomes a more powerful catalyst for KS. Managers should intentionally use SL principles to manage conflict and turn diverse perspectives into a source of competitive advantage and superior innovation.

5.3. Limitations and directions for future research

Despite the valuable contributions, this study is subject to limitations. The sample was drawn from general SMEs without distinction between private or state-owned structures, which may introduce bias due to differing goals and strategic priorities. Future research should strive to:

Sectoral and Ownership Differentiation: Replicate the study with samples segregated by industry or ownership type to provide more nuanced, context-specific insights.

Longitudinal Design: Employ a longitudinal research design to assess the causal effects and long-term sustainability of the relationships identified.

Inclusion of Outcomes: Integrate organizational performance or innovation metrics as an outcome variable to provide a more comprehensive test of the value generated by the SL-CT-KS nexus

6. Conclusion

This study successfully constructed and validated a theoretical model demonstrating the impact of Sustainable Leadership (SL) on Knowledge Sharing (KS) in Vietnamese SMEs, establishing the significant roles of Cultural Trust (CT) as a partial mediator and Cultural Diversity Level (CDL) as a positive moderator (H1, H2, H3, H4, H5). The findings substantially contribute to the body of knowledge concerning the antecedent factors that encourage and enhance employee participation in knowledge sharing activities, thereby offering a robust framework for improving the competitive advantage and innovation capabilities of small and medium-sized enterprises in Vietnam

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