International Journal of Computer Information Systems and Industrial Management Applications
ISSN 2150-7988 Volume 18(18s) 2026 pp. 1274-1287
https://doi.org/10.70917/ijcisim-2026-4975
Article

Assessing the Scalability and Cost-Effectiveness of Customer Relationship Management Automation Among Registered Small Enterprises in Maharashtra, India

Phadke Nandakishor Dattatraya[1], Prof. (Dr) Bhuwan Chandra[2]

[1]Research Scholar, Computer Application, University of Technology, Jaipur, India
phadke_kishor@hotmail.com
[2]Research Supervisor, Department of Computer Application, University of Technology, Jaipur, India
bcd.hald@gmail.com

Abstract: Small businesses are increasingly adopting Customer Relationship Management (CRM) automation to enhance customer relations and support business growth. Prior research studies have, however, basically examined CRM scalability and cost-effectiveness separately and have provided limited evidence on registered small enterprises in Maharashtra, India. This study aims to do so through four objectives: (i) to examine the status of CRM adoption, (ii) to identify varieties of CRM practices in use, (iii) to examine the perceived scalability and cost-effectiveness of CRM automation, and (iv) to map major barriers to CRM adoption. A cross-sectional research design was utilized. The Structured Questionnaire was used to collect the Primary data from 400 registered Small Enterprises which is more than the calculated sample size of 382 using Cochran's formula. The descriptive statistics, Chi-square tests, Cramer's V, the Kruskal-Wallis H test, Spearman's rank correlation, and one-sample t-tests were used to analyse the data. The study's results reveal that firms of various types and sizes widely and consistently adopt CRM solutions. According to the findings of the article, contact/lead management was the most highly adopted CRM practice at 79.25% while the reporting and analytics functionalities were the least adopted at 46.0%. The perceived scalability of CRM automation is significantly higher (Mean=3.34, $p<0.001$) as compared to cost-effectiveness (Mean=2.99, $p=0.791$), with a moderate positive correlation ($\rho=0.368$, $p<0.001$) between the two dimensions. The main impediments to the adoption of the customer relationship management system are high implementation costs and training-related skill gaps. The research suggests that CRM automation can help scale the organization, but the long-term value of CRM automation needs effective execution. The results offer valuable guidance for small businesses, CRM providers, and lawmakers.

Keywords: CRM automation; scalability; cost-effectiveness; small enterprises; Maharashtra; customer orientation; digital transformation

1. Introduction

In this competitive environment, companies don't just price and product quality but also customer relationships, in which depth and duration are important. The marketplace has expanded beyond local and national boundaries. In view of the fact that such transaction efficiency does not offer any sustainable competitive advantage, relational efficiency has become necessary. This is so especially for smaller firms which cannot benefit of the bulk economies or of price competition (Sheth & Parvatiyar, 1995). According to Reichheld and Sasser (1990), regardless of the size of the company, consumers have also exhibited an increasing expectation for timely, customized and dependable service. Such expectations have increased the pressure on small businesses to achieve retention as it becomes increasingly harder to attain with traditional or manual methods only.

The incorporation of significant pressure has seen the overall digital transformation process. The CRM system that was hitherto associated with larger organizations is now available to smaller organizations due to deployment on cloud and subscription models. According to Payne and Frow (2005), CRM is a process of value creation which is strategic and cross functional and not just a contact list, thus it can be described as the software implementation of the customer related activities like scheduling, behavior profiling and reminders.

The following two problems that crop up are the scalability and cost-efficiency of CRM options for small companies. In the case of small enterprises, it is not possible to separate the above issues due to their limited resource base. However, the literature on the issue has mostly considered these issues in isolation. Harrigan et al. (2008) and Alshawi et al. (2011) have studied the CRM implementation issues within small enterprises. Issues falling within the stream's organizations, technology, and data quality respectively.

Maharashtra provides an ideal place to carry out this study. Being one of the most industrialized states in India with 74,866 registered small companies engaged in manufacturing, services, retail, wholesale and food/hospitality sectors, the state provides scale and diversity of sectors that provide sufficient opportunities for observing CRM implementation patterns. Accordingly, this study assesses the scalability and cost-effectiveness of CRM automation among registered small enterprises in Maharashtra.

The following four specific research objectives were formulated:

(i) To study the adoption of CRM techniques by registered Small Enterprises in Maharashtra, India.

(ii) To examine the varieties of CRM practices popular among registered Small Enterprises, such as publicity, after-sales services, discounts, and incentives.

(iii) To assess the scalability and cost-effectiveness of CRM automation among registered small enterprises in Maharashtra.

(iv) To examine the difficulties in the adoption of CRM practices by SMEs.

In addition, three hypotheses, derived from the research objectives and from the literature reviewed in Section 2, were formulated and tested:

H1: Registered Small Enterprises are less likely to envisage customers at the heart of their businesses.

H2: Registered Small Enterprises in the food sector are likely to rank customer relations as critical to business success.

H3: Registered Small Enterprises are most likely to face difficulties in adopting CRM practices because of a lack of customer intimacy, knowledge, direct interaction, databases, and brand identity.

The study adds to the body of knowledge by considering both scalability and cost-effectiveness together, by considering registered small enterprises as a separate empirical category, and by providing findings unique to the relatively neglected small-enterprise economy of Maharashtra. The rest of this paper is organized into the literature review (Section 2), the methodology (Section 3), results (Section 4), discussion of results and their implications, limitations, directions for future research, and conclusion (Sections 5 through 9).

2. Literature Review

2.1 From Relationship Marketing to CRM Automation

Marketing has changed from transaction orientated to relationship marketing, which considers long conversation with customer relationships as a source of competitive advantage. (Sheth & Parvatiyar, 1995). As customer bases grow, it becomes increasingly difficult to manage such relationships manually. That’s where CRM systems come in. They are tools that help firms manage customer interactions. According to Payne and Frow (2005), CRM is defined as a strategic, cross-functional process that integrates customer information, the creation of value,

and the performance of the organization. Reichheld and Sasser (1990) show that retention improvement substantially enhances profitability reinforcement. Thus, CRM has a strategic impact on small enterprises.

2.2 CRM Adoption and Implementation Challenges in Small Enterprises

Small enterprises adopt CRM under limited financial, technological, and managerial resources. Harrigan et al. (2008) note that small firms often possess strong customer orientation because owners interact directly with customers, with internet-based CRM extending these relationships efficiently. Alshawi et al. (2011) identify organizational readiness, technological compatibility, and data quality as major determinants of adoption. Technology adoption theories the Technology Acceptance Model (Davis, 1989), the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), and Diffusion of Innovation (Rogers, 2003) similarly emphasize perceived usefulness, compatibility, and ease of use, while Storey (1994) highlights the influence of resource limitations on small-enterprise technology decisions

2.3 Scalability and Cost-Effectiveness of CRM Automation

Scalability refers to the ability of a CRM system to grow with you without having to replace it completely or go bankrupt, while cost-effectiveness refers to whether the long-term benefits will outweigh the cost of having it set up and running. Through the software-as-a-service and cloud computing model, CRM has become accessible for small-size enterprises as infrastructure cost has reduced while flexibility has improved (Trigueros-Preciado et al., 2013; Forootani et al., 2022). Studies applying the Technology Organization Environment framework (Cruz-Jesus et al., 2019) and post-implementation perspectives (Ruivo et al., 2014) suggest that realized value depends on continuous, effective utilization. Yet most studies examine scalability and cost-effectiveness independently rather than jointly a gap this study addresses

2.4 Customer Orientation, Customer Knowledge, and Relationship Building

Customer orientation forms the foundation of relationship marketing and CRM implementation (Morgan & Hunt, 1994; Palmatier et al., 2006) and is especially critical in food and hospitality businesses that depend on repeat customers. Effective orientation also requires systematic acquisition, storage, and application of customer knowledge (Gebert et al., 2003); without structured customer information, small enterprises struggle to maintain personalized relationships as they grow, limiting CRM effectiveness (Reinartz et al., 2004; Soltani et al., 2018).

2.5 Small Enterprises, Digital Transformation, and the Maharashtra Context

According to Verhoef et al. (2021), Vial (2019), Cloud Computing and Software-As-A-Service facilitated the global adoption of CRM technology. The slow uptake of digital technology among smaller firms as compared to larger ones (OECD, 2021) has not deterred the efforts of the government, which is facilitating digitalization through Udyam Registration. Maharashtra with nearly 74,866 registrations in various industries of small firms makes it a suitable state for the study of CRM automation, scalability, affordability and challenges related to it. on.

2.6 Research Gap

While there is considerable research on the adoption of CRM in SMEs but, it has been executed separately on issues like adoption, scalability, cost-benefit, customer orientation, implementation barriers and so on. The literature generally does not evaluate issues of scalability and cost-effectiveness with respect to adoption strategies, customer orientation and constraints in registered small enterprises in Maharashtra. In comparison to studies dealing only with adoption factors, there is lesser literature analysing post-adoption value creation. The current study attempts to address these gaps through fulfillment of four objectives and three hypotheses using evidence from 400 registered small enterprises.

3. Methodology

3.1 Research Design

The research used a positivist approach in terms of research paradigm. The research methodology was deductive and cross-sectional. In addition, the research methodology was descriptive-analytical. The literature review provided insights into the problem statement and the development of the objectives and hypotheses of the research. The objectives and hypotheses of the research were formed based on the literature and were tested through primary data from registered small firms in Maharashtra. This method assisted in ascertaining CRM adoption, CRM processes, scalability, cost-effective, implementation of obstacles, and customer-related perceptions at just one time period only.

3.2 Study Area, Population, and Sample

The study was conducted among registered small enterprises in Maharashtra across Manufacturing, Services, Retail/E-commerce, Wholesale/Distribution, Hospitality/Food, and other sectors, defined per the MSMED Act criteria (Government of India, 2006), with the target population estimated at 74,866 (Ministry of Micro, Small and Medium Enterprises, Udyam Registration Portal). Applying Cochran's (1977) formula at a 95% confidence level, a 5% margin of error, and a 50% response distribution, the minimum required sample size was 382; 400 valid responses were obtained. In the absence of a centrally accessible sampling frame, a non-probability, purposive sampling technique was employed through industry associations, trade bodies, and professional networks, with deliberate effort to span all relevant sectors and firm-size bands. The achieved sample covers six sectoral categories and five firm-size bands (1–9 to 100+ employees).

3.3 Data Collection and Research Instrument

Data were collected using a structured and self-administered online questionnaire. This was sent through industry associations, trade bodies, professional networks between March to October 2025 to owners, proprietors or senior decision makers. The instrument captured four areas corresponding to the study's objectives CRM adoption status, varieties of CRM practices, perceptions of scalability and cost-effectiveness, and implementation barriers together with items measuring customer orientation, importance of customer relations, and customer-knowledge difficulty (H1–H3). Except for categorical demographic and practice-adoption items, all attitudinal constructs were measured on a five-point Likert scale (1 = low to 5 = high), permitting comparison of composite means against the midpoint (3.0)

3.4 Reliability and Validity

Prior to full-scale administration, the questionnaire was pilot tested on a subsample of 70 registered small enterprises (N = 70), drawn using the same sampling approach but excluded from the final analytical sample. Internal consistency was assessed using Cronbach's Alpha for each composite construct.

Table 1. Reliability Analysis (Cronbach's Alpha, Pilot Sample N = 70)

Construct	**Items**	**N**	**Cronbach's α**	**Result**
Scalability	Q11–Q16	80	0.91	Reliable
Cost-effectiveness	Q17–Q20	80	0.80	Reliable
Value / ROI	Q22–Q25, Q27	80	0.82	Reliable
Barrier Score	Q28–Q32	80	0.88	Reliable
Customer Orientation (Ha)	Q39–Q40	80	0.81	Reliable
Importance of Relations (Hb)	Q41–Q42	80	0.81	Reliable

Customer-Knowledge Difficulty (Hc)	Q43–Q44	80	0.80	Reliable

Source: Field Survey Data. All constructs met or exceeded the 0.80 threshold for good internal consistency and were retained without modification.

3.5 Variables and Hypotheses

The study examined four key dimensions: CRM adoption, CRM practices, scalability and cost-effectiveness, and CRM implementation barriers. The indicators of scalability and cost efficiency were determined through composite measures obtained from several Likert-scale questions. Customer Orientation (Ha), Importance of Customer Relations (Hb), and Customer Knowledge Difficulty (Hc) were also measured as composite constructs.

The hypotheses tested were:

H1: Registered Small Enterprises are less likely to envisage customers at the heart of their businesses.

H2: Registered Small Enterprises in the food sector are likely to rank customer relations as critical to business success.

H3: Registered Small Enterprises are most likely to face difficulties in adopting CRM practices because of a lack of customer intimacy, knowledge, direct interaction, databases, and brand identity.

3.6 Statistical Techniques

Data were analyzed using Microsoft Excel and SPSS. Descriptive and inferential statistical techniques were applied according to the research objectives and hypotheses, as summarized in Table 2. Statistical significance was evaluated at the 5% level ($\alpha = 0.05$), while Objective 1 also considered $\alpha = 0.10$ to identify borderline patterns.

Table 2 Statistical Techniques Used for Data Analysis

Research Objective / Hypothesis	**Statistical Technique**
Objective 1	Frequency & Percentage Analysis, Chi-square Test, Cramer's V, Kruskal–Wallis H Test
Objective 2	Frequency & Percentage Analysis
Objective 3	Mean, Standard Deviation, One-Sample *t*-Test, Spearman's Rank Correlation
Objective 4	Mean Ranking, Frequency & Percentage Analysis
Hypothesis Testing	One-Sample *t*-Test

3.7 Ethical Considerations and Limitations of the Methodology

All respondents provided informed consent for participation, which was voluntary and did not retain any identifying information in the analysis dataset. As detailed further in Section 6, the cross-sectional design precludes causal inference, the non-probability sampling technique limits full generalizability to the wider population of 74,866 registered small enterprises, self-report data are subject to social-desirability bias, and the Hospitality/Food subsample used to test H2 (N = 29) is relatively small.

4. Results

Data were collected from 400 registered small enterprises across six sectors (Manufacturing 28.5%, Services 24.0%, Retail/E-commerce 22.75%, Wholesale/Distribution 14.25%, Hospitality/Food 7.25%, Other 3.25%) and five firm-size bands (1–9 employees 33.0%, 10–24 26.0%, 25–49 23.0%, 50–99 13.5%, 100+ 4.5%), predominantly established firms with 6 or more years of operation (71.25%) and moderate active customer bases (34.25% reporting

100–500 customers). All seven composite constructs demonstrated good-to-excellent internal consistency (Cronbach's α = 0.80–0.91; Table 1). Results are organized below by research objectives, followed by hypothesis testing.

4.1 Objective 1: Status of CRM Adoption

Five procedures examined CRM adoption status: descriptive frequency analysis, two chi-square tests of adoption status against sector and firm size, a chi-square test of CRM type against firm size, and two Kruskal–Wallis H tests of CRM Adoption Depth against sector and firm size.

1] CRM Adoption Status by Business Sector

Table 3.A: Cross-tabulation of CRM Adoption Status by Business Sector (% within Sector)

Adoption Status	Hospitality/Food	Manufacturing	Retail/ E-comm	Services	Wholesale/Distr.	Other
Not using, no plans	10.3	11.4	8.8	6.2	1.8	0.0
Considering, not yet adopted	6.9	28.1	17.6	22.9	26.3	15.4
Recently adopting / trial	31.0	14.0	18.7	20.8	26.3	38.5
Partially adopted	41.4	24.6	33.0	27.1	28.1	23.1
Fully adopted	10.3	21.9	22.0	22.9	17.5	23.1

Chi-square	df	p	N	Cramer's V
25.03	20	0.2004	400	0.125

4.2 2] CRM Adoption Status by Firm Size

Table 4.4 and Figure 4.8 present the cross-tabulation of CRM adoption status and firm size (the number of employees).

Table 3.B: Cross-tabulation of CRM Adoption Status by Firm Size (% within Firm Size)

Adoption Status	1-9	10-24	25-49	50-99	100+
Not using, no plans	4.5	12.5	5.4	9.3	11.1
Considering, not yet adopted	25.0	20.2	22.8	16.7	27.8
Recently adopting/trial	19.7	18.3	20.7	25.9	22.2
Partially adopted	33.3	24.0	27.2	35.2	11.1

Fully adopted	17.4	25.0	23.9	13.0	27.8

Chi-square	df	p	N	Cramer's V
17.23	16	0.3711	400	0.104

4.3 3] CRM Type by Firm Size

Table 4.5 and Figure 4.9 present the cross-tabulation of the type of CRM system used and firm size.

Table 3.C: Cross-tabulation of CRM Type by Firm Size (% within Firm Size)

CRM Type	1-9	10-24	25-49	50-99	100+
Cloud/SaaS CRM	35.6	41.3	47.8	31.5	38.9
Custom-built in-house	12.1	10.6	4.3	9.3	0.0
No formal CRM	10.6	16.3	13.0	16.7	11.1
On-premises /Installed	17.4	15.4	7.6	14.8	16.7
Spreadsheet /Manual	24.2	16.3	27.2	27.8	33.3

Chi-square	df	p	N	Cramer's V
18.47	16	0.297	400	0.107

4.4 4] CRM Adoption Depth by Business Sector and Firm Size

4.5 To capture not only whether a firm has adopted CRM but also the breadth of CRM functionality actually in use, a composite CRM Adoption Depth score was constructed as the count of CRM techniques/functions in active use.

Table 3.D: CRM Adoption Depth by Business Sector

Sector	Mean Depth	Median	SD	N
Hospitality/Food	3.31	3.0	1.17	29
Manufacturing	3.63	4.0	1.12	114
Retail/E-commerce	3.34	3.0	1.16	91
Services	3.54	4.0	1.18	96
Wholesale/Distribution	3.18	3.0	1.02	57
Other	3.62	4.0	1.12	13

Kruskal-Wallis H	p
9.78	0.082

Figure 4: Mean CRM Adoption Depth across Business Sectors (N = 400)

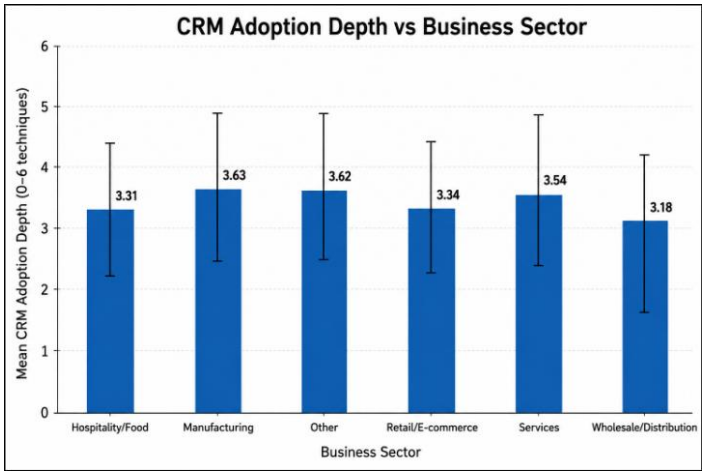


Table 3.E: CRM Adoption Depth by Firm Size

Firm Size	Mean Depth	Median	SD	N
1-9	3.40	3.0	1.03	132
10-24	3.69	4.0	1.21	104
25-49	3.33	3.0	1.16	92
50-99	3.46	4.0	1.02	54
100+	3.11	3.0	1.49	18
Kruskal-Wallis H		p		
9.30		0.054		

Adoption was widespread and largely uniform: depending on firm-size bracket, only 4.5%–12.5% of firms reported no CRM use or plans, and Cloud/SaaS CRM was the dominant technology across every category (31.5% - 47.8%). None of the five tests reached conventional significance, and effect sizes were weak throughout (Cramer's V = 0.104 - 0.125), indicating that neither sector nor firm size meaningfully predicts adoption status, depth, or CRM type. Adopting firms operationalize three to four of the six core functions (mean depth 3.11–3.69). The firm-size effect on depth (p = 0.054) narrowly missed significance, with mid-sized firms (10–24 employees, 3.69) showing the broadest use and the largest firms (100+, 3.11) the narrowest suggestive pattern given the borderline p-value.

4.2 Objective 2: Varieties of CRM Practices

4.6 The second objective of the present study is to examine the varieties of customer relationship management (CRM) practices that are popular among registered small enterprises operating as registered SMEs in Maharashtra

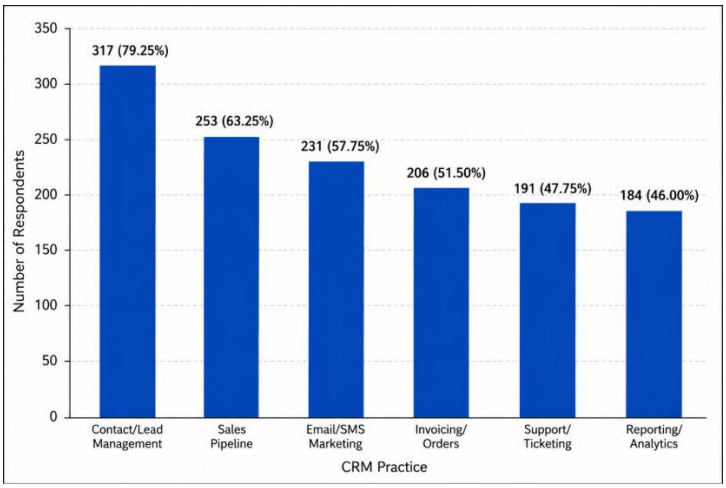
Table 4. Frequency of Adoption of CRM Practices (N = 400)

CRM Practice	N	Percentage
Contact/Lead Management	317	79.25
Sales Pipeline Management	253	63.25
Email/SMS Marketing	231	57.75
Invoicing/Orders	206	51.50

Support/Ticketing	191	47.75
Reporting/Analytics	184	46.00

Note: Percentages of N = 400; multiple responses permitted. 38 firms (9.5%) reported using no CRM practice at all.

Figure 6: Adoption of CRM Practices among Registered Small Enterprises (n = 400)



Contact/Lead Management was the most widely adopted practice (79.25%), followed by Sales Pipeline Management (63.25%) and Email/SMS Marketing (57.75%); Invoicing/Orders and Support/Ticketing were each adopted by roughly half of firms (51.50% and 47.75%), while Reporting/Analytics was the least adopted (46.00%). The CRM adoption hierarchy shows that CRM adoption is mainly operational and contact driven. It is more geared towards customer acquisition and sales management than analytics and reporting.

4.3 Objective 3: Scalability and Cost-Effectiveness

Table 5.A Descriptive Statistics for Scalability Items and Composite Score (N = 400)

Item	Mean	SD
Handling Growing Customer Volume	3.43	1.03
Ease of Adding Users	3.46	1.01
Feature Expandability	3.20	1.05
Integration with Other Tools	3.23	1.00
Performance During Peak Demand	3.40	1.02
Confidence in Future Growth Support	3.34	1.04
Scalability Score	**3.34**	**0.82**

Table 5.B: Descriptive Statistics for Cost-effectiveness Items and Composite Score

Item	Mean	SD
Initial Setup Cost	2.93	1.06
Ongoing Costs	3.08	1.07
Hidden Costs	2.82	1.00

Cost per User	3.12	1.01
Cost-effectiveness Score	**2.99**	**0.85**

Figure 8: Mean Ratings of Cost-effectiveness Items (N = 400)

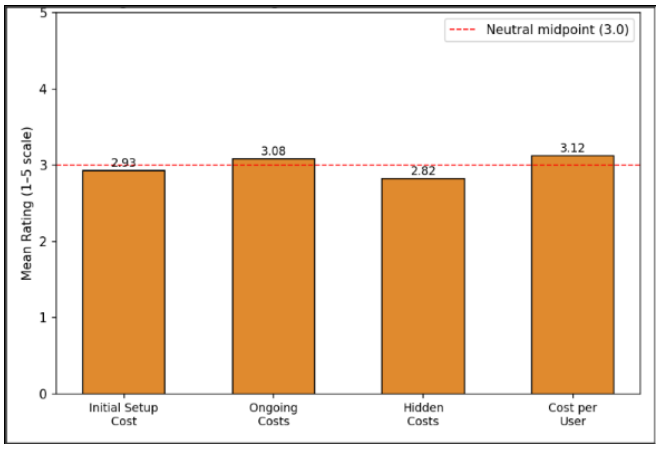


Table 5.C: One-Sample t-Test of Scalability and Cost-effectiveness Composite Scores Against the Scale Midpoint (Test Value = 3.0, N = 400)

Construct	Mean	SD	t (df = 399)	p (two-tailed)	Result
Scalability	3.34	0.82	8.44	< 0.001	Significantly above midpoint
Cost-effectiveness	2.99	0.85	−0.27	0.791	Not significantly different from midpoint

The highest-ranking features of scalability are ease of adding users (3.46) and managing increasing customer volumes (3.43), while the lowest ranking features were featuring expandability (3.20) and being able to integrate with other tools (3.23). A total of 68.5% of companies rated scalability at least at midpoint. Within the area of Cost-effectiveness, the Lower ratings for Hidden costs (2.82) and Initial Setup cost (2.93) indicate that in their general view, the costs are perceived as high but not for ongoing Cost (3.08) and Cost per User (3.12). This suggests that it is the upfront and hidden costs that appear to be the cause of overall ambivalence of users, not the recurring charges. A Spearman's correlation between the two scores was positive but rather moderate ($\rho = 0.368$, $p < 0.001$), indicating that they are related but with empirical distinct dimensions not a single judgement of CRM quality.

4.4 Objective 4: Barriers to CRM Adoption

The fourth goal of the study attempts to see what challenges the registered micro and small enterprises in Maharashtra face in adopting Customer Relationship Management (CRM) practice.

Table 6. CRM Adoption Barriers: Severity Ranking and Single Most Significant Barrier

Barrier (graded severity)	Mean severity	SD
Training/Skill Gap	3.32	1.08
Data Quality Issues	3.08	1.10

Employee Resistance	3.02	1.05
Difficulty of Implementation	2.82	1.03
Inadequate Vendor Support	2.66	1.05

Note: Barriers were rated on a five-point scale (1 = low severity, 5 = high severity). Overall composite barrier score: Mean = 2.98, SD = 0.87

Table 6 presents the extent of severity of the five primary barriers to CRM adoption for registered SMEs. The most serious barrier was the emergence of training/skill gaps (3.32), followed by data quality issues (3.08) and employee resistance (3.02). Difficulty of implementation (2.82) and lack of vendor support (2.66) were moderate but less serious. A composite barrier score of 2.98 implies that the firms confront moderate difficulties across all dimensions; not acute problems in any one area. The importance of shortcomings in training and skills suggests that it is human-capital constraints, rather than technology or finance constraints, which present the most persistent challenge that has to be addressed in a targeted manner.

4.5 Hypothesis Testing

Table 7. Summary of Hypothesis Testing (One-Sample t-Test, Test Value = 3.0)

Hyp.	Construct	N	Mean	SD	t	p	Decision
H1	Customer Orientation (Ha)	400	3.73	0.89	16.47	< 0.001	Not supported
H2	Importance of Relations (Hb)	29	3.97	0.65	7.95	< 0.001	Supported
H3	Customer-Knowledge Difficulty (Hc)	400	3.18	0.91	4.00	< 0.001	Supported

H1 hypothesized that Customer Orientation would be significantly lower than the neutral midpoint. The observed mean (M = 3.73) was significantly higher, not lower ($t(399) = 16.47$, $p < 0.001$); H1 is therefore not supported, with the result running contrary to its proposed direction indicating that firms place the customer at the center of business decisions to a significant degree. H2 hypothesized that Hospitality/Food firms would rate customer relations as more important than the midpoint; the observed mean (M = 3.97, N = 29) was significantly higher ($t(28) = 7.95$, $p < 0.001$), supporting H2, though the small subsample warrants caution. H3 hypothesized greater-than-neutral difficulty in acquiring customer knowledge; the observed mean (M = 3.18) was significantly higher than the midpoint ($t(399) = 4.00$, $p < 0.001$), supporting H3, though the modest distance from the midpoint indicates the difficulty is moderate rather than severe.

Overall, H2 and H3 were supported while H1 was not running contrary to its hypothesized direction indicating that registered small enterprises are considerably more customer-oriented than anticipated, that food-sector firms regard customer relations as critical, and that firms across sectors face a statistically significant but moderate difficulty in customer knowledge and intimacy

5. Discussion

5.1 CRM Adoption among Registered Small Enterprises

The small enterprises that are registered in Maharashtra have a well-established CRM adoption. In addition, there is no significant difference in different business sectors. This indicates that CRM is now seen as a business tool rather than a technology used by industries. Nonetheless, the differences in CRM use by firm-size category signify that larger companies typically use more CRM functions than smaller companies. The results corroborate previous research that addresses the organizational resources and managerial capability that influence the extent of CRM use. Therefore, the question for small businesses is not whether to make CRM but how effectively it is integrated into operations.

5.2 CRM Practices Adopted by Small Enterprises

The research found that small companies mainly use CRM for operational activities like contact management and customer communication, whilst advanced functions like reporting and analytics are reportedly underutilized. CRM is perceived mainly as an operational support tool, rather than as a strategic decision making system. As with previous studies, limited financial resources and analytical configuration inhibited the use of sophisticated CRM. Enhancing analytical capabilities could boost customer insights and lead to better decisions.

5.3 Scalability and Cost-Effectiveness of CRM Automation

The findings indicate that in general, respondents believe that CRM systems are scalable and can support business growth, especially through cloud-based systems that provide flexibility and lower infrastructure cost. Conversely, there was a reasonable view in terms of cost effectiveness which implies that the success in terms of money was caused not merely because of CRM but also its implementation and training of employees. The previous literature finds that the value of the enterprise CRM does not come from implementation only but usage and alignment. This research corroborates this finding. However, successful implementation of enterprise CRM necessitates persistent effort from the organization.

5.4 Barriers to CRM Implementation

While many adopters are using CRM technology, we cannot overlook the fact that many organizations still face issues with CRM because of various organization-related issues in implementing them. The research highlights several problems like managing customer data, capability, and knowledge of customers. The technological infrastructure is important and so too is organizational readiness in the successful implementation of CRM. For this reason, organizations should complement employee training with their CRM efforts, better information management techniques, and a more customer-friendly process approach.

5.5 Discussion of Hypothesis Testing

The findings of the study were additionally corroborated. The strong customer orientation adopted by the respondents shows that customer relations are vital for business success. Customer relations are especially important in the food sector as they are dependent on their customers. Thus, customer service was found to be essential. Nevertheless, the interviewers also experience some challenges in securing and managing information related to customers. Consequently, managing customer information remains a field to be improved. All these observations highlight the importance of developing long-term relationships with customers to implement CRM successfully and lead us to the principles of Relationship Marketing.

5.6 Overall Discussion

Generally speaking, overall, findings hint that the adoption of CRM in registered small enterprises in Maharashtra has been implemented and is increasingly being utilized for customer relationship management and business development. To realize the CRM strategic value, it requires improving analytics, skill of employee and knowledge management of Customer as per research. In other words, not only must technology be implemented to adopt technology, but it must also integrate successfully into the business process for CRM to be successful.

6. Practical Implications

The findings have several implications. Small businesses cannot expect a sustainable benefit from just CRM implementation. They need to enhance employee skills, customer information management, and even using more sophisticated CRM functions like reporting. The above clearly indicates what must be offered by CRM vendors. They should provide a cost-effective, scalable and easy-to-use system. Moreover, the implementation process should also be easy. Further, training is also necessary. The barriers specified will both underline the need for governments and industry associations to work on improving the digital capability of the entities through training and other supportive measures.

Finally, the research provides authentic data from registered small enterprises in Maharashtra which can be used as a benchmark for future studies considering the CRM implementation and digital transformation of an emerging business.

7. Limitations

As stated in section 3.7, there are various limitations associated with this research. These results cannot be generalized because they only apply to small firms registered in Maharashtra. It does not involve a longitudinal research design that would capture changes over time. Self-reporting can lead to respondent bias regardless of anonymity measures used, and the limitations of the research framework do not consider other organizational and environmental factors affecting CRM.

8. Future Scope

Such a study would also help generate numerous opportunities for future research in the forthcoming period of time. For instance, such a kind of research can also be conducted in some other Indian states or nations. Moreover, this research can even become a longitudinal one to know about the adoption and scalability of CRM over the time period. Finally, future research may also consider the impact of other variables such as leadership commitment, organizational culture, digital competence of employees, and technology readiness to implement CRM successfully. Finally, future research which involves comparative analysis among micro businesses, small businesses, medium businesses, large businesses, or different industries can help understand better CRM implementation and its effect on performance.

9. Conclusion

The present study sought to analyze CRM adoption, implementation, scalability, cost-effectiveness, and implementation barriers among registered small enterprises in Maharashtra. The results show that CRM is adopted in a significant number of cases as a useful tool for operation purposes, and while the participants in this research believe CRM systems to be scalable, cost-effectiveness would be achieved through successful implementation, employee capability, and organizational integration, not only through the adoption of technology. Organizational barriers associated with customer knowledge and information management are still among the factors that significantly influence the success of CRM. By presenting empirical research on registered small enterprises in Maharashtra, the study provides a valuable contribution to understanding how CRM goes beyond adoption into being integrated in practice, and how success becomes sustainable by implementing customer-oriented approaches along with organizational capability development.

REFERENCES

1. Alshawi, S., Missi, F., & Irani, Z. (2011). Organizational, technical, and data quality factors in CRM adoption: SMEs perspective. Industrial Marketing Management, 40(3), 376–383. https://doi.org/10.1016/j.indmarman.2010.08.006
2. Cochran, W. G. (1977). Sampling techniques (3rd ed.). Wiley.
3. Cruz-Jesus, F., Pinheiro, A., & Oliveira, T. (2019). Understanding CRM adoption stage: Empirical analysis building on the TOE framework. Computers in Industry, 109, 1–13. https://doi.org/10.1016/j.compind.2019.03.002

4. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. https://doi.org/10.2307/249008
5. Forootani, S., Abdolvand, N., & Rajaee Harandi, S. (2022). Investigating the factors affecting the adoption of cloud-based CRM by SMEs. Journal of Enterprise Information Management, 35(4/5), 1234–1256. https://doi.org/10.1108/JEIM-08-2020-0347
6. Gebert, H., Geib, M., Kolbe, L., & Brenner, W. (2003). Knowledge-enabled customer relationship management: Integrating customer relationship management and knowledge management concepts. Journal of Knowledge Management, 7(5), 107–123. https://doi.org/10.1108/13673270310505421
7. Government of India. (2006). The Micro, Small and Medium Enterprises Development Act, 2006. Ministry of Micro, Small and Medium Enterprises. https://msme.gov.in
8. Harrigan, P., Ramsey, E., & Ibbotson, P. (2008). e-CRM in SMEs: An exploratory study in Northern Ireland. Marketing Intelligence & Planning, 26(4), 385–404. https://doi.org/10.1108/02634500810879296
9. Ministry of Micro, Small and Medium Enterprises. (2026). Udyam Registration Portal. https://udyamregistration.gov.in/
10. Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. Journal of Marketing, 58(3), 20–38. https://doi.org/10.1177/002224299405800302
11. Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. Journal of Marketing, 70(4), 136–153. https://doi.org/10.1509/jmkg.70.4.136
12. Payne, A., & Frow, P. (2005). A strategic framework for customer relationship management. Journal of Marketing, 69(4), 167–176. https://doi.org/10.1509/jmkg.2005.69.4.167
13. Reichheld, F. F., & Sasser, W. E. (1990). Zero defections: Quality comes to services. Harvard Business Review, 68(5), 105–111.
14. Reinartz, W., Krafft, M., & Hoyer, W. D. (2004). The customer relationship management process: Its measurement and impact on performance. Journal of Marketing Research, 41(3), 293–305. https://doi.org/10.1509/jmkr.41.3.293.35991
15. Rogers, E. M. (2003). Diffusion of innovations (5th ed.). Free Press.
16. Ruivo, P., Oliveira, T., & Neto, M. (2014). Examine ERP post-implementation stages of use and value: Empirical evidence from Portuguese SMEs. International Journal of Accounting Information Systems, 15(2), 166–184. https://doi.org/10.1016/j.accinf.2014.01.002
17. Sheth, J. N., & Parvatiyar, A. (1995). The evolution of relationship marketing. International Business Review, 4(4), 397–418. https://doi.org/10.1016/0969-5931(95)00018-6
18. Soltani, Z., Zareie, B., Milani, F. S., & Navimipour, N. J. (2018). The impact of customer relationship management on organizational performance. The Journal of High Technology Management Research, 29(2), 237–246. https://doi.org/10.1016/j.hitech.2018.10.008
19. Storey, D. J. (1994). Understanding the small business sector. Routledge.
20. Trigueros-Preciado, S., Pérez-González, D., & Solana-González, P. (2013). Cloud computing in industrial SMEs: Identification of the barriers to its adoption and effects of its application. Electronic Markets, 23(2), 105–114. https://doi.org/10.1007/s12525-012-0120-4
21. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425–478. https://doi.org/10.2307/30036540
22. Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research, 122, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022
23. Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003
24. OECD. (2021). The digital transformation of SMEs. OECD Publishing. https://doi.org/10.1787/bdb9256a-en