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An Integrative Model of Customer Relationship Management and Sustainable Finance in SMEs

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ABSTRACT

This study aims to develop an integrative model of customer relationship management (CRM) and sustainable finance (SF) in culinary small and medium enterprises (SMEs) in Lamongan. The research background is based on the current simple CRM practices and low sustainable finance literacy among business actors. The study used a qualitative-driven mixed methods approach through interviews, observations, and questionnaires with ten culinary SMEs. The results show that although CRM adoption is still limited to manual customer recording and simple loyalty programs, there is great potential to connect it with SF through digitalization, sustainability-based loyalty programs, and the utilization of customer data. The resulting CRM–SF model positions CRM as an enabler to increase customer loyalty while encouraging cost efficiency, green financial literacy, and access to sustainable financing. This research contributes to expanding the function of CRM from a mere marketing tool to a strategic instrument for sustainable financial transformation, while providing practical implications for SMEs, financial institutions, and local governments.

SARI PATI

Penelitian ini bertujuan mengembangkan model integratif Customer Relationship Management (CRM) dan Sustainable Finance (SF) pada UKM kuliner di Lamongan. Latar belakang penelitian didasari oleh praktik CRM yang masih sederhana serta rendahnya literasi keuangan berkelanjutan pada pelaku usaha. Penelitian menggunakan pendekatan qualitative-driven mixed methods melalui wawancara, observasi, dan kuesioner terhadap sepuluh UKM kuliner. Hasil menunjukkan bahwa meskipun adopsi CRM masih terbatas pada pencatatan manual pelanggan dan program loyalitas sederhana, terdapat potensi besar untuk menghubungkannya dengan SF melalui digitalisasi, program loyalitas berbasis keberlanjutan, dan pemanfaatan data pelanggan. Model CRM–SF yang dihasilkan menempatkan CRM sebagai enabler untuk meningkatkan loyalitas pelanggan sekaligus mendorong efisiensi biaya, literasi keuangan hijau, serta akses pembiayaan berkelanjutan. Penelitian ini berkontribusi memperluas fungsi CRM dari sekadar alat pemasaran menjadi instrumen strategis bagi transformasi keuangan berkelanjutan, sekaligus memberikan implikasi praktis bagi UKM, lembaga keuangan, dan pemerintah daerah.

INTRODUCTION

The SME sector, especially the culinary sector, plays a strategic role in the Indonesian economy, absorbing labor, driving the economy, and supporting local economic growth. However, many culinary small and medium enterprises (SMEs) face obstacles such as low production efficiency, raw material waste, and disorganized financial management. This threatens the sustainability of their businesses. Customer relationship management (CRM) helps SMEs manage customer data, increase loyalty, and customize products according to market preferences. CRM is a set of processes to help people deliver value to customers and the company. CRM is more than just a marketing database or a marketing function that provides information about market segments and targets. CRM can also support a company's mission to become more customer-centric by sharing customer-related data more broadly across the company (Zulyanti & Irawan, 2023).

From a theoretical perspective, CRM can be understood as a set of strategic business processes designed to create and deliver value through managing customer relationships (Peppers & Rogers, 2016). Beyond its traditional role as a marketing function, CRM enables firms to systematically capture customer interactions, preferences, and transaction histories, which can be transformed into key financial indicators such as revenue predictability, customer lifetime value, and cash flow stability (Payne & Frow, 2017; Reinartz et al., 2004).

These financial indicators are particularly critical for SMEs, as they enhance financial transparency and credibility (two essential requirements for accessing external financing, including sustainability-oriented funding schemes). In this context, CRM does not merely function as a marketing tool, but as an enabling mechanism that connects customer-based value creation with financial decision-making. Therefore, CRM can serve as a practical and accessible starting point for SMEs to gradually adopt sustainable finance (SF) practices, especially in resource-constrained environments in which advanced financial systems are not yet available.

Digitalization and two-way communication through social media and digital transactions have been proven to facilitate market access and strengthen customer relationships (Hoegh et al., 2024; Nurjannah et al., 2025; Wahab et al., 2023). The pre-research phase conducted on a sample of culinary SMEs in Lamongan, East Java, showed that CRM practices in culinary SMEs in Lamongan are still minimal: customer data is rarely recorded, and loyalty programs are not available or do not stimulate customers to provide feedback. This has the potential to weaken cash flow. A study in Bandung showed that, although culinary SMEs have implemented environmentally friendly practices (green practices), supply chains that apply sustainability principles have been shown to improve economic and environmental performance (Anggita et al., 2025). Thus, CRM can be a strategic bridge between operational innovation, sustainable services, and better access to financing (such as green financing, bank capital, or social funding) (Majid et al., 2023).

The concept of SF has been a hot topic in various countries in recent years, including Indonesia. Currently, the transformation of the financial system through SF is a way to ensure that financial flows are in line with environmentally friendly development (Setyowati, 2023). SF is the integration of environmental, social, and governance (ESG) issues into financial decisions. Sustainability in companies today is not just a side issue that is limited to the responsibility of the corporate social responsibility (CSR) department, but is a CEO-level issue that is fundamental to the core of the business (Edmans & Kacperczyk, 2022).

Although the concept of SF continues to develop, there are various challenges for certain groups, that is the integrated implementation with CRM in SMEs. Therefore, it is crucial to strengthen the customer management ecosystem, drive cost efficiency, and thus create business sustainability. Addressing this gap requires an integrative perspective that not only links marketing and financial functions but also reflects the operational realities of SMEs. This study responds to this need by developing a CRM – a SF integrative model that is empirically grounded and practically applicable.

Despite the growing body of literature on CRM and SF, these two domains have largely evolved in parallel rather than in an integrated manner, particularly in the context of SMEs. Existing studies on CRM predominantly focus on marketing performance, customer retention, and digital engagement, while SF research emphasizes financial systems, ESG integration, and institutional frameworks. As a result, there is a limited understanding of how customer-related data and relationship management practices can be translated into financial decision-making processes that support sustainability.

This gap is even more pronounced in developing country contexts, where SMEs operate with limited resources, low digital maturity, and minimal exposure to SF instruments. Consequently, there is a need for a contextually grounded framework that bridges CRM practices with SF adoption in a way that is both practical and accessible for SMEs. Addressing these gaps requires not only conceptual integration but also a practical framework that reflects the operational realities of SMEs.

In the specific context of culinary SMEs in Lamongan, several structural challenges remain evident. First, CRM practices are still largely traditional and lack systematic data utilization. Second, financial management remains informal, with limited separation between personal and business finances. Third, there is a disconnect between customer data and financial decision-making. Finally, awareness of SF principles remains low, limiting the adoption of sustainability-oriented practices. Customer information is not used to support financial decisions in culinary SMEs. Fourth, low awareness of SF principles has resulted in decreased focus on efficiency and sustainability practices among culinary SMEs. These issues can impact customer loyalty and threaten business continuity. The solution to this problem is to develop a CRM model integrated with SF. CRM can be a gateway to more sustainable financial practices for SMEs in the Lamongan culinary sector. The proposed problem-solving strategy involves exploring CRM practices naturally through interviews and observations. The next step is to map the financial system simply by recording sales and expenses and evaluating the use of simple financial technology. Finally, we identify the intersection between CRM and SF, resulting in a CRM model integrated with SF.

The contribution and novelty of this research are grounded in several aspects. First, it is an interdisciplinary study, integrating two concepts, namely the concepts of CRM and SF, in the context of SMEs. In previous studies, the matters discussed focused only on each discipline (discussed separately between CRM and SF). Previous research on CRM has indeed been widely studied, but in the context of large companies, fintech, or modern retail, while SMEs, especially the culinary sector, have not been widely studied (Nurfarida et al., 2021). Studies on the business sustainability in SMEs mostly discuss environmentally friendly practices directly, but few look at how CRM encourages access to financing and financial stability (Majid et al., 2023). Second, it is a study with a local contextual approach, namely raising the context in Lamongan, which reflects the unique characteristics of SMEs in semi-urban areas that have not received much academic attention. Third, the model that will be produced in the final result is an applicable integrative model in the form of a CRM-SF model that is applicable and simple. Thus, it is hoped that it can be directly applied by SME actors.

Building on this foundation, the novelty of this study lies not only in combining CRM and SF concepts but in positioning CRM as a functional entry point for SF adoption among SMEs. Unlike prior studies that treat sustainability as a separate operational or financial domain, this research proposes a bottom-up integration approach in which customer data and relationship management practices serve as the basis for financial planning, efficiency, and access to sustainable financing.

Furthermore, this study introduces digitalization as a bridging mechanism that operationalizes the integration between CRM and SF. By emphasizing simple and scalable digital tools, the proposed model offers a practical pathway for SMEs to transition from traditional practices to sustainability-oriented financial management. This approach contributes to the literature by providing a micro-level, implementation-oriented perspective that has been largely overlooked in previous research. Therefore, this study aims to develop an integrative CRM–SF model for culinary SMEs, positioning CRM as an entry point and digitalization as a bridging mechanism to support sustainable financial practices.

METHODS

This study employed a qualitative-driven, mixed-methods approach with an exploratory case study design to develop an integrative model of CRM and SF in culinary SMEs in Lamongan. This approach was selected to provide an in-depth understanding of existing business practices while simultaneously supporting the development of a contextually grounded conceptual model. The research focused on ten culinary SMEs, selected using purposive sampling. The selection criteria included SMEs that: (1) had operated for at least two years, (2) were actively engaged in culinary business activities, and (3) had utilized basic digital platforms such as WhatsApp, Instagram, or TikTok in their marketing activities. The selected SMEs represented variation in product type, business scale, and digital adoption level, thereby ensuring an information-rich dataset.

The sample size of ten SMEs was considered appropriate, given the exploratory nature of the study, in which emphasis was placed on the depth of insight rather than statistical generalization. In a qualitative inquiry, smaller samples are acceptable when they generate rich contextual data and allow detailed interpretation (Creswell & Poth, 2016). Data collection continued until thematic saturation was achieved, and additional interviews no longer produced substantially new insights.

Data were collected through three techniques: (1) in-depth interviews with SME owners or managers to explore CRM practices, financial management, and sustainability awareness; (2) direct observation of business operations, especially customer interactions and financial recording practices; and (3) a structured Likert-scale questionnaire to capture descriptive indicators of CRM dimensions (customer data management, engagement, loyalty programs, and digital channels) and SF dimensions (green investment needs, green loan access, and sustainability reporting).

Qualitative data were analyzed using a grounded approach, involving data reduction, open coding, categorization, and theme development to identify patterns linking CRM and SF practices. Quantitative questionnaire data were analyzed using descriptive statistics (frequency and mean values) to support data triangulation. It is important to note that the percentages reported in this study (e.g., 40%, 60%, and 70%) are derived from a limited sample and are used solely for descriptive and illustrative purposes. These figures are not intended to represent statistically generalizable findings but rather to strengthen the qualitative interpretation. The integration of qualitative insights and descriptive quantitative evidence enabled the development of a contextually grounded CRM–SF integrative model, positioning this study as an initial model-building effort rather than a confirmatory statistical analysis.

RESULTS AND DISCUSSION

Result

The findings indicate that the integration of CRM and SF among culinary SMEs in Lamongan is still in an early developmental stage. While most participating SMEs have begun implementing basic customer management practices, the connection between customer-related information and financial sustainability is still largely informal and fragmented. This suggests that the existing practices provide an initial foundation for a more integrated CRM–SF approach, although substantial organizational and digital capability gaps remain.

The study involved ten culinary SMEs in Lamongan that had operated for at least two years and had adopted basic digital platforms such as WhatsApp, Instagram, or TikTok for marketing purposes. The participating businesses included Najma Cookies, Ar-Razaq Cakes, Aqilla, Dins Snack, LaPrimarasa, Ananda, Ratatita, Seblak Gandol, Bu Lis, and Bu Nafiah, representing a range of local food and beverage enterprises. Data were collected through semi-structured interviews and descriptive questionnaires with the SME owners, as presented in Table 1.

CRM Adoption Level Versus Digitalization Readiness

Preliminary findings show that CRM adoption among culinary SMEs in Lamongan remains at an early operational stage. At this stage, CRM is commonly limited to basic customer interaction management rather than the strategic use of customer knowledge to improve long-term firm performance (Buttle & Maklan, 2019). Most participants maintain customer relationships through manual records, informal communication, and simple loyalty incentives such as repeat-purchase discounts. Only a limited number of SMEs have begun using basic digital tools such as spreadsheets or messaging applications to support customer management.

Table 1. Interview Guide And Semi-Structured Questionnaires

Dimension / Item Statement	Frequency (Yes)	Mean (1–5)	Interpretasi
CRM – Customer Relationship Management			
Use social media for market research	8	4.00	High
Discuss customer needs on social media	1	0.50	Low
Collect customer satisfaction data from social media	4	2.00	Low
Monitor competitor information through social media	2	1.00	Low
Dimension / Item Statement	**Frequency (Yes)**	**Mean (1–5)**	**Interpretasi**
Involve customers in product development	2	1.00	Low
Customer information is used for segmentation	3	1.50	Low
Use social media to detect customer preferences	3	1.50	Low
Conduct live meetings with customers	4	2.00	Low
Implement loyalty program (regular customer discounts)	7	3.50	Medium–High
Offer digital customer registration	4	2.00	Low
SF - Sustainable Finance			
Invest in environmentally friendly practices	2	1.00	Low
Use energy-efficienct technology	3	1.50	Low
Have funding plan for environmentally friendly projects	1	0.50	Low
Know about green loan facilities	2	1.00	Low
Assess opportunities for access to green finance	2	1.00	Low
Meet green loan requirements	2	1.00	Low
Record energy/water/resource usage	4	2.00	Low
Separate business and personal accounts	4	2.00	Low
Create sustainability reports for transparency	2	1.00	Low

Source: Processed Data, 2025

Questionnaire results further confirm this pattern. Approximately 70% of respondents still record customer data manually, while only 40% have shifted to simple digital formats such as Excel or Google Sheets. In addition, 60% of SMEs reported implementing loyalty programs, although these remain informal and short-term in nature. Customer communication is still dominated by WhatsApp, while social media is mainly used passively for promotion rather than strategic engagement.

From a theoretical perspective, this condition reflects the initial stage of CRM maturity, where SMEs prioritize customer retention through interpersonal interaction before transitioning toward data-driven relationship management (Payne & Frow, 2017). At this stage, CRM is commonly limited to basic customer interaction management rather than the strategic use of customer knowledge to improve long-term firm performance (Buttle & Maklan, 2019). Similar findings have been reported by (Reinartz et al., 2019), who found that SMEs in developing economies often begin with operational CRM before progressing toward analytical digital systems.

Although digital integration remains limited, the existence of basic customer recording practices indicates that these SMEs already possess the foundational elements required for gradual digital transformation. This finding suggests that digital readiness alone does not automatically translate into effective CRM capability unless customer data are systematically converted into managerial insights. However, the limited use of customer data for segmentation, personalized promotion, and financial planning suggests that digitalization has not yet been fully utilized as a strategic bridge toward SF.

Awareness of Sustainable Finance Remains Low.

The findings of this study indicate that awareness of SF among culinary SMEs in Lamongan remains relatively low. Most respondents were unfamiliar with concepts such as green investment, green loan access, and sustainability reporting, suggesting that SF has not yet become part of routine business decision-making. Financial management among respondents continues to focus primarily on short-term operational needs, particularly daily cash flow management and working capital availability, rather than long-term business sustainability.

The interview data presented in Table 1 reinforce this pattern. All respondents reported recording cash inflows and outflows; however, only 40% separated personal and business accounts, while only 20% had established a business emergency reserve, usually through informal monthly savings from gross profit. In addition, although 50% of respondents stated that they reinvested part of their profits, these decisions were generally made without formal financial planning or sustainability considerations. These findings suggest that financial practices remain reactive rather than strategically oriented toward resilience.

This pattern is consistent with previous studies showing that SME owners in developing economies tend to prioritize immediate financial survival over sustainable investment planning. Greitens and Baden-Württemberg (2023) found that many SMEs focus on short-term liquidity while paying limited attention to investments related to energy efficiency, waste reduction, or environmental reporting. Similarly, Fernando et al. (2023) identified green financial literacy gaps, limited information access, and weak institutional incentives as major barriers to SF adoption among SMEs. Yip and Bocken (2018) further emphasized that SMEs frequently prioritize short-term profitability over sustainability-oriented investments, particularly in resource-constrained environments.

In the Lamongan context, the low level of SF awareness appears to be further influenced by limited managerial capacity, which has been identified as a critical barrier to sustainability implementation in SMEs (Schaltegger et al., 2019). Nevertheless, research by Tollin and Christensen (2019) demonstrates that consumer expectations in the food and beverage sector are increasingly shifting toward transparency and sustainability, suggesting that SMEs that fail to adapt may face long-term competitive disadvantages.

From a theoretical perspective, this finding identifies the financial capability gap often observed in SMEs, for which operational survival takes precedence over strategic sustainability planning. Previous studies suggest that sustainability integration in SMEs depends not only on financial resources, but also on managerial capability to translate sustainability principles into routine business decisions (Schaltegger et al., 2019). Therefore, the low awareness of SF identified in this study should not be interpreted merely as resistance to innovation, but rather as an indication of the limited institutional and knowledge support available to local SMEs. This condition strengthens the argument that literacy enhancement and gradual digital financial integration are necessary prerequisites for the successful integration of CRM and SF.

Potential to Integrate CRM Strategy with Sustainable Finance

Another important finding is that the current conditions of culinary SMEs in Lamongan reflect an early-stage foundation with gradual potential for integrating CRM practices with SF. Although most respondents demonstrated limited familiarity with SF concepts, several SMEs showed openness toward customer-oriented innovation, particularly in digital promotion and communication activities. This suggests that, while the financial sustainability dimension remains underdeveloped, the relational dimension of CRM has begun to emerge as a possible entry point for future integration.

The interview findings presented in Table 1 further support this interpretation. All participating SMEs reported using social media platforms such as Instagram or WhatsApp for promotional purposes; however, these tools were primarily used for communication rather than for systematic customer data collection or strategic analysis. Only 30% of respondents recognized the need to invest in environmentally friendly business practices, while only 20% reported awareness of sustainability-based financing facilities. These findings indicate that the current level of integration remains limited, but they also reveal the presence of basic digital and relational capabilities that could support a more gradual transition.

From a practical perspective, the integration of CRM and SF may occur through several mechanisms. First, customer data generated through CRM can help SMEs identify consumer preferences for environmentally responsible products, such as organic ingredients or biodegradable packaging. Second, loyalty programs can be redesigned to encourage sustainable behavior; for example, by offering incentives for reusable packaging or low-waste purchasing patterns. Third, digital engagement platforms such as WhatsApp Business, Instagram, and marketplace applications can function as communication channels for both customer engagement and basic financial transparency. This interpretation is consistent with the findings of Ghosh (2021), who found that digital-based CRM can strengthen customer trust while improving investor confidence. Similarly, Ahn and Rho (2022) demonstrated that digital transformation in SMEs can improve marketing efficiency while expanding access to sustainability-oriented financing opportunities.

From a theoretical perspective, this finding supports the view that digitalization can serve as an intermediary capability, linking customer relationship processes with broader financial sustainability goals. Recent studies suggest that SMEs often adopt sustainability gradually through small operational changes rather than through immediate strategic transformation (Hoegh et al., 2024; Schaltegger et al., 2019). In this context, CRM should not be interpreted as a direct pathway to SF, but rather as a progressive enabling mechanism that can strengthen financial discipline, customer trust, and long-term business resilience.

Therefore, the findings of this study do not suggest immediate readiness for full CRM–SF integration. Instead, they indicate that culinary SMEs in Lamongan possess an initial platform from which customer relationship practices may gradually evolve into more sustainable financial management. This positions CRM as a realistic starting point for sustainability transformation in resource-constrained SME environments.

Discussion

The findings of this study suggest that the integration of CRM and SF in culinary SMEs should be understood as a gradual and capability-based process rather than an immediate strategic transformation. The empirical evidence presented in Tables 2 and 3 shows that even simple CRM practices such as customer data recording, basic segmentation, and personalized communication can begin to generate financial information that supports revenue planning, cost control, and business resilience. In the context of Lamongan culinary SMEs, customer purchase records were found to provide practical value beyond marketing activities. Regular purchase data can be translated into monthly revenue projections, customer visit patterns can support raw material planning and waste reduction, and customer loyalty can improve cash flow through pre-order systems.

These findings support previous studies, which argue that systematic relationship management contributes to stronger financial stability and long-term firm performance (Payne & Frow, 2017; Reinartz et al., 2004). Importantly, the evidence from this study suggests that such integration does not require sophisticated enterprise systems, but can begin through low-cost digital tools such as Google Sheets, POS applications, and WhatsApp Business.

The proposed three-month implementation roadmap further illustrates that CRM can function as an operational entry point for SF. Rather than requiring immediate adoption of complex sustainability reporting systems, SMEs can first strengthen internal customer knowledge, then gradually connect that knowledge to cost efficiency and financing readiness. This staged process is consistent with the view that SMEs typically adopt sustainability incrementally through manageable operational changes rather than radical organizational restructuring (Hoegh et al., 2024; Schaltegger et al., 2019).

From a theoretical perspective, the findings extend the existing CRM literature by demonstrating that customer relationship processes can influence not only marketing outcomes but also financial sustainability. Traditional CRM studies have primarily emphasized customer loyalty and lifetime value

Table 2. Simple CRM Model for Culinary SMEs

CRM Components	Simple Practices for SMEs	Examples of Free/Inexpensive Tools
Customer Database	Save names, phone numbers, and purchase history	Google Sheets, Excel, the "Customer" feature in POS apps like Kasir Pintar
Customer Segmentation	Differentiate between loyal, occasional, and new customers	Use filters in Sheets or the tag feature in POS apps
Communication & Promotion	Send promotions via WhatsApp, Instagram, or SMS	WhatsApp Business (free)
Feedback & Satisfaction	Ask for customer feedback with a short questionnaire	Google Forms, a small piece of paper on your desk
Data Analysis	Calculate average purchase, favorite menu items, and peak periods	Simple formula functions in Excel or POS reports

Source: Processed Data, 2025

Table 3. Recommendations for implementing CRM-SF within three months

Month	CRM Activities	SF Activities	Output/Indicator
Month 1	• Start collecting customer data (name, phone number, favorite menu items). • Use a POS app or Google Sheets.	• Identify the largest costs (electricity, raw materials, packaging). • Look for cost-effective options (e.g., LEDs, local suppliers).	• A database of at least 30 registered customers. • A list of cost-efficiency opportunities.
Month 2	• Segment loyal and regular customers. • Send thank you messages/ promotions via WhatsApp Business.	• Replace plastic packaging with paper or biodegradable ones. • Start tracking energy/cost savings.	• At least two promotional campaigns for loyal customers. • Small cost/energy savings reports.
Month 3	• Conduct simple satisfaction surveys (Google Forms or paper). • Create sales and promotion response recaps.	• Prepare a brief report: revenue, number of loyal customers, and environmentally friendly initiatives. • Use this report to apply for financing (KUR/CSR/grants).	• Have a mini-CRM + sustainability report. • Ready to apply for green/ MSME financing.

Source: Processed Data, 2025

(Kumar & Reinartz, 2016), whereas SF literature has focused more heavily on ESG reporting and institutional financing mechanisms (Weber, 2017). This study contributes by showing that digitalization can act as an intermediary capability linking these two previously separate domains. In particular, digital tools allow customer information to be transformed into operational and financial insights that strengthen SME readiness for sustainability-oriented financing (Ahn & Rho, 2022; Ghosh, 2021).

To further explain this relationship, the integrative CRM–SF model developed in this study provides a conceptual representation of how digitalized customer management can support sustainable financial practices in SMEs. The CRM–SF integration model developed in this study positions CRM as the operational starting point for SF adoption in SMEs. As illustrated in Figure 1, the model begins with four CRM inputs (customer data management, customer engagement, loyalty programs, and digital channels), which generate customer-related information that can be transformed into financial insight.

Among these components, customer data management plays a central role because it enables SMEs to identify purchasing patterns, estimate recurring revenue, and evaluate customer preferences for environmentally responsible products. This information can then support the identification of green investment priorities and improve the credibility of SMEs when seeking sustainability-oriented financing (Bharadwaj et al., 2022; Weber, 2017).

Customer engagement and loyalty programs strengthen the relational dimension of the model by creating a sustainable business case. Continuous interaction with customers helps SMEs understand changing consumer expectations regarding environmental responsibility, while loyalty-based incentives can encourage sustainable consumption behavior (Bruhn, 2023; Kumar & Reinartz, 2016). In this way, customer relationships become not only a source of revenue, but also a mechanism for reinforcing sustainability values in daily business practice.

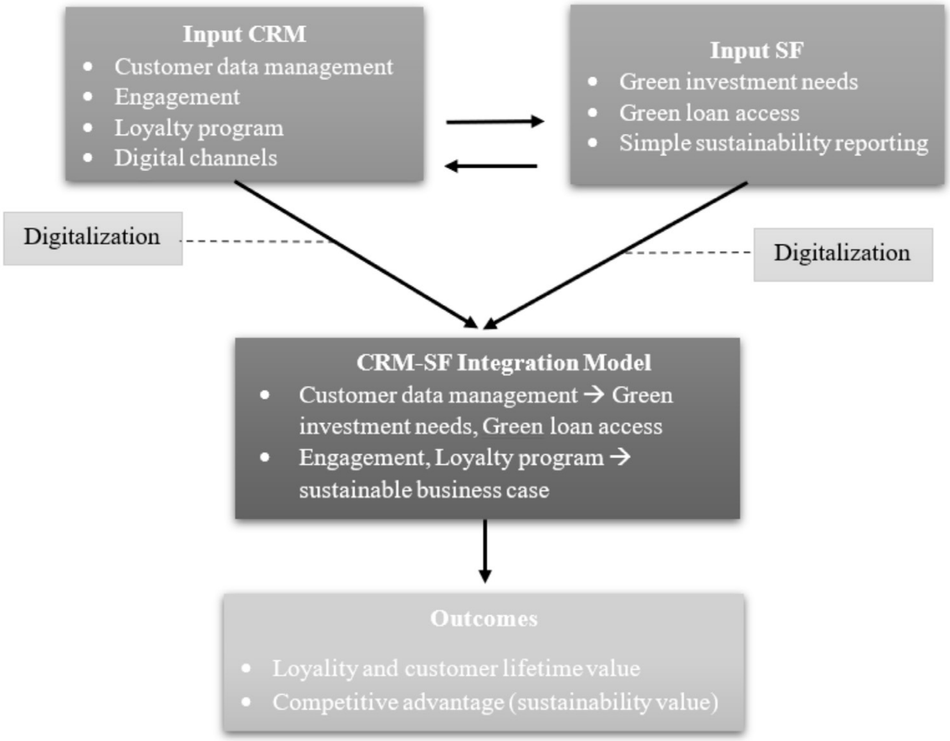

Figure 1. CRM–SF integration model for SMEs
Source : Processed Data, 2025

The model further identifies digitalization as the bridging mechanism that links CRM practices with SF. Digital tools such as WhatsApp Business, POS applications, and spreadsheet-based customer records enable SMEs to convert customer information into more structured financial documentation. This supports simple sustainability reporting, improves transparency, and increases access to financing opportunities that increasingly require digital business evidence (Ahn & Rho, 2022; Ghosh, 2021; UNEP Finance Initiative, 2021).

Through this process, CRM no longer functions solely as a customer retention tool. Instead, it evolves into a managerial capability that supports financial planning, operational efficiency, and sustainability-oriented decision-making. The integration process shown in Figure 1 demonstrates that customer data can contribute to green investment planning, while engagement and loyalty activities can strengthen the business case for SF (KPMG International, 2020; Mudalige, 2023).

The resulting outcomes of this model include stronger customer loyalty, improved customer lifetime value, and the development of sustainability-based competitive advantage. This supports the argument of Kramer and Porter (2011) that sustainability can become a source of strategic value creation when embedded in business operations.

The main academic contribution of this model lies in extending the role of CRM beyond marketing performance toward sustainable financial capability at the SME level. Rather than treating marketing and finance as separate domains, this study demonstrates how digital CRM can function as a practical pathway through which resource-constrained SMEs gradually adopt SF practices.

Nevertheless, because the framework was developed from a limited sample of ten SMEs, the model should be interpreted as an exploratory rather than statistically validated framework. Its contribution lies in offering a contextually grounded basis for future empirical testing in broader SME populations. Further quantitative research is needed to examine whether CRM capability significantly influences SF adoption through the mediating role of digitalization.

MANAGERIAL IMPLICATION

Practically, the integrative CRM–SF model offers a feasible pathway for culinary SMEs in Lamongan to begin aligning customer management with sustainability-oriented financial practices. For SME owners, CRM can function not only as a customer retention tool but also as a simple platform for improving financial literacy, transparency, and business planning. For financial institutions, customer-related business records may provide an additional reference for assessing the readiness of SMEs to access sustainability-oriented financing schemes.

For local governments and SME development agencies, the model could serve as a reference for designing policy interventions that support SME digitalization, financial inclusion, and sustainability capacity building. In this context, targeted training programs in digital CRM, basic financial recording, and green business awareness may strengthen the long-term resilience of local SMEs.

CONCLUSION

This study found that culinary SMEs in Lamongan have begun implementing simple CRM practices, particularly customer data recording and loyalty-based communication, although these practices remain largely manual and have not yet been systematically integrated with digital systems or SF mechanisms. The findings also indicate that awareness of SF remains limited, particularly in relation to green investment, green loan access, and sustainability reporting.

Despite these limitations, the findings suggest that CRM may provide an initial operational foundation for linking customer management with SF through the use of customer data, digital communication, and sustainability-oriented customer engagement. The CRM–SF integration model developed in this study demonstrates how CRM can gradually evolve beyond customer retention toward supporting financial planning, cost efficiency, and improved readiness for sustainability-oriented financing.

However, the proposed model should be interpreted as an exploratory framework, because it was developed from a limited qualitative sample of culinary SMEs in a single regional context. Its primary contribution lies in offering a contextually grounded model that may guide future research and practical experimentation in similar SME environments. Future quantitative studies are needed to examine whether CRM capability significantly influences SF adoption, particularly through the mediating role of digitalization.

Further testing across non-culinary SME sectors is also necessary to evaluate the broader applicability of the model. Overall, this study suggests that CRM–SF integration may represent a promising pathway for SMEs seeking to improve business resilience while gradually aligning with sustainability-oriented economic development.

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