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Causal–Strategic Modeling of Customer Knowledge Management in Companies Affiliated with the Foundation of the Oppressed

Alireza. Nezhadafshar[1], Mahmoud. Ahmadi Sharif[1*], Farzad. Asayesh[1], Alireza. Rousta[1]

1 Department of Business Management, ShQ.C., Islamic Azad University, Shahr-e Qods, Iran

Corresponding author email address:
m.ahmadisharif@qodsiau.ac.ir

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ABSTRACT

Customer knowledge management is a strategic approach that creates mutual added value, thereby generating advantages for both customers and organizations. On the customer side, accurately identifying and analyzing needs, behaviors, and preferences enables targeted responsiveness and enhances customer experience and perceived value. On the organizational side, collecting and organizing reliable data contributes to the continuous development and improvement of products and services and ultimately leads to increased profitability, strengthened customer loyalty, and the preservation of competitive advantage. The aim of this study was to develop a causal–strategic model of customer knowledge management in industrial companies affiliated with the Foundation of the Oppressed. This research is applied in purpose and descriptive–analytical in nature, and it was conducted using a mixed-method (qualitative–quantitative) approach in two phases. In the qualitative phase, the statistical population consisted of academic experts and managers of the industrial companies affiliated with the Foundation, who were selected through snowball sampling until theoretical saturation was achieved (12 participants). The data collection tool was a semi-structured interview, and thematic analysis was used as the analytical method, which led to the identification of 2 organizing themes and 13 basic themes. In the quantitative phase, a researcher-developed questionnaire derived from the qualitative findings was distributed among 213 customers using random sampling after confirming its validity and reliability (Cronbach's alpha > 0.7). The collected data were analyzed using SPSS and AMOS through confirmatory factor analysis. The results confirmed the causal relationships between the external and internal constructs of the model and demonstrated that the proposed model has a high potential for enhancing customer interaction, improving service quality, and increasing loyalty.

Keywords: Causal–strategic, customer knowledge, customer interaction, Foundation of the Oppressed

Introduction

In the current hypercompetitive and rapidly evolving business environment, organizations increasingly recognize knowledge as a strategic asset and a fundamental source of sustainable competitive advantage. Knowledge management (KM) has thus emerged as a crucial discipline for creating, storing, disseminating, and applying organizational knowledge to enhance decision-making, operational efficiency, and innovation outcomes [1]. Among the various branches of KM, customer knowledge management (CKM) has gained particular prominence as firms seek to cultivate deep insights into customers' needs, preferences, and behaviors to co-create value and build long-term relationships [2]. CKM integrates the principles of KM with customer relationship management (CRM) frameworks, enabling organizations to collect, share, and leverage customer-related knowledge for improved service delivery, innovation, and market responsiveness [3].

CKM differs from traditional CRM by emphasizing knowledge flows rather than merely transactional interactions. It involves three fundamental dimensions: knowledge for customers (information provided to customers to enhance their experience), knowledge about customers (data and insights regarding customer preferences and behaviors), and knowledge from customers (inputs, feedback, and innovative ideas provided by customers themselves) [4]. According to the seminal theory of organizational knowledge creation proposed by [5], organizations transform tacit knowledge into explicit knowledge through socialization, externalization, combination, and internalization processes. Applying this SECI model to the customer domain allows companies to capture tacit customer insights and embed them into organizational processes and product design.

Research has demonstrated that CKM can drive multiple organizational benefits, including innovation capability, service quality, and customer loyalty [6]. CKM fosters an organizational culture of continuous learning, which facilitates the identification of latent customer needs and the creation of differentiated value propositions [7]. Particularly in knowledge-intensive and service-driven sectors, CKM strengthens relational bonds by enabling personalized communications and tailored offerings [8]. In turn, these dynamics enhance customer satisfaction, reduce churn rates, and promote long-term engagement, thereby supporting strategic objectives and revenue growth [9].

The growing body of literature highlights that successful CKM implementation requires an integration of technological infrastructure, human resources, and organizational culture [10]. Advanced information technologies such as big data analytics, cloud computing, and AI-driven platforms enable firms to gather and analyze massive volumes of customer data in real time, thereby generating actionable insights [11]. Yet, technological capability alone is insufficient without the support of knowledge-centered cultural norms and collaborative practices [12]. Organizational culture mediates the relationship between KM capabilities and innovation outcomes, as it shapes employees' attitudes toward knowledge sharing and experimentation [13]. Similarly, leadership support and employee motivation are vital in fostering trust and openness, which are prerequisites for effective knowledge exchange [14].

Despite its potential, the implementation of CKM faces numerous challenges. Studies indicate that organizations often encounter resistance to change, lack of coordination across departments, and misalignment between CKM initiatives and broader business strategies [15]. Moreover, CKM efforts may fail when they prioritize technology adoption without embedding knowledge-sharing behaviors and customer-centric mindsets within the workforce [16]. The alignment of CKM with innovation strategies is also critical; insufficient linkages between customer insights and new product development (NPD) processes can hinder the commercialization of customer-driven ideas [17]. This underscores the need for strategic frameworks that integrate CKM into the organizational architecture and innovation lifecycle.

From a strategic management perspective, CKM contributes to dynamic capabilities by enabling firms to sense market changes, seize emerging opportunities, and reconfigure resources accordingly [18]. Dynamic capability theory suggests that competitive advantage depends on an organization's ability to integrate, build, and reconfigure internal and external competencies in response to environmental turbulence. CKM equips firms with the market intelligence and learning agility required to adapt offerings and strategies to shifting customer demands [19]. For instance, capturing and analyzing real-time customer feedback can accelerate decision cycles and enhance responsiveness to market disruptions.

In sectors such as agritourism and banking, CKM has been shown to directly affect organizational performance and customer retention by supporting data-driven decision-making and relationship quality [2, 7]. CKM also enables the

codification and dissemination of environmental knowledge, thereby contributing to the adoption of sustainable consumption practices and corporate responsibility initiatives [20]. This aspect is increasingly significant given the global emphasis on sustainability and stakeholder-centric governance. Organizations that effectively integrate customer environmental concerns into their knowledge systems can enhance their reputation and strengthen their long-term viability.

The evolution of CKM has also been influenced by the convergence of knowledge management and information management disciplines, which has blurred the boundaries between structured knowledge repositories and dynamic data ecosystems [10]. As customer data becomes more complex and multidimensional, organizations must develop mechanisms to convert fragmented information into coherent knowledge assets. Emerging research emphasizes the use of knowledge audits, knowledge maps, and balanced scorecard-based evaluations to measure CKM maturity and guide continuous improvement [7]. These approaches provide diagnostic tools to identify knowledge gaps, redundancies, and potential areas for strategic alignment.

Furthermore, CKM plays a critical role in supporting organizational innovation, which is a key determinant of long-term competitiveness. Effective CKM practices promote both exploratory and exploitative innovation by enabling firms to leverage customer insights for radical breakthroughs while refining existing offerings [13]. Organizations that maintain robust knowledge networks and encourage cross-functional collaboration are more likely to translate customer knowledge into novel products and services [12]. Conversely, inadequate knowledge flows can stifle creativity and impede innovation performance. Thus, CKM can be considered a strategic enabler of innovation-driven growth trajectories.

While the strategic value of CKM is widely acknowledged, the theoretical and empirical literature reveals that many organizations struggle to design comprehensive CKM frameworks that integrate people, processes, and technology [11]. There remains a pressing need for models that map the causal relationships between CKM drivers, organizational strategies, and performance outcomes. A causal–strategic model could provide organizations with a structured approach to identify the enablers, processes, and outcomes of CKM, thereby facilitating its institutionalization. Such models can also help overcome the fragmentation of current practices and support the development of cohesive CKM architectures aligned with strategic objectives [17].

In light of these considerations, this study seeks to develop a causal–strategic model of customer knowledge management tailored to the context of industrial companies affiliated with the Foundation of the Oppressed.

Methodology

In this study, the methodology was designed and implemented based on the Saunders Research Onion model. This model, which comprises various layers from research philosophy to data collection and analysis methods, provides a systematic framework for advancing research. The present study is of a mixed type (quantitative–qualitative), and to achieve the main objective, it combined qualitative and quantitative sections that complemented each other.

In the qualitative section, the study had an exploratory nature and adopted an interpretivist philosophy and an inductive approach to identify and gain an in-depth understanding of the underlying categories of the phenomenon under investigation. This section was conducted using a single-case study strategy, and the study population included academic experts in business management and senior managers of industrial companies affiliated with the Foundation of the Oppressed. Sampling in this section was carried out purposefully, and 12 semi-structured interviews were conducted with

knowledgeable and relevant individuals. The interview process continued until theoretical saturation was reached, meaning no new information was obtained for analysis. The primary data collection tool in this stage was semi-structured interviews designed based on key and open-ended questions. Qualitative data were analyzed using the Thematic Analysis method. The steps of thematic analysis included initial familiarization with the data, open coding, searching for initial themes, reviewing, and final defining of themes, which led to the extraction of the main dimensions of the study.

In the quantitative section, the study was designed and conducted based on a positivist philosophy and a deductive approach. The statistical population of this section consisted of all customers of the industrial companies affiliated with the Foundation of the Oppressed, and sampling was performed using the cluster method. From the accessible customers, a sample of 213 individuals was selected using the Cochran's formula. The main data collection tool was a researcher-developed questionnaire designed and constructed based on the themes and dimensions derived from the qualitative section. This questionnaire included items measuring the main variables of the study. The validity of the questionnaire was assessed using the opinions of experts in management and methodology, and its reliability was confirmed using Cronbach's alpha, which was above 0.7, indicating acceptable reliability.

Quantitative data were analyzed using SPSS. In this section, descriptive analysis was first performed to identify the demographic characteristics of the sample, and then inferential analyses were used to test the research hypotheses. In addition, Confirmatory Factor Analysis was conducted using AMOS to validate the conceptual model of the study and examine the factor structure of the questionnaire. The confirmatory factor analysis was performed to assess the relationships between variables and validate the constructs derived from the qualitative section, and its results showed the model’s fit with the collected data.

By integrating the qualitative and quantitative sections, this study succeeded in presenting a comprehensive model of customer knowledge management in industrial companies affiliated with the Foundation of the Oppressed. The qualitative section contributed to identifying key dimensions and concepts, while the quantitative section examined and validated these concepts within the target population. Overall, confirmatory factor analysis played a crucial role in the quantitative part of the study and confirmed the structure of the final model.

Findings and Results

To collect data for the qualitative section, interviews were conducted with 12 academic and executive experts from industrial companies affiliated with the Foundation of the Oppressed. The characteristics of the interviewees are presented in Table 1. Table 1 shows the demographic characteristics of the interviews conducted in the qualitative section. In this part, the interviewees are described in terms of characteristics such as gender, age, and education.

Table 1

Demographic Characteristics of Interviewees

Experts and Professors	Education	Work Experience	Gender	Number of Interviewees
PhD and above	Master’s	Above 20 years	11–20 years	5–10 years
11	1	4	7	1

To collect data, interviews were conducted with 12 academic and executive experts from industrial companies affiliated with the Foundation of the Oppressed. According to the findings, most interviewees were men (73%) and the fewest were

women (27%). Regarding work experience, 9% had 5–10 years, 64% had 11–20 years, and 27% had more than 20 years of experience. Based on education, 91% held a PhD and 9% held a master's degree.

For qualitative data analysis, Thematic Analysis was used, and among its various approaches, the Thematic Network Analysis approach was applied. Initially, preliminary theoretical codes were extracted to discover themes. At this stage, concepts and key points related to presenting a structural model influenced by the dimensions and components of customer knowledge management in industrial companies affiliated with the Foundation of the Oppressed were listed from the interview process. After completing the interview transcripts, coding was carried out.

In the next step, thematic network analysis was performed. After comparing the extracted concepts, related concepts were categorized into overarching categories, and based on the titles available in related theories or concepts derived from the study, general titles were assigned to the categories. Thus, after continuous comparison of the interview responses, similar responses were grouped, and similar concepts were extracted from them. Furthermore, closely related items were merged, and the themes were classified into two main categories.

Category 1: Drivers of the Customer Knowledge Management Model in Industrial Companies Affiliated with the Foundation of the Oppressed

This category includes 51 basic themes.

Table 2

Drivers of the Customer Knowledge Management Model

Organizing Themes	Basic Themes
Drivers of the Customer Knowledge Management Model	Readiness for change, team creation, conducting knowledge audits, establishing connections between individuals and knowledge, customer feedback strategy (via surveys, comments, opinions, and customer interviews), use of CRM, understanding the target market, current customer needs, future desires, communication, purchasing activity and financial capacity, market, knowledge management for customers, company introduction and identification, future products and services of the company, focus on knowledge-based products of the company, current products and services of the company, past products and services of the company, suppliers, competitors' products and services, government regulations, knowledge management about customers, reviewing the history of current customers (previous purchasing behaviors), examining demographic knowledge of current customers, preferences for products or services of current customers, motivations of current customers, expectations of current customers, knowledge about potential customer requirements, motivations of potential customers, expectations of potential customers, knowledge management from customers, experience of using a specific service from the company, applying creative ideas about products and services, new company services, government regulations, market, suppliers, competitors' products and services, encouraging employees to share knowledge, customer success, innovation and learning, training and learning, benchmarking successful knowledge management systems, research and development, using a dedicated training department, training methods that support group learning, focusing on methods of knowledge transfer and management training, user-friendly systems, encouraging new ideas, supporting knowledge management projects, participation and guidance in knowledge management programs, retaining and upgrading knowledge workers

Category 2: Effective Strategies in the Customer Knowledge Management Model in Industrial Companies Affiliated with the Foundation of the Oppressed

In this category, 38 basic themes were identified.

Table 3

Effective Strategies in the Customer Knowledge Management Model

Organizing Themes	Basic Themes
Effective Strategies in the Customer Knowledge Management Model	Leadership, organizational culture, processes, explicit knowledge, tacit knowledge, knowledge hubs, knowledge measurement, people and skills, knowledge market leverage and enablers, strengthening technological infrastructures, knowledge audits, knowledge transparency, growth of customer-centricity and loyalty, collaboration with customers in co-creating value, transforming customers into creators of knowledge and value, encouraging employees to share knowledge, comparing sales of new products with competitors' products, percentage of profitability of new products compared to competitors' products, success achieved from new products compared to expectations, overall performance of new products, percentage of success of new products, impact of new products on the company's condition, measuring financial indicators, measuring achievement of set goals, providing high-desirability services for loyal customers, share of new products in the company's total sales, percentage success of new product development, overall advantage or benefit of product development for the company, product life cycle, examining sales and profitability of new products, examining time spent to launch the product to the market, support and backing from senior management, necessity of applying knowledge management, knowledge transfer, knowledge development, knowledge productivity and efficiency, creating personal experience, using suggestion systems

At this stage, the thematic network was developed. The thematic network stage of this study clarified the relationship of the main category with other categories. At this stage, the main and subcategories were connected to each other to collect theoretical concepts for presenting the causal–strategic factors of the customer knowledge management model in industrial companies affiliated with the Foundation of the Oppressed. These actions enabled the researcher to integrate the concepts obtained from the previous stages and use them to present the thematic network.

Figure 1.

The Causal–Strategic Model of Customer Knowledge Management

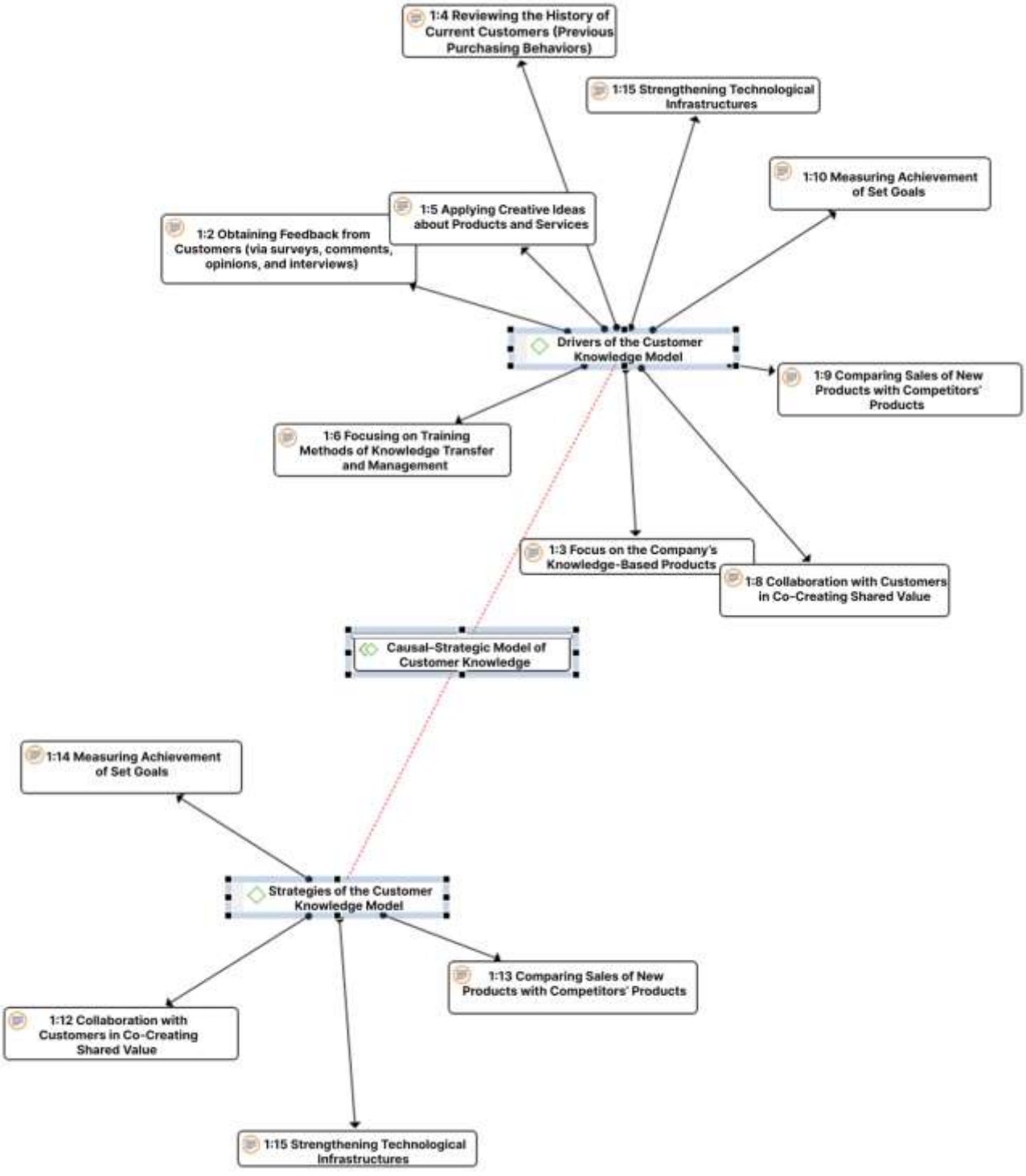

Table 4

Final Themes of the Model

Organizing Themes	Basic Themes
Drivers of the Customer Knowledge Management Model in Industrial Companies Affiliated with the Foundation of the Oppressed	Customer feedback strategy (via surveys, comments, opinions, and customer interviews); focus on the company's knowledge-based products; reviewing the history of current customers (previous purchasing behaviors); applying creative ideas about products and services; focusing on methods of knowledge transfer and management training; strengthening technological infrastructures; collaboration with customers in co-creating value; comparing sales of new products with competitors' products; measuring achievement of set goals
Strategies of the Customer Knowledge Management Model in Industrial Companies Affiliated with the Foundation of the Oppressed	Collaboration with customers in co-creating value; comparing sales of new products with competitors' products; measuring achievement of set goals; strengthening technological infrastructures

Table 5

Frequency Distribution of Respondents' Demographic Characteristics

Characteristic	Category	Frequency	Percentage
Gender	Male	165	77%
	Female	48	23%
Age	30–40 years	61	28%
	41–50 years	108	51%
	51 years and above	44	21%
Education Level	Bachelor's	47	22%
	Master's	69	32%
	PhD	97	46%
Work Experience	6–10 years	25	12%
	11–15 years	52	24%
	16–20 years	46	22%
	21–25 years	52	24%
	26–30 years	38	18%
Total Respondents	—	213	100%

This table presents the demographic distribution of 213 respondents based on gender, age, education level, and work experience. The majority of participants are male, in the 41–50 age group, hold PhD degrees, and have between 11–15 or 21–25 years of work experience.

To determine the validity of the second category, confirmatory factor analysis was used. All factor loadings were above 0.6. According to the AMOS output in Table 6, the calculated χ^2/df value is 1.58. A χ^2/df lower than 5 indicates a good model fit. Also, the Root Mean Square Error of Approximation (RMSEA) should be less than 0.08, and in the presented model this value is 0.055. The indices GFI, AGFI, CFI, and NFI should all be greater than 0.90, and in the model under review they are all above the specified threshold. Therefore, the data of this study show a good fit with the factor structure of this scale, indicating alignment of the items with the variables of the second category.

The numbers on the paths are factor loadings. All factor loadings were above 0.6. According to the AMOS output in Table 6, the calculated χ^2/df value is 2.96. A χ^2/df lower than 5 indicates a good model fit. Also, the RMSEA should be less than 0.08, and in the presented model this value is 0.069. The indices GFI, AGFI, CFI, and NFI should all be greater than 0.90, and in the model under review they are all above the specified threshold. Therefore, the data of this study show a good fit with the factor structure of this scale, indicating alignment of the items with the variables of the third category.

Table 6

Fit Indices of the Second Category

Indices	Index Name	Abbreviation	Acceptable Fit	Drivers Index Value	Strategies Index Value
Absolute Fit	Degrees of Freedom	DF	—	212	212
	Significance Level	P	< 0.05	0.000	0.000
	Chi-square to Degrees of Freedom Ratio	CMIN/DF	Between 1 and 5	1.58	2.96
	Chi-square Coverage Level	Chi-Square	> 5%	0.39	0.14
	Goodness of Fit Index	GFI	> 0.90	0.981	0.955
	Adjusted Goodness of Fit Index	AGFI	> 0.90	0.941	0.941
Comparative Fit	Non-Normed Fit Index	NNFI	> 0.90	0.90	0.90
	Normed Fit Index	NFI	Close to 1	0.92	0.99
	Comparative Fit Index	CFI	> 0.90	0.981	0.955
	Relative Fit Index	RFI	> 0.50	0.58	0.64
	Incremental Fit Index	IFI	0–1	0.74	0.59
Parsimonious Fit	Parsimonious Normed Fit Index	PNFI	> 0.50	0.90	0.99
	Parsimonious Goodness of Fit Index	PGFI	> 0.50	0.941	0.901
	Root Mean Square Error of Approximation	RMSEA	< 0.10	0.055	0.069
	Normalized Chi-square	CMIN	Between 1 and 3	1.8	1.9

Discussion and Conclusion

The results of this study offer valuable insights into the causal–strategic relationships among the drivers, processes, and strategies of customer knowledge management (CKM) within industrial companies affiliated with the Foundation of the Oppressed. The confirmatory factor analysis validated the proposed structural model, showing that the hypothesized connections between external drivers (such as technological infrastructure, feedback mechanisms, and customer knowledge acquisition) and internal strategic outcomes (such as innovation performance, customer loyalty, and service quality) are statistically significant. This suggests that when organizations systematically manage customer knowledge flows—encompassing knowledge for, about, and from customers—they can substantially enhance their strategic positioning and operational performance [4, 5].

A core finding of the study is the pivotal role of technological infrastructure as a driver of CKM. Firms with robust IT infrastructures demonstrated stronger knowledge-sharing networks, more effective customer data integration, and improved knowledge dissemination capabilities. This aligns with prior work emphasizing the foundational role of digital systems, big data analytics, and cloud platforms in enabling knowledge management initiatives [3, 10]. By providing scalable repositories and real-time analytics capabilities, technology reduces information silos and accelerates the feedback loop between customers and firms. Furthermore, this study's finding that technological enablers indirectly improve customer loyalty and innovation outcomes supports the view that IT infrastructure is not just a back-end support system but a strategic asset in CKM implementation [11, 19].

The analysis also revealed that customer feedback mechanisms—particularly those involving structured surveys, interviews, and social listening tools—serve as critical enablers of CKM. Companies that systematically collect and integrate customer feedback exhibited stronger performance in product development, customer satisfaction, and adaptive decision-making. This finding echoes the conceptual framework of [5], which highlights the externalization and combination of tacit customer knowledge as central to organizational knowledge creation. It also resonates with empirical evidence that direct engagement with customers enhances the relevance and innovativeness of new offerings [6, 17]. The model confirmed that organizations using feedback strategically transform customers from passive information sources into active co-creators of value, supporting the relational paradigm of CKM [2].

Organizational culture and leadership support were found to be key mediators linking CKM drivers to strategic outcomes. Companies with knowledge-centered cultures and participatory leadership styles were more likely to translate customer insights into actionable strategies, which is consistent with findings that a supportive culture enhances knowledge-sharing behavior and innovation capability [12, 13]. Cultural alignment ensures that employees are intrinsically motivated to contribute, access, and utilize customer knowledge resources, reducing the risk of knowledge hoarding and fragmentation [14]. This confirms previous observations that the absence of cultural alignment can undermine even well-funded CKM initiatives, as technological tools alone cannot compensate for a lack of trust, collaboration, and openness [16].

Additionally, the study validated the significance of integrating customer knowledge into new product development (NPD) and service innovation processes. Organizations that embedded CKM practices within NPD pipelines showed higher success rates in launching new products, meeting customer expectations, and outperforming competitors in market share. This supports prior reviews demonstrating that CKM enhances both exploratory and exploitative innovation by improving the relevance and market fit of innovations [7, 17]. By linking customer insights to iterative prototyping, design thinking, and continuous improvement processes, CKM accelerates innovation cycles and reduces time-to-market. This finding reinforces the perspective that CKM acts as a dynamic capability enabling firms to sense, seize, and reconfigure resources to address market turbulence [11, 18].

The results further showed that CKM significantly contributes to customer relationship quality and retention, especially when combined with CRM platforms. The synergy between CRM and CKM allows companies to personalize customer interactions, predict behavioral trends, and provide tailored experiences—thereby enhancing relationship quality and loyalty [2, 6]. This corroborates evidence from service industries showing that CKM-driven personalization improves engagement, trust, and emotional bonds between firms and their customers [8]. Moreover, the integration of environmental and sustainability-related knowledge within CKM systems was linked to positive brand perception and sustainable consumption patterns, reflecting broader stakeholder expectations [20].

In summary, the validated model demonstrates that CKM functions as a multi-level strategic system in which technological, cultural, and relational drivers converge to generate superior strategic outcomes. These results confirm that CKM is not merely an operational tool but a strategic resource that can shape innovation trajectories, customer relationships, and competitive advantage [1, 10]. By aligning CKM practices with organizational goals, companies can institutionalize continuous learning loops and sustain long-term competitiveness in dynamic markets.

While the study offers valuable theoretical and empirical contributions, several limitations must be acknowledged. First, the research was conducted exclusively within industrial companies affiliated with the Foundation of the Oppressed, which may limit the generalizability of the findings to other sectors or cultural contexts. The organizational structures, knowledge practices, and customer interaction patterns in these firms may differ from those in more decentralized or service-oriented environments. Second, although the study adopted a mixed-method design to enhance validity, the qualitative phase relied on a relatively small number of expert interviews (n = 12). While theoretical saturation was achieved, this limited sample size may not fully capture the diversity of perspectives on CKM practices. Third, the quantitative analysis relied on self-reported data from customers, which could be influenced by social desirability or recall biases. Finally, the study measured CKM performance outcomes cross-sectionally, which restricts the ability to establish causal relationships over time. Longitudinal data would provide stronger evidence of the temporal dynamics between CKM drivers and strategic outcomes.

Future studies could expand the scope of CKM research by examining different industries and organizational contexts, such as small and medium-sized enterprises, public institutions, or digital-native firms, to compare CKM implementation patterns and their strategic implications. Cross-cultural studies could also illuminate how national cultural values shape knowledge-sharing behaviors, customer participation, and innovation responsiveness in CKM systems. In methodological terms, future research could employ longitudinal designs to explore how CKM capabilities evolve over time and their long-term impact on firm performance. Combining structural equation modeling with network analysis could also provide richer insights into the complex interdependencies among CKM drivers, processes, and outcomes. Furthermore, future studies could examine the role of emerging technologies—such as artificial intelligence, blockchain, and predictive analytics—in enhancing CKM processes and creating real-time adaptive systems.

Managers seeking to implement or strengthen CKM should focus on building integrated socio-technical systems that align technological platforms, organizational culture, and human capital. They should invest in scalable IT infrastructures and analytics tools to collect and analyze customer data, while simultaneously fostering a knowledge-centric culture through leadership commitment, incentives for knowledge sharing, and training programs. Embedding CKM into core strategic processes such as new product development, customer relationship management, and sustainability initiatives can help ensure that customer insights directly inform decision-making. Additionally, managers should adopt structured evaluation mechanisms, such as knowledge audits and performance dashboards, to monitor CKM effectiveness and drive continuous improvement. By approaching CKM as a strategic capability rather than a stand-alone system, organizations can enhance their adaptability, innovation capacity, and long-term customer relationships.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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