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CRM Effectiveness (CRME) in Indian Quick-Service Restaurants (QSRs): An Investigation of Scale Generalizability

Tejas Yaduvanshi[1], Alok Kumar Rai[2]

[1]Assistant Professor, School of Management Sciences, Varanasi, Uttar Pradesh, India, E-mail: tejas@smsvaranasi.com

[2]Professor, Institute of Management Studies, Banaras Hindu University, BHU, Varanasi, India

Abstract

Purpose: This study comprehends the effectiveness of Customer Relationship Management (CRM) in Quick-Service Restaurants (QSRs), with a focus on the measurement of CRM Effectiveness (CRME) specifically tailored for the Indian QSR sector by testing the validity and generalizability of an existing scale for CRME (Padmavathy et. al., 2012), originally developed for Indian banking service industry.

Research Gap: The QSR sector witness challenges of high customer turnover with quick-paced service environments, making CRM strategies pertinent. With exponential increase in the competition, effective CRM practices have become decisive for retaining customers and enhance overall business performance. Although, there has been lot of research in the field of CRM Effectiveness in the Indian Banking service industry, there is a lack of standardized scale for quantifying CRM effectiveness for the Indian QSRs, which may lead to ineffective CRM implementation and assessment practices.

Novelty : Present study investigates the validity and generalizability of a multi-dimensional CRME scale that evaluates the effectiveness of CRM system in the QSR context by employing exploratory and descriptive quantitative methods (such as KMO, Cronbach Alpha, EFA and higher order CFA using SPSS and AMOS), which is first of its kind in the context of QSR industry.

Findings/Implications: Leveraging existing literature and theoretical frameworks, present study empirically investigates critical dimensions of CRME, including Organizational commitment (OC), Customer experience (CE), Process-driven approach (PD), Reliability (RE), and Technology orientation (TOR); and concludes that the scale originally developed by Padamavathy et al. (2012) is generalizable to the Indian QSR sector with OC being the most impactful predictor of CRME. Finally, the study offers actionable insights for QSR managers to improve their CRM efforts.

Keywords: Customer Relationship Management (CRM); CRM Effectiveness (CRME); Scale generalizability; Quick-Service Restaurants (QSRs); CFA.

Introduction

CRM refers to the practices, processes, and tools that businesses employ to handle customers in order to increase customer retention and long lasting *profitability (Payne & Frow, 2005; Kumar & Reinartz, 2018; Meena & Sahu, 2021). Parvatiyar &Sheth (2001)* defined CRM as "a comprehensive approach and practice of partnering with select customers to craft superior value for the business and the customer." Customer relationship management is a cross-functional process that benefits an organisation in numerous manners- increased sales, reduced costs, improved operations, prompt and tactical business decisions, customer satisfaction, customer retention, and optimum use of the resources *(Sheth et al., 2012; Wang, 2023).*

Customer Relationship Management (CRM) has been widely researched in service industries,

(Corresponding Author: Tejas Yaduvanshi, Assistant Professor, School of Management Sciences, Varanasi, Uttar Pradesh, India
E-mail: tejas@smsvaranasi.com

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particularly in hospitality, banking, insurance and retail sectors, where it plays a vital role in improving customer satisfaction and long-term profitability *(Rai, 2012; Kannan & Vikkraman, 2015; Chathoth et al., 2016; Kumar & Reinartz, 2018)*. In the service industry, CRM is predominantly imperative because of the high extant of customer interaction and the emphasis on providing a personalized experience that meets customer needs and expectations *(Grönroos, 1994; Buttle & Maklan, 2019)*.

Considering the diversity of market conditions, cultures, the speed of economic growth, diverse organizations, and the ever-global competitive landscape, practical concepts like CRM need to be tested and generalized beyond the settings where they were initially developed *(Chen et al., 2009; Akroush et al., 2011; Makkar & Singh, 2019; Yang & Babapour, 2023)*. Henceforth, from a global marketing viewpoint, a challenge confronting academic marketing research is to validate and generalize the applicability of marketing concepts, models, scales and theoretical frameworks across different industries, business cultures, and contexts *(Varadarajan and Jayachandran, 1999; Akroush et. al. 2011; Hillebrand et al. 2011; Wang & Feng, 2012; Pandey & Rai, 2020; Sinha et al., 2023)*.

The Quick-Service Restaurant (QSR) segment is a significant actor in the food service industry due to its ability to meet consumer demands for quick, reasonable, and convenient dining options *(Mason et. al., 2016)*. The competitive landscape of QSRs is marked by high customer turnover and a fast-paced service environment, making it progressively important for these businesses to embrace effective Customer Relationship Management (CRM) practices to ensure long-term customer retention and profitability *(Nguyen et al., 2022)*. CRM, which encompasses the usage of strategies and technological tools to manage interactions with current and prospective patrons, is acknowledged to be a vital tool for enhancing customer satisfaction, loyalty, and profitability in the service industry *(Rai, 2012; Kannan & Vikkraman, 2015; Umarani et al., 2022)*. CRM systems are intended to nurture long term customer relationships by implying data-driven insights to deliver customised experiences *(Garg & Madan, 2024; Matosas-López 2024)*.

Unlike other service setups, QSRs face unique challenges such as high customer churn, short service duration, and standardized service offerings, which may restrict opportunities for building long-term relationships which in turn results into revenue losses *(Hahm & Khan, 2022; Manhas et al., 2024)*. Existing CRM research has predominantly focused on major service setups such as banking, finance, retail and hospitality settings *(Maklan et al., 2008; Kannan & Vikkraman, 2015; Lokesh & Vasantha, 2024)*, where the nature of customer interactions is significantly different from the QSR industry. QSR's high customer turnover, quick service times, and price competition necessitate a distinct approach to CRM that is capable of capturing these unique challenges. Despite the increasing recognition of CRM's importance in QSRs, there is a gap in the literature regarding the comprehension and measurement of CRM effectiveness (CRME) in the QSR segment. Existing CRM effectiveness frameworks often lack specificity for the QSR context, creating a critical research gap. While CRM effectiveness has been explored in wider contexts, no standardized and validated scale exists to measure CRM effectiveness in QSRs. It is crucial to examine the generalizability of the CRME scale in order to enhance our practical insight into the construct and its anticipated impact on business outcomes. Acknowledging the complexities of its generalizability to different industries and contexts, which cannot be simply assumed *(Sin et al., 2005; Kim & Kim, 2009; Chen et al., 2009; Hillebrand, 2011; Akroush et al., 2011; Berrais et al., 2019;)*, a recommended research approach is to broaden the generalizability of already existing conceptual scales of CRME and investigate the outcome of CRM practices on business performance. This becomes particularly significant as several researchers *Kim et al., (2003); Sin et al., (2005); Akroush et al., (2011); Wang and Feng,(2012);*

Wang (2023); Suriyavarma & Vijayakumar, (2025) have conveyed that the comprehension of CRM effectiveness and its impact is limited, resulting in a poor conceptualization of CRM as a marketing instrument. Present study bridges this gap by validating an assessment scale for CRM effectiveness (CRME) specifically designed for QSRs by examining the multidimensional nature of CRME (Padmavathy et. al. 2012), including factors such as Organizational commitment (OC), Customer experience (CE), Process-driven approach (PD), Reliability (RE), and Technology orientation (TOR. This research contributes to the mounting body of literature on CRME in the QSR service industry. Through qualitative as well as empirical methods, this study aims to provide a comprehensive framework that QSRs can utilise to assess and optimize their CRM strategies. The study also seeks to contribute to the academic literature by offering a validated instrument for measuring CRM effectiveness in the context of QSRs, providing insights into how CRM can enhance customer interactions and eventually advance business performance in the sector.

Review of Literature

Customer Relationship Management comprehension

Numerous definitions of CRM have been researched, with every next enriching the latter ones and providing broader perspective of the concept and articulation of its foundational principles *(Chen and Popovich, 2003; Maklan et al., 2008; Meena and Sahu, 2021; Lokesh & Vasantha, 2024; Garg & Madan, 2024)*. The earlier emphasis in CRM definition was directed towards IT and its function in gathering and interpreting customer intelligence. However, these definitions often faced criticism for being too narrow in their perspective of CRM *(Kumar & Reinartz, 2018)*. Broader viewpoints started to arise in several definitions that transformed the comprehension of CRM as an organization-wide initiative aimed at establishing and sustaining profitable customer relationships by recognizing and fulfilling customer needs and expectations *(Kannan & Vikkraman, 2015)*.

Kotler and Armstrong (2004) described CRM as "the comprehensive process of developing and sustaining lucrative customer associations through the provision of exceptional customer value and satisfaction." *Parvatiyar & Sheth (2001)* characterized CRM as "an enterprise-wide strategy for acquiring, maintaining, and collaborating with key customers to engender superior value for both the company and the customer."

The concept of CRM is still progressing and there is absence of consensus on a universally accepted definition of *CRM (Nguyen et al., 2022; Garg & Madan, 2024; Suriyavarma & Vijayakumar, 2025)*. Comprehensive review of literature reveals that the concept of CRM has been envisioned from various perspectives: a technological tool *(Sakunthala, 2020; Meena and Sahu, 2021),* a business strategy *(Croteau & Li, 2003),* a business process, or a business *philosophy (Ryals & Knox, 2001; Maklan et al., 2008)*.

Migdadi (2021) advanced that CRM is a technology enabler for business organizations to sustain long-term associations with customers in a profitable manner *(Sakunthala, 2023)*.

Rai (2012) defined "CRM is a constantly updated process of ascertaining relative worth of customers and crafting customized business interaction to delight them so that they do not just endure with the company profitably but also be the firm's ambassador. Complete involvement and empowerment of staffs and suitable technology are two prerequisites for successful CRM."

Chan & Khodakarami (2014) postulated that CRM systems are used to simplify and automate business activities, including management, data analysis, customer service, sales, and marketing. *Hollensen (2015*) contemplated that the two main constituents of CRM are the human and business dimensions. The human dimension deals with detecting and responding to people needs, while

the business facets are the vital elements of marketing. *Kannan & Vikkraman (2015)* conceptualised CRM as a management concept that helps a business to optimise sales, enhance customer value, and improve service quality by identifying and fulfilling the demands of each customer *(Assimakopoulos, et al., 2015)*. Robust evidence from the literature establishes that businesses who successfully exploit CRM gain multiple advantages *(Madhovi and Dhliwayo, 2017; Garg & Madan, 2024; Lokesh & Vasantha, 2024)*.

QSR (Quick Service Restaurant)

A fast-food restaurant, also termed as a quick service restaurant (QSR), is a particular type of restaurant that serves fast food and has minimal table service. The food served in fast food restaurants is offered from a limited menu and usually available for take away, though seating may be provided *(Sinha, 2012; Mehrotraet al., 2018)*. Fast food establishments offer seating but also serve food from a limited menu that is frequently available for takeout *(Pandey & Das 2019)*.

Merriam-Webster dictionary defines fast food as "the food that sold in a restaurant or store with preheated or precooked ingredients and served to the customer in a packaged form for take-out/take-away". The organized food sector has changed over the decades, leading to the introduction of innovative and cutting-edge service elements. Usually, QSRs highlight their affordable costs, accommodating hours, prompt service, and menu selections. *(Goyal & Singh, 2007; Mahmood et al., 2024)*.

The main organised QSR chains in India with foreign brand are KFC, McDonald's, Starbucks, Burger King, Subway, Pizza Hut, Baskin Robbins, Dominos, etc. Most of these have had to make a lot of modifications to their standard menus to cater the Indian customers' taste preferences. Major Indian organised QSR food chains include Bikanerwala, Haldiram's, Sagar Ratna, Faaso's, Goli-Vadapav, Barista, Café Coffee Day, etc. *(Mehrotraet al., 2018; NRAI-2024, Techsci Research Report-2024)*

CRM systems enable companies in the hospitality industry to gather and examine consumer data, divide up their clientele, and customize marketing campaigns to each individual's tastes. (Mason et al., 2016). It has been demonstrated that this personalised strategy improves customer interaction and raises the organization's overall *profitability (Boulding et al., 2005; Chathoth et al., 2016; Manhas et al., 2024)*.
CRM practices in QSRs vary considerably from those in other service industries due to the fast-paced environment of the industry and narrow customer interactions *(Mason et. al., 2016)*. CRM systems in QSRs emphasis on upholding high customer satisfaction and retention despite the integral challenges of high customer turnover, shorter customer interactions, and price sensitivity *(Mason et. al., 2013; Mason et. al., 2016)*.

There have been numerous researches focusing on benefits of CRM implementation effectiveness, out of which prominent ones are discussed as follows:

Lo et al. (2014) identified that restaurants that use CRM competently are efficacious at retaining customers; CRM directly affects customer retention. *Naveed et al. (2016)* explored Malaysian fast-food industry and revealed a relationship between CRM dimensions and the satisfaction level of customers as well as the profitability of the fast-food chain. *Uddin (2019)* inferred that fast food restaurants required to generate long term customer relationships since customers of QSRs are availed to a wide range of similar competitive options *(Mason et al., 2016)*.

CRM Effectiveness

CRM effectiveness (CRME) generally refers to the ability of CRM ecosystem to accomplish the desired consequences, such as customer satisfaction, retention loyalty, and profitability *(Sin et. al., 2005; Chen et al., 2009; Padmavathy et al.,*

2012; Dah et al., 2023). Effective implementation of CRM should involve an integrated approach comprising people, process, organisational strategy and technology *(Wang and Feng, 2012).* Numerous studies have discovered a positive correlation between CRM effectiveness and customer retention, and overall profitability *(Kim et al., 2003; Kim & Kim, 2009; Hillebrand et al., 2011; Akroush et al., 2011; Padmavathy et al., 2012; Yang & Babapour, 2023).* On the contrary, ineffective CRM may lead to unfavourable impacts like high customer churn, low customer satisfaction, and revenue loss.

Mason et al. (2016) identified CRM as a critical factor for improving customer retention in the restaurant industry and highlighted the necessity for more comprehensive and specific frameworks to measure the effectiveness of CRM practices in QSR. This gap is mainly noticeable in the absence of validated instruments to assess CRM effectiveness in QSR industry.

There is also a dearth of research into the specific constituents of CRM that is majorly responsible for its effectiveness in QSRs. Though previous studies in wider service contexts have identified dimensions such as organisational motivation, technology, customer knowledge, personalization, service quality, and customer value as key drivers of CRM effectiveness *(Sin et. al., 2005 Chen et al., 2009; Akroush et al., 2011)*, the QSR industry presents distinct features that may necessitate different conceptualizations and measurements for CRME *(Naveed et al., 2016).* For instance, QSRs may prioritize factors such as organisational motivation, process driven approach, speed, technological support and consistent service quality as key drivers of CRM success *(Naehyun Jin, 2012; Ryu et al., 2012; Mason et al., 2016; Espinosa et al., 2018; Manhas et al., 2024)*

Kim et al. (2003) postulated the four fundamental dimensions a successful of CRM ecosystem namely, customer value, customer knowledge, customer interaction, and *CS. Chen et al. (2009)* advanced a CRM framework based on three dimensions—relationship management, information technology and systems, and a customer-focused organisational climate. Sin et al. (2005) identified a multi-dimensional approach to CRM that constitutes knowledge management, technology-based CRM, core customer focus, and CRM organisation. *Akroush et. al. (2011)* emphasized upon validation and generalizability of CRM scales in new contexts, cultures and industries by validating and generalizing a multi-dimensional scale developed by *Sin et al. (2005)* in Jordanian Banking industry.

After reviewing numerous researches about CRM effectiveness and implementation, three primary studies were considered to identify key elements that suffice successful CRM effectiveness: *(Sin et al. (2005), Akroush et al. (2011),* and *Padmavathy et al. (2012).* These researches were grounded in the concept that effective CRM implementation mandates four critical areas: strategy, people, technology, and processes *(Sheth, 2002; Ryals and Knox, 2001, Reinartz et al., 2004; Kotler and Armstrong, 2004; Kumar & Reinartz, 2012; Kumar & Reinartz, 2018).* Only when these four fundamentals operate in synchronisation that a superior customer-value can develop *(Yim et al., 2004; Sin et al., 2005; Wang and Feng, 2012; Yang & Babapour 2023). Reinartz et al. (2004); Yim et al. (2004*) and *Sin et al. (2005)* considered CRM as a multidimensional construct comprising four dimensions: customer focus, CRM organization, knowledge management, and technology-based CRM. Comprehending CRM as a framework consisting of these four elements aligns with Chen and *Popovich (2003); Akroush et al. (2011); Hillerband (2011); Meena & Sahu (2021). Padmavathy et al. (2012),* defined CRM as "the strategic application of information, processes, technology, and personnel to manage the relationship with customers to realise customer retention and long-term profits." It is additionally reflected *in Kim & Kim (2009)* conception of CRM as being "originated on the idea of fusing people, processes, and technology to enhance the understanding and creation of customer value."

Padmavathy et al. (2012), conceptualised a multi-dimensional framework for CRM effectiveness, defined CRME as "a set of customer-focussed practices bonded with organisational strategy and technological tools, designed to enhance customer relations in order to create CL and strengthen gains over the due course of time". *Padmavathy et al. (2012)* highlighted that an effective CRM system should integrate components of business strategy, organisational motivation, reliability, customer service and IT *(Wang (2013).*

These studies concluded that, in order to successfully use CRM, organisational commitment, business processes and IT must all be taken into account while building and sustaining relationships with customers and eventually profitability. By leveraging the driving factors of CRME, firms can realise better CRM performance through the integration and organisation of these dimensions. *Padmavathy et. al. (2012)* stated that "assessing the effectiveness of customer relationships will, in turn, assess the relational efforts or activities that have an impact on the variables that affect customer and business success". They further added that operationalizing and measuring CRM, and linking it to business performance variables will give an all-inclusive view of CRME. They conceptualized a multi-dimensional scale comprising of five dimensions for measuring CRM effectiveness:

Organizational commitment is referred to as a company's efforts to provide customers with the anticipated levels of organisational performance. From the standpoint of customer and CRM initiatives, it imitates the company's customer centric culture, value and belief system *(Tripathi & Singh, 2023).*

Customer experience is referred to a company's adherence to CRM initiatives by swift complaint resolution through proactive customer support services. It results into building customer trust and guarantees that their needs are being taken care of on a consistent basis by the organisation.

Process-driven approach is referred to the management of all the processes essential to serve customers effectively and efficiently including hasty and satisfactory fulfilment of customer requests.

Reliability is referred to as the extent to which the services are exactly provided to their patrons as it was promised by the service provider with regular checks. It is a vital for generating higher customer value than competitors, thus meeting customer expectations.

Technology orientation It encompasses usage of the recent technology to serve customers in a better way and ensures organisation's operational performance. It utilises knowledge from customer data to enable personalised services to increase customer value and aid to create fruitful relationships with patron.

Research Gap

Although there have been numerous studies pertaining to CRM frameworks for measuring the CRME for major service industries *(Kim et al., 2003; Reinartz et al., 2004; Sin et al., 2005; Kim & Kim, 2009; Akroush et al., 2011; Hillebrand et al., 2011; Padmavathy et al., 2012; Padmavathy, 2017; Kumar & Reinartz, 2018; Garg & Madan, 2024; Suriyavarma & Vijayakumar, 2025),* none of these scales have been specifically targeted the QSR industry. Henceforth, a measurement scale is needed to assess CRME in QSR, emphasising on predominant dimensions of CRM such as customer focussed organisational commitment, TOR, PD, and RE. Therefore, a CRM Effectiveness (CRME) measurement scale validated specifically for QSRs would provide both academic and practical value by facilitating more accurate evaluations of CRM practices and its impact on customer interactions and business performance. A validated CRM Effectiveness (CRME) scale tailored to the QSR industry is vital for advancing research in this domain and providing QSR managers with a reliable tool for assessing the CRME.

Research Questions:

- What dimensions constitute CRM effectiveness in the context of Quick-Service Restaurants (QSRs)?
- How can CRM effectiveness be measured in QSRs using a valid and reliable scale?
- What are the key elements of successful CRM implementation in QSRs?

Objectives

- To conceptualize CRM effectiveness in the QSR context.
- To validate a measurement scale for CRME (CRM Effectiveness) with reference to the QSR industry.
- To provide actionable insights for practitioners to enhance CRM implementation.

The conceptual framework of the study comprises of following CRME dimensions *(Padmavathy et. al., 2012):*

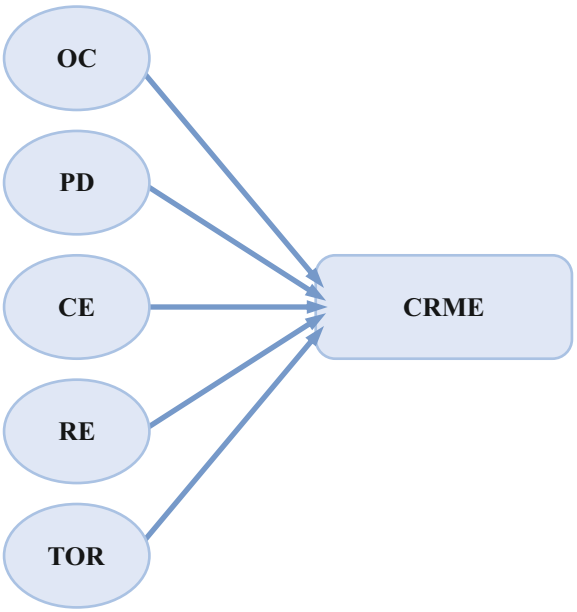

Figure 1- Conceptual framework of the study

1) Organizational commitment (OC), 2) Process-driven approach, 3) Customer experience (CE) (PD), 4) Reliability (RE), and 5) Technology orientation (TOR).

Research Methodology and Analysis

Present study employs two stages of research design viz. exploratory and descriptive. The research design is exploratory till the identification of the dimensions of CRME. Insights gained in the exploratory stage are empirically tested in the next phase of descriptive research where relationship between various constructs of the present study is investigated using quantitative methods.

A survey instrument using a 5-point Likert scale was administered to the customers of major QSRs for response generation. The data was examined using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to identify underlying dimensions of CRM effectiveness and to test the scale's reliability and validity.

Population: Customers from organised QSR (Quick Service Restaurant) brands located in the

capital city of Lucknow (India) comprised the population for the study.
Sampling frame: Consumers of the organized QSR brands present in Lucknow, Uttar Pradesh, India.
Sampling unit: Individual customers above 18years of age who were consumer of fast food.

Sampling Technique: Non probability technique - Purposive sampling. *Campbell et al. (2020)* researched that "Purposive sampling enhances the thoroughness and reliability of the study".

Primary data: Responses from organised QSR consumers was acquired using standard survey instrument from the literature. Survey was collected from organised QSRs located in the capital city of Lucknow including KFC, McDonald's, Starbucks, Burger King, Subway, Pizza Hut, Baskin Robbins, Dominos, Bikanerwala, Haldiram's, Sagar Ratna, Goli-Vadapav, Barista, Café Coffee Day (NRAI-2024).

Sample Size: As per the 1:5 rule *(Bentler and Chou, 1987; Golob, 2003*), the sample size must be greater than five times the number of items. 323 responses were collected in the survey for the present study. After data cleaning and checking for outliers using "Mahalanobis distance", 33 responses were removed *(Bentler, 1992; Hair et al., 2014; Ley & Verdebout, 2017*). Henceforth, sample size of 290 was used in the present study.

*Statistical tools***:** The data gathered from the survey was analysed using SPSS 20 and AMOS 23 to realize the study's objectives.
Survey instrument

Standard scale from the literature *(Padmavathy et al., 2012)* was adapted accordingly the present study and suitable statistical methods were applied to inspect the validity and reliability in the context of present study *(Dastane, 2020).*

Table 1: Survey instrument adapted from Padmavathy et. al (2012)

Items	Statements	Sources
	ORGANISATIONAL COMMITTMENT	Mithas et al. (2005); Rygielski et al. (2002); Jayachandran et al. (2005); Padmavathy et. al (2012); Jain et al. (2007)
OC1	This QSR frequently realizes personal information to provide customized offerings.	
OC2	Staffs of this QSR regularly interact with customers to evaluate service performance.	
OC3	This QSR assesses customer satisfaction regularly.	
OC4	This QSR carefully evaluates customer evolving needs.	
	CUSTOMER EXPERIENCE	Cho et al. (2003); Rygielski et al. (2002); Padmavathy et. al (2012)
CE1	This QSR attends customer complaints promptly.	
CE2	This QSR outlet is co-operative.	
CE3	This QSR outlet effectively communicates to customers.	
CE4	This QSR takes sincere concern in resolving customer problems.	
	PROCESS-DRIVEN APPROACH	Padmavathy et. al (2012); Chen et al. (2009); Korner and Zimmermann (2000)
PD1	This QSR deliberate their service procedures to satisfy the customer.	
PD2	This QSR delivers value-added information along with its offerings.	
PD3	Conducting transactions and getting order correctly and rapidly is very common with this QSR.	
PD4	This QSR delivers services at the earliest.	
	RELIABILITY	Chen and Popovich (2003); Padmavathy et. al (2012); Yim et al. (2004)
RE1	This QSR outlet maintains consistent service standards.	
RE2	This QSR provides reliable services.	
	TECHNOLOGY ORIENTATION	Yim et al. (2004); Padmavathy et. al (2012)
TOR1	This QSR applies latest technology (mobile/internet) to offer superior quality services.	
TOR2	This QSR makes effective use of ICT Tools to enhance customer services.	

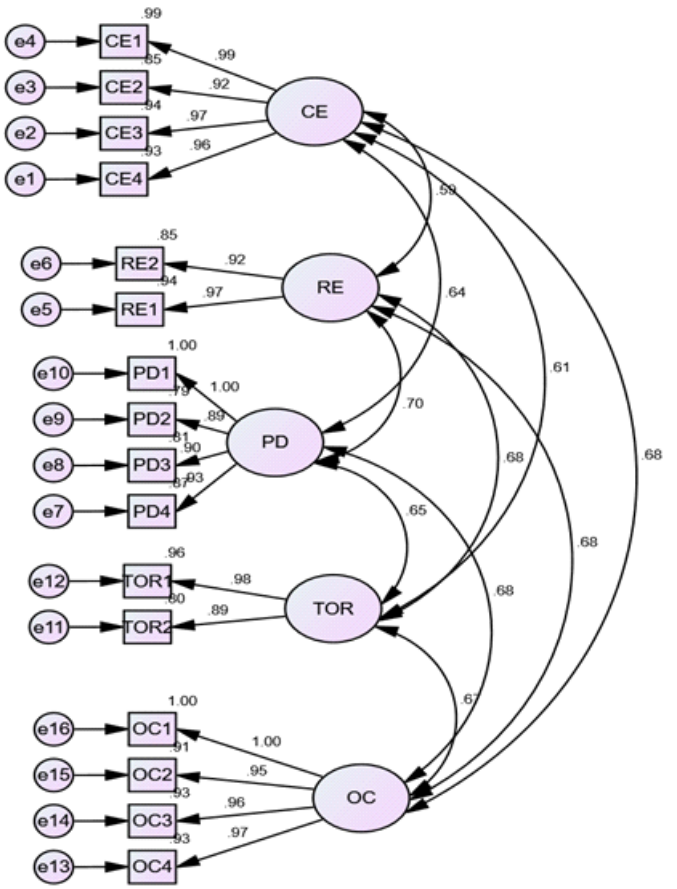

Figure 2 – First order CFA (Confirmatory Factor Analysis)

The standardized regression weights of all the 16 items came to be greater than > 0.6 for their corresponding factors, well above the thresholds *(Hair et. al. 2014).*

Table 2- Model fit indices first order CFA

Fit indices	Values	Threshold [Moss (2009); Hair (2009); Bentler (1992); Hair et al. (2014); Hu and Bentler (1990)]
χ2/df	1.420	<2
RMSEA	0.032	<.05
RMR	0.015	<.06
NFI	0.987	>.95
CFI	0.996	>.97
TLI	0.995	>.95
GFI	0.961	>.90

Note: χ2/df= Chi Square/degree of freedom; RMSEA=Root mean square error of approximation; RMR= Root mean square residual; CFI= Comparative fit index; TLI= Tucker Lewis index; GFI= Goodness of fit index

The psychometric properties of the model were assessed after confirming good model fit indices for the measurement model/CFA comprising 5 CRME dimensions. Applying Master Validity plugin (Gaskin & Lim, 2016), "Master Validity Tool", AMOS Plugin), following table was formed. “No validity concerns” was verified using the table.

Table -3 Psychometric properties of the model

	CR	AVE	MSV	CE	RE	PD	TOR	OC
CE	0.979	0.921	0.451	0.959				
RE	0.945	0.896	0.458	0.590***	0.947			
PD	0.964	0.870	0.452	0.645***	0.673***	0.933		
TOR	0.933	0.875	0.458	0.613***	0.677***	0.619***	0.935	
OC	0.985	0.943	0.456	0.672***	0.659***	0.655***	0.675***	0.971

AVE- Average Variance Extracted, MSV- Maximum Shared Variance, CR- Composite Reliability

CR is > 0.70, and AVE is > 0.5, which specifies that composite reliability (CR >0.70), convergent validity (AVE>0.5) pre-requisites are fulfilled and above the cutoff criteria for each construct *(Fornell and Larcker, 1981).*

Discriminant validity was certified by examining AVE > MSV, which also came to be above the cutoff criteria for each construct *(Fornell and Larcker, 1981).*

Content Validity was realised by existing literature focused on CRME and collecting specialists' view using interviews.

After first order CFA, it was revealed that the five dimensions of CRME have inter construct covariances and correlations, ranging from 0.57 to 0.70. Consequently, it necessitates the employing of second order CFA both theoretically *(Padmavathy et. al., 2012)* and empirically (high covariance/correlation) for the validation of the latent construct of CRME scale comprising five dimensions: PD, OC, CE, RE, TOR. Hereafter, viability of the multi-dimensional scale for CRME in QSR industry was tested using second order CFA.

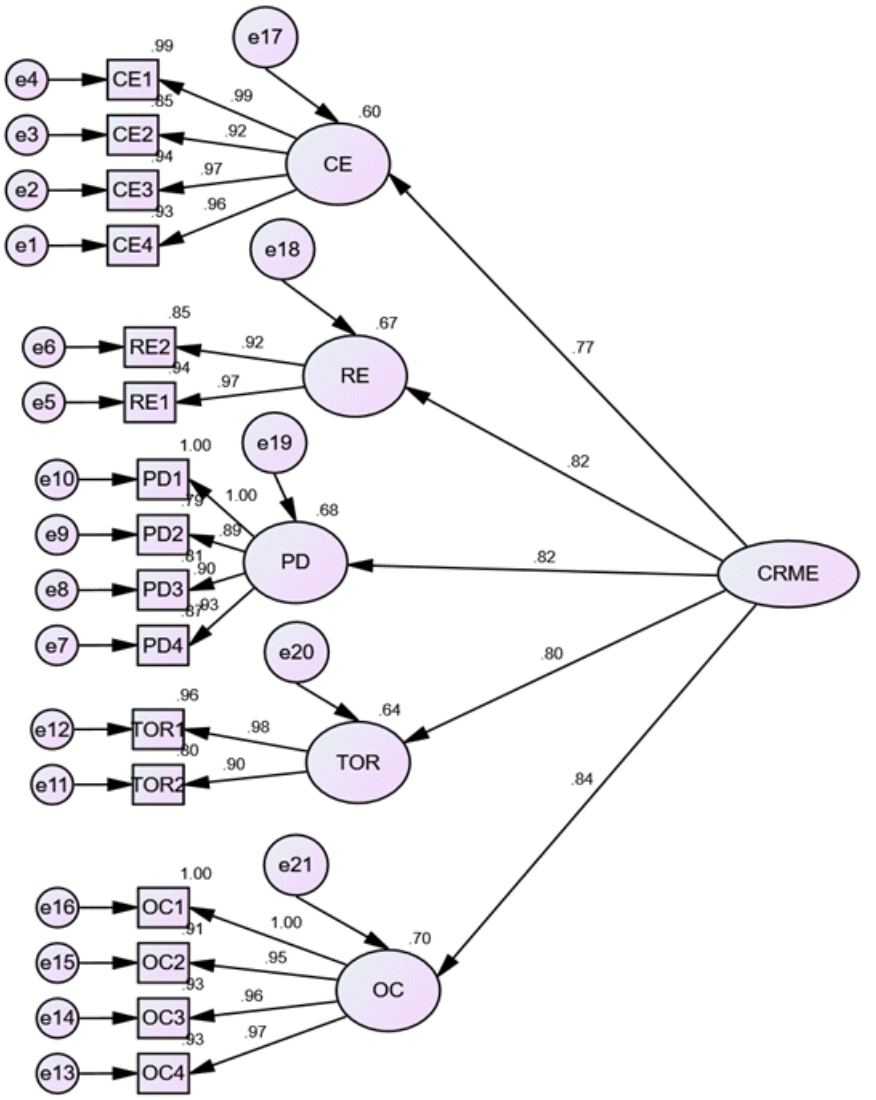

Figure 3 - Second order CFA (Confirmatory Factor Analysis)

Table 4- Model fit indices second order CFA

Fit indices	Values	Threshold [Moss (2009); Hair (2009); Bentler (1992); Hair et al. (2014); Hu and Bentler (1990)]
χ2/df	1.492	<2
RMSEA	0.035	<.05
RMR	0.022	<.06
NFI	0.986	>.95
CFI	0.995	>.97
TLI	0.994	>.95
GFI	0.957	>.90

Inferring from the above table, all the model fit indices came to be well above cu-toff criteria *(Hu and Bentler, 1990).*

Composite reliability (CR): 0.648 and Average Variance Extracted (AVE): 0.902 were found well above threshold limits *(Gaskin & Lim, 2016).*

The path estimates for all the five dimensions of CRME is tabulated in the following table. It is evident from the table that all path coefficients are significant and positive. OC (Organisational Commitment), 0.833 was found to be most impactful predictor dimension amongst the five dimensions of CRME scale.

Table 5- Path Estimate (Regression weights)

	Path		Estimate
CE	←	CRME	.779
RE	←	CRME	.826
PD	←	CRME	.823
TOR	←	CRME	.803
OC	←	CRME	.840

Evident from the aforementioned empirical proofs; composite reliability, convergent validity, , model fit indices, first and second order CFA and regression weights, validation of the CRME scale structure was successfully attained and found reliable.

Conclusion and Discussion

The aim of this study was to investigate the validity and generalizability of the CRME scale originally developed by *Padmavathy et al. (2012)* in the context of the QSR sector, which was successfully tested using both exploratory and descriptive analyses. Findings of the study indicates that the CRM implementation scale originally created by *Padmavathy et al. (2012)* for Indian banking sector is generalised, thus can be applied to the Indian QSR context with minor adjustments *(Akroush et al., 2011).*

The philosophical underpinnings of CRM are grounded in Relationship marketing, customer retention, and customer centricity *(Ryals & Knox, 2001; Chen and Popovich, 2003; Sheth et al., 2012; Buttle & Maklan, 2019)*. CRM has transformed into a cutting-edge marketing approach that gathers customer information and identifies vital patrons to forecast their buying behaviour, thereby revealing a rich understanding of prevailing customer needs and their future expectations. *(Rai, 2012; Kannan & Vikkraman, 2015; Matosas-López, 2024).*

In consistency with the extant literature, present study adds to prevailing body of knowledge pertaining to CRM by empirically demonstrating that a successful CRM application system must include aspects of customer centricity, organizational motivation, process management, and technological support to realise customer retention and business profitability *(Kumar & Reinartz, 2018; Nguyen et al., 2022; Garg & Madan, 2024; Suriyavarma & Vijayakumar, 2025).* Employing validity and reliability tests, EFA, first order CFA and second order CFA, present study has successfully tested and validated a multidimensional CRME scale comprising of five constituents: PD, OC, CE, RE, TOR. The study contributes to the existing body of literature concerning to CRM effectiveness assessment by validating a multi-dimensional scale to quantify CRM effectiveness in the Indian QSR industry.

Present research addresses a noteworthy gap in the literature by coming up with a scale that measures

CRM effectiveness in QSR industry where customer interactions are mostly short-lived and operational adeptness is of utmost importance.

This research reveals five dimensions of CRM effectiveness in the QSRs: OC, CE, RE, PD, TOR, wherein OC and RE came to be the most impactful predictor component of CRME with reference to the QSR industry. OC (Organisational Commitment) represents a composite of organizational motivation and employee behaviour. The most profound factors for CRME in QSRs came to be customer centric organisational culture, employee orientation and consistent service delivery to the customer with reference to the Indian QSR industry.

These outcomes highlight the multifarious nature of CRM in the QSR industry and stress the significance of both operational and relational approaches in attaining CRM success. The findings advance empirical backing to the importance of CRM systems and their effectiveness in QSRs, giving industry managers a more systematized framework to evaluate and enhance their CRM practices. This research adds value to the academic literature and real-world CRM applications in the QSR segment. The validated CRME scale facilitates QSRs to measure and improve their CRM initiatives, which has the ability to boost the customer retention, satisfaction, and long-term profitability in the business.

The study advances the theoretical comprehension of CRM in quick-paced, shorter-interaction service setups by providing a conceptual framework that enhances the existing comprehension of CRM effectiveness. Furthermore, the research exemplifies the importance of context-specific metrics and thorough research methodology involved in the validation of the scale, accentuating the necessity for industry-specific measurement tools in CRM studies.

Managerial Implications

This research has evaluated a valid and reliable scale of CRM effectiveness for the QSR industry, originally established by Padmavathy et al. (2012). The empirical research has stretched the comprehension of CRME foundations and their influence on business performance within the QSR sector. From a practical viewpoint, the current study represents first of its kind, systematic empirical research focused on understanding the components of CRM effectiveness within the QSR sector in India. The result might facilitate QSR managers with strategic insight regarding CRM implementation, CRM dimensions, and, most crucially, the key factors affecting CRM effectiveness.

The multi-faceted scale for evaluating CRM effectiveness in the QSR segment can assist QSR brands/managers in accurately assessing their CRM initiatives, allowing managers to pinpoint their strengths and weaknesses, and pursue corrective measures for any loopholes where they may be losing customers or competitive edge.

The multi-dimensional concept of CRME established higher regression weight for OC (Organisational Commitment) and RE (Reliability), moderate for TOR (Technological Orientation) and PD (Process Driven approach), and relatively lower for CE (Customer Experience). An organization that prioritizes organisational commitment towards customer centric culture may realize enriched outcomes for their CRM initiatives. With the growing reliance on technology in the QSR industry, it is essential for QSRs to utilise in CRM technologies that enhance customer interactions to foster deeper customer connections.

The findings can help managers from QSR industry to categorise their concerns according to their organisational needs, so that their goals could

perfectly align with appropriate CRM dimensions within their organization and anticipated outcomes can be realised.

Managers should utilize the CRME scale to regularly evaluate the success of their CRM efforts which will allow QSRs to pinpoint areas needing improvement and guarantee that their CRM strategies continue to align with customer expectations and organizational objectives.

Limitations

Even though this research offers vital insights relating to CRM effectiveness with reference to the QSR industry, there are few limitations that must be taken into account while evaluating the results.

The research is grounded on data collected from a limited range of QSRs, which may not sufficiently reveal the variability found in other geographically located QSR industry. The outcomes might not be pertinent to all QSR settings, especially those situated in different cultural or economic situations. The study employed self-reported surveys, which might lead to response biases like memory concerns or social desirability. Though the study documented multiple vital facets of CRM effectiveness, to avoid model redundancy, it did not take into account all possible components that could affect CRM effectiveness in QSRs, including employee satisfaction, management techniques, or external market factors.

Future Scope

Future studies might utilize the methodology applied in the present study to scrutinize the CRME scale validity and generalizability in other geographical settings. Future studies might investigate the CRME scale validity and generalizability in other service industries.

The present study implies the viewpoint of customers; future research might take into account the perspective of employees or managers while assessing CRM effectiveness, which would enhance a comprehensive understanding of CRM dynamics. Future researchers may draw a comparative study between foreign brand and domestic brand using the present validated scale.

Future research might inculcate the role of emerging technologies such as artificial intelligence and virtual reality in the present conceptual framework, while advancing the present study. Considering the global aspect of the QSR industry, forthcoming researches could explore cultural and geographical variations providing essential insights for multinational QSR chains.

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