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Enhancing the Competitive Performance of Catering Enterprises through Knowledge Sharing and Open Innovation

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Abstract

Purpose: This study examined the factors influencing knowledge sharing, open innovation, and competitive performance in restaurant firms in Zhanjiang, China. The conceptual framework explored cause-and-effect relationships among Commitment (CO), Shared Language (SL), Shared Vision (SV), Enjoyment in Helping Others (EHO), Knowledge Sharing (KS), Knowledge Hiding (KH), Open Innovation (OI), and Competitive Performance (CP). **Research design, data and methodology:** A quantitative technique with a sample of 511 practitioners from catering enterprises was employed. Non-probability sampling, comprising judgmental, quota, and convenience methods, was used to select five firms and collect data both online and offline. While effective for targeted data collection, these methods may have limited the generalizability of the findings. Structural equation modeling (SEM) and confirmatory factor analysis (CFA) were used to assess model fit, reliability, and construct validity. **Results:** The results revealed that CO, SL, and SV significantly enhanced KS, while EHO and KH directly impacted OI. Furthermore, OI positively influenced CP. All seven hypotheses were statistically supported. **Conclusions:** The findings indicated that fostering organizational commitment, a shared language, and a unified vision promoted effective knowledge sharing, which, along with prosocial behavior and reduced knowledge hiding, drove open innovation. Open innovation, in turn, significantly boosted competitive performance. Managers were encouraged to invest in internal knowledge-sharing mechanisms to strengthen innovation and improve business competitiveness.

Keywords: Knowledge Sharing, Open Innovation, Competitive Performance, Catering Enterprise

JEL Classification Code: D20, D80, L20, L83

1. Introduction

Following the COVID-19 pandemic, the catering industry in China has undergone significant restructuring and economic adjustment. Improving business and competitive performance has become critical for the sector's long-term recovery. Despite growing interest in innovation strategies, limited empirical research has explored how internal organizational factors influence innovation outcomes in the catering sector, a service-intensive and highly competitive industry. This study aims to fill this gap by examining the factors that drive knowledge sharing and innovation in catering enterprises in Zhanjiang, China, with the goal of offering practical strategies to strengthen operational resilience and theoretical insights into knowledge-based innovation mechanisms.

Employees with strong emotional commitment are less likely to leave their organizations, making commitment a key component of internal workplace relationships (Kmieciak, 2021). This commitment also fosters innovation, as emotionally invested employees tend to engage in creative problem-solving and contribute to organizational development (Macky & Boxall, 2008). Additionally, a sense of vitality among employees can improve individual

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innovation, promoting the free flow of knowledge (De Dreu et al., 2008). Yet, it remains underexplored how emotional commitment specifically affects knowledge sharing and innovation in the catering business context, where service quality and team cohesion are paramount.

However, knowledge sharing is not always seamless. Differences in professional backgrounds may lead to varied interpretations of the same content due to the absence of a common language (Haldin-Herrgard, 2000). A shared language, developed through close collaboration and a supportive culture, fosters trust and facilitates the exchange of tacit knowledge. Moreover, when employees possess the confidence and self-efficacy to apply new knowledge, they are more likely to engage in productive learning experiences (Nakano et al., 2013).

A clearly defined shared vision is another important enabler of knowledge sharing. It aligns employees with collective goals, enhances coordination, and creates a collaborative environment that supports knowledge flow (Tsai & Ghoshal, 1998). Organizations with a strong shared vision report higher knowledge exchange, as employees perceive mutual value in sharing expertise (Chiu et al., 2006; Yli-Renko et al., 2001). Knowledge transfer is most effective in bidirectional relationships where individuals actively exchange and apply knowledge (Van Wijk et al., 2008).

While structural mechanisms are important, intrinsic motivation is a powerful driver of knowledge-sharing behavior. Employees who enjoy helping others are naturally inclined to share knowledge, viewing it as rewarding (Lin, 2007; Wasko & Faraj, 2000). This intrinsic enjoyment encourages open knowledge exchange and supports organizational innovation (Kankanhalli et al., 2005). Additionally, organizational culture, shaped by leadership, knowledge type, and opportunity, affects how knowledge circulates (Ipe, 2003). In service industries like catering, where teamwork is essential and tacit knowledge is common, motivation becomes a central force in enabling innovation.

Employee motivation is also critical to open innovation. Motivated individuals are more willing to explore new ideas and share insights beyond organizational boundaries (de Almeida et al., 2016; Peris-Ortiz et al., 2019). Intrinsic motivation fosters helping behaviors and knowledge sharing while reducing knowledge hiding (Aleksić et al., 2021; Osterloh & Frey, 2000). However, few studies have examined how enjoyment in helping others or knowledge hiding behavior influence innovation in the catering sector, a field where customer-facing roles depend heavily on informal knowledge exchanges.

Open innovation, defined as the inflow and outflow of knowledge across organizational boundaries, has become a central strategy for maintaining competitiveness. By collaborating with external stakeholders, companies can access diverse knowledge sources and generate novel solutions (Hagedoorn & Zobel, 2015). Despite its relevance, the application of open innovation in the catering industry remains under-researched, particularly in how it is affected by internal relational dynamics.

Competitive performance hinges on a company's ability to leverage knowledge and innovation effectively (Porter, 1990). Internal capabilities and access to both internal and external knowledge drive competitive advantage (Ambastha & Momaya, 2004). Innovation, whether radical or incremental, remains essential for sustaining competitive performance (Tellis et al., 2009). Key elements such as proactivity, innovation, risk-taking, and competitive aggressiveness contribute to a firm's long-term success (Lumpkin & Dess, 1996). However, there is a lack of empirical studies that map the direct and indirect pathways from knowledge sharing to open innovation and competitive performance in the context of catering businesses.

Therefore, this study seeks to answer the following research question: How do commitment (CO), shared language (SL), shared vision (SV), enjoyment in helping others (EHO), and knowledge hiding (KH) influence knowledge sharing (KS), and how do these factors, in turn, affect open innovation (OI) and competitive performance (CP) in catering enterprises?

This study addresses both theoretical gaps, by integrating social capital and motivational perspectives into knowledge-sharing models, and practical gaps by offering evidence-based insights to improve innovation performance in the catering industry.

2. Literature Review

2.1 Factors affecting Knowledge Sharing, Open Innovation and Competitive performance

Commitment plays a crucial role in fostering innovation and strengthening organizational ties. Defined as a positive emotional experience, it enhances employees' motivation to seek knowledge and engage in innovative behaviors (Battistelli et al., 2013). As a multidimensional concept, commitment reflects the extent to which individuals identify with an organization and actively participate in its affairs (Meyer & Allen, 1987). Emotional commitment, in particular, has been recognized as the most influential factor, increasing engagement, motivation, and innovative behavior (Rockstuhl et al., 2020). Organizations that cultivate a positive atmosphere, fostering emotional commitment, create an environment conducive to innovation and employee well-being (Muñoz et al., 2022).

A shared language within an organization is fundamental to effective communication, minimizing misunderstandings,

and strengthening knowledge transfer (Chang & Chuang, 2011). This common linguistic foundation emerges from close collaboration, a strong cooperative culture, and a supportive social atmosphere, ultimately shaping a cohesive work environment (Nakano et al., 2013). More than just a linguistic tool, a shared language helps align employees with organizational goals, fostering a shared vision that unifies aspirations and promotes collective objectives (Senge, 2006). As a cognitive resource, a shared vision enhances organizational achievement by enabling a deeper understanding of common goals and streamlining knowledge transfer (Wang et al., 2015).

Beyond structural mechanisms, intrinsic motivation plays a critical role in knowledge sharing. Employees who genuinely enjoy helping others are more likely to share knowledge freely, driven by personal fulfillment rather than expectation of direct returns (Aleksić et al., 2021). Rooted in altruism, this motivation fosters collaboration and innovation as individuals willingly assist colleagues in solving organizational challenges (Lin, 2007; Organ, 1988). Knowledge sharing, in turn, is essential for sustaining innovation and maintaining competitive advantage, as it facilitates expertise transfer, enabling firms to adapt and grow (Easa, 2012; Wang & Noe, 2010). However, this process can be obstructed by knowledge hiding—deliberate withholding of information—which often arises from self-interest, competition, or perceived threats (Kmieciak, 2021;). Such behavior creates barriers to innovation and hinders organizational progress (Labafi, 2017).

Organizations that embrace open innovation, leveraging both internal and external knowledge, are better positioned to drive technological advancements and business growth (Teece, 2007). Through collaboration with external stakeholders such as suppliers, customers, and research institutions, companies can accelerate innovation, refine processes, and expand market opportunities (Chesbrough, 2006; Lichtenthaler et al., 2011). Open innovation enables firms to remain adaptable in dynamic environments, enhancing their competitive performance by integrating diverse knowledge sources and optimizing strategic decision-making (Chesbrough & Bogers, 2014).

Competitive performance, at the heart of business strategy, depends on an organization's ability to innovate and sustain market leadership (Porter, 1990). Firms that successfully leverage knowledge, both within and beyond organizational boundaries, outperform competitors by implementing proactive, risk-taking strategies (Lumpkin & Dess, 1996). By fostering a culture of knowledge sharing, reducing barriers to collaboration, and integrating open innovation practices, businesses enhance their ability to navigate changing market conditions, ultimately securing long-term success (Drnevich & Kriauciunas, 2011).

2.2 Research Hypothesis and Relationship between Variables

2.2.1 Relation between Commitment and Knowledge Sharing

Commitment plays a crucial role in fostering knowledge sharing within organizations. High levels of commitment establish trust, strengthening communication and facilitating the exchange and interpretation of knowledge between business partners (Yam & Chan, 2015). Employees with strong organizational commitment are more likely to engage in knowledge-sharing activities, as their sense of loyalty and emotional attachment to the organization fosters a collaborative work culture (Kmieciak, 2021). Furthermore, organizational commitment positively influences employees' learning orientation, which in turn enhances their willingness to share knowledge (Ro et al., 2021). Research also indicates that individuals with a higher degree of commitment—particularly those who actively engage in decision-making—have a stronger impact on knowledge-sharing behaviors than those who remain passive in their roles (Li et al., 2022). Together, these findings suggest that commitment not only enhances interpersonal trust but also creates a sense of shared purpose, making it a foundational element in promoting knowledge sharing within organizations. Therefore, the following hypothesis is proposed for the study:

H1: Commitment has a significant impact on knowledge sharing.

2.2.2 Relation between Shared Language and Knowledge Sharing

Effective knowledge sharing is strongly influenced by shared language, which facilitates communication and fosters mutual understanding within organizations. A well-developed shared language, encompassing both natural and technical terms, enables individuals to exchange knowledge more effectively, as those who speak the same language as the source are more likely to adopt new information successfully (Cabrera & Cabrera, 2005). Beyond words, shared language also includes professional terminology, abbreviations, and subtle nuances of workplace communication, reinforcing its role as a form of social capital that enhances knowledge exchange (Omotayo & Babalola, 2016). Good communication serves as a foundation for developing shared language and knowledge, further strengthening its role as a key enabler of knowledge sharing (Nakano et al., 2013).

Similarly, a shared vision aligns individuals toward common goals, fostering an environment where knowledge flows more freely. As a unifying force, shared vision enhances collaboration and mutual purpose, making it a strong predictor of knowledge sharing across different

organizational settings (Li et al., 2022). These studies collectively point to shared language as a critical relational mechanism that reduces misunderstandings, increases cognitive alignment among employees, and thus directly supports knowledge-sharing practices. Therefore, the following hypothesis is proposed for the study:

H2: Shared language has a significant impact on knowledge sharing.

2.2.3 Relation between Shared Vision and Knowledge Sharing

A shared vision plays a crucial role in fostering knowledge sharing by aligning individuals toward common goals and strengthening collaboration. When employees perceive that they share common aspirations and interests with their colleagues, they are more willing to engage in meaningful knowledge exchange, listen to different perspectives, and absorb new information (Mohammed & Kamalanabhan, 2019). Research confirms that a shared vision significantly enhances knowledge-sharing behavior, serving as a strong predictor of knowledge exchange across various organizational contexts (Chang et al., 2012; Chiu et al., 2006; Li et al., 2022). Even in geographically dispersed partnerships, shared vision remains an essential factor influencing knowledge sharing, demonstrating its ability to transcend physical boundaries and unify individuals in a common purpose (Chumnangoon et al., 2023).

Beyond guiding collaboration, a shared vision also fosters positive workplace dynamics. It strengthens trust and social interaction, reinforcing an environment where employees feel encouraged to share and seek knowledge freely (Lin & Huang, 2023). The frequent exchange of knowledge, in turn, has been linked to improved creative performance and innovation, further underscoring the importance of shared vision in driving both individual and organizational growth (Mohammed & Kamalanabhan, 2019). Taken together, these findings underscore shared vision as a motivational and structural force that unites employees around a collective identity, thereby promoting sustained knowledge-sharing behaviors. Therefore, the following hypothesis is proposed for the study:

H3: Shared vision has a significant impact on knowledge sharing.

2.2.4 Relation between Enjoyment in Helping Others and Open Innovation

Enjoyment in helping others is a key intrinsic motivator that fosters knowledge sharing and innovation. Individuals who find satisfaction in assisting others are more likely to engage in knowledge-sharing activities without expecting reciprocity, driven by psychological benefits derived from altruism (Lin, 2007). Altruistic individuals willingly impart their knowledge, and their desire to help others reinforces a culture of open knowledge exchange. Research confirms that enjoyment in helping others has a significant positive effect on knowledge-sharing behaviors, as individuals with a strong inclination to assist others actively contribute to organizational learning and collaboration (Aleksić et al., 2021; Phung et al., 2019).

This intrinsic motivation extends beyond knowledge sharing to influence open innovation. When individuals derive personal fulfillment from sharing their expertise, they become more engaged in collective problem-solving and creative processes (Shin, 2023). In knowledge-driven environments, the willingness to share information fosters individual innovation, reinforcing the link between intrinsic motivation, knowledge sharing, and organizational growth (Phung et al., 2019). Therefore, enjoyment in helping others acts as a psychological enabler of innovation by enhancing voluntary knowledge-sharing behavior and increasing employees' engagement in creative and exploratory tasks. The following hypothesis is proposed for the study:

H4: Enjoyment in helping others has a significant impact on open innovation.

2.2.5 Relation between Knowledge Sharing and Open Innovation

Knowledge sharing is a key driver of open innovation, fostering creativity and competitive advantage, particularly in high-tech industries (Aleksić et al., 2021). By stimulating innovative thinking, it enables firms to leverage new insights and adapt to changing markets. The willingness of employees—especially boundary managers—to share knowledge significantly enhances new product development and performance, regardless of market volatility (Keszey, 2018).

Beyond direct innovation impact, knowledge sharing optimizes knowledge management, improving innovation success rates (Ben Arfi et al., 2019). It also facilitates external collaboration, helping businesses meet customer needs and maintain a competitive edge. Leading users who actively share expertise contribute to innovation success by enhancing collective learning (Marzouki & Belkahla, 2019). Organizations that encourage knowledge-sharing behaviors generate more novel ideas and sustain continuous innovation (Al-Ahmad Chaar & Easa, 2021).

Internally, seamless knowledge flow is crucial for open innovation. Inefficiencies in knowledge sharing can hinder progress, while active employee participation strengthens innovation outcomes (Pundziene et al., 2022). Thus, knowledge sharing not only enables innovation through idea generation and integration but also creates the collaborative foundation necessary for open innovation to thrive across organizational boundaries. The following hypothesis is proposed for the study:

H5: Knowledge sharing has a significant impact on open innovation.

2.2.6 Relation between Knowledge Hiding and Open Innovation

Knowledge hiding poses a significant barrier to open innovation, as it is often a strategic behavior aimed at securing competitive advantage and maximizing self-interest. However, this withholding of knowledge hinders collaboration and disrupts the knowledge flow essential for innovation. Research confirms that increased knowledge hiding among entrepreneurs correlates with lower success rates in open innovation, emphasizing its detrimental impact on organizational growth (Aleksić et al., 2021).

By restricting access to critical information, knowledge hiding suppresses creativity and weakens an organization's ability to generate novel ideas (Cerne et al., 2014). It impairs innovation effectiveness, preventing firms from leveraging collective expertise to drive progress (Butt & Ahmad, 2019). Moreover, it undermines key drivers of organizational growth, such as creativity and adaptability, further limiting the capacity for sustained innovation (Cerne et al., 2017). Taken together, these studies show that knowledge hiding erodes the collaborative structures and information transparency required for open innovation to flourish, making it a significant inhibitor of innovation performance. Therefore, the following hypothesis is proposed for the study:

H6: Knowledge hiding has a significant impact on open innovation.

2.2.7 Relation between Open Innovation and Competitive Performance

Adopting open innovation strategies enhances organizational value creation and improves overall performance by integrating external knowledge into existing processes (Capaldo & Petruzzelli, 2011). Companies leveraging open innovation can strengthen their competitive performance by fostering dynamic capabilities that drive adaptability and growth (Pundziene et al., 2022). Open innovation serves as a crucial mediator between a firm's dynamic capabilities and its competitive edge, reinforcing its direct impact on business success.

In high-tech industries, knowledge sharing—particularly collaboration with clients to internalize market intelligence—plays a vital role in improving innovation outcomes and competitive performance (Wang et al., 2015). Small and medium-sized enterprises also benefit from adopting open innovation, as it enhances both innovation and competitive performance (Aleksić et al., 2021). Empirical research further confirms the significant positive impact of open innovation on organizational performance, aligning with previous studies that highlight its role in sustaining competitive advantage (Hung & Chou, 2013; Walker et al., 2015; Zanjirchi et al., 2019). These findings establish open innovation as a performance-enhancing strategy that enables firms to stay ahead of competition by continuously renewing knowledge and adapting to market changes. Therefore, the following hypothesis is proposed for the study:

H7: Open innovation has a significant impact on competitive performance.

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework for this research is based on the following theoretical foundations: the Dynamic Capabilities Theory (DCT) proposed by Teece et al. (1997), the Social Cognitive Theory (SCT) proposed by Bandura (1986), and the Knowledge-Based Theory (KBT) proposed by Demsetz (1988). Based on these foundations, the researcher has developed a conceptual framework for this study, as illustrated in Figure 1.

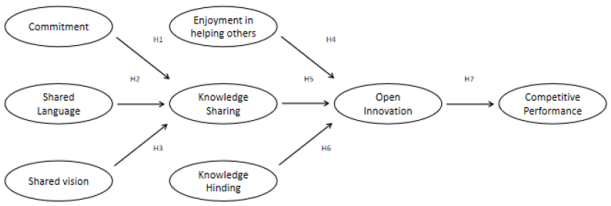

Figure 1: Conceptual Framework

This paper also utilizes Structural Equation Modeling (SEM) to analyze and validate key variables, including commitment (CO), shared language (SL), shared vision (SV), enjoyment in helping others (EHO), knowledge sharing (KS), and knowledge hiding (KH), as well as their impact on open innovation (OI) and competitive performance (CP) in restaurant firms in Zhanjiang, China.

3.2 Research Methodology

In this study, researchers utilized non-probability sampling and quantitative methods to distribute questionnaires to the target population online and offline. The target population consisted of practitioners from five catering enterprises in Zhanjiang, China. These five companies were selected through judgmental sampling due to their market relevance, established operations, and representation of medium-to-large-scale catering firms in the region. Each firm had a well-defined organizational

structure and a history of innovation engagement, making them appropriate for examining knowledge-sharing dynamics and innovation performance.

The aim was to analyze the feedback data to identify the factors influencing knowledge sharing, open innovation, and competitive performance within these catering enterprises. The questionnaire was structured into three sections. The first section included screening questions to ensure respondents were current full-time employees with at least one year of experience. The second section measured seven key variables (Commitment, Shared Language, Shared Vision, Enjoyment in Helping Others, Knowledge Sharing, Knowledge Hiding, Open Innovation, and Competitive Performance) using items adapted from validated scales in prior studies. Each variable was assessed using a 5-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. Sample items included statements such as "I willingly share my expertise with coworkers" and "There is a clear, shared vision in my organization." The third section focused on demographic information, such as gender, and years of work experience.

Prior to the main data collection, a pre-test was conducted with 30 respondents from the target population to assess clarity and comprehension. The questionnaire underwent expert review, and all items achieved an Item-Objective Congruence (IOC) score above 0.67, indicating content validity. The reliability of the instrument was verified using Cronbach's alpha (Cronbach, 1951), with all constructs exceeding the 0.70 threshold, confirming acceptable internal consistency. A total of 511 valid responses were collected from the targeted sample, distributed proportionally across the five firms.

Statistical analysis was conducted using SPSS and AMOS software. Confirmatory Factor Analysis (CFA) was employed to assess the validity of the measurement model, including tests for convergent validity, discriminant validity, and construct reliability. Model fit indices (e.g., RMSEA, CFI, TLI) indicated a good model fit. Based on these assessments, Structural Equation Modeling (SEM) was applied to evaluate the causal relationships between the study variables and to test the seven research hypotheses.

In terms of ethical considerations, all participants were informed of the study's purpose and voluntarily provided informed consent. Data confidentiality was assured, and responses were anonymized to protect the identity of participants. The study adhered to institutional ethical guidelines for human subjects research.

3.3 Target Population and Sample Size

This study focused on practitioners employed in five catering enterprises located in Zhanjiang, China. These firms were selected as they represent sizable, structured, and operationally active players in the local catering industry. The total target population across the five companies was 1,056 employees. From February to October 2024, the researchers conducted a questionnaire survey both online and offline, obtaining participation consent from company management. Company leaders supported the data collection process and encouraged staff participation to ensure broad organizational representation.

To achieve balanced representation across companies, proportional quota sampling was used based on each firm's workforce size. A total of 511 valid responses were collected, as shown in Table 1. This sampling distribution enabled the researchers to reflect the workforce composition of each enterprise.

Table 1: Population and Sample Size of Five Catering Enterprises in Zhanjiang City

Targeted Catering Enterprises	Population Size	Proportional Sample Size
Zhanjiang Misen Catering Management Co., Ltd	218	105
Zhanjiang West Coast Catering Management Co. Ltd	172	82
Zhanjiang Haoyefu Catering Service Co., Ltd	167	80
Zhanjiang Huasen Catering Management Co. Ltd	173	85
Zhanjiang Yutangfu Hotel Management Co., Ltd	326	159
Total	**1,056**	**511**

This proportional breakdown ensured that each company's views were equitably represented in the dataset while maintaining alignment with organizational size. The data served as the basis for subsequent structural model analysis.

4. Results and Discussion

4.1 Demographic Information

The demographic information collected from participants involves the practitioners' gender and their years of work experience. We distributed questionnaires to 511 employees of five catering companies in Zhanjiang city. Among the respondents were 223 females and 288 males, accounting for 44 percent and 56 percent, respectively. 169 employees (33%) have less than one year of work experience, 208 employees (41%) have 1-3 years of work experience, and 134 employees (26%) have more than three years of work experience. Table 2 displays demographic information.

Table 2: Demographic Information

Demographic and General Data (N=511)		Frequency	Percentage
Gender	Female	223	43.6
	Male	288	56.4
Work Experience	Less than 1 year	169	33.1
	Between 1 to 3 years	208	40.7
	More than 3 years	134	26.2
Work Address	Zhanjiang	511	100.0

4.2 Confirmatory Factor Analysis (CFA)

In this study, confirmatory factor analysis (CFA) was employed to assess the variables within the conceptual framework. The analysis revealed that all scale items for each variable were statistically significant, with acceptable factor loading values, suggesting that the conceptual framework fit the data well. Specifically, all factor loading values exceeded 0.30, all p-values were below 0.05, construct reliabilities were above 0.70, and average variances extracted were greater than 0.50. These results were all significant. Table 3 presents these values in detail.

Table 3: Confirmatory Factor Analysis (CFA), Composite Reliability (CR), and Average Variance Extracted (AVE) Results

Variable	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factor Loading	CR	AVE
Commitment (CO)	Li et al. (2022)	3	0.796	0.719-0.778	0.798	0.568
Shared Language (SL)	Li et al. (2022)	3	0.817	0.748-0.802	0.818	0.600
Shared Vision (SV)	Li et al. (2022)	3	0.786	0.711-0.770	0.788	0.553
Enjoyment in helping others (EHO)	Aleksić et al. (2021)	4	0.851	0.734-0.791	0.851	0.589
Knowledge Sharing (KS)	Aleksić et al. (2021)	4	0.828	0.717-0.763	0.828	0.546
Knowledge Hiding (KH)	Aleksić et al. (2021)	4	0.833	0.724-0.775	0.833	0.555
Open Innovation (OI)	Aleksić et al. (2021)	4	0.859	0.742-0.800	0.860	0.606
Competitive Performance (CP)	Pundziene et al. (2022)	3	0.820	0.764-0.796	0.820	0.603

Note: CR = Composite Reliability, AVE = Average Variance Extracted

The study utilized several model fit indices in the CFA test, including GFI, AGFI, NFI, CFI, TLI, and RMSEA. As presented in table, the statistical values were within the acceptable criterion, CMIN/DF = 2.231, GFI = 0.935, AGFI = 0.911, NFI = 0.956, CFI = 0.975, TLI = 0.969, and RMSEA = 0.050. Therefore, it indicates a good measurement model fit.

Table 4: Goodness of Fit for Measurement Model

Index	Criterion	Statistical Value
CMIN/DF	< 5.00 (Awang, 2012)	2.231
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.935
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.911
NFI	≥ 0.80 (Wu & Wang, 2006)	0.956
CFI	≥ 0.80 (Bentler, 1990)	0.975
TLI	≥ 0.80 (Sharma et al., 2005)	0.969
RMSEA	< 0.08 (Sica & Ghisi, 2007)	0.050

Note: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker Lewis index and RMSEA = root mean square error of approximation

Table 5 illustrates the square roots of the extracted variance differences, which indicate that the correlations among the variables in this study are appropriate. Overall, these measures collectively validate the structural model estimated in this study.

Table 5: Discriminant Validity

Variable	Factor Correlations							
	CO	SL	SV	EHO	KS	KH	OI	CP
CO	**0.754**							
SL	0.442	**0.774**						
SV	0.351	0.372	**0.743**					
EHO	0.404	0.462	0.296	**0.767**				
KS	0.469	0.521	0.393	0.443	**0.739**			
KH	0.349	0.374	0.348	0.359	0.326	**0.745**		
OI	0.443	0.424	0.261	0.384	0.403	0.368	**0.778**	
CP	0.322	0.366	0.316	0.399	0.378	0.271	0.253	**0.777**

Note: The diagonally listed value is the AVE square roots of the variables

4.3 Structural Equation Model (SEM)

According to Awang (2012), a Chi-square/degrees-of-freedom (CMIN/DF) ratio of less than 5.00 is recommended for assessing model fit. Sica and Ghisi (2007) suggested that both the Adjusted Goodness-of-Fit Index (AGFI) and the Normed Fit Index (NFI) should exceed 0.80. Bentler (1990) recommended that the Comparative Fit Index (CFI) should be greater than 0.80, while Sharma et al. (2005) indicated that the Tucker-Lewis Index (TLI) should be above 0.90. Lastly, Hu and Bentler (1999) proposed that the Root Mean Square Error of Approximation (RMSEA) should be below 0.08.

This study used SPSS AMOS version 26 for SEM calculations and model adjustments. The fitting index results indicate a good model fit: CMIN/DF = 2.990, GFI = 0.851, AGFI = 0.822, NFI = 0.847, CFI = 0.892, TLI = 0.880, and RMSEA = 0.062. These values are presented in Table 6.

Table 6: Goodness of Fit for Structural Model

Index	Criterion	Statistical Value
CMIN/DF	< 5.00 (Awang, 2012)	2.990
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.851
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.822
NFI	≥ 0.80 (Wu & Wang, 2006)	0.847
CFI	≥ 0.80 (Bentler, 1990)	0.892
TLI	≥ 0.80 (Sharma et al., 2005)	0.880
RMSEA	< 0.08 (Sica & Ghisi, 2007)	0.062

Note: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker Lewis index and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

Based on the regression weights and R^2 variances of each variable, the researchers assessed the significance of the research model. Table 7 presents the calculation results, which support all the hypotheses of this study. The findings indicate that commitment influences knowledge sharing (β = 0.365), shared language influences knowledge sharing (β = 0.473), and shared vision influences knowledge sharing. Additionally, enjoyment in helping others influences open innovation (β = 0.231), while knowledge sharing has a positive impact on open innovation (β = 0.349, β = 0.256). Finally, open innovation influences competitive performance (β = 0.318).

Table 7: Hypothesis Testing Result

Hypothesis	Standardized path coefficients (β)	t-value	Test Result
H1: CO → KS	0.365	6.924*	Supported
H2: SL → KS	0.473	8.536*	Supported
H3: SV → KS	0.244	4.826*	Supported
H4: EHO → OI	0.231	4.673*	Supported
H5: KS → OI	0.349	6.518*	Supported
H6: KH → CI	0.256	5.074*	Supported
H7: OI → CP	0.318	5.822*	Supported

Note: *=p-value<0.05

According to the results in Table 7, the researchers concluded as below:

H1 confirms commitment as a key driver of knowledge sharing, with a standardized coefficient of 0.365 in its structural path. Employees are more likely to be engaged in knowledge sharing when they have a sense of loyalty and commitment (Kmieciak, 2021).

H2 demonstrates that shared language significantly influences knowledge sharing, with a standardized coefficient of 0.473. This finding agrees with Nakano et al. (2013), who found that strong communication skills help develop shared language and knowledge sharing.

H3 further supports shared vision as a crucial knowledge-sharing factor, with a standardized coefficient of 0.244. Employees with common interests and goals are more willing to exchange knowledge (Mohammed & Kamalanabhan, 2019).

H4 also confirms that helpfulness plays a significant role in driving open innovation, with a standardized coefficient of 0.231. Initiation and innovative behaviors of employees would derive from their enjoyment in helping others (Aleksić et al., 2021).

H5 shows that knowledge sharing is identified as a key enabler of open innovation, exhibiting a standardized coefficient of 0.349. A knowledge-sharing environment is essential to maintaining business innovation outcomes (Pundziene et al., 2022).

H6 indicates that knowledge hiding influences open innovation, with a standardized coefficient of 0.256. knowledge hiding inhibits creativity and has a great effect on open innovation (Cerne et al., 2014).

H7 result demonstrates that open innovation is a key determinant of competitive performance, with a standardized coefficient of 0.318. The competitive performance of an enterprise can be strengthened by building innovative capabilities (Pundziene et al., 2022).

5. Conclusions and Recommendation

5.1 Conclusions

This study aimed to comprehensively analyze the factors affecting knowledge sharing, open innovation, and competitive performance of catering enterprises in Zhanjiang, China. Seven hypotheses were proposed to examine the relationships among commitment, shared language, shared vision, enjoyment in helping others, knowledge hiding, knowledge sharing, open innovation, and competitive performance.

The target population consisted of practitioners from five catering enterprises in Zhanjiang, with a total of 511 valid responses collected through a structured questionnaire. The data were analyzed using SPSS and JAMOVI, and the conceptual framework was tested using AMOS for Confirmatory Factor Analysis (CFA). The measurement model met standard thresholds for convergent and discriminant validity, including satisfactory composite reliability, Cronbach's alpha, and factor loadings. The model structure was further validated using Structural Equation Modeling (SEM), confirming all seven proposed hypotheses.

The findings revealed that commitment, shared language, and shared vision significantly influenced knowledge

sharing, supporting the notion that strong relational and cultural factors are essential for effective knowledge exchange. Secondly, enjoyment in helping others, knowledge sharing, and knowledge hiding had significant effects on open innovation. Lastly, open innovation was found to directly enhance competitive performance.

These findings align with and extend previous studies conducted in other sectors and regions. For instance, Aleksić et al. (2021) demonstrated similar links between intrinsic motivation and innovation in high-tech industries, while Chiu et al. (2006) and Lin (2007) confirmed the influence of shared vision and altruistic behavior on knowledge sharing in knowledge-intensive firms. Moreover, Wang et al. (2015) found that open innovation contributes significantly to firm competitiveness across various sectors, reinforcing the cross-context validity of the present results. However, this study adds new insights by confirming these relationships within the catering industry, a service-oriented sector that is less frequently examined in innovation literature.

The results highlight the critical role of organizational commitment, collaborative culture, and intrinsic motivation in fostering knowledge sharing and open innovation, which in turn contribute to competitive performance. These insights provide both empirical support for existing theories and practical implications for catering enterprises seeking to enhance their innovation capacity and market competitiveness.

5.2 Recommendations

This study examined the factors influencing knowledge sharing, open innovation, and competitive performance in catering enterprises in Zhanjiang, China. The research confirmed that commitment, shared language, shared vision, enjoyment in helping others, and knowledge hiding significantly affect knowledge sharing and innovation outcomes, which in turn influence competitive performance. These findings offer both practical guidance for practitioners and theoretical contributions to the literature on organizational innovation and knowledge management.

Theoretically, this study contributes to the Dynamic Capabilities Theory by demonstrating that open innovation acts as a dynamic capability enabling firms to translate internal knowledge into competitive advantage. The results show that the ability to adapt and reconfigure knowledge-sharing mechanisms is essential for sustained performance. The findings also support Social Cognitive Theory by illustrating that intrinsic motivation, such as enjoyment in helping others, drives prosocial behavior and engagement in innovation activities. Additionally, the study extends Knowledge-Based Theory by confirming that knowledge is a core organizational resource and that its effective sharing enhances innovation capacity and competitive outcomes.

In light of these findings, several actionable recommendations are proposed. First, catering enterprises should strengthen employee commitment and shared vision through structured training and internal development programs. Managers should regularly communicate organizational goals, reinforce shared values through town hall meetings, and implement clear career progression plans to increase emotional attachment and alignment with the firm's vision. These efforts can foster a workplace culture conducive to knowledge sharing and collective learning.

Second, firms are encouraged to develop integrated digital knowledge management systems. These systems should include centralized repositories, collaboration tools, and mobile accessibility to ensure that knowledge flows across departments and reaches all employees, including frontline staff. Appointing knowledge champions in each department to monitor engagement and promote collaboration will further enhance participation and system effectiveness.

Third, catering enterprises should institutionalize policies and cultural practices that discourage knowledge hiding. Transparent performance evaluations that reward collaboration and knowledge contribution, along with peer feedback mechanisms, can help identify and mitigate hoarding behavior. Trust-based leadership and recognition of knowledge-sharing efforts in public forums will also reinforce open communication.

Fourth, a culture of helping others should be promoted by incorporating intrinsic motivation strategies into HR practices. This includes peer recognition programs, gamified knowledge-sharing platforms, and encouraging prosocial behavior that aligns with employees' sense of personal fulfillment. These strategies reflect principles from Social Cognitive Theory, emphasizing the role of internal rewards and perceived self-efficacy in driving knowledge-sharing behaviors.

Finally, in accordance with Dynamic Capabilities Theory, catering firms should align their innovation initiatives with external market feedback. Creating structured feedback loops through customer service teams, CRM systems, or direct client engagement can help firms adjust innovation strategies to remain competitive in changing environments.

In conclusion, the proposed recommendations not only provide practical steps for catering enterprises seeking to improve innovation and performance but also reinforce key theoretical perspectives by demonstrating how internal capabilities, motivation, and knowledge systems interact to drive organizational success.

5.3 Limitation and Further Study

While this study offers valuable insights into the factors influencing knowledge sharing, open innovation, and competitive performance in catering firms in Zhanjiang, China, several limitations should be noted. First, the use of non-probability sampling methods (judgmental, quota, and convenience) limits the representativeness of the sample. As such, the findings may not be generalizable to all catering enterprises or other regions.

Second, the study relied on cross-sectional data collected from individual employees. Although these respondents were knowledgeable, they may not fully reflect firm-level strategic decisions. This misalignment between the data source and the unit of analysis may limit the interpretation of competitive performance as an organizational outcome.

Third, the cross-sectional design prevents any inference of causality. Although model fit was statistically validated, longitudinal data would be needed to establish the direction and stability of these relationships over time.

Future research should consider using probability sampling techniques to improve generalizability. Studies could also target managerial respondents to better capture organizational perspectives. Expanding the sample to other cities or industries and exploring moderating factors, such as organizational culture or leadership, could further enrich the findings.

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