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DIGITAL CUSTOMER RELATIONSHIP MANAGEMENT: BUILDING LONG-TERM LOYALTY THROUGH DATA-DRIVEN ENGAGEMENT

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Abstract

This study explores the critical challenges and opportunities for organizations, particularly micro, small, and medium enterprises (MSMEs), in adopting a Digital Customer Relationship Management (DCRM) approach to enhance customer engagement and foster long-term loyalty. Digital transformation necessitates a move from traditional, data-poor CRM to a dynamic, real-time, and data-driven DCRM system. Employing a qualitative research design with in-depth interviews of MSME owners and personnel, the study identified three core themes: (1) fragmented customer data and inconsistent management practices, where data is scattered across multiple platforms, hindering strategic use; (2) personalization as a central engagement mechanism, which participants view as essential for increasing response rates and building relational value; and (3) technological capability gaps and adoption barriers, including limited digital literacy, resource constraints, and fear of complexity. The findings underscore that data integration, ethical data governance, and internal technological and human readiness are critical for sustaining DCRM performance and cultivating trust in competitive digital environments. This research provides a practical framework to help organizations develop digital engagement competencies and address operational and ethical challenges.

Keywords: DCRM; Customer Loyalty; Customer Engagement; Personalization; MSMEs

INTRODUCTION

Digital transformation has reshaped the way organizations interact with customers, creating new expectations for speed, personalization, and seamless engagement across digital channels. Traditional Customer Relationship Management (CRM) systems, which rely heavily on historical data and manual processes, are increasingly unable to accommodate the dynamic, real-time nature of customer behavior in the digital era. As customers demand more personalized, responsive, and consistent experiences, organizations, particularly micro, small, and medium enterprises (MSMEs), often struggle to manage customer data effectively and convert it into meaningful engagement strategies. This gap creates a critical challenge: how can firms design and implement a Digital Customer Relationship Management (DCRM) approach that enhances customer engagement and fosters long-term loyalty?

The urgency of this issue lies in the rapid acceleration of digital adoption and the heightened competition across industries. Many organizations continue to face difficulties in integrating customer data, managing multi-platform interactions, and leveraging analytics to understand customer needs. Without systematic data-driven engagement, companies risk weakened customer relationships, higher churn rates, and reduced long-term profitability. Service activities focused on improving DCRM capabilities are therefore essential, particularly for businesses that lack technical expertise or structured customer management systems. By strengthening digital engagement competencies, organizations can enhance their readiness to compete in increasingly data-centric markets.

A review of relevant literature highlights the strategic role of DCRM as a driver of customer loyalty and organizational performance. Digital CRM integrates technologies such as big data analytics, automation tools, and omnichannel platforms to enhance customer insight and personalize value offerings

(Choudhury & Harrigan, 2014). Research emphasizes that customer engagement is strengthened when firms utilize real-time data to design tailored experiences and proactive service delivery (Lemon & Verhoef, 2016). Furthermore, digital touchpoints social media, mobile applications, chatbots, and automated messaging, play a key role in maintaining continuous customer relationships (Šebjan et al., 2014). These findings underscore the need for organizations to adopt structured DCRM capabilities that align with technological advancements and consumer expectations.

An analysis of the specific service context indicates that many participating organizations face challenges such as fragmented customer data, limited digital communication strategies, and minimal use of analytics for decision-making. These constraints hinder their ability to build strong, long-term customer relationships. Therefore, the planned service activities focus on practical, problem-oriented interventions, enabling organizations to optimize data use, strengthen digital engagement, and design loyalty-building mechanisms grounded in DCRM principles. Through this approach, the initiative aims to provide actionable solutions that improve organizational resilience and customer-centric performance in the digital marketplace.

LITERATURE REVIEW

Digital Customer Relationship Management (DCRM) has emerged as a strategic response to the growing complexity of customer interactions in the digital era. Existing research consistently highlights the importance of integrating digital technologies, analytics, and customer engagement mechanisms to build sustained customer loyalty. Early CRM research emphasized database management and structured customer interactions; however, scholars argue that traditional CRM is insufficient in environments where customer behavior evolves rapidly across multiple digital touchpoints (Choudhury & Harrigan, 2014). As a result, contemporary studies increasingly focus on DCRM as a dynamic, data-driven system that leverages real-time information and automated tools to enhance the customer experience.

Companies today must prioritize providing value and cultivating customer loyalty. Customer loyalty is defined as the repeated return to conduct business transactions (purchases), even when the company's product may not be market-leading or the lowest price. This seemingly 'irrational' consumer behavior is often attributed to the 'good relationships' established with customers, which are crucial for a company's long-term retention success. Study Kumar and Reinartz (2018) ultimately confirm that Customer Relationship Management (CRM) significantly influences Customer Loyalty.

A substantial body of literature positions customer engagement as a central outcome of effective DCRM implementation. Engagement theory suggests that customers become more loyal when they experience meaningful, personalized, and continuous interactions with a brand (Brodie et al., 2011). Research by Lemon and Verhoef (2016) expands this view by emphasizing the significance of the customer journey and the need for firms to manage each stage through seamless omnichannel experiences. These studies collectively highlight the importance of integrating digital communication platforms such as social media, mobile applications, and chatbots to maintain consistent relationships and strengthen emotional and behavioral loyalty.

Technological advancements have also shaped the conceptualization of DCRM. Scholars stress the role of big data analytics, artificial intelligence (AI), and automation in transforming raw customer data into actionable insights (Wedel & Kannan, 2016). Predictive analytics enables firms to anticipate customer needs, optimize segmentation, and personalize value propositions. While these technologies offer significant opportunities, some researchers argue that they require substantial organizational readiness,

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including digital capability, data governance structures, and staff competency (Mikalef et al., 2020; Garmaki et al., 2023). Without these foundational elements, organizations struggle to manage data effectively and risk implementing fragmented or ineffective DCRM strategies.

Despite widespread agreement on the potential of DCRM, the literature reveals ongoing debates. One area of contention concerns the balance between personalization and privacy. Research consistently finds that while customers appreciate the convenience and relevance of personalized services, they are uneasy about the data collection and algorithmic processes required to deliver these experiences. This tension is often described as the "acceptability gap": people are more accepting of personalized services than of the underlying data collection, with 64–75% of respondents in Germany, Great Britain, and the US showing this gap (Kozyreva et al., 2020). High levels of privacy concern are reported across countries, regardless of political orientation (Kozyreva et al., 2020; Tian et al., 2024; Raji et al., 2024).

Another debate revolves around the extent to which automation enhances or diminishes customer satisfaction. Some scholars suggest that AI-driven systems improve responsiveness and service quality; others warn that excessive automation may reduce the human touch required to build relational trust (Šebjan et al., 2014). These discrepancies indicate that effective DCRM requires not only technological capability but also strategic consideration of customer expectations and ethical implications.

Furthermore, existing literature identifies gaps related to the implementation of DCRM in smaller enterprises and community-focused organizations. Most DCRM research targets large enterprises, with limited empirical work on MSMEs, especially micro-enterprises (Yasiukovich & Haddara, 2020; Marolt et al., 2020). MSMEs are not simply scaled-down versions of large firms; their DCRM adoption is shaped by distinct resource, knowledge, and cultural constraints (Castagna et al., 2020; Evanita & Fahmi, 2023). Additionally, little attention has been given to capacity-building initiatives, training interventions, or community service programs aimed at strengthening DCRM literacy among practitioners. This gap highlights the need for practical, context-specific approaches that support organizations in developing digital engagement competencies.

In summary, current literature underscores the value of DCRM in enhancing customer loyalty through data-driven engagement, yet significant gaps remain in understanding how organizations with limited resources can operationalize these practices effectively. This study addresses these gaps by offering a structured, service-oriented framework that supports organizations in building digital CRM capabilities, integrating analytics into customer engagement strategies, and navigating technological, organizational, and ethical challenges.

METHOD

This study used a qualitative design with in-depth, semi-structured interviews as the main data collection method. A qualitative approach was chosen because it allows a contextual and detailed understanding of complex social processes and participants' lived experiences (Creswell & Poth, 2018). This design fits the aim of exploring how organizations conceptualize and execute Digital Customer Relationship Management (DCRM) and how data-driven engagement supports long-term loyalty.

Participants were recruited through purposive sampling to capture information-rich cases (Patton, 2015). They included MSME owners or managers, marketing officers, and customer service staff directly involved in digital customer engagement. Inclusion criteria required experience with digital platforms—such as social media, messaging apps, CRM software, or basic analytics—to ensure relevance to DCRM.

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Semi-structured interviews enabled exploration of core topics while allowing participants to elaborate on issues they deemed important (Kallio et al., 2016). The guide covered understanding of DCRM, digital engagement practices, use of customer data, adoption challenges, and views on personalization and loyalty. Interviews were conducted face-to-face or online, recorded with consent, and transcribed verbatim. Data collection continued until saturation, when no new insights emerged (Guest et al., 2020). Field notes captured contextual observations and immediate reflections. Data were analyzed using Braun and Clarke's (2006) thematic analysis, including familiarization, coding, theme development, and refinement. Open, axial, and selective coding were used to identify core themes explaining how organizations leverage digital tools to build relationships and loyalty. Trustworthiness was strengthened through member checking to verify interpretations (Lincoln, 2007), peer debriefing to challenge assumptions, and an audit trail documenting coding steps and analytical decisions.

RESULTS AND DISCUSSION

The qualitative analysis of interview data generated a comprehensive understanding of how organizations adopt and implement Digital Customer Relationship Management (DCRM). Three major themes were identified: (1) fragmented customer data and inconsistent management practices, (2) personalization as a strategic engagement mechanism, and (3) technological capability gaps and adoption barriers.

Theme 1: Fragmented Customer Data and Inconsistent Management Practices

A key issue emerging from interviews was fragmented customer data. Participants stored information across WhatsApp chats, notebooks, Google Sheets, and informal staff records. As one participant explained, "I have customer lists, but they are everywhere… If I need to contact them again, I often have to search for the number manually." This fragmentation created operational barriers: teams struggled to track customer history, follow-up became inconsistent, and many retention opportunities were lost because accurate, centralized data were unavailable. Limited visibility into customer lifetime value also prevented targeted strategies, ultimately weakening overall customer relationship management.

Although participants gathered various customer details, they rarely processed the data systematically, using them mainly for reactive responses rather than strategic personalization. These findings align with Choudhury and Harrigan (2014), who note that organizations often collect substantial data but fail to convert it into strategic insights due to poor integration. Wedel and Kannan (2016) highlight that integration is essential for segmentation and personalization in digital CRM. The interviews show that most organizations remain at a manual, fragmented stage of DCRM maturity. While many participants expressed interest in integrating data, they were uncertain about how to start—echoing Šebjan et al. (2014), who found that early-stage DCRM adoption is often hindered by limited structure and unclear processes.

Theme 2: Personalization as a Central Engagement Mechanism

The second major theme highlights the critical role of personalized communication in strengthening customer relationships. Nearly all participants emphasized that personalization is essential not only for initiating engagement but also for sustaining long-term relational value. Participants described a variety of practices that contribute to this sense of personalization, including sending individualized greetings, addressing customers by name, and offering product recommendations informed by previous purchases. Others noted the positive impact of more emotionally resonant gestures, such as birthday messages or

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loyalty rewards, which make customers feel recognized and appreciated. Additionally, several participants underscored the importance of crafting follow-up messages tailored to each customer's preferences and interaction history. These personalized efforts collectively convey attentiveness and genuine care, which participants viewed as fundamental to effective customer relationship management.

One participant stated:

"If I send a general broadcast message, many customers ignore it. But when I message them by name and mention what they bought before, they respond quickly."

Participants consistently reported better engagement, higher reply rates, repeat purchases, and improved rapport when implementing even simple forms of personalization. This aligns with customer engagement theory, which suggests that personalized interactions increase emotional connection and strengthen customer loyalty (Brodie et al., 2011).

Lemon and Verhoef (2016) argue that personalization across the customer journey improves continuity, satisfaction, and long-term relationship value. The interview findings clearly illustrate this dynamic: participants perceived personalization not as a luxury but as a practical, necessary strategy for retaining customers in competitive digital environments. Additionally, participants emphasized that personalization helped differentiate their brand from competitors. In the context of MSMEs, where product offerings are often similar, relational personalization becomes a strategic asset.

Theme 3: Technological Capability Gaps and Adoption Barriers

The third theme centered on technological readiness and the limitations in digital capability that hindered the effective use of customer management systems. Many participants acknowledged that their familiarity with CRM platforms, analytics features, and customer data dashboards remained limited, which constrained their ability to leverage digital tools for decision-making. Several challenges emerged from their accounts, including a general lack of knowledge about available CRM solutions and a perception that existing digital platforms were overly complex or difficult to navigate. Participants also expressed concerns regarding the cost and long-term sustainability of adopting such technologies, noting that financial considerations often discouraged investment. In addition, limited staff competencies in managing digital systems created further operational bottlenecks, as employees struggled to interpret even basic customer metrics. As a result, many organizations continued to rely on manual or informal digital processes, which reduced efficiency and impeded efforts to build data-driven customer management practices.

One participant expressed:

"I want to use a CRM application, but when I see the interface, I get confused. It looks too complicated. So I just keep using WhatsApp and notes."

These experience-based insights match findings from Mikalef et al. (2020), who argue that digital transformation success depends not only on adopting technology but also on developing digital competencies within the organization. Owners and employees frequently lack the digital skills and knowledge needed to leverage DCRM effectively (Martínez-Peláez et al., 2023; Rupeika-Apoga & Petrovska, 2022; Hendrawan et al., 2024)

The interviews also revealed several sub-barriers that further constrained the implementation of digital customer relationship management. A prominent barrier was limited digital literacy, as many participants were unfamiliar with fundamental CRM functions such as customer segmentation, tagging, automated messaging, and profiling. This lack of understanding restricted their ability to utilize even the most basic features of available systems.

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Another barrier concerned the absence of standard operating procedures, where organizations had no structured workflow for managing customer interactions. As a result, engagement practices were often inconsistent, reactive, and dependent on individual initiative rather than guided by systematic processes. Resource constraints also emerged as a recurring concern; participants perceived CRM systems as expensive or requiring additional staff, even though affordable and user-friendly solutions were readily accessible. This perception reinforced hesitation toward adoption.

Additionally, a notable number of participants expressed fear of making mistakes, including anxieties about "pressing the wrong button" or misinterpreting customer analytics, which further discouraged experimentation with digital tools. These sub-barriers align with broader research indicating that MSMEs commonly face intertwined cultural, technical, and operational constraints when adopting digital systems (Rupeika-Apoga & Petrovska, 2022; Kallmuenzer et al., 2024).

Culturally, many organizations exhibit risk-averse mindsets, resistance to change, traditional business practices, and limited digital awareness. From a technical standpoint, challenges such as outdated legacy systems, insufficient digital skills, inadequate technological infrastructure, and cybersecurity concerns further impede adoption. Operationally, MSMEs often struggle with limited financial and human resources, weak strategic planning capabilities, and restricted access to relevant training opportunities. Together, these factors create systemic barriers that inhibit the effective implementation of digital CRM initiatives. The findings underscore that capability development, rather than mere technological availability, plays a decisive role in determining the effectiveness of digital CRM adoption.

The broader discussion of these findings provides a nuanced understanding of how organizations navigate DCRM practices in real-world settings. The first major theme highlights fragmented customer data as a foundational obstacle. Without integrated data systems, organizations struggle to monitor customer behavior, identify relationship trends, or develop informed engagement strategies. This observation aligns with prior literature emphasizing the centrality of data integration in digital CRM environments (Wedel & Kannan, 2016).

The second theme emphasizes personalization as a widely recognized driver of engagement. Participants consistently viewed personalized communication as both attainable and impactful, echoing previous studies that identify tailored interaction as a key mechanism for enhancing customer loyalty and strengthening long-term relationships (Brodie et al., 2011; Lemon & Verhoef, 2016).

The third theme highlights gaps in technological readiness as a practical constraint that hinders progression toward more advanced, data-driven engagement. These findings reinforce broader discourse on digital readiness, which argues that technological tools alone are insufficient without corresponding skills, organizational routines, and a readiness culture to support their use (Mikalef et al., 2020; Garmaki et al., 2023).

CONCLUSION

The findings derived from interview-based qualitative analysis demonstrate that organizations are actively leveraging customer data to personalize communication, strengthen engagement, and improve overall relational value. However, the results also reveal that fragmentation of customer data, limited internal capabilities, and persistent privacy concerns continue to hinder the full realization of DCRM's strategic potential.

This research highlighted several key conclusions. First, data integration plays a critical role in achieving accurate customer insights and ensuring consistent engagement across multiple digital platforms.

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Organizations that successfully integrate their data systems are better positioned to develop targeted loyalty initiatives and deliver seamless omnichannel experiences. Second, personalization remains a cornerstone of effective DCRM, as it enhances relevance and fosters stronger emotional connections with customers. Third, ethical data governance and transparent communication are essential in building and maintaining customer trust, particularly as consumers grow more aware of privacy issues. Lastly, internal readiness, both technological and human, is necessary to sustain long-term CRM performance, emphasizing the need for continuous capacity building within organizations.

Looking ahead, the development of future DCRM strategies should prioritize deeper system integration, improved employee competencies in data analytics, and stronger organizational commitments to ethical data practices. Investments in advanced CRM technologies, ongoing training programs, and customer-centric governance frameworks will be critical in supporting more responsive, personalized, and trustworthy engagements. By addressing these areas, organizations can enhance the effectiveness of their digital customer relationship initiatives and strengthen their ability to cultivate long-term customer loyalty in increasingly competitive digital environments.

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