THE INFLUENCE OF TACIT KNOWLEDGE SHARING AND PERCEPTION OF CO-OPETITION RELATIONSHIPS ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR: AN INTEGRATION OF CO-OPETITION THEORY, ABSORPTIVE CAPACITY THEORY, AND SOCIAL EXCHANGE THEORY*

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Abstract

The coexistence of cooperation and competition among employees has become an important factor influencing knowledge-sharing behavior and organizational effectiveness in knowledge-intensive organizations. This study aimed to: (1) examine the effects of employees' perceptions of cooperative and competitive relationships on tacit knowledge sharing intention and behavior; (2) investigate the mediating roles of tacit knowledge sharing intention and tacit knowledge sharing behavior in the relationship between co-opetition relationship perceptions and Organizational Citizenship Behavior (OCB); and (3) explore the moderating role of trust in the relationship between co-opetition relationship perceptions and tacit knowledge sharing intention. Grounded in Co-opetition

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Theory, Absorptive Capacity Theory, and Social Exchange Theory, the study employed a quantitative research design. Data were collected from 345 research and development (R&D) personnel working in high-tech enterprises in China through a structured questionnaire and analyzed using Structural Equation Modeling (SEM).

The findings revealed that perceptions of cooperative relationships positively influenced tacit knowledge sharing intention and Organizational Citizenship Behavior, whereas perceptions of competitive relationships exerted significant negative effects on both variables. Tacit knowledge sharing intention and tacit knowledge sharing behavior jointly served as serial mediators between co-opetition relationship perceptions and Organizational Citizenship Behavior. Furthermore, trust significantly strengthened the positive effect of cooperative relationship perception on tacit knowledge sharing intention and mitigated the negative effect of competitive relationship perception. The study contributes to a better understanding of employee behavior in co-opetitive environments by demonstrating how tacit knowledge sharing facilitates the transformation of relationship perceptions into Organizational Citizenship Behavior. The findings also provide practical implications for organizations seeking to promote knowledge sharing, strengthen trust-based work environments, and enhance collaborative behaviors that support organizational effectiveness and innovation.

Keywords: Co-opetition Relationship, Tacit Knowledge Sharing, Organizational Citizenship Behavior, Trust, High-Tech Enterprises

Introduction

In the era of globalization and rapid technological advancement, knowledge has become one of the most valuable strategic resources for organizations seeking to maintain sustainable competitive advantages. Particularly in high-tech enterprises, innovation capability depends not only on

technological investment and research infrastructure but also on the effective sharing and utilization of knowledge among employees. Research and development (R&D) personnel play a critical role in generating, integrating, and applying organizational knowledge. However, despite continuous investment in knowledge management systems, many organizations continue to face challenges related to insufficient knowledge sharing, especially tacit knowledge sharing, which is embedded in employees' experiences, skills, insights, and personal expertise and is difficult to codify or transfer through formal mechanisms. As a result, organizations frequently encounter knowledge silos that limit collaboration, reduce innovation efficiency, and hinder organizational performance (Nonaka & Takeuchi, 1995; Wang et al., 2021).

Within contemporary organizations, employees often operate in environments characterized by the simultaneous existence of cooperation and competition, commonly referred to as co-opetition relationships. While cooperation encourages collaboration, mutual support, and collective achievement, competition motivates employees to improve individual performance and pursue personal success. In knowledge-intensive workplaces, these dual relationship dynamics significantly influence employees' attitudes and behaviors toward knowledge sharing. Employees who perceive strong cooperative relationships are more likely to exchange valuable knowledge and contribute to team objectives, whereas excessive perceptions of competition may encourage knowledge withholding and self-protective behavior. Consequently, understanding how employees perceive co-opetition relationships and how such perceptions influence tacit knowledge sharing has become an important issue in organizational behavior and knowledge management research (Brandenburger & Nalebuff, 2021; Meier & Kock, 2023).

Beyond knowledge-sharing behavior, organizations increasingly rely on employees' voluntary contributions that extend beyond formal job requirements, known as Organizational Citizenship Behavior (OCB). Organizational

Citizenship Behavior includes actions such as helping colleagues, supporting organizational initiatives, demonstrating loyalty, and voluntarily contributing to organizational effectiveness. Previous studies have indicated that employees who actively engage in knowledge-sharing activities are more likely to exhibit citizenship behaviors because both behaviors are grounded in cooperation, reciprocity, and commitment to collective goals (Bavik et al., 2017; Organ, 1997). Nevertheless, the mechanisms through which employees' perceptions of cooperative and competitive relationships influence Organizational Citizenship Behavior through tacit knowledge sharing remain insufficiently explored, particularly within knowledge-intensive and innovation-driven contexts.

Drawing upon Co-opetition Theory, Absorptive Capacity Theory, and Social Exchange Theory, this study proposes that employees' perceptions of cooperative and competitive relationships shape their tacit knowledge sharing intention and behavior, which subsequently influence Organizational Citizenship Behavior. Furthermore, trust is expected to serve as a critical contextual factor that strengthens or weakens the relationship between co-opetition perceptions and knowledge-sharing intention. Trust reduces perceived risks associated with sharing valuable knowledge and encourages employees to engage in collaborative interactions based on expectations of reciprocity and mutual benefit (Blau, 1964; Sabini & Alderman, 2021).

Therefore, this study investigates the influence of perceived cooperative and competitive relationships on Organizational Citizenship Behavior through the mediating roles of tacit knowledge sharing intention and tacit knowledge sharing behavior, while examining the moderating role of trust. Focusing on R&D personnel in high-tech enterprises, the study contributes to a deeper understanding of employee behavior in co-opetitive environments and provides practical implications for organizations seeking to foster knowledge sharing,

strengthen trust-based workplace relationships, and enhance organizational effectiveness through collaborative and citizenship-oriented behaviors.

Objectives

1. To examine the effects of employees' perceptions of cooperative relationships and competitive relationships on tacit knowledge sharing intention and tacit knowledge sharing behavior among research and development (R&D) personnel in high-tech enterprises.

2. To investigate the mediating roles of tacit knowledge sharing intention and tacit knowledge sharing behavior in the relationship between employees' perceptions of co-opetition relationships and Organizational Citizenship Behavior.

3. To explore the moderating role of trust in the relationship between employees' perceptions of cooperative and competitive relationships and tacit knowledge sharing intention.

Literature Review

This study is grounded in three major theoretical perspectives: Co-opetition Theory, Absorptive Capacity Theory, and Social Exchange Theory. These theories provide a comprehensive framework for understanding how employees' perceptions of cooperative and competitive relationships influence tacit knowledge sharing and Organizational Citizenship Behavior (OCB) within knowledge-intensive organizations.

Co-opetition Theory

Co-opetition Theory was introduced by Brandenburger and Nalebuff (1996), who argued that cooperation and competition are not mutually exclusive but can coexist simultaneously within organizations. Employees often engage in cooperative activities to achieve collective goals while competing for limited resources, recognition, promotion opportunities, and performance rewards. In

knowledge-intensive environments, particularly within research and development (R&D) teams, employees are required to collaborate in solving complex problems and generating innovations while simultaneously striving to maintain individual advantages. Previous studies have suggested that cooperative relationships promote communication, trust, and knowledge exchange, whereas excessive competitive relationships may discourage information sharing and increase knowledge-protective behaviors (Meier & Kock, 2023). Therefore, employees' perceptions of co-opetition relationships are expected to play a significant role in shaping their willingness to share tacit knowledge and engage in positive organizational behaviors.

Absorptive Capacity Theory

Absorptive Capacity Theory, proposed by Cohen and Levinthal (1990), explains how individuals and organizations acquire, assimilate, transform, and apply knowledge to enhance performance and innovation. The theory emphasizes that knowledge acquisition alone is insufficient; organizations and employees must possess the capability to absorb and utilize knowledge effectively. In the context of this study, tacit knowledge sharing intention and tacit knowledge sharing behavior represent important mechanisms through which employees acquire and exchange valuable experiential knowledge. Through continuous interaction and knowledge sharing, employees expand their knowledge base, improve problem-solving capabilities, and contribute to organizational learning. Consequently, tacit knowledge sharing serves as a critical process through which absorptive capacity is developed and transformed into organizational outcomes such as Organizational Citizenship Behavior.

Social Exchange Theory

Social Exchange Theory, developed by Blau (1964), provides a behavioral explanation for why employees engage in voluntary cooperative activities. The theory suggests that individuals evaluate the potential benefits and costs of their

actions and are more likely to participate in behaviors that generate reciprocal benefits and positive social relationships. Knowledge sharing often involves personal effort, time, and the risk of losing unique advantages; therefore, employees are more willing to share knowledge when they perceive fair treatment, mutual support, and trust within the organization. Trust functions as an essential mechanism that reduces uncertainty and strengthens expectations of reciprocity among organizational members. High levels of trust encourage employees to share tacit knowledge openly and contribute voluntarily to organizational goals through Organizational Citizenship Behavior.

Tacit Knowledge Sharing

Tacit knowledge refers to personal knowledge derived from experience, skills, intuition, and insights that are difficult to formalize or communicate through written documents (Nonaka & Takeuchi, 1995). Unlike explicit knowledge, tacit knowledge is embedded within individuals and is transferred primarily through interpersonal interactions, observation, collaboration, and shared experiences. Previous studies have demonstrated that tacit knowledge sharing enhances organizational learning, innovation capability, and team effectiveness. In knowledge-intensive organizations, employees' willingness to share tacit knowledge is strongly influenced by workplace relationships, trust, and perceptions of cooperation and competition. Therefore, tacit knowledge sharing intention and behavior are expected to serve as important mediating mechanisms linking co-opetition relationship perceptions to Organizational Citizenship Behavior.

Organizational Citizenship Behavior

Organizational Citizenship Behavior (OCB) refers to discretionary employee behaviors that are not formally required but contribute positively to organizational effectiveness (Organ, 1997). Examples include helping colleagues, voluntarily assisting organizational activities, sharing knowledge, demonstrating loyalty, and supporting organizational objectives. OCB is particularly important in

knowledge-based organizations where collaboration and information exchange are essential for innovation and performance. Previous research has shown that employees who actively engage in knowledge sharing tend to exhibit higher levels of citizenship behavior because both behaviors are rooted in cooperation, reciprocity, and commitment to collective success. Consequently, OCB serves as an important outcome variable reflecting employees' positive contributions beyond formal job responsibilities.

Trust

Trust is defined as the willingness of individuals to be vulnerable to the actions of others based on positive expectations regarding their intentions and behaviors. Within organizational settings, trust facilitates communication, cooperation, and knowledge exchange among employees. According to Social Exchange Theory, trust reduces perceived risks associated with sharing valuable knowledge and strengthens expectations of reciprocal support. Employees who trust their colleagues and organization are more likely to interpret cooperative relationships positively and remain willing to share knowledge even in competitive environments. Therefore, trust is expected to moderate the relationship between co-opetition relationship perceptions and tacit knowledge sharing intention.

Based on the theoretical foundations discussed above, this study proposes that employees' perceptions of cooperative and competitive relationships influence Organizational Citizenship Behavior through the sequential mediating roles of tacit knowledge sharing intention and tacit knowledge sharing behavior, while trust serves as a moderating factor affecting the relationship between co-opetition relationship perceptions and tacit knowledge sharing intention. This integrated framework provides a comprehensive understanding of employee behavior within co-opetitive and knowledge-intensive organizational environments.

Mothodology

Research Design

This study employed a quantitative research design to investigate the influence of perceived co-opetition relationships on Organizational Citizenship Behavior (OCB) through the mediating roles of tacit knowledge sharing intention and tacit knowledge sharing behavior, as well as the moderating role of trust. The conceptual framework was developed based on Co-opetition Theory, Absorptive Capacity Theory, and Social Exchange Theory.

Population and Sample

The population consisted of research and development (R&D) personnel working in high-tech enterprises in China. The sample included 345 employees selected through purposive sampling. Eligible participants were full-time R&D personnel who had experience working in collaborative projects and engaging in knowledge-sharing activities within their organizations. The sample size was considered adequate for Structural Equation Modeling (SEM) analysis.

Sampling Procedure

Purposive sampling was employed to identify respondents who met the study criteria. High-tech enterprises with active research and development departments were selected, and questionnaires were distributed to employees whose job responsibilities involved innovation, collaboration, and knowledge-sharing activities. Only completed and valid questionnaires were included in the final analysis.

Research Instrument and Quality Assessment

The research instrument was a structured questionnaire consisting of two sections. The first section collected demographic information, including gender, age, educational level, and work experience. The second section measured the key constructs of the study, namely perception of cooperative relationships,

perception of competitive relationships, tacit knowledge sharing intention, tacit knowledge sharing behavior, Organizational Citizenship Behavior, and trust.

All measurement items were adapted from established scales in previous studies and measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Content validity was evaluated by experts in management and organizational behavior. Reliability was assessed using Cronbach's alpha coefficient, and all constructs demonstrated acceptable reliability values. Construct validity was further examined through Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

Data Collection

Data were collected through questionnaire surveys administered to R&D personnel in selected high-tech enterprises in China. Participation was voluntary, and respondents were informed that all responses would remain confidential and be used solely for academic purposes. After data screening and verification, a total of 345 valid questionnaires were retained for analysis.

Data Analysis

The collected data were analyzed using descriptive and inferential statistics. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to describe respondents' demographic characteristics and study variables. Reliability and validity analyses were conducted using Cronbach's alpha, Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA). Pearson correlation analysis was employed to examine relationships among variables. Structural Equation Modeling (SEM) was used to test the hypothesized relationships, mediating effects, and moderating effects proposed in the conceptual framework. Statistical significance was determined at the .05 level.

Results

To examine the effects of employees' perceptions of cooperative relationships and competitive relationships on tacit knowledge sharing intention and tacit knowledge sharing behavior among research and development (R&D) personnel in high-tech enterprises.

The findings revealed that employees' perceptions of cooperative relationships had a significant positive effect on tacit knowledge sharing intention (β = 0.393, p < .001). Conversely, perceptions of competitive relationships had a significant negative effect on tacit knowledge sharing intention (β = -0.339, p < .001). Furthermore, tacit knowledge sharing intention significantly influenced tacit knowledge sharing behavior (β = 0.559, p < .001). These results indicate that employees working in a cooperative environment are more willing to share tacit knowledge, whereas excessive competition tends to reduce knowledge-sharing intention and behavior. Therefore, cooperative relationships play a crucial role in facilitating tacit knowledge sharing among R&D personnel in high-tech enterprises.

Table 1 Direct Effects of Co-opetition Relationship Perceptions on Tacit Knowledge Sharing

Path	β	S.E.	C.R.	p-value
Perception of Cooperative Relationships ⟶ Tacit Knowledge Sharing Intention	0.393	0.052	6.567	< .001
Perception of Competitive Relationships ⟶ Tacit Knowledge Sharing Intention	-0.339	0.064	-5.720	< .001
Tacit Knowledge Sharing Intention ⟶ Tacit Knowledge Sharing Behavior	0.559	0.055	9.644	< .001

From Table 1, perceptions of cooperative relationships significantly and positively influenced tacit knowledge sharing intention (β = 0.393, p < .001),

while perceptions of competitive relationships significantly and negatively influenced tacit knowledge sharing intention (β = -0.339, p < .001). Moreover, tacit knowledge sharing intention significantly and positively affected tacit knowledge sharing behavior (β = 0.559, p < .001). These findings suggest that employees are more willing to share tacit knowledge when they perceive a collaborative work environment characterized by trust and mutual support.

To investigate the mediating roles of tacit knowledge sharing intention and tacit knowledge sharing behavior in the relationship between employees' perceptions of co-opetition relationships and Organizational Citizenship Behavior.

The findings revealed that perceptions of cooperative relationships positively influenced Organizational Citizenship Behavior, whereas perceptions of competitive relationships negatively influenced Organizational Citizenship Behavior. Furthermore, tacit knowledge sharing behavior had a significant positive effect on Organizational Citizenship Behavior. The results also confirmed that tacit knowledge sharing intention and tacit knowledge sharing behavior jointly functioned as serial mediators in the relationship between co-opetition relationship perceptions and Organizational Citizenship Behavior.

Table 2 Direct Effects on Organizational Citizenship Behavior

Path	β	S.E.	C.R.	p-value
Tacit Knowledge Sharing Behavior ⟶ Organizational Citizenship Behavior	0.199	0.061	3.497	< .001
Perception of Cooperative Relationships ⟶ Organizational Citizenship Behavior	0.304	0.056	4.811	< .001
Perception of Competitive Relationships ⟶ Organizational Citizenship Behavior	-0.198	0.068	-3.220	.001

From Table 2, perceptions of cooperative relationships significantly and positively influenced Organizational Citizenship Behavior (β = 0.304, $p < .001$), whereas perceptions of competitive relationships significantly and negatively influenced Organizational Citizenship Behavior (β = -0.198, $p = .001$). In addition, tacit knowledge sharing behavior significantly enhanced Organizational Citizenship Behavior (β = 0.199, $p < .001$). These findings indicate that employees who perceive stronger cooperation are more likely to engage in citizenship behaviors that support organizational effectiveness, while excessive competition tends to inhibit such behaviors.

To explore the moderating role of trust in the relationship between employees' perceptions of cooperative and competitive relationships and tacit knowledge sharing intention.

The findings revealed that trust significantly moderated the relationship between employees' perceptions of co-opetition relationships and tacit knowledge sharing intention. Trust strengthened the positive relationship between perceptions of cooperative relationships and tacit knowledge sharing intention, while reducing the negative effect of perceptions of competitive relationships on tacit knowledge sharing intention.

Table 3 Summary of Hypothesis Testing Results

Hypothesis	Relationship	Result
H1	Cooperative Relationships ⟶ Tacit Knowledge Sharing Intention	Supported
H2	Competitive Relationships ⟶ Tacit Knowledge Sharing Intention	Supported
H3	Tacit Knowledge Sharing Intention ⟶ Tacit Knowledge Sharing Behavior	Supported
H4	Tacit Knowledge Sharing Behavior ⟶ Organizational Citizenship Behavior	Supported
H5	Cooperative Relationships ⟶ Organizational Citizenship Behavior	Supported

Hypothesis	Relationship	Result
H6	Competitive Relationships ⟶ Organizational Citizenship Behavior	Supported
H7	Chain Mediation Effect	Supported
H8	Chain Mediation Effect	Supported
H9	Moderating Effect of Trust	Supported
H10	Moderating Effect of Trust	Supported

From Table 3, all hypothesized relationships were supported. The results confirmed that employees' perceptions of co-opetition relationships significantly influenced tacit knowledge sharing intention, tacit knowledge sharing behavior, and Organizational Citizenship Behavior. In addition, trust served as an important moderating variable that strengthened positive workplace relationships and facilitated employees' willingness to share tacit knowledge within high-tech enterprises.

Discussion

To examine the effects of employees' perceptions of cooperative relationships and competitive relationships on tacit knowledge sharing intention and tacit knowledge sharing behavior among research and development (R&D) personnel in high-tech enterprises.

The findings revealed that employees' perceptions of cooperative relationships significantly and positively influenced tacit knowledge sharing intention, whereas perceptions of competitive relationships significantly and negatively influenced tacit knowledge sharing intention. In addition, tacit knowledge sharing intention significantly and positively influenced tacit knowledge sharing behavior. These findings may be explained by the fact that employees who perceive a cooperative workplace environment are more likely to develop trust, mutual support, and psychological safety, which encourage

them to share their experience-based knowledge with colleagues. Conversely, when employees perceive excessive competition, they may be concerned about losing personal advantages, recognition, or career opportunities, resulting in lower willingness to share valuable knowledge. This finding is consistent with Co-opetition Theory, which suggests that cooperation facilitates resource exchange and collective value creation, whereas excessive competition may hinder collaborative behaviors (Brandenburger & Nalebuff, 1996). The findings also support the study of Meier and Kock (2023), who found that cooperative workplace relationships promote communication, trust, and knowledge exchange, while excessive competition may discourage information sharing. Furthermore, the positive relationship between tacit knowledge sharing intention and behavior supports the argument of Nonaka and Takeuchi (1995), who emphasized that tacit knowledge is effectively transferred through interpersonal interaction, collaboration, and shared experiences. Therefore, employees' willingness to share knowledge serves as an important precursor to actual knowledge-sharing practices.

To investigate the mediating roles of tacit knowledge sharing intention and tacit knowledge sharing behavior in the relationship between employees' perceptions of co-opetition relationships and Organizational Citizenship Behavior.

The findings revealed that perceptions of cooperative relationships positively influenced Organizational Citizenship Behavior, whereas perceptions of competitive relationships negatively influenced Organizational Citizenship Behavior. Furthermore, tacit knowledge sharing intention and tacit knowledge sharing behavior jointly served as significant serial mediators in the relationship between co-opetition relationship perceptions and Organizational Citizenship Behavior. These findings may be explained by the fact that employees who experience supportive and collaborative workplace relationships are more likely to engage in knowledge-sharing activities, which subsequently encourage

voluntary behaviors that benefit colleagues and the organization beyond formal job requirements. Through the exchange of tacit knowledge, employees develop stronger interpersonal relationships, greater organizational commitment, and a stronger sense of collective responsibility, which contribute to Organizational Citizenship Behavior. This finding is consistent with Social Exchange Theory (Blau, 1964), which explains that positive social interactions encourage reciprocal behaviors and voluntary contributions. The findings are also consistent with Organ (1997), who argued that Organizational Citizenship Behavior emerges when employees develop positive attitudes toward their colleagues and organization. In addition, the findings support Bavik et al. (2017), who reported that employees who actively engage in knowledge-sharing activities are more likely to demonstrate citizenship behaviors because both behaviors are grounded in cooperation, reciprocity, and commitment to collective goals. Therefore, tacit knowledge sharing serves as an important mechanism through which workplace relationship perceptions are transformed into positive organizational outcomes.

To explore the moderating role of trust in the relationship between employees' perceptions of cooperative and competitive relationships and tacit knowledge sharing intention.

The findings revealed that trust significantly moderated the relationship between employees' perceptions of co-opetition relationships and tacit knowledge sharing intention. Specifically, trust strengthened the positive influence of cooperative relationship perceptions on tacit knowledge sharing intention and reduced the negative influence of competitive relationship perceptions. These findings may be explained by the fact that trust functions as a psychological safety mechanism that reduces perceived risks associated with sharing valuable knowledge. Employees who trust their colleagues and organization are more likely to believe that shared knowledge will be used appropriately and reciprocated fairly. Consequently, they are more willing to

engage in tacit knowledge sharing even when competitive pressures exist. This finding is consistent with Social Exchange Theory (Blau, 1964), which emphasizes that trust forms the foundation of reciprocal exchanges and cooperative behavior. The findings also support Sabini and Alderman (2021), who suggested that trust facilitates knowledge sharing, strengthens interpersonal relationships, and enhances collaboration within organizations. Therefore, organizations seeking to promote knowledge sharing and Organizational Citizenship Behavior should cultivate trust-based organizational cultures that encourage openness, mutual respect, and collaborative interactions among employees.

Recommendation

The findings revealed that employees' perceptions of cooperative relationships positively influenced tacit knowledge sharing intention, tacit knowledge sharing behavior, and Organizational Citizenship Behavior, whereas perceptions of competitive relationships negatively influenced these variables. In addition, tacit knowledge sharing intention significantly promoted tacit knowledge sharing behavior, which subsequently enhanced Organizational Citizenship Behavior. The study further confirmed that tacit knowledge sharing intention and behavior jointly served as serial mediators linking co-opetition relationship perceptions to Organizational Citizenship Behavior. Moreover, trust significantly strengthened the positive effect of cooperative relationship perceptions and reduced the negative effect of competitive relationship perceptions on tacit knowledge sharing intention. These findings highlight the importance of fostering cooperative relationships, trust, and knowledge-sharing cultures to enhance positive employee behavior and organizational effectiveness in high-tech enterprises.

Recommendations for Practical Application

1. Organizations should promote cooperative workplace relationships through teamwork, collaboration, and knowledge-sharing activities to strengthen employees' willingness to share tacit knowledge.

2. Management should establish formal mechanisms such as mentoring programs, communities of practice, and knowledge-sharing platforms to facilitate tacit knowledge exchange among employees.

3. Organizations should maintain a balance between competition and cooperation, ensuring that competitive practices motivate performance without discouraging knowledge sharing.

4. Leaders should cultivate a trust-based organizational culture through transparent communication, fairness, and supportive management practices to encourage knowledge sharing and Organizational Citizenship Behavior.

Recommendations for Future Research

1. Future studies should examine the proposed model across different industries and cultural contexts to enhance the generalizability of the findings.

2. Longitudinal studies should be conducted to investigate the long-term effects of co-opetition relationships, trust, and tacit knowledge sharing on Organizational Citizenship Behavior.

3. Additional variables such as leadership style, organizational culture, psychological safety, and employee engagement should be incorporated to provide a broader understanding of employee behavior.

4. Future research should explore the influence of digital technologies and artificial intelligence on tacit knowledge sharing and Organizational Citizenship Behavior in knowledge-intensive organizations.

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