THE ROLE OF E-CRM IN SHAPING CUSTOMER EXPERIENCE SATISFACTION AND LOYALTY IN THE BANKING INDUSTRY

Pradeep Mamgain[1], Nibras Kadhim Abed Ouj[2]

[1] *HNBG University, India*
[2] *University of Kerbala, Iraq*

Corresponding author:
Pradeep Mamgain
Email : pradmamgain@gmail.com

Conflict of interest statement:
Author(s) reported no conflict of interest

ABSTRACT

Objective: This study aims to systematically synthesize the relationship between Electronic Customer Relationship Management (E-CRM), customer experience, customer satisfaction, and customer loyalty in the banking industry. This study addresses the theoretical gap regarding the mediating role of experience and satisfaction in the context of digital banking, as well as identifying areas for further empirical exploration.

Research Design & Methods: This study uses a systematic literature review design by analysing national and international journal articles published between 2020 and 2025 on E-CRM in the banking sector. This analysis combines descriptive classification and synthesis to identify key variables, methodological trends, and research gaps related to the relationship between E-CRM, customer experience, satisfaction, and loyalty.

Findings: This review shows a consistent positive and significant relationship between E-CRM and customer loyalty, which is largely mediated by customer experience and customer satisfaction across various sectors, indicating that improvements in digital service quality, ease of use, and personalization contribute to a stronger experience and satisfaction, which in turn strengthens loyalty. Additionally, contextual factors such as system quality, security, trust, and relationship quality significantly influence the effectiveness of E-CRM implementation.

Implications & Recommendations: These findings theoretically confirm that E-CRM plays a central role in shaping customer experience, satisfaction, and loyalty, and practically recommend that banks develop user-oriented E-CRM through omnichannel integration, improved security, personalization, service quality, and a sustainable feedback system.

Contribution & Value Added: This study contributes academically through the integrative framework of E-CRM–experience–satisfaction–loyalty while offering practical value by formulating strategic directions for E-CRM implementation and an agenda for further research.

Keywords: E-CRM, Customer Experience, Customer Satisfaction, Customer Loyalty, Digital Banking.

JEL codes: M31, D83, L86
Article type: research paper

INTRODUCTION

The global banking industry has undergone significant digital transformation over the past two decades, driven by rapid advances in information and communication technology (ICT). The integration of information technology, digitization of business processes, and adoption of artificial intelligence have become strategic foundations for banks to improve the effectiveness of customer

relationship management in the digital age (Ke and Wel, 2024). This transformation is further accelerated by the shift in customer preferences from conventional banking services based on physical branches to digital platforms that offer greater convenience, speed, and accessibility (Rashwan et al., 2020). In the context of digital banking, the implementation of an Electronic Customer Relationship Management (E-CRM) system has become an unavoidable strategic necessity, given its crucial role in managing customer interactions through various electronic communication channels and providing personalized services tailored to individual customer needs (Asadi et al., 2024).

The intensity of competition in the banking industry has increased sharply with the proliferation of digital banks and fintech companies offering innovative financial services with lower operating costs (Al-Dmour et al., 2019). This competitive environment creates significant pressure for banks to not only attract new customers, but more importantly, retain existing customers through effective retention strategies (Al-Karim et al., 2023; Mang'unyi et al., 2017). Research shows that effective E-CRM implementation can improve the quality of electronic services, which in turn strengthens brand image and customer loyalty, especially when customer satisfaction is high (Ahmad and Hameed, 2025). In a highly competitive environment, a bank's ability to build and maintain long-term relationships with customers through an integrated E-CRM system is a key differentiator that determines business success and sustainable growth (Rashwan et al., 2020).

E-CRM plays a fundamental strategic role in building and maintaining long-term relationships between banks and customers through various interrelated mechanisms. A comprehensive E-CRM system covers key dimensions such as customization strategies, electronic communication channels, service personalization, customer support, and integrated data management (Adlin et al., 2019; Suchitra and Merugu, 2024). Empirical research shows that E-CRM influences customer loyalty through various important mediators, including service quality, customer satisfaction, and bank reputation, indicating its strategic role in improving transactional and relational outcomes (Haghighinasab et al., 2025). E-CRM models that integrate technological, human, and organizational components have been shown to have a significant positive impact on customer satisfaction and loyalty, with technology factors, particularly IT management, being the strongest predictor (Asadi et al., 2024). Furthermore, in the context of banking digital transformation, IT integration and CRM digitization, combined with well-planned CRM strategy execution, are critical strategic levers for improving CRM efficacy and organizational performance in a banking landscape increasingly driven by AI (Ke and Wel, 2024).

Banks realize that maintaining relationships with customers is crucial not only to achieve competitive advantage but also to survive in the long term (Oumar et al., 2017). Therefore, banks have shifted their focus from a bank-centric approach to a customer-centric approach in order to improve their relationships with existing and potential customers (Ahmed, 2009). In the context of digital-only banking, reputation and E-CRM together drive customer loyalty, with customer satisfaction acting as a key mediator (Haghighinasab et al., 2025). With E-CRM, customers can interact with their bank anytime and anywhere, providing convenience for customers (Lam et al., 2013). Therefore, E-CRM can be considered the definitive solution for both banks and customers. Retaining existing customers is more profitable than acquiring new ones (Kumar and Mokha, 2021).

Customer retention is more profitable than acquiring new customers, and E-CRM is seen as a key strategy for building satisfaction, loyalty, and organizational profitability (Dubihlela and Khosa, 2014; Lee-Kelley et al., 2003). Customer satisfaction drives repeat purchases and positive word-of-mouth, which strengthens loyalty (Taylor and Hunter, 2002). Meanwhile, E-CRM practices enable organizations to continuously record and manage customer interactions to create unique and memorable experiences (Klaus and Maklan, 2013). Although several studies have highlighted the positive role of E-CRM in improving customer satisfaction and loyalty, there is still a lack of an integrative framework that simultaneously covers the technological, experiential, and relational dimensions, especially in the context of digital banking alone. Therefore, this study seeks to fill the gap by providing an integrated understanding of the role of E-CRM in shaping customer experience, customer satisfaction, and customer loyalty in the digital banking industry. This study examines the interactions between these four constructs and analyzes the benefits of E-CRM for banks and

customers through a systematic literature review covering the period 2020–2025. The results of this study are expected to identify relationship patterns, research trends, and research gaps, while also providing theoretical contributions and practical implications for the development of more effective E-CRM strategies.

LITERATURE REVIEW

Electronic Customer Relationship Management (E-CRM)

Electronic Customer Relationship Management (E-CRM) is an evolution of traditional CRM that utilizes digital technology to manage customer relationships through integrated electronic channels. The literature defines E-CRM as a system that combines human, technological, and organizational factors, with technological factors, particularly IT management and integration, as the strongest predictors of customer satisfaction and loyalty in the banking sector (Asadi et al., 2024). In the context of modern banking, E-CRM encompasses IT adoption, CRM digitization, customer data management, and multi-channel personalized communication that enables real-time, large-scale service personalization (Ke and Wel, 2024; Suchitra and Merugu, 2024). Unlike traditional CRM, which focuses on physical interactions and manual processes, E-CRM emphasizes digital channels such as mobile banking, internet banking, email, and social media within an omnichannel framework, supported by real-time data analytics to improve customer experience, satisfaction, and loyalty (Magatef et al., 2023; Rahma et al., 2023). The implementation of E-CRM in banking involves the use of mobile applications, integrated CRM systems, data management platforms, as well as investment in infrastructure and human resource training, which has been proven to increase customer engagement, satisfaction, and loyalty when supported by good e-service quality and usability (Magatef et al., 2023; Suchitra and Merugu, 2024). However, literature also emphasizes that the success of E-CRM is not only determined by technology, but also by the quality of the user experience (Putri et al., 2025).

Customer Experience

Customer experience in digital banking refers to the perceptions, interactions, and cognitive and emotional responses of customers throughout their customer journey across all electronic touchpoints, and is understood as a holistic concept that encompasses the functional, mechanical, and human aspects of the services offered by banks (Berry et al., 2002; Gentile et al., 2007; Schmitt et al., 2015; Verhoef et al., 2009). In E-CRM literature, customer experience is viewed as a key mediator that bridges the influence of E-CRM on customer satisfaction and loyalty through a serial mediation mechanism, namely E-CRM → customer experience/e-service quality → satisfaction → loyalty (Al-Karim et al., 2023; Asadi et al., 2024; Mokha and Kumar, 2024). Improvements in E-CRM quality enhance customer experience at digital touchpoints such as mobile banking, personalization, digital customer service, and transaction security, which in turn drive satisfaction, retention, and willingness to recommend in a banking context with limited face-to-face interaction. Although customer experience is recognized as a strategic asset in building long-term relationships and improving business performance, its measurement in banking E-CRM studies is still implicit and fragmented, with the adoption of a consistent multi-dimensional experience scale still relatively limited (Chahal and Dutta, 2015; Mulyo and Situmorang, 2018; Verhoef et al., 2009).

Customer Satisfaction

Customer satisfaction in electronic banking represents a comprehensive evaluation by customers of the quality of digital services received and the extent to which these services meet or exceed expectations. It is positioned in E-CRM literature as the main outcome and central mediator linking E-CRM and e-service quality with loyalty and willingness to recommend (Farhadi et al., 2013; Oliver, 1999). Customer satisfaction arises from the gap between expectations and perceived service performance, where performance that exceeds expectations results in higher levels of satisfaction (Mulyo and Situmorang, 2018), and in the context of intense competition, becomes a key factor in organizational success (Oliver, 1999). A number of studies show that effective E-CRM improves e-service quality and service personalization, which in turn strengthens customer

satisfaction and translates into e-loyalty and customer advocacy through sequential mediation mechanisms (Bataineh, 2015; Chu Liu et al., 2012).

Customer Loyalty

Customer loyalty is defined as a customer's deep commitment to continue using and repurchasing a particular product or service in the future, despite situational pressures and marketing efforts that may encourage brand switching (Oliver, 1999). Customer loyalty reflects an organization's success in building long-term, mutually beneficial relationships with customers (Alhaiou et al., 2012; Oumar et al., 2017). Customer loyalty is built through consistent positive experiences, superior service quality, reliable customer support, and trustworthy privacy policies, and is greatly influenced by the level of trust and commitment customers have in the brand or service provided (Leverin and Liljander, 2006; Maroofi et al., 2012; Sudhahar et al., 2006). In the context of electronic banking, loyalty is manifested through e-loyalty, intention to repeat transactions, positive word-of-mouth, and willingness to recommend, which are formed through the mediation mechanism of E-CRM on customer experience and satisfaction, both directly and through improvements in e-service quality (Al-Karim et al., 2023; Mokha and Kumar, 2024; Rashwan et al., 2020). Customer loyalty has significant strategic implications for the sustainability and profitability of banks because it encourages customer retention, organic referrals, cost efficiency, and increased customer lifetime value, given that retaining existing customers is more cost-effective than acquiring new ones (Khan and Khawaja, 2013; Reichheld and Teal, 1996).

METHODS

This study uses a literature review method by examining national and international journal articles that discuss Electronic Customer Relationship Management (E-CRM) in the banking industry. The literature search was conducted using keywords such as "E-CRM," "electronic customer relationship management," "digital banking," "customer experience," "customer satisfaction," "customer loyalty," and "e-service quality" in reputable scientific databases. The articles reviewed were limited to those published between 2020 and 2025 to capture the latest conceptual and empirical developments. Data were analyzed using descriptive analysis to identify the characteristics, variables, and main findings of previous studies, as well as a synthesis of findings to formulate relationship patterns, research trends, and research gaps related to the role of E-CRM in shaping the experience, satisfaction, and loyalty of banking customers.
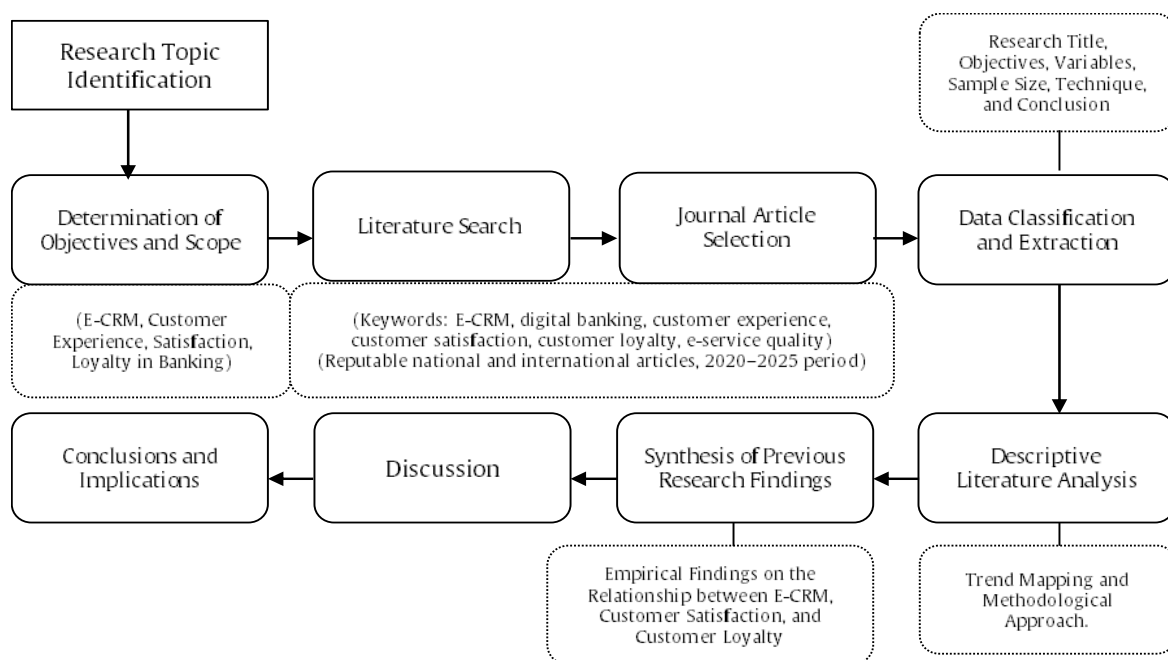

Figure 1. Research Framework and Literature Review Process on E-CRM

RESULT

Table 1 analyzes a literature review that explains the relationship between E-CRM, customer experience, customer satisfaction, and customer loyalty.

Table 1. Analysis of Existing Literature

Year	Title	Objectives	Variables	Sample Size	Technique	Conclusion
2025	Electronic customer relationship management and reputation: drivers of customer satisfaction and loyalty in digital-only banking	Analyzing the influence of E-CRM and reputation on customer loyalty with customer satisfaction as a mediator.	E-CRM, Reputation → Customer Satisfaction → Customer Loyalty	384 Blubank respondents	AHP, SmartPLS	E-CRM and reputation positively influence loyalty; customer satisfaction mediates this relationship.
2025	The Mediation Role of Social Customer Relationship Management (CRM) Performance Between E-CRM Antecedents and Customer Loyalty: A Study of Internet Users in Jordan	Explaining the influence of e-CRM dimensions (enjoyment, usefulness, usability) on customer loyalty through social CRM.	E-CRM Antecedents → Social CRM → Customer Loyalty	448 internet users in Jordan	Smart PLS	E-CRM has a positive effect on loyalty; usability is the most dominant dimension.
2024	Linking electronic customer relationship management and customer loyalty through serial mediation of customer experience and customer satisfaction	Testing the relationship between E-CRM and customer loyalty through serial mediation of customer experience and satisfaction.	E-CRM → Customer Experience → Customer Satisfaction → Loyalty	836 bank customers	SEM	E-CRM influences loyalty through customer experience and satisfaction.
2024	The impact of E-CRM on customer loyalty in the airline industry: the mediating role of customer experience	Analyzing the impact of E-CRM on customer loyalty with customer experience mediation	E-CRM → Customer Experience → Customer Loyalty	386 Royal Jordanian customers	SPSS v26	E-CRM has a significant effect on loyalty; experience mediates this relationship
2024	Impact of electronic customer relationship management on competitive advantage: Mediating role of customer satisfaction in EgyptAir	Testing the relationship between E-CRM, customer satisfaction, and competitive advantage.	E-CRM → Customer Satisfaction → Competitive Advantage	355 EgyptAir customers	AMOS v24	E-CRM enhances competitive advantage through customer satisfaction.
2024	The Role of E-CRM Systems in Strengthening Bank-Customer Relationships: Evidence from Visakhapatnam Banks	Analyzing how E-CRM systems improve bank-customer relationships and loyalty.	E-CRM (Communication, Assistance, Data Mgmt) → Satisfaction → Loyalty	384 bank customers	SEM - Smart PLS.	E-CRM strengthens customer relationships and increases loyalty; infrastructure and training are essential.
2024	A Bibliographic Review to Identify Trend Topics and Sustainability of Customer Relationship Management Strategies	Analyzing CRM and e-CRM research trends over two decades.	CRM, e-CRM, Customer Satisfaction, Loyalty	828 articles (Scopus & WoS)	Bibliometric	CRM and e-CRM are dominant topics; focus on satisfaction and loyalty.
2024	Financial Outcomes Hypothesized Through Serially Mediated Combination Of eCRM, eSERVICE Quality and Relationship Quality: A Digitalisation Aspect In Modern Retail Banking	Examining the relationship between e-CRM, e-service quality, relationship quality, and bank financial performance.	E-CRM → eService Quality → Relationship Quality → Financial Outcomes	523 Indian bank customers.	AMOS (Serial Mediation)	E-CRM affects financial results through service quality and relationships.

Year	Title	Objectives	Variables	Sample Size	Technique	Conclusion
2023	The impact of electronic customer relationship management strategies on customer loyalty: A mediated model	Measuring the effect of functional and personal dimensions of e-CRM on loyalty with CR quality mediation	e-CRM Strategies (Functional & Personal Dimensions) → CR Quality → Loyalty	301 Jordan online customers	SEM (AMOS)	Functional dimensions have a positive effect; CR quality mediates the relationship with loyalty.
2023	Critical variables for assessing the effectiveness of electronic customer relationship management systems in online shopping	Testing the influence of information, system quality, and security on user satisfaction and e-CRM effectiveness.	Information, System Quality, Security → Satisfaction → E-CRM Effectiveness	384 respondents	Smart PLS	Information quality and security enhance the effectiveness of E-CRM through user satisfaction.
2023	Exploring The Impact of E-CRM System on Customers in Banking Sector Using PLS-SEM Approach	Assessing the impact of E-CRM on service quality, trust, satisfaction, and customer loyalty of banks.	E-CRM → Quality, Trust, Satisfaction → Loyalty	205 bank customers	PLS-SEM (SmartPLS 3.2.7)	E-CRM affects service quality, trust, and satisfaction; the effect of loyalty increases with mediation.
2023	Improving real estate CRM user experience and satisfaction: A user-centered design approach	Developing m-CRM and e-CRM integration to increase user loyalty and satisfaction	m-CRM & e-CRM → UX → Satisfaction → Loyalty	user survey	Design Science Research (DSR)	System integration improves usability and user satisfaction.
2023	A Serial Mediation Model for Investigating the Impact of e-CRM Services on Customer Loyalty in the Indian Healthcare Industry	Testing the relationship between e-CRM and loyalty with trust, value, satisfaction, and switching costs as mediators.	E-CRM → CT, CV, CS, SC → CL	402 respondents	SEM (SPSS-AMOS)	Trust and value partially mediate; satisfaction and switching costs fully mediate the relationship between e-CRM and CL
2023	Electronic Loyalty of Islamic Banks in Saudi Arabia: Do E-CRM Practices Matter?	Researching the effect of e-CRM on e-loyalty in Saudi Arabian Islamic banks.	Website Quality, Ease of Use, Privacy, Info Quality → e-Loyalty	516 respondents	SEM (AMOS v20)	All dimensions of e-CRM have a positive impact; ease of use and privacy are the most dominant.
2023	Connecting e-customer relationship management and e-loyalty to willingness to recommend a bank service: the sequential mediating roles of e-satisfaction and e-service quality	Testing the chain mediation of e-service quality and e-satisfaction between e-CRM and e-loyalty.	E-CRM → e-Service Quality → e-Satisfaction → e-Loyalty	372 Bangladeshi private bank customers	SEM	e-CRM has a positive effect on e-loyalty; chain mediation is significant.
2022	Evaluating Electronic Customer Relationship Management System Success: The Mediating Role of Customer Satisfaction	Assessing the factors determining the success of e-CRM in Jordanian companies.	Tech Readiness, Privacy, Trust, Service Quality → Satisfaction → e-CRM Success	390 CRM employees	SEM (AMOS v22)	Tech readiness, COVID-19, and satisfaction increase the success of e-CRM.
2022	Electronic customer relationship management (E-CRM), customer experience and customer satisfaction: evidence from the banking industry	Testing the role of customer experience as a mediator between E-CRM and satisfaction	E-CRM → Customer Experience → Satisfaction	836 Indian bank customers	SEM (AMOS)	Customer experience mediates the relationship between E-CRM and satisfaction.
2022	Examining the Interconnections Between E-CRM, Customer Experience, Customer Satisfaction and Customer Loyalty: A Mediation Approach	Using the S-O-R model to explain the relationship between E-CRM and loyalty.	E-CRM → Experience & Satisfaction → Loyalty	836 Indian bank customers	SEM (AMOS)	Experience and satisfaction mediate the relationship between E-CRM and loyalty.

Year	Title	Objectives	Variables	Sample Size	Technique	Conclusion
2022	Electronic Customer Relationship Management (E-CRM) and Customer Loyalty: The Mediating Role of Customer Satisfaction in the Banking Industry	Assessing the effect of E-CRM on loyalty with partial satisfaction mediation.	E-CRM → Satisfaction → Loyalty	836 Indian bank customers	SEM (AMOS)	Satisfaction mediates part of the influence of E-CRM–loyalty.
2022	The Role of Electronic Customers Relationship Management in Enhancing Customer Loyalty at Jordanian Telecommunication Industry	Assessing the dimensions of E-CRM that influence customer loyalty in the Jordanian telecommunications industry.	E-CRM (Service Quality, Info Quality, Rewards, Fulfillment, Navigation) → Loyalty	315 customer respondents	SPSS Regression	E-CRM has a significant impact on loyalty; navigation and rewards are the most dominant factors.
2022	Effects of Online Purchase e-CRM activities and e-Customer Satisfaction on e-Loyalty during COVID-19: The Mediating Effects of e-Customer Satisfaction	Testing the effect of online e-CRM activities on e-loyalty with e-satisfaction mediation.	E-Marketing, E-Sales, E-Support, E-System → e-Satisfaction → e-Loyalty	1,307 respondents	SEM	E-Marketing & E-Sales have a direct effect; satisfaction mediates all dimensions.
2022	Critical success factors for assessing the effectiveness of E-CRM systems in online shopping: the mediating role of user satisfaction	Testing the influence of system factors on the effectiveness of E-CRM through user satisfaction	System Quality, Security, Access, Training → Satisfaction → Effectiveness	320 Carrefour customer respondents	SEM	Security and system quality have a significant effect; satisfaction mediates part of this effect.
2022	Designing a Model for the Effect of Content Marketing on the Effectiveness of E-Customer Relationship Management (Case Study: Iran Public Libraries Foundation)	Designing a model of the influence of content marketing on the effectiveness of E-CRM at IPLF.	Content Marketing (5 dimension) → E-CRM Effectiveness	364 IPLF staff and librarians; 17 experts in marketing, IT, and libraries.	Mixed Methods, Fuzzy Delphi, CFA	Content marketing has a significant effect (β=0.816) on the effectiveness of E-CRM; content production is the most dominant factor.
2021	Digital transformation of marketing strategies during a pandemic: Evidence from an emerging economy during covid-19	Analyzing the relationship between digital marketing practices (including E-CRM), customer satisfaction, and purchase intent during the pandemic.	Digital Marketing Practices (E-CRM, SEO, Display, Content), Customer Satisfaction (mediator), Customer Involvement (moderator), Purchase Intention	535 life insurance customers	SEM (mediation and moderation)	E-CRM, SEO, and Display significantly influence satisfaction and purchase intention; satisfaction mediates this relationship.
2021	Improvement of tourists satisfaction according to their non-verbal preferences using computational intelligence	Developing a computational intelligence-based E-CRM model to improve customer satisfaction and profitability.	Customer Data, Non-verbal Preferences → Customer Satisfaction, Profitability	73 customers	Computational Intelligence (Naïve Associative Classifier)	The CI model improves segmentation accuracy and customer satisfaction compared to previous algorithms.
2021	Maintaining customer loyalty using electronic customer relationship management (e-CRM): Qualitative evidence from small food businesses in Jordan	Identifying E-CRM tools and tactics to maintain customer loyalty in small businesses.	E-CRM Tools (Social Media, Telemarketing), Customer Loyalty Indicators	8 food company executives	Qualitative (semi-structured interviews, thematic analysis)	E-CRM is important for maintaining loyalty through complaints, after-sales service, and customer follow-ups.

Year	Title	Objectives	Variables	Sample Size	Technique	Conclusion
2021	The impact of e-service quality and ease of use of e-customer relationship management: A study of mobile phone services in Jordan	Investigating the influence of e-service quality and ease of use on e-CRM performance based on the TAM model.	E-Service Quality, Ease of Use → E-CRM Performance	food industry employees in Jordan	Quantitative (survey; TAM-based analysis)	ESQ and EOU have a significant positive effect on e-CRM performance, increasing satisfaction and loyalty.
2020	The impact of trust, privacy and quality of service on the success of E-CRM: the mediating role of customer satisfaction	Analyzing the role of trust, privacy, and service quality in the success of E-CRM through customer satisfaction.	Trust, Privacy, Service Quality → Customer Satisfaction → E-CRM Success	378 respondents (taxpayers, Iran)	PLS-SEM	Trust, privacy, and service quality significantly influence the success of E-CRM through customer satisfaction.
2020	Investigating factors in implementation of electronic customer relationship management and its consequences in private hospitals in Isfahan city	Assessing E-CRM implementation factors that influence patient satisfaction and loyalty.	Key Implementation Factors → Customer Satisfaction, Loyalty, Profitability	249 employees and managers of private hospitals (Isfahan)	Pearson Correlation & SEM (SmartPLS)	The implementation of E-CRM effectively improves hospital satisfaction, loyalty, and profitability.
2020	Customer oriented determinants of e-crm success factors	Investigating the influence of customer satisfaction, trust, commitment, and profitability on the success of E-CRM.	Customer Satisfaction, Trust, Commitment, Profitability → E-CRM Success	319 respondents (e-commerce customers, Saudi Arabia)	SEM (SmartPLS)	All variables have a significant positive effect on the success of E-CRM; trust and commitment are the most dominant.

Trend Mapping Analysis and Methodological Approach to E-CRM Research

Based on a review of empirical articles examining the relationship between Electronic Customer Relationship Management (E-CRM) and Customer Loyalty, there appears to be a consistent and rapidly growing research trend over the past five years (2020–2025). In general, this trend shows a shift in focus from testing the direct influence between E-CRM and customer loyalty towards a more complex and integrated model, involving mediating variables such as customer satisfaction, customer experience, trust, service quality, and switching costs (Awad and Mahmoud, 2024; Dash and Chakraborty, 2021; Dehghanpouri et al., 2020; Kumar et al., 2022; Kumar & Mokha, 2022; Mokha and Kumar, 2022, 2024; Singh et al., 2023). This pattern indicates an increase in conceptual depth and a tendency for researchers to understand the psychological and behavioral mechanisms that bridge the relationship between digital CRM systems and customer loyalty.

From a methodological perspective, almost all studies used a quantitative survey-based approach with a customer population from various sectors, particularly banking, telecommunications, aviation, e-commerce, and public services. This quantitative approach is generally analyzed using Structural Equation Modeling (SEM) techniques based on either AMOS or Partial Least Squares (PLS-SEM), which are used to test direct and indirect relationships between variables. The use of SEM and PLS-SEM has become dominant due to their ability to explain chain mediation models and comprehensively assess the validity of theoretical constructs. In addition, a small number of studies apply a mixed-method approach, such as research on public institutions and the digital content sector, which combines qualitative analysis (Delphi, expert interviews) and quantitative analysis (CFA, regression) to strengthen the validity of the findings (Sohrabi et al., 2022; Suchitra and Merugu, 2024).

From a geographical perspective, developing countries in Asia and the Middle East are the dominant areas of research, particularly India, Jordan, Iran, Egypt, and Saudi Arabia, reflecting the growing interest in digital transformation and the adoption of E-CRM systems in new markets (Al-Bashayreh et al., 2022; Al Nassar, 2021; Ali and Alfayez, 2024; Almahadeen and Al-Manasrah, 2022; Alsheikh, 2023; Awad and Mahmoud, 2024; Dehghanpouri et al., 2020; Kakeesh et al., 2021; Mokha

and Kumar, 2024; Salameh et al., 2020). This trend also shows a strong focus on the digital banking and financial services sector, which is considered to be the fastest to integrate E-CRM with technology-based user experiences.

Overall, the mapping results show that E-CRM research is moving from simple conceptual models to more comprehensive, cross-sector relational models. The use of SEM-AMOS and PLS-SEM as the main analytical tools is the most dominant methodological characteristic, while thematic trends show a shift from merely the influence of technology on loyalty to a holistic understanding of customer experience and long-term relationships mediated by satisfaction and trust.

Empirical Analysis of the Relationship between E-CRM, Customer Satisfaction, and Customer Loyalty

Based on a review of 30 empirical studies, it was generally found that Electronic Customer Relationship Management (E-CRM) has a positive and significant effect on customer loyalty in various sectors such as banking, telecommunications, aviation, e-commerce, and public services. Most studies confirm that the successful implementation of E-CRM depends on an organization's ability to utilize technology to improve customer interactions, strengthen trust, and create consistent and personalized service experiences.

Research in the banking context shows that the implementation of E-CRM systems directly contributes to customer loyalty through increased customer satisfaction and trust (Awad and Mahmoud, 2024; Haghighinasab et al., 2025; Kumar & Mokha, 2022; Mokha and Kumar, 2022, 2024; Salameh et al., 2020; Yang and Babapour, 2023). Similarly, studies in the telecommunications and e-commerce sectors show that ease of use, quality of information, and system security are important factors that significantly drive customer loyalty (Almahadeen and Al-Manasrah, 2022; Almajali et al., 2022; Hwang, 2022; Magatef et al., 2023; Yang and Babapour, 2023).

Empirical findings from various studies show that customer satisfaction acts as the main mediating variable in the relationship between E-CRM and customer loyalty. A number of studies in the banking and aviation contexts have found that E-CRM not only has a direct impact on loyalty, but also an indirect impact through increased customer satisfaction (Al-Karim et al., 2023; Awad and Mahmoud, 2024; Garg and Madan, 2024; Kumar et al., 2022; Kumar & Mokha, 2022; Mokha and Kumar, 2022, 2024). These studies confirm that the higher the level of customer satisfaction with the digital services provided by banks, the stronger customer loyalty will be. In addition, customer satisfaction has been proven to strengthen the influence of E-CRM dimensions such as service quality, system usability, and personalization on customer loyalty (Almajali et al., 2022; Alsheikh, 2023; Yang and Babapour, 2023).

Several studies also show the existence of a double mediation effect, where customer satisfaction works sequentially with other variables such as trust and switching costs, which together strengthen the relationship between E-CRM and customer loyalty (Al-Bashayreh et al., 2022; Singh et al., 2023). In addition to customer satisfaction, customer experience was also found to play a strategic role in strengthening the relationship between E-CRM and customer loyalty. Customer experience is an important link that explains how E-CRM influences emotional and behavioral loyalty. In this context, E-CRM that is capable of providing a digital experience that is convenient, fast, and relevant to customer needs will increase positive perceptions of the organization, which in turn encourages long-term loyalty. This finding is in line with the Stimulus–Organism–Response (S-O-R) model used by several studies in the banking sector, which describes E-CRM as a stimulus that elicits a psychological response in the form of customer experience and satisfaction, which then results in loyalty (Kumar et al., 2022; Mokha and Kumar, 2022).

From all previous research results, a consistent pattern of relationships between variables can be identified. First, E-CRM has a direct effect on customer satisfaction, trust, and service quality, which in turn shape customer loyalty. Second, the relationship between E-CRM → Customer Satisfaction → Customer Loyalty is the most common pattern that appears in almost all industrial contexts. Third, several studies expand this model to E-CRM → Service Quality/Customer Experience → Customer Satisfaction → Customer Loyalty, indicating the existence of chain mediation in the

process of forming loyalty. Fourth, research in the telecommunications and e-commerce sectors highlights the role of usability, navigation ease, and reward systems as technical dimensions of E-CRM that strongly influence customer loyalty.

Thus, empirical synthesis results show that customer loyalty is not solely shaped by the technical implementation of E-CRM, but is more influenced by customers' perceptions of the emotional value and quality of digital interactions they experience. Overall, cross-industry empirical evidence confirms that E-CRM is an important determinant in building customer loyalty, both directly and through the mediation of customer satisfaction and customer experience. Effective e-CRM not only speeds up service, but also creates deeper emotional connections between customers and organizations through valuable, secure, and relevant interactions. Common patterns emerging from various studies can be summarized as follows:

- E-CRM → Service Quality / Experience → Satisfaction → Loyalty,

- E-CRM → Trust → Satisfaction → Loyalty, dan

- E-CRM → Satisfaction → Loyalty,

Together, they show that customer satisfaction and experience are the main mechanisms that bridge the influence of E-CRM on customer loyalty.

DISCUSSION

Interpretation of literature review results

The results of the literature review show strong empirical consistency that Electronic Customer Relationship Management (E-CRM) is a strategic determinant in shaping customer loyalty in various sectors, especially banking, telecommunications, aviation, e-commerce, health, and public services. The majority of studies reviewed confirm that E-CRM has a positive and significant effect on customer loyalty, both directly and indirectly through complex and layered mediation mechanisms. These findings confirm that the role of E-CRM in the digital age is not merely technological, but also psychological and relational.

Specifically, the literature shows that the influence of E-CRM on customer loyalty is rarely direct and is more often mediated by intermediate variables such as customer satisfaction, customer experience, trust, relationship quality, and e-service quality. Chain mediation patterns such as E-CRM → service quality → satisfaction → loyalty or E-CRM → experience → satisfaction → loyalty appear repeatedly in various industry contexts, confirming that digital loyalty is formed through a gradual evaluation process based on cumulative customer experiences. This reinforces the view that E-CRM serves as an initial stimulus that triggers affective and cognitive responses from customers before culminating in loyal behavior.

Cross-sector findings also reveal that the effectiveness of E-CRM is greatly influenced by functional dimensions such as ease of navigation, system quality, security, information quality, service personalization, and reward programs. The dimensions of ease of use and security consistently emerge as the most dominant factors in strengthening satisfaction and loyalty, particularly in the digital banking and telecommunications sectors. However, several studies also show that the personal dimension of E-CRM does not always have a direct positive impact on loyalty, indicating the potential for negative effects if personalization is not aligned with customer preferences or privacy.

In addition, the review results broaden the understanding of E-CRM by showing that customer loyalty not only affects retention, but also the competitive advantage and financial performance of the organization. Studies linking E-CRM with competitive advantage and financial performance show that customer satisfaction and relationship quality serve as a bridge between CRM digitization and sustainable business results. Thus, E-CRM can be understood as a strategic asset that contributes to long-term revenue stability through increased customer lifetime value, reduced customer acquisition costs, and strengthened positive word-of-mouth.

Furthermore, several recent studies highlight new contextual factors such as technological readiness, customer pressure, the impact of COVID-19, and the role of content marketing in strengthening the effectiveness of E-CRM. These findings indicate that the success of E-CRM is dynamic and contextual, influenced by the technological environment, customer expectations, and relevant and valuable digital communication strategies. Thus, E-CRM cannot be viewed as a static system, but rather as an evolving customer relationship ecosystem.

Overall, the interpretation of the literature review results confirms that E-CRM plays a central role in building customer loyalty through the channels of experience, satisfaction, and trust. The success of E-CRM is highly dependent on the quality of technology implementation, user-centered design, and the organization's ability to manage the customer experience holistically. These findings provide strong theoretical justification for the layered relationship model between E-CRM, customer experience, customer satisfaction, and customer loyalty, while emphasizing the importance of a strategic and customer-oriented approach in developing E-CRM systems in an era of increasingly intense digital competition.

The strategic role of E-CRM in shaping customer experience and satisfaction

Electronic Customer Relationship Management (E-CRM) has a strategic role that goes beyond the technical function of managing customer data, transforming into a key instrument in shaping customer experience and customer satisfaction in an increasingly competitive digital banking environment. E-CRM functions as an integrative system that combines information technology, service processes, and multi-channel interactions to create a consistent, personalized, and valuable customer experience across all digital touchpoints. Thus, E-CRM can be understood as a structural foundation that enables banks to manage the customer experience holistically, rather than merely as an operational tool.

The literature shows that the effect of E-CRM on customer satisfaction is generally not direct, but rather mediated by customer experience as the main psychological mechanism. A chain relationship pattern such as E-CRM → customer experience → customer satisfaction has been consistently found and empirically supported in various industrial and national contexts (Kumar et al., 2022; Mokha and Kumar, 2022, 2024). This indicates that customers do not evaluate E-CRM based solely on the existence of the system, but rather on how the system translates into a real experience, such as ease of use, speed of service, personalization, and a sense of security in transactions. In other words, customer experience serves as an evaluative bridge that converts the technological capabilities of E-CRM into perceptions of satisfaction.

Furthermore, the functional dimensions of E-CRM, including ease of navigation, system quality, information quality, and security, emerged as the most dominant determinants in shaping customer experience and satisfaction (Almahadeen and Al-Manasrah, 2022; Almajali et al., 2022; Alsheikh, 2023; Yang and Babapour, 2023). Studies confirm that ease of navigation and system reliability have a stronger influence than the personal dimensions of E-CRM, as these aspects directly affect customers' perceptions of efficiency, control, and trust in the bank's digital services (Almahadeen and Al-Manasrah, 2022; Alsheikh, 2023). The banking industry, where financial risk and data privacy are major concerns, E-CRM's failure to ensure system security and stability can significantly reduce satisfaction, even when personalization features are available (Almajali et al., 2022; Yang and Babapour, 2023). This finding confirms that the quality of functional experience is a prerequisite for customer satisfaction.

In addition to technological aspects, E-CRM plays a role in building satisfaction by strengthening relationship quality and trust. Several studies show that E-CRM increases customer satisfaction by creating a better perception of reputation, service consistency, and the bank's commitment to maintaining long-term relationships (Haghighinasab et al., 2025; Mohamed et al., 2023; Singh et al., 2023). E-CRM acts not only as a transaction system, but also as a relational enabler that strengthens the emotional and cognitive bonds between customers and banks. Satisfaction built on trust and the quality of these relationships tends to be more stable and sustainable than satisfaction driven solely by short-term service efficiency.

Furthermore, several recent studies emphasize that the effectiveness of E-CRM in shaping customer experience and satisfaction is greatly influenced by organizational supporting factors, such as technological readiness, staff training, customer feedback systems, and user-centered design approaches (Al-Bashayreh et al., 2022; Almajali et al., 2022; Ferreira et al., 2023; Suchitra and Merugu, 2024). These studies show that investing in technology without adequate human resources and experience design can potentially hinder the benefits of E-CRM and even reduce customer satisfaction. Therefore, the success of E-CRM is socio-technical in nature, depending on the synergy between digital systems and organizational capabilities.

Overall, this discussion confirms that E-CRM plays a strategic role in shaping customer experience and satisfaction through the integration of technological capabilities, digital service quality, and experience-oriented customer relationship management. E-CRM is designed to be secure, easy to use, and responsive to customer needs, proven to create a positive and sustainable experience and significantly increase satisfaction. These findings reinforce the argument that strengthening customer experience and customer satisfaction through E-CRM is a fundamental prerequisite for building customer loyalty and competitive advantage for banks in the digital age.

Theoretical implications for developing E-CRM concepts

The results of the literature review provide significant theoretical implications for the development of the concept of Electronic Customer Relationship Management (E-CRM), particularly in expanding the understanding of E-CRM from a technology-based system approach to a relational, experiential, and multidimensional conceptual framework. Empirical findings consistently show that E-CRM can no longer be positioned as a single independent variable that directly impacts customer loyalty, but rather as a complex construct whose effects are mediated by psychological and relational variables such as customer experience, customer satisfaction, trust, reputation, and relationship quality. This reinforces the argument that E-CRM theory needs to adopt a processual approach, rather than a linear causality approach.

Theoretically, the dominant role of mediating variables supports the strengthening of E-CRM integration into the Stimulus–Organism–Response (S-O-R) framework, where E-CRM acts as a stimulus, customer experience and satisfaction as organisms (internal processes), and loyalty or competitive advantage as behavioral responses. These findings confirm that the value of E-CRM is formed through customer evaluative mechanisms, not merely through its technological capabilities. Thus, the main theoretical contribution of this literature is the repositioning of E-CRM as an enabler of experience and a shaper of perception, not just a tool for automating customer relationships.

In addition, the review results expand the concept of E-CRM by incorporating contextual and structural dimensions that were previously overlooked in classical CRM theory. Factors such as technological readiness, privacy, system quality, user-centered design, content marketing, and the integration of m-CRM and social CRM have been shown to significantly influence the effectiveness of E-CRM (Al-Nassar et al., 2025; Ferreira et al., 2023; Sohrabi et al., 2022). The theoretical implication is that modern E-CRM models need to be ecosystemic, encompassing interactions between technology, organizations, and users, so that E-CRM is understood as a dynamic socio-technical system.

Several studies show that functional dimensions such as ease of use, ease of navigation, security, and information quality have a more consistent and stronger influence than personal dimensions, which in certain contexts even show negative effects (Almahadeen and Al-Manasrah, 2022; Alsheikh, 2023; Magatef et al., 2023). This challenges previous theoretical assumptions that placed personalization at the core of E-CRM, and indicates the need to reconceptualize the hierarchy of E-CRM dimensions based on industry context and user digital maturity levels.

The CI-based E-CRM model developed successfully improved customer segmentation accuracy compared to previous algorithms. Findings indicate that this approach is effective in increasing customer satisfaction and profitability through non-verbal preference analysis. This research expands the application of E-CRM to data-driven marketing in the tourism industry, providing a basis for more adaptive and personalized decision making (Tusell-Rey et al., 2021).

Another theoretical implication is the strengthening of the relationship between E-CRM and non-behavioral outcomes, such as organizational reputation, financial performance, and competitive advantage. Several studies show that E-CRM contributes to reputation and financial performance through the mediation of digital service quality and relationship quality (Awad and Mahmoud, 2024; Chauhan et al., 2024; Haghighinasab et al., 2025). This finding expands the theoretical domain of E-CRM from the realm of relational marketing to organizational strategy and performance management, thereby positioning E-CRM as a strategic capability in management and information systems literature.

Practical implications for the banking industry

The literature review not only confirms the significance of E-CRM for customer loyalty, but also provides concrete and strategic practical implications for the banking industry in optimizing the implementation of E-CRM effectively and with a broad impact. First, banks need to strengthen the comprehensive integration of E-CRM systems as part of a strategic digital transformation, not just a technological upgrade. This integration includes combining E-CRM modules with key service systems such as internet banking, mobile banking, and other digital channels to ensure integrated, responsive, and personalized services. Further studies show that strong CRM integration contributes directly to increased customer satisfaction and loyalty, both directly and through customer satisfaction mediation (CRM system integration) (Zalzabilah and Nurhadi, 2025). This kind of implementation can help banks provide faster, more personalized, and more relevant services, thereby strengthening customer loyalty and long-term retention (Seify et al., 2020).

Second, improving the quality of digital systems and services is a key practical priority. Empirical findings emphasize that functional dimensions such as ease of navigation, system quality, information quality, and security are important determinants in shaping positive experiences and customer satisfaction, which ultimately strengthen loyalty. This implies that banks must continuously monitor and improve the quality of their digital systems through continuous monitoring, system updates, and regular security and data privacy audits.

Third, banks need to combine E-CRM with a user-centered service approach to create an intuitive and satisfying digital experience. This approach includes user-friendly interface design, intuitive navigation, and service features that are easily accessible and understandable by various customer segments. Studies show that user-oriented design not only increases satisfaction but also reduces the likelihood of digital implementation failure, thereby strengthening overall loyalty.

Fourth, investment in human resource training and the development of a digital service culture are important components. Successful E-CRM implementation depends not only on technology, but also on staff competence in utilizing and managing the system effectively, including responding to customer issues and feedback in real time. The literature highlights that the success of E-CRM is greatly influenced by technological infrastructure, staff training, and responsive customer feedback systems (Al-Bashayreh et al., 2022; Suchitra and Merugu, 2024). Staff training to improve customer data analysis capabilities and digital service skills will strengthen more meaningful personal interactions, even though physical interactions are becoming increasingly rare.

Fifth, banks need to leverage E-CRM to promote a coherent omnichannel approach, where customers can experience consistent service across mobile banking, internet banking, call centers, and social media. An effective omnichannel approach not only improves operational efficiency but also creates a seamless and accessible experience at any time, which is essential for retaining customers in today's digital age.

Finally, the use of E-CRM as an analytical tool to understand customer needs and preferences is a practical and strategic step. Banks can combine E-CRM data with customer behavior analytics to map segments based on lifecycle stage, risk profile, and product usage patterns in order to design more targeted offers and increase customer lifetime value. A literature review indicates that improving customer experience through E-CRM will have a direct impact on loyalty and increased repurchase, which is effective in creating long-term competitive advantage (Chauhan et al., 2024; Haghighinasab et al., 2025; Mokha and Kumar, 2024).

Overall, the practical implications of this review confirm that E-CRM should be positioned as a holistic strategy that combines technology, internal processes, and customer experience to strengthen loyalty and retain customers amid increasingly intense digital competition. These integrated practices will help banks not only meet customer expectations but also strengthen their competitive position in the ever-evolving digital financial services ecosystem.

Research Limitations

Although the results of this literature review provide a comprehensive understanding of the strategic role of Electronic Customer Relationship Management (E-CRM) in shaping customer experience, satisfaction, and loyalty, there are several research limitations that need to be considered. Most of the studies reviewed focused on the banking and financial services sectors, so generalizing the results to other sectors such as education, manufacturing, and the public sector still requires caution due to differences in customer relationship characteristics and service digitization levels. Additionally, the majority of studies use a quantitative approach based on Structural Equation Modeling (SEM), which, although capable of testing causal relationships between variables, does not fully capture the dynamics of customer experience in depth; therefore, further research using a mixed methods or longitudinal approach is recommended to enrich our understanding of customer relationship processes. Most of the data used is also cross-sectional and perception-based, making it susceptible to temporal and contextual biases; future research needs to integrate actual behavioral data from E-CRM systems to improve the external validity and accuracy of predictive models. Furthermore, exploration of the role of new technologies such as artificial intelligence (AI), big data analytics, and automation in the context of E-CRM is still limited, as is attention to the increasingly important issues of digital ethics and customer privacy in the era of digital banking. In addition, the majority of the literature originates from developing countries in Asia and the Middle East, so there is potential for contextual bias related to cultural factors and levels of digital maturity; thus, cross-regional and cross-cultural comparative research is needed to enrich the global understanding of the effectiveness and adaptability of E-CRM in various industrial and social contexts.

CONCLUSION

This study uses a literature review approach with a systematic synthesis of national and international journal articles discussing E-CRM in the context of digital banking in the period 2020–2025, focusing on the relationship between E-CRM, customer experience, customer satisfaction, and customer loyalty. The analysis shows that E-CRM consistently has a positive effect on customer loyalty, both directly and indirectly through the mediation of customer experience and customer satisfaction, thus confirming a chain relationship pattern such as E-CRM → experience → satisfaction → loyalty in various digital service industry contexts. Although the majority of studies show this positive relationship, there are research gaps that still need to be explored further, including the need for longitudinal research, multi-country studies, more granular mapping of the experience dimension, and analysis of contextual factors such as technological readiness and user-centered service design. The contribution of this research to academics lies in its comprehensive and integrative mapping of empirical findings, which expands the conceptual framework of E-CRM by emphasizing the mediating role of experience and satisfaction in shaping loyalty, as well as providing a research map for further research agendas. For banking practitioners, these findings emphasize the importance of a holistic E-CRM strategy that encompasses digital system quality, user experience, and customer relationship management as the foundation for improving satisfaction, strengthening customer loyalty, and reinforcing competitive advantage in an increasingly dynamic digital banking market. This study has limitations in its coverage of the 2020–2025 period and its focus on the context of digital banking in developing countries, so its generalizability is still limited. Future studies are recommended to use a longitudinal and cross-country approach and consider new factors such as artificial intelligence, data privacy, and user experience design in analyzing the effectiveness of E-CRM on customer loyalty.

REFERENCES

Adlin, F. N., Ferdiana, R., & Fauziati, S. (2019). Current Trend and Literature on Electronic CRM Adoption Review. *Journal of Physics: Conference Series, 12*(1), 012058. https://doi.org/10.1088/1742-6596/1201/1/012058

Ahmad, M., & Hameed, F. (2025). Assessing The Impact Of E-CRM on Customer Loyalty: The Moderating Role of Service Quality. *Kashf Journal of Multidisciplinary Research, 2*(02), 15–31. https://doi.org/10.71146/kjmr272

Ahmed, T. (2009). Electronic customer relationship management in online banking. *In Digitala Vetenskapliga Arkivet.*

Al-Bashayreh, M., Almajali, D., Al-Okaily, M., Masa'deh, R., & Al-Adwan, A. (2022). Evaluating Electronic Customer Relationship Management System Success: The Mediating Role of Customer Satisfaction. *Sustainability (Switzerland), 14*(19). https://doi.org/10.3390/su141912310

Al-Dmour, H. H., Algharabat, R. S., Khawaja, R., & Al-Dmour, R. H. (2019). Investigating the impact of ECRM success factors on business performance: Jordanian commercial banks. *Asia Pacific Journal of Marketing and Logistics, 31*(1), 105–127. https://doi.org/10.1108/APJML-10-2017-0270

Al-Karim, R., Rabiul, M. K., & Kawser, S. (2023). Connecting e-customer relationship management and e-loyalty to willingness to recommend a bank service: the sequential mediating roles of e-satisfaction and e-service quality. *Global Knowledge, Memory and Communication, 74*(7–8), 2680–2697. https://doi.org/10.1108/GKMC-05-2023-0176

Al-Nassar, B., Awadallah, A., Abudarwish, N., Aloqaily, A., Jarah, B., Ismail, A., & Samarah, T. (2025). The Mediation Role of Social Customer Relationship Management (CRM) Performance Between E-CRM Antecedents and Customer Loyalty: A Study of Internet Users in Jordan. *Salud, Ciencia y Tecnologia*, 5. https://doi.org/10.56294/saludcyt20251477

Al Nassar, B. A. Y. (2021). The impact of e-service quality and ease of use of e-customer relationship management: a study of mobile phone services in Jordan. *International Journal of Electronic Customer Relationship Management, 13*(2), 146. https://doi.org/10.1504/IJECRM.2021.10044217

Alhaiou, T., Irani, Z., & Ali, M. (2012). A study on e-CRM implementation and e-loyalty at different stages of transaction cycle. *International Journal of Logistics Systems and Management, 11*(2), 270. https://doi.org/10.1504/IJLSM.2012.045427

Ali, N., & Alfayez, M. (2024). The impact of E-CRM on customer loyalty in the airline industry: the mediating role of customer experience. *Cogent Business and Management, 11*(1). https://doi.org/10.1080/23311975.2024.2364838

Almahadeen, S. A.-K., & Al-Manasrah, E. A. (2022). The Role of Electronic Customers Relationship Management in Enhancing Customer Loyalty at Jordanian Telecommunication Industry. *WSEAS Transactions on Business and Economics*, 19, 1452–1462. https://doi.org/10.37394/23207.2022.19.131

Almajali, D., Alfityani, A. A., Maali, H., & Almajali, H. (2022). Critical success factors for assessing the effectiveness of E-CRM systems in online shopping: the mediating role of user satisfaction. *Uncertain Supply Chain Management, 10*(3), 667–678. https://doi.org/10.5267/j.uscm.2022.5.008

Alsheikh, L. H. (2023). Electronic Loyalty of Islamic Banks in Saudi Arabia: Do E-CRM Practices Matter? *International Journal of Customer Relationship Marketing and Management, 14*(1). https://doi.org/10.4018/IJCRMM.332883

Asadi, M., Meymand, M. M., & Zakipor, M. (2024). Design and Explanation of an Electronic Customer

Relationship Management (E-CRM) Model to Enhance Customer Loyalty in Private Banks of Iran. *Dynamic Management in Business Analysis, 3*(2), 264–283. https://doi.org/10.61838/dmbaj.3.2.16

Awad, A., & Mahmoud, M. (2024). Impact of electronic customer relationship management on competitive advantage: Mediating role of customer satisfaction in EgyptAir. *Problems and Perspectives in Management, 22*(3), 276–286. https://doi.org/10.21511/ppm.22(3).2024.22

Bataineh, A. Q. (2015). The Effect of eCRM Practices on eWOM on Banks' SNSs: The Mediating Role of Customer Satisfaction. *International Business Research, 8*(5), 230–243. https://doi.org/10.5539/ibr.v8n5p230

Berry, L. L., Carbone, L. P., & Haeckel, S. H. (2002). Managing the total customer experience. *In MIT Sloan management review.* https://sloanreview.mit.edu/article/managing-the-total-customer-experience/

Chahal, H., & Dutta, K. (2015). Measurement and impact of customer experience in banking sector. *Decision, 42*(1), 57–70. https://doi.org/10.1007/s40622-014-0069-6

Chauhan, K., Singh, S., Dahiya, V., & Singh, B. (2024). Financial Outcomes Hypothesized Through Serially Mediated Combination of ECRM, Eservice Quality and Relationship Quality: A Digitalisation Aspect in Modern Retail Banking. *Risk Governance and Control: Financial Markets and Institutions, 14*(4), 68–77. https://doi.org/10.22495/rgcv14i4p7

Chu Liu, C., Tseng, H., Chuang, L., & Huang, C. (2012). A Study of the Impact of the e-CRM Perspective on Customer Satisfaction and Customer Loyalty. *Journal of Economic and Behavioural Studies, 4*(8), 467–476.

Dash, G., & Chakraborty, D. (2021). Digital Transformation of Marketing Strategies during a Pandemic: Evidence from an Emerging Economy during COVID-19. *Sustainability, 13*(12), 6735. https://doi.org/10.3390/su13126735

Dehghanpouri, H., Soltani, Z., & Rostamzadeh, R. (2020). The impact of trust, privacy and quality of service on the success of E-CRM: the mediating role of customer satisfaction. *Journal of Business and Industrial Marketing, 35*(11), 1831–1847. https://doi.org/10.1108/JBIM-07-2019-0325

Dubihlela, J., & Khosa, P. M. (2014). Impact of e-CRM Implementation on Customer Loyalty, Customer Retention and Customer Profitability for Hoteliers along the Vaal Meander of South Africa. *Mediterranean Journal of Social Sciences, 5*(16), 175–183. https://doi.org/10.5901/mjss.2014.v5n16p175

Farhadi, F., Ghartemani, S. K., Ghartemani, H. K., & Gigloo, R. R. (2013). Assessing the Relationship between E-CRM and Customers Retention in Parsmodir Khazar Enterprise. *Life Science Journal, 10*(7), 99–105.

Ferreira, M. S., Antão, J., Pereira, R., Bianchi, I. S., Tovma, N., & Shurenov, N. (2023). Improving real estate CRM user experience and satisfaction: A user-centered design approach. *Journal of Open Innovation: Technology, Market, and Complexity, 9*(2). https://doi.org/10.1016/j.joitmc.2023.100076

Garg, T., & Madan, R. (2024). A Bibliographic Review to Identify Trend Topics and Sustainability of Customer Relationship Management Strategies. *Journal of Relationship Marketing, 23*(4), 305–325. https://doi.org/10.1080/15332667.2024.2307107

Gentile, C., Spiller, N., & Noci, G. (2007). How to Sustain the Customer Experience: An Overview of Experience Components that Co-create Value with the Customer. *European Management Journal, 25*(5), 395–410. https://doi.org/10.1016/j.emj.2007.08.005

Haghighinasab, M., Ahmadi, D., & Khobbakht, F. (2025). Electronic customer relationship management and reputation: drivers of customer satisfaction and loyalty in digital-only

banking. *Journal of Financial Services Marketing, 30*(1). https://doi.org/10.1057/s41264-024-00297-1

Hwang, S.-Y. (2022). Effects of Online Purchase e-CRM activities and e-Customer Satisfaction on e-Loyalty during COVID-19: The Mediating Effects of e-Customer Satisfaction. *Global Business and Finance Review, 27*(5), 100–114. https://doi.org/10.17549/gbfr.2022.27.5.100

Kakeesh, D., Al-Weshah, G., & Al-Ma'aitah, N. (2021). Maintaining Customer Loyalty Using Electronic Customer Relationship Management (E-CRM): Qualitative Evidence from Small Food Businesses in Jordan. *Studies of Applied Economics, 39*(7). https://doi.org/10.25115/eea.v39i7.4810

Ke, B., & Wel, C. A. C. (2024). Elevating Customer Relationship Management in Chinese Banking: A Synergy of Information Technology and Strategic Practices. *Journal of Information Systems Engineering and Management, 9*(2), 24663. https://doi.org/10.55267/iadt.07.14676

Khan, M. B., & Khawaja, K. F. (2013). The Relationship of E-CRM, Customer Satisfaction and Customer Loyalty. The Moderating Role of Anxiety. *Middle-East Journal of Scientific Research, 16*(4), 531–535. https://doi.org/10.5829/idosi.mejsr.2013.16.04.11568

Klaus, P. 'Phil,' & Maklan, S. (2013). Towards a Better Measure of Customer Experience. *International Journal of Market Research, 55*(2), 227–246. https://doi.org/10.2501/IJMR-2013-021

Kumar, P., & Mokha, A. K. (2021). Relationship between E-CRM, Customer Experience, Customer Satisfaction and Customer Loyalty in Banking Industry: A Review of Literature. *RESEARCH REVIEW International Journal of Multidisciplinary, 6*(2), 127–137. https://doi.org/10.31305/rrijm.2021.v06.i02.022

Kumar, P., & Mokha, A. K. (2022). Electronic Customer Relationship Management (E-CRM) and Customer Loyalty: The Mediating Role of Customer Satisfaction in the Banking Industry. *International Journal of E-Business Research, 18*(1). https://doi.org/10.4018/IJEBR.293292

Kumar, P., Mokha, A. K., & Pattnaik, S. C. (2022). Electronic customer relationship management (E-CRM), customer experience and customer satisfaction: evidence from the banking industry. *Benchmarking, 29*(2), 551–572. https://doi.org/10.1108/BIJ-10-2020-0528

Lam, A. Y. C., Cheung, R., & Lau, M. M. (2013). The Influence of Internet-Based Customer Relationship Management on Customer Loyalty. *Contemporary Management Research, 9*(4). https://doi.org/10.7903/cmr.11095

Lee-Kelley, L., Gilbert, D., & Mannicom, R. (2003). How e-CRM can enhance customer loyalty. *Marketing Intelligence & Planning, 21*(4), 239–248. https://doi.org/10.1108/02634500310480121

Leverin, A., & Liljander, V. (2006). Does relationship marketing improve customer relationship satisfaction and loyalty? *International Journal of Bank Marketing, 24*(4), 232–251. https://doi.org/10.1108/02652320610671333

Magatef, S., Al-Okaily, M., Ashour, L., & Abuhussein, T. (2023). The impact of electronic customer relationship management strategies on customer loyalty: A mediated model. *Journal of Open Innovation: Technology, Market, and Complexity, 9*(4), 100149. https://doi.org/10.1016/j.joitmc.2023.100149

Mang'unyi, E. E., Khabala, O. T., & Govender, K. K. (2017). The relationship between e-CRM and customer loyalty: a Kenyan Commercial Bank case study. *Banks & Bank Systems, 12*(2), 106–115. https://doi.org/10.21511/bbs.12(2).2017.11

Maroofi, F., Darabi, A., & Torabi, J. (2012). Effects of E-CRM on customer-bank relationship quality and result. *Human Resource Management Academic Research Society, International Journal of Academic Research in Accounting, Finance and Management Sciences, 2*(3), 164–182.

https://ideas.repec.org/a/hur/ijaraf/v2y2012i3p164-182.html

Mohamed, S. M., Marie, M., & Yehia, E. (2023). Exploring The Impact of E-CRM System on Customers in Banking Sector Using PLS-SEM Approach. *International Journal of Intelligent Systems and Applications in Engineering, 11*(9), 156–165. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171353901&partnerID=40&md5=09b46795171c2c6f9a53accd54e2124d

Mokha, A. K., & Kumar, P. (2022). Examining the Interconnections Between E-CRM, Customer Experience, Customer Satisfaction and Customer Loyalty: A Mediation Approach. *Journal of Electronic Commerce in Organizations, 20*(1). https://doi.org/10.4018/JECO.292474

Mokha, A. K., & Kumar, P. (2024). Linking electronic customer relationship management and customer loyalty through serial mediation of customer experience and customer satisfaction. *International Journal of Electronic Customer Relationship Management, 14*(2), 103–127. https://doi.org/10.1504/IJECRM.2024.138642

Mulyo, J. H., & Situmorang, S. H. (2018). e-CRM and Loyalty: A Mediation Effect of Customer Experience and Satisfaction in Online Transportation of Indonesia. *Academic Journal of Economic Studies, 10*(3), 96–105.

Oliver, R. L. (1999). Whence Consumer Loyalty? *Journal of Marketing, 63*(4), 33–44. https://doi.org/10.1177/00222429990634s105

Oumar, T. K., Mang'unyi, E. E., Govender, K. K., & Rajkaran, S. (2017). Exploring the e-CRM–e-customer-e-loyalty nexus: a Kenyan commercial bank case study. *Management & Marketing, 12*(4), 674–696. https://doi.org/10.1515/mmcks-2017-0039.Introduction

Putri, M. A. D., Hussein, A. S., & Handrito, R. P. (2025). The Impact of Electronic Customer Relationship Management (e-CRM) on e-Loyalty. *Jurnal Ilmiah Manajemen Kesatuan, 13*(5), 4191–4202. https://doi.org/10.37641/jimkes.v13i5.3600

Rahma, S. A., Holipah, H., Al Rasyid, H., & Rahmayanti, F. (2023). Hubungan Electronic Customer Relationship Management (E-Crm) Terhadap Loyalitas Pasien Di Rumah Sakit: Tinjauan Pustaka. *Jurnal Teknologi Informasi dan Ilmu Komputer, 10*(3), 593–602. https://doi.org/10.25126/jtiik.2023106698

Rashwan, H. H. M., Mansi, A. L. M., & Hassan, H. E. (2020). Exploring electronic -loyalty antecedents in Egyptian commercial banks; Electronic customer relationship management and banking electronic satisfaction. *Journal of Business & Retail Management Research, 14*(02). https://doi.org/10.24052/JBRMR/V14IS02/ART-06

Reichheld, F. F., & Teal, T. (1996). The loyalty effect: The hidden force behind growth, profits and lasting. *Harvard Business School Publications.*

Salameh, A. A., Hatamleh, A., Azim, M. S., & Kanaan, A. G. (2020). Customer oriented determinants of e-CRM success factors. *Uncertain Supply Chain Management, 8*(4), 713–720. https://doi.org/10.5267/j.uscm.2020.8.001

Schmitt, B., Joško Brakus, J., & Zarantonello, L. (2015). From experiential psychology to consumer experience. *Journal of Consumer Psychology, 25*(1), 166–171. https://doi.org/10.1016/j.jcps.2014.09.001

Seify, M., Tabaeeian, R. A., & Khoshfetrat, A. (2020). Investigating factors in implementation of electronic customer relationship management and its consequences in private hospitals in Isfahan city. *International Journal of Electronic Customer Relationship Management, 12*(3), 225. https://doi.org/10.1504/IJECRM.2020.110040

Singh, P., Kumar, V., & Kataria, S. (2023). A Serial Mediation Model for Investigating the Impact of e-CRM Services on Customer Loyalty in the Indian Healthcare Industry. *Journal of Relationship Marketing, 22*(1), 62–86. https://doi.org/10.1080/15332667.2022.2136439

Sohrabi, H., Razavi, S. A. A., Tahmasebi, S. T., & Zareei, A. (2022). Designing a Model for the Effect of Content Marketing on the Effectiveness of E-Customer Relationship Management (Case Study: Iran Public Libraries Foundation). *International Journal of Information Science and Management, 20*(3), 187–214. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85138595078&partnerID=40&md5=59fdcca629e6a14701b4607e0d63bbb9

Suchitra, M. S., & Merugu, P. (2024). The Role of E-CRM Systems in Strengthening Bank-Customer Relationships: Evidence from Visakhapatnam Banks. *Nanotechnology Perceptions, 20*(S6), 53. https://doi.org/10.62441/nano-ntp.v20iS6.53

Sudhahar, C., Israel, D., & Selvam, M. (2006). Banking Service Loyalty Determination through SEM Technique. *Journal of Applied Science, 6*(7), 1472–1480. https://ui.adsabs.harvard.edu/abs/2006JApSc...6.1472C/abstract

Taylor, S. A., & Hunter, G. L. (2002). The impact of loyalty with e-CRM software and e-services. *International Journal of Service Industry Management, 13*(5), 452–474. https://doi.org/10.1108/09564230210447931

Tusell-Rey, C. C., Tejeida-Padilla, R., Camacho-Nieto, O., Villuendas-Rey, Y., & Yáñez-Márquez, C. (2021). Improvement of tourists satisfaction according to their non-verbal preferences using computational intelligence. *Applied Sciences (Switzerland), 11*(6), 2491. https://doi.org/10.3390/app11062491

Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer Experience Creation: Determinants, Dynamics and Management Strategies. *Journal of Retailing, 85*(1), 31–41. https://doi.org/10.1016/j.jretai.2008.11.001

Yang, Z., & Babapour, H. (2023). Critical variables for assessing the effectiveness of electronic customer relationship management systems in online shopping. *Kybernetes, 52*(9), 3044–3063. https://doi.org/10.1108/K-10-2021-0952

Zalzabilah, F., & Nurhadi, N. (2025). Customer Relationship Management System Integration Boosts Customer Satisfaction and Loyalty in Banking. *Academia Open, 10*(2), 10–21070. https://doi.org/10.21070/acopen.10.2025.12496