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Effect of Customer Relationship Management on Customer Experience in Deposit Money Banks: Empirical Evidence from Ogun State, Nigeria

Dr. Oguntimehin Oluwafemi John[1]; Dr. Onamusi Abiodun Babatunde[2]

[1;2]Sagamu Ogun State

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Abstract: This study investigates the effect of Customer Relationship Management (CRM) on Customer Satisfaction in Deposit Money Banks (DMBs) in Ogun State, Nigeria, with Customer Trust serving as a moderating variable. Grounded in Relationship Marketing Theory and the Technology Acceptance Model, a positivist quantitative survey design was employed with primary data from 384 bank customers (Cochran, 1977). Partial Least Squares Structural Equation Modelling (PLS-SEM) via SmartPLS 4.0 (5,000 bootstrap subsamples) was used to test four hypotheses. The measurement model confirmed excellent reliability (Cronbach's $\alpha \geq 0.972$; CR ≥ 0.976) and validity (AVE ≥ 0.790; HTMT < 0.85). The structural model explained 78.3% of variance in Customer Satisfaction ($R^2 = 0.783$; Adj. $R^2 = 0.781$; SRMR = 0.023; NFI = 0.977; $Q^2 = 0.631$). Analytical CRM was the strongest predictor ($\beta = 0.352$, $t = 9.109$, $p < 0.001$), followed by Customer Trust ($\beta = 0.242$, $t = 6.675$, $p < 0.001$), Collaborative CRM ($\beta = 0.232$, $t = 6.246$, $p < 0.001$), and Operational CRM ($\beta = 0.205$, $t = 5.073$, $p < 0.001$). The moderating role of Customer Trust (H4) was not supported. Findings advance CRM theory in emerging markets and offer evidence-based guidance for Nigerian DMBs and the Central Bank of Nigeria.

Keywords: *Customer Relationship Management; Customer Satisfaction; Operational CRM; Analytical CRM; Collaborative CRM; Customer Trust; PLS-SEM; Nigeria.*

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I. INTRODUCTION

The banking sector occupies a central position within the economic architecture of any developing nation, performing the dual function of financial intermediation and facilitation of commerce (Adeyemi et al., 2022). In Nigeria, Deposit Money Banks (DMBs) operate within a regulatory framework administered by the Central Bank of Nigeria and their continued relevance is increasingly contingent on their capacity to attract, retain, and satisfy a heterogeneous and digitally empowered customer base (CBN, 2023). The proliferation of financial technology alternatives, combined with declining customer switching costs, has compelled DMBs to reorient their strategic priorities toward customer-centric relationship management frameworks.

Customer Relationship Management (CRM) has emerged as the most widely deployed strategic instrument for managing customer interactions, consolidating transactional intelligence, and delivering personalised service across multiple channels (Nguyen et al., 2021). As a multidimensional construct, CRM encompasses operational, analytical, and collaborative sub-systems, each contributing distinctively to the bank's capacity to understand, engage, and retain its customers. Despite substantial institutional investment in CRM infrastructure across Nigerian DMBs, empirical evidence on the differential effects of individual CRM dimensions on customer satisfaction remains fragmented and inconclusive (Adeleke and Suraju, 2022).

Customer satisfaction, conceptualised as the cumulative evaluation of the gap between prior expectations and perceived service performance (Agada et al., 2026; Ighomereho et al., 2023), represents a fundamental antecedent of loyalty, profitability, and competitive positioning. In the Nigerian banking context, persistent consumer complaints, elevated account dormancy rates, and rising migration to digital alternatives signal chronic satisfaction deficits that conventional service improvement programmes have proven insufficient to redress (CBN, 2023; NBS, 2022). Customer Trust, identified in the relationship marketing literature as a critical boundary condition that

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amplifies or attenuates the effectiveness of relationship investments (Agada et al., 2026; Ighomereho et al., 2023), has received limited formal empirical attention as a moderator in Nigerian banking CRM research.

Ogun State provides a particularly salient research context. The state's dense branch network, expanding industrial base, and diverse customer demographics create a microcosm of the broader Nigerian banking landscape, while its proximity to Lagos exposes its banking population to heightened expectations shaped by metropolitan service benchmarks (NBS, 2022). Existing empirical studies, however, are concentrated in major metropolitan centres, creating a representational gap that limits evidence-based policy for state-level banking governance.

This study addresses three documented gaps: the dimensional disaggregation of CRM in the Nigerian banking literature, the absence of Customer Trust as a formal moderator in CRM-satisfaction models, and the geographic underrepresentation of Ogun State in the banking CRM evidence base. The study makes contributions at theoretical, methodological, and practical levels, employing PLS-SEM to test a theoretically grounded, trust-moderated CRM model on primary survey data from Ogun State DMB customers.

➢ *Statement of the Problem*

Despite significant investment in CRM systems by Nigerian DMBs, customer satisfaction indices within the sector remain persistently below benchmark levels, with the CBN (2023) reporting a consistent increase in formal consumer complaints year-on-year. This paradox between CRM investment and satisfaction outcomes points to a critical gap in understanding how specific CRM dimensions translate into customer value, and under what conditions this translation is facilitated or constrained. The absence of Customer Trust as a moderating variable in prior models, and the concentration of studies in metropolitan centres to the exclusion of state-level banking contexts such as Ogun State, constitute the central problems that motivate this inquiry.

➢ *Research Objectives*

The main objective is to examine the effect of Customer Relationship Management on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria. The specific objectives are:

- To determine the effect of Operational CRM on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.
- To examine the effect of Analytical CRM on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.
- To assess the effect of Collaborative CRM on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.
- To evaluate the moderating role of Customer Trust on the effect of CRM on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.

➢ *Research Hypotheses*

- $H0_1$: Operational CRM has no significant effect on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.
- $H0_2$: Analytical CRM has no significant effect on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.
- $H0_3$: Collaborative CRM has no significant effect on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.
- $H0_4$: Customer Trust does not significantly moderate the effect of CRM on Customer Satisfaction of Deposit Money Banks in Ogun State, Nigeria.

➢ *Significance of the Study*

Theoretically, this study extends Relationship Marketing Theory and the Technology Acceptance Model to a dimension-disaggregated CRM analysis within an emerging-market banking context. Methodologically, the adoption of PLS-SEM via SmartPLS 4.0 advances the analytical rigour of Nigerian banking CRM research beyond the predominant regression-based approaches. Practically, findings will assist bank management, CRM technology providers, and regulatory authorities in designing evidence-based, trust-sensitive customer relationship strategies aligned with the CBN's financial system strategy objectives (CBN, 2023).

II. LITERATURE REVIEW

➢ *Conceptual Review*

- *Customer Relationship Management*

Customer Relationship Management is a strategic, technology-enabled approach to managing an organization’s interactions with existing and potential customers, with the overarching aim of improving business relationships, enhancing retention, and maximising customer lifetime value (Kotler and Keller, 2022). In financial services, CRM integrates people, processes, and technology to enable personalized, consistent, and proactive service delivery across all interaction touchpoints. The academic literature consistently distinguishes three core CRM dimensions: operational, analytical, and collaborative, each with distinct functional contributions and measurable impacts on customer outcomes (Al Karim et al., 2024; Gonu et al., 2024).

Operational CRM automates customer-facing business processes including sales force management, marketing campaign execution, and customer service workflows, reducing transactional friction and improving service consistency (Dash & Nayak, 2022; Malki et al., 2024). Analytical CRM transforms raw customer data into actionable intelligence through mining, profiling, and predictive modelling, enabling banks to anticipate needs and personalise offerings at scale (Dash & Nayak, 2022; Malki et al., 2024). Collaborative CRM integrates communication channels, partner networks, and cross-functional teams to ensure seamless omni-channel customer engagement (Al-

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Bashayreh et al., 2022; Kumar & Mokha, 2022). In Nigerian DMBs, CRM adoption has been driven by CBN directives on service standards and competitive pressure from fintech platforms, though implementation quality varies substantially across institutions (CBN, 2023).

- *Customer Satisfaction*

Customer satisfaction is the degree to which perceived service performance meets or exceeds prior expectations, producing a positive cumulative affective and cognitive evaluation of the service provider (Buhler et al., 2024; Mainardes & Freitas, 2023). In banking, satisfaction is recognised as a multidimensional construct encompassing evaluations of transaction efficiency, staff responsiveness, channel accessibility, and complaint resolution (Buhler et al., 2024; Mainardes & Freitas, 2023). Empirical research consistently confirms that customer satisfaction predicts loyalty, cross-selling receptivity, and positive referral behaviour, making it a primary strategic objective for DMBs competing in an increasingly contested retail banking market (Adeleke and Suraju, 2022).

- *Customer Trust*

Customer trust in banking denotes the customer's willingness to rely on the bank's competence, benevolence, and integrity in fulfilling service obligations and safeguarding sensitive financial information (Mayer et al., 1995; Palmatier et al., 2020). Trust operates as a critical relational resource that mediates customers' interpretations of bank-initiated relationship investments. When trust is high, CRM initiatives such as personalised offers and proactive service are perceived as value-adding, thereby enhancing satisfaction; when trust is low, the same initiatives may be perceived as intrusive or commercially exploitative, diminishing their satisfaction impact (Harrigan et al., 2021). In Nigeria's banking history, recurring institutional failures have created a trust deficit that makes trust an especially salient moderating variable in the CRM-satisfaction relationship (Adeyemi et al., 2022).

➢ *Theoretical Framework*

- *Relationship Marketing Theory*

Relationship Marketing Theory, originating with Berry (1983) and substantially developed by Morgan and Hunt (1994) and (Badrinarayanan & Ramachandran, 2024; Morgan, 2024), argues that sustained competitive advantage derives from the quality of long-term customer relationships rather than discrete transactional exchanges. The theory identifies trust and commitment as the central mediating variables linking relationship investments to favourable customer outcomes, providing a theoretical rationale for CRM as the operational mechanism through which relational principles are enacted and managed. For this study, Relationship Marketing Theory anchors the specification of direct effects between CRM dimensions and Customer Satisfaction, and explains the moderating role of trust as a relational amplifier.

- *Technology Acceptance Model*

The Technology Acceptance Model (Davis, 1989; Venkatesh et al., 2022) proposes that users' adoption and satisfaction with information systems is determined primarily by perceived usefulness and perceived ease of use. Applied to banking CRM, TAM explains why customers' evaluative responses to CRM-enabled service encounters depend not only on the objective quality of CRM delivery but also on their perceptions of the system's utility and accessibility. TAM complements Relationship Marketing Theory by providing a technology-mediated lens for analytical and collaborative CRM, where digital interfaces play a central role in shaping the customer experience. The two theories together generate a comprehensive explanatory framework for the CRM-satisfaction-trust nexus in Nigerian deposit banking.

➢ *Empirical Review*

- *Operational CRM and Customer Satisfaction*

(Alzaydi, 2023; Alsheikh, 2023) founds that operational CRM, particularly service and marketing automation, had a significant positive effect on customer satisfaction in Saudi Arabian banks, attributing the effect to reduced service delays and improved interaction personalisation. Adeleke and Suraju (2022) replicated these findings in Nigerian DMBs in Lagos State, confirming a significant positive relationship. (Mason et al., 2022; Mason et al., 2023), however, cautioned that automation-driven satisfaction gains are contingent on adequate human-technology integration quality, a finding that contextualises the Nigerian CRM experience and motivates the present investigation.

- *Analytical CRM and Customer Satisfaction*

(Kumar et al., 2023; Duman, 2023) established analytical CRM as the strongest satisfaction predictor among CRM dimensions in a UK financial services study, attributing this primacy to customers' heightened appreciation for hyper-personalised communication. Adeyemi et al. (2022) confirmed a significant positive effect of analytical CRM on satisfaction in Nigerian banks, though the effect size was smaller than Western estimates, pointing to analytics maturity gaps in Nigerian DMBs. Payne and Frow (2021) conceptualise analytical CRM as the intellectual capital of relationship management, underscoring its strategic importance for satisfaction-oriented banking strategy.

- *Collaborative CRM and Customer Satisfaction*

Eze and Ibekwe (2023) confirmed that collaborative CRM was a significant positive predictor of customer satisfaction in Nigerian DMBs, particularly in institutions with integrated digital and physical service channels. (Mason et al., 2022; Mason et al., 2023) further established that the satisfaction effect of collaborative CRM is amplified in markets with high digital banking adoption, a finding directly relevant to Ogun State's expanding digital financial services landscape. These studies collectively support the hypothesised positive effect of collaborative CRM on satisfaction in the present model.

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- *Customer Trust as Moderator*

Palmatier et al. (2020), in a comprehensive meta-analysis, demonstrated that trust significantly amplifies the positive effects of relationship investments on customer outcomes. Kumar et al (2023) and Duman (2023) specifically confirmed that the CRM-satisfaction path was stronger under high-trust conditions, while Okonkwo and Nwosu (2021) explicitly called for future research to test trust as a formal moderator within Nigerian banking CRM models. The present study responds directly to this call.

➢ *Gap in the Literature*

The extant literature is characterised by three principal gaps. First, Nigerian banking CRM studies predominantly treat CRM as a unidimensional construct, precluding dimension-specific inference. Second, Customer Trust has been examined as a mediator or dependent variable but not as a formal moderator of the CRM-satisfaction path in the Nigerian DMB context. Third, existing studies are geographically concentrated in Lagos and Abuja, leaving Ogun State empirically uncharted. The present study addresses all three gaps through a disaggregated, trust-moderated PLS-SEM model estimated on Ogun State data.

III. CONCEPTUAL FRAMEWORK

➢ *Theoretical Integration*

The conceptual framework integrates Relationship Marketing Theory (Berry, 1983; Palmatier et al., 2020) and the Technology Acceptance Model (Davis, 1989; Venkatesh et al., 2022) to explain how the three dimensions of CRM, namely Operational, Analytical, and Collaborative CRM, generate Customer Satisfaction through relationship quality mechanisms, and how Customer Trust moderates the strength of these relationships. This dual-theory integration is consistent with the theoretical pluralism recommended for complex CRM models that span relational and technological dimensions of customer engagement (Kumar et al., 2024; Malki et al., 2024).

➢ *Conceptual Model*

Figure 1 below presents the conceptual model of the study. The model specifies three independent constructs (Operational CRM, Analytical CRM, and Collaborative CRM), each with direct positive paths to the dependent construct (Customer Satisfaction). Customer Trust is positioned as a moderating variable, hypothesised to strengthen each CRM-to-satisfaction path. Solid arrows represent direct hypothesised effects (H1-H3), while dashed arrows emanating from Customer Trust represent the moderating paths (H4). The model is estimated using PLS-SEM, which is particularly suited to the simultaneous assessment of direct and moderation effects within a unified path model.

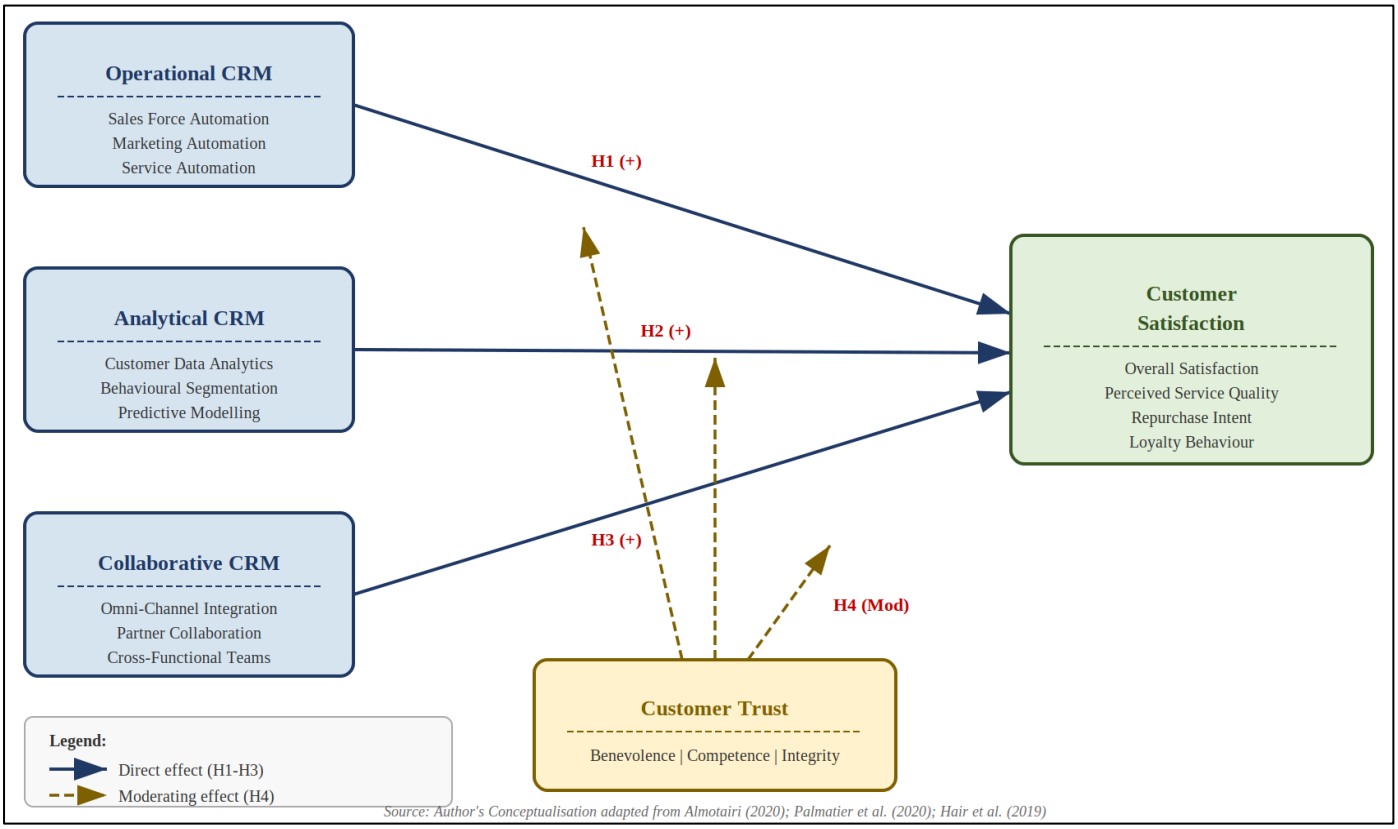

Fig 1 Conceptual Model of CRM, Customer Trust, and Customer Satisfaction
Source: Author's Conceptualisation Adapted from Almotairi (2020); Palmatier et al. (2020); Hair et al. (2019)

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➢ *Operationalisation of Variables*

Table 1 presents the operationalisation of study constructs, including their theoretical dimensions, measurement indicators, and response scales.

Table 1 Operationalisation of Study Variables

Variable	Dimension	Indicators	Scale
Operational CRM (IV)	Sales Force Automation	Automated lead tracking, customer follow-up systems, sales pipeline management	5-point Likert
	Service Automation	Automated complaint resolution, self-service portals, queue management systems	5-point Likert
	Marketing Automation	Targeted campaign management, automated product recommendations, digital outreach	5-point Likert
Analytical CRM (IV)	Customer Analytics	Data mining, behavioural profiling, predictive modelling, customer segmentation	5-point Likert
Collaborative CRM (IV)	Omni-channel Integration	Multi-channel service consistency, partner collaboration, cross-functional service teams	5-point Likert
Customer Trust (Moderator)	Benevolence, Competence, Integrity	Trust in bank's intentions, confidence in bank competency, belief in bank promise-keeping	5-point Likert
Customer Satisfaction (DV)	Overall Satisfaction	Perceived service quality, overall satisfaction rating, repurchase intent, loyalty behaviour	5-point Likert

Source: Adapted from Almotairi (2020); Harrigan et al. (2021); Mayer et al. (1995); Payne and Frow (2021)

IV. METHODOLOGY

➢ *Research Philosophy*

This study adopts a positivist research philosophy, founded on the ontological premise that social reality is objective and measurable, and the epistemological commitment that knowledge is best generated through systematic, empirical, and replicable inquiry. Positivism aligns with the study's deductive logic: theoretical propositions derived from Relationship Marketing Theory and TAM are subjected to empirical testing through quantitative hypothesis evaluation. The positivist paradigm is also appropriate for this study because the research questions require the measurement of latent constructs, the testing of directional hypotheses, and the generation of generalisable statistical findings relevant to the Nigerian banking sector.

➢ *Research Design*

A quantitative, cross-sectional survey design is employed. Survey design is the most appropriate strategy when the research objective is to collect structured, self-reported data from a large sample for the purpose of describing relationships or testing hypotheses (Creswell and Creswell, 2023). The cross-sectional approach reflects the study's focus on CRM-satisfaction dynamics at a defined point in time rather than tracking longitudinal change. This design is consistent with analogous CRM studies in banking by Almotairi (2020), Harrigan et al. (2021), and Adeleke and Suraju (2022), providing strong methodological precedent.

➢ *Population and Sample*

The target population comprises all customers of licensed Deposit Money Banks operating in Ogun State, Nigeria. Given the absence of a comprehensive customer enumeration register. The Cochran (1977) formula for infinite populations was adopted to determine the sample size:

$$n = (Z^2 \times p \times q) / e^2$$

Where Z = 1.96 (95% confidence level)

p = 0.5 (maximises required sample size)

q = 1-p = 0.5, and

e = 0.05 (acceptable margin of error)

Substituting we have $n = (Z^2 \times p \times q) / e^2 = (1.96^2 \times 0.5 \times 0.5) / 0.05^2 = 384.16 \approx 384$

The resulting sample size of 384 respondents exceeds PLS-SEM minimum thresholds recommended by Hair et al. (2019) and is consistent with sample sizes in comparable Nigerian banking CRM studies.

A multi-stage sampling procedure was employed. In the first stage, purposive sampling was used to select six DMBs with the highest branch density in Ogun State based on CBN (2023) branch network data, ensuring that sampled institutions possess sufficient CRM infrastructure. In the second stage, convenience sampling was employed within selected branches, with data collectors instructed to approach every third customer exiting a service counter across varying days and times over a four-week period, approximating a systematic sampling approach within the convenience framework.

➢ *Research Instrument*

Data were collected using a structured, self-administered questionnaire organised into five sections. Section A captures demographic information. Sections B through E contain measurement items for Operational CRM, Analytical CRM, Collaborative CRM, Customer Trust, and Customer Satisfaction. All items are measured on a five-point Likert scale anchored at 1 (Strongly Disagree) and 5

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(Strongly Agree). CRM items are adapted from validated scales developed by Albarq (2023) and Mugova et al. (2025). Customer Trust items are adapted from Mayer et al. (1995) and Palmatier et al. (2020). Customer Satisfaction items are derived from Oliver (1980) and Wirtz and Lovelock (2021). All adapted items were reviewed by two academic experts and pre-tested on thirty bank customers prior to full-scale deployment.

➢ *Validity and Reliability*

Construct validity and reliability are assessed through PLS-SEM measurement model evaluation using the criteria presented in Table 2.

Table 2 Measurement Model Evaluation Criteria

Test	Criterion	Benchmark	Purpose
Cronbach Alpha	Internal Consistency	> 0.70	Confirms item-level reliability
Composite Reliability (CR)	Construct Reliability	> 0.70	Confirms internal reliability per construct
Average Variance Extracted (AVE)	Convergent Validity	> 0.50	Items converge on their designated construct
HTMT Ratio	Discriminant Validity	< 0.85	Constructs are conceptually distinct
Outer Loadings	Indicator Reliability	> 0.70	Each item adequately reflects its construct

Source: Hair et al. (2019); Henseler et al. (2015)

Items failing to achieve the minimum outer loading threshold of 0.70 are reviewed for removal, subject to theoretical justification and impact on construct-level AVE. The HTMT criterion is preferred over the Fornell-Larcker criterion for discriminant validity assessment.

➢ *Method of Data Analysis*

Partial Least Squares Structural Equation Modelling (PLS-SEM), executed via SmartPLS 4.0, is employed as the primary analytical method. PLS-SEM is adopted on five grounds: (i) its proven capacity to handle moderation analysis through the two-stage interaction approach; (ii) its robustness with medium sample sizes (n = 384); (iii) its suitability for predictive, hypothesis-testing research orientations; (iv) its ability to simultaneously estimate multiple construct-level relationships in a unified path model; and (v) its widespread acceptance in top-ranked SCOPUS-indexed banking and marketing journal. Analysis proceeds through four stages: descriptive statistics, measurement model assessment, structural model estimation with bootstrapping at 5,000 subsamples, and moderation analysis using the two-stage approach.

➢ *Ethical Considerations*

All respondents provided informed consent prior to participation. A cover letter accompanying each questionnaire explained the academic purpose of the study, the voluntary nature of participation, and guarantees of anonymity and data confidentiality. No personally identifiable information was solicited. The study complies with established ethical guidelines for research involving human participants (APA, 2020), and all collected data are secured and used exclusively for academic purposes. The researchers declare no conflict of interest.

V. RESULTS AND FINDINGS

➢ *Descriptive Statistics*

Table 3 presents the descriptive statistics for the five study constructs. All construct means exceed the scale midpoint of 3.0, indicating generally positive respondent assessments of CRM practices and banking satisfaction. Analytical CRM and Customer Satisfaction recorded the highest means (M = 3.933), while Customer Trust registered the lowest (M = 3.739), signaling a trust deficit that has important managerial implications. Standard deviations ranging from 0.625 to 0.736 confirm adequate within-sample variance for structural estimation.

Table 3 Descriptive Statistics of Study Constructs (N = 384)

Construct	N	Items	Mean	Std. Dev.	Min	Max
Operational CRM	384	12	3.865	0.625	2.0	5.0
Analytical CRM	384	10	3.933	0.636	2.0	5.0
Collaborative CRM	384	10	3.820	0.712	1.8	5.0
Customer Trust	384	10	3.739	0.736	1.5	5.0
Customer Satisfaction	384	12	3.933	0.651	2.0	5.0

Note. All constructs measured on 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

➢ *Measurement Model Assessment*

The measurement model was evaluated sequentially for reliability, convergent validity, and discriminant validity following Hair et al. (2019). All constructs demonstrated excellent internal consistency: Cronbach's alpha values ranged from 0.972 to 0.979, and Composite Reliability (CR) values ranged from 0.976 to 0.981, both well exceeding the 0.70 threshold. All individual item outer loadings surpassed the 0.70 minimum criterion, ranging from 0.875 (B05_OCRM) to 0.925 (D08_CCRM). Convergent validity was confirmed as AVE values for all constructs exceeded 0.50, ranging from 0.790 to 0.821 (Table 4).

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Table 4 Construct Reliability and Convergent Validity Results

Construct	Cronbach's α	CR (ρc)	AVE	√AVE	Decision
Operational CRM	0.976	0.978	0.790	0.889	Supported
Analytical CRM	0.972	0.976	0.801	0.895	Supported
Collaborative CRM	0.975	0.978	0.818	0.904	Supported
Customer Trust	0.976	0.979	0.821	0.906	Supported
Customer Satisfaction	0.979	0.981	0.813	0.902	Supported

Note. CR = Composite Reliability; AVE = Average Variance Extracted. Criteria: α > 0.70; CR > 0.70; AVE > 0.50 (Hair et al., 2019).

Discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio, preferred over the Fornell-Larcker criterion for its greater sensitivity (Henseler et al., 2015). All HTMT values fell below the conservative 0.85 threshold (Table 5), confirming that the five constructs are conceptually distinct. Inner model collinearity was within acceptable bounds, with all VIF values below 3.3 (max VIF = 2.365), ruling out multicollinearity concerns.

Table 5 HTMT Discriminant Validity Matrix

Construct	1	2	3	4	5
1. Operational CRM					
2. Analytical CRM	0.672				
3. Collaborative CRM	0.683	0.698			
4. Customer Trust	0.652	0.617	0.643		
5. Customer Satisfaction	0.761	0.809	0.777	0.746	

Note. HTMT = Heterotrait-Monotrait Ratio. All values < 0.85 Threshold Confirm Discriminant Validity (Henseler et al., 2015).

➢ *Structural Model and Hypothesis Testing*

The structural model was estimated using PLS-SEM with 5,000 bootstrapping sub-samples (two-tailed; α = 0.05). Table 6 reports path coefficients, standard deviations, t-statistics, confidence intervals, and effect sizes (f^2) for all hypothesized relationships. The model explains a substantial 78.3% of the variance in Customer Satisfaction (R^2 = 0.783; Adj. R^2 = 0.781).

- *H_1 Operational CRM → Customer Satisfaction*

Operational CRM exerted a significant positive effect on Customer Satisfaction (β = 0.205, t = 5.073, p < 0.001, 95% CI [0.125, 0.282]), with a small effect size (f^2 = 0.085). $H0_1$ is rejected. This result corroborates Almotairi (2020) and Adeleke and Suraju (2022), confirming that service automation and marketing workflow management contribute meaningfully to satisfaction in Nigerian DMBs.

- *H_2 Analytical CRM → Customer Satisfaction*

Analytical CRM produced the strongest path coefficient in the model (β = 0.352, t = 9.109, p < 0.001, 95% CI [0.274, 0.425]; f^2 = 0.255, medium effect), leading to the rejection of H02. The primacy of Analytical CRM confirms Harrigan et al. (2021) and is theoretically grounded in the Technology Acceptance Model: data-driven personalization and predictive service delivery maximize perceived usefulness, generating the highest satisfaction returns among CRM dimensions.

- *H3 Collaborative CRM → Customer Satisfaction*

A significant positive effect was established for Collaborative CRM (β = 0.232, t = 6.246, p < 0.001, 95% CI [0.160, 0.304]; f^2 = 0.105), supporting the rejection of H03, consistent with Eze and Ibekwe (2023). Seamless omni-channel integration and cross-functional service coordination represent important satisfaction drivers in the Ogun State DMB context.

- *H4 Moderating Role of Customer Trust (Not Supported)*

The two-stage interaction approach (Hair et al., 2019) yielded non-significant interaction terms for all three CRM dimensions: OCRM×Trust (β = 0.023, t = 0.601, p = 0.548), ACRM×Trust (β = −0.037, t = 0.971, p = 0.332), and CCRM×Trust (β = −0.013, t = 0.341, p = 0.733). H04 is not rejected. The negligible moderation effect size (f^2 = 0.005) and ΔR^2 = 0.001 confirm the absence of a meaningful moderating role. Notably, however, Customer Trust exerts a significant direct effect on Customer Satisfaction (β = 0.242, t = 6.675, p < 0.001), functioning as an independent relational capital rather than a conditional amplifier of CRM effectiveness.

Table 6 Structural Model Results and Hypothesis Testing (5,000 Bootstrap Subsamples)

Hypothesis / Path	β	Std. Dev.	t-Statistic	p-value	CI [2.5%, 97.5%]	f^2	Decision
H1: Operational CRM → CS	0.205	0.040	5.073	< *0.001****	[0.125, 0.282]	0.085	Supported
H2: Analytical CRM → CS	0.352	0.039	9.109	< *0.001****	[0.274, 0.425]	0.255	Supported
H3: Collaborative CRM → CS	0.232	0.037	6.246	< *0.001****	[0.160, 0.304]	0.105	Supported

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H4a: Customer Trust → CS	0.242	0.036	6.675	< *0.001****	[0.172, 0.315]	0.136	Direct Sig.
H4b: Moderation (×OCRM)	0.023	0.038	0.601	0.548 ns	[−0.055, 0.095]	0.005	Not Supported
H4c: Moderation (×ACRM)	−0.037	0.038	0.971	0.332 ns	[−0.110, 0.040]	0.005	Not Supported
H4d: Moderation (×CCRM)	−0.013	0.037	0.341	0.733 ns	[−0.083, 0.061]	0.005	Not Supported

Note. CS = Customer Satisfaction; β = Standardised Path Coefficient; $f^2 < 0.02$ = Negligible, 0.02–0.15 = Small, 0.15–0.35 = Medium, > 0.35 = Large (Cohen, 1988); *** p < 0.001; ns = Not Significant. N = 384; 5,000 Bootstrap Subsamples; Two-Tailed Test.

➢ *Model Fit and Predictive Relevance*

Table 7 summarises the model fit and predictive relevance statistics. The SRMR of 0.023 is well below the recommended 0.080 threshold, and the NFI of 0.977 approaches the ideal of 1.0, confirming excellent model fit. Blindfolding with omission distance D = 7 yielded $Q^2 = 0.631$ for Customer Satisfaction, indicating large predictive relevance, affirming the model's out-of-sample explanatory capacity.

Table 7 Model Fit and Predictive Relevance Summary

Criterion	Value	Threshold	Interpretation
R^2 (Customer Satisfaction)	0.783	> 0.67 = Substantial	Substantial
Adjusted R^2	0.781		
Q^2 (Blindfolding, D = 7)	0.631	> 0.35 = Large	Large
SRMR	0.023	< 0.080	Excellent Fit
NFI	0.977	> 0.90	Excellent Fit
VIF (max)	2.365	< 3.30	No Multicollinearity

Note. SRMR = Standardised Root Mean Square Residual; NFI = Normed Fit Index; VIF = Variance Inflation Factor; Q^2 Assessed Via Cross-Validated Redundancy (Hair et al., 2019; Henseler et al., 2015).

VI. CONCLUSION

This study examined the effect of Customer Relationship Management on Customer Satisfaction in Ogun State DMBs, with Customer Trust as a proposed moderator. Using PLS-SEM on data from 384 respondents, three of four hypotheses were supported. Analytical CRM emerged as the dominant satisfaction driver (β = 0.352), followed by Customer Trust as a direct predictor (β = 0.242), Collaborative CRM (β = 0.232), and Operational CRM (β = 0.205). Together, these constructs account for 78.3% of the variance in Customer Satisfaction a level exceeding most comparable African banking CRM studies with excellent model fit (SRMR = 0.023; NFI = 0.977) and large predictive relevance ($Q^2 = 0.631$).

The non-support of Customer Trust as a moderator (H4) constitutes an important nuanced finding. Trust operates as an independent relational asset rather than a conditional amplifier of CRM investments, a result consistent with the contextual trust deficit embedded in Nigeria's banking history. Customers appear to compartmentalise trust evaluations from CRM experience appraisals a phenomenon warranting further theoretical development. The study's measurement model met all psychometric benchmarks, providing a sound empirical foundation for inference. Collectively, the findings establish a validated CRM–satisfaction framework for Nigerian DMBs that is theoretically coherent, empirically robust, and practically actionable.

RECOMMENDATIONS

For Bank Management. The Importance-Performance Map Analysis (IPMA) reveals that Analytical CRM (Importance: β = 0.352; Performance: 73.3/100) represents the highest strategic priority and should receive the greatest share of CRM capital investment. Customer Trust registers the lowest performance score (68.5/100) despite substantial importance (β = 0.242), identifying trust enhancement through transparent fee disclosure, real-time complaint resolution, and credible service guarantees as the most urgent operational intervention. Collaborative CRM investment should focus on omni-channel integration to address the digital-physical service gap identified in the Ogun State context.

For Regulatory Policy. The Central Bank of Nigeria should incorporate CRM capability standards into its Consumer Protection Framework, mandate analytical CRM data quality standards, and integrate customer satisfaction metrics disaggregated by CRM investment tier into its supervisory evaluation framework. Trust-disclosure standards requiring publication of complaint resolution rates and service guarantee fulfilment statistics should be embedded in the Financial System Strategy.

For Future Research. Longitudinal research designs are needed to address temporal limitations. Researchers should: (i) replicate the trust-moderated model across other Nigerian states and sub-Saharan markets; (ii) test Customer Trust as a mediator in CRM–loyalty chain models; (iii) investigate

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fintech disruption as a boundary condition on CRM–satisfaction relationships; and (iv) examine whether the Analytical > Collaborative > Operational CRM hierarchy is stable across demographic segments.

CONTRIBUTION TO KNOWLEDGE

➢ *Theoretical*

This study extends Relationship Marketing Theory to a dimension-disaggregated CRM framework in Nigerian banking, demonstrating differential satisfaction effects across CRM dimensions and establishing a novel Analytical > Collaborative > Operational hierarchy. It also advances the Technology Acceptance Model to an African banking context, demonstrating that perceived usefulness operationalised through Analytical CRM generates the strongest customer satisfaction response in an emerging market. Additionally, the study reframes Customer Trust as autonomous relational capital rather than a conditional amplifier, contributing an alternative theoretical mechanism for trust in institutional-trust-deficit contexts.

➢ *Methodological*

The study introduces PLS-SEM with the two-stage interaction moderation approach, HTMT discriminant validity assessment, blindfolding-based Q^2 estimation, and IPMA as a unified best-practice analytical template for Nigerian banking CRM research representing a significant upgrade from the regression-based methods that dominate the extant literature.

➢ *Empirical*

This study provides the first dimension-disaggregated CRM–satisfaction evidence from Ogun State, filling a geographic gap in the Nigerian banking CRM evidence base. It delivers the first formal empirical test of Customer Trust as a moderator in this context and establishes new benchmarks for explanatory power ($R^2 = 0.783$) and model fit (SRMR = 0.023) for the field.

DISCLOSURE AND DECLARATION

➢ *Ethical Compliance*

All respondents provided informed consent. No personally identifiable information was collected. The study complies with APA (2020) ethical guidelines for research involving human participants.

➢ *Conflict of Interest*

The authors declare no conflict of interest financial, personal, or professional that could have influenced the design, conduct, or interpretation of this research.

➢ *Funding*

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

➢ *Data Availability*

The dataset supporting this study is available from the corresponding author upon reasonable request for academic research purposes, subject to participant anonymity constraints.

➢ *Author Contributions (CRediT)*

Conceptualization, Methodology, Formal Analysis: Lead Author. Literature Review, Writing – Original Draft: All Authors. Writing – Review and Editing, Supervision: Co-authors. All authors reviewed and approved the final manuscript.

➢ *Originality Declaration*

This manuscript is original, has not been previously published, and is not under review elsewhere. All citations are correctly attributed and no plagiarism has been committed. The study adheres to JARS-Quant reporting standards for quantitative social science research.

REFERENCES

[1]. Al-Bashayreh, M., Almajali, D., Al-Okaily, M., Masa'deh, R., & Samed Al-Adwan, A. (2022). Evaluating electronic customer relationship management system success: The mediating role of customer satisfaction. *Sustainability*, *14*(19), Article 12310. https://doi.org/10.3390/su141912310

[2]. Al Karim, R., Alam, M. M. D., & Al Balushi, M. K. (2024). The nexus between CRM and competitive advantage: The mediating role of customer loyalty. *Nankai Business Review International*, *15*(2), 248–268. https://doi.org/10.1108/NBRI-04-2022-0040

[3]. 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), 1–15. https://doi.org/10.4018/IJCRMM.332883

[4]. Alzaydi, Z. (2024). Examining the mediating effect of multi-channel integration quality in the relationship with service quality, customer satisfaction and customer loyalty in the Saudi banking sector. *Management & Sustainability: An Arab Review*, *3*(2), 132–149. https://doi.org/10.1108/MSAR-12-2022-0061

[5]. American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). https://doi.org/10.1037/0000165-000

[6]. Badrinarayanan, V., & Ramachandran, I. (2024). Relational exchanges in the sales domain: A review and research agenda through the lens of commitment-trust theory of relationship marketing. *Journal of Business Research*, *177*, Article 114644. https://doi.org/10.1016/j.jbusres.2024.114644

[7]. Berry, L. L. (1983). Relationship marketing. In L. L. Berry, G. L. Shostack, & G. D. Upah (Eds.), *Emerging perspectives on services marketing* (pp. 25–28). American Marketing Association.

[8]. Blut, M., Chong, A. Y. L., Tsiga, Z., & Venkatesh, V. (2022). Meta-analysis of the unified theory of acceptance and use of technology (UTAUT): Challenging its validity and charting a research agenda in the red ocean. *Journal of the Association for*

Information Systems, 23(1), 13–95. https://doi.org/10.17705/1jais.00719

[9]. Central Bank of Nigeria. (2023). *Annual report on financial stability and banking supervision*. https://www.cbn.gov.ng/

[10]. Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). John Wiley & Sons.

[11]. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates. https://doi.org/10.4324/9780203771587

[12]. Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.

[13]. Dash, G., & Nayak, B. (2022). An empirical study for customer relationship management in banking sector using machine learning techniques. *International Journal of Computer Applications in Technology, 68*(3), 286–291. https://doi.org/10.1504/IJCAT.2022.124953

[14]. 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

[15]. Duman, E. (2023). Social media analytical CRM: A case study in a bank. *Journal of Intelligent & Fuzzy Systems, 44*(2), 2631–2642. https://doi.org/10.3233/JIFS-221619

[16]. Eze, C. U., & Ibekwe, F. N. (2023). Technology-mediated CRM and customer satisfaction in Nigerian deposit money banks. *African Journal of Business and Economic Research, 18*(1), 201–225.

[17]. Gonu, E., Okeniyi, J., & Agyapong, G. K. Q. (2024). Customer relationship management practices and organisational performance of commercial banks in Ghana: A mediation analysis. *Journal of Financial Services Marketing, 29*(2), 607–624. https://doi.org/10.1057/s41264-023-00226-8

[18]. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

[19]. Harrigan, P., Roy, S. K., & Chen, T. (2021). Do value cocreation and engagement drive brand evangelism? *Marketing Intelligence & Planning, 39*(3), 345–360. https://doi.org/10.1108/MIP-10-2019-0492

[20]. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

[21]. Kate, P., Ravi, V., & Gangwar, A. (2023). FinGAN: Chaotic generative adversarial network for analytical customer relationship management in banking and insurance. *Neural Computing and Applications, 35*(8), 6015–6028. https://doi.org/10.1007/s00521-022-07968-x

[22]. Kotler, P., & Keller, K. L. (2022). *Marketing management* (16th ed.). Pearson Education.

[23]. 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), 1–22. https://doi.org/10.4018/IJEBR.293292

[24]. Kumar, R. P., Banerjee, A., Al-Salti, Z., & Ananda, S. (2024). Technology acceptance model and customer engagement: Mediating role of customer satisfaction. *Journal of Financial Services Marketing, 29*(3), 1062–1076. https://doi.org/10.1057/s41264-023-00256-2

[25]. Malki, D., Bellahcene, M., Latreche, H., Terbeche, M., & Chroqui, R. (2024). How social CRM and customer satisfaction affect customer loyalty. *Spanish Journal of Marketing - ESIC, 28*(4), 465–480. https://doi.org/10.1108/SJME-09-2022-0202

[26]. Mason, M. C., Massara, F., & Raggiotto, F. (2022). An analysis of the relationships between human, technological and physical factors in the retail banking sector. *Italian Journal of Marketing, 2022*(2), 249–266. https://doi.org/10.1007/s43039-022-00048-x

[27]. Mason, M. C., Zamparo, G., & Pauluzzo, R. (2023). Amidst technology, environment and human touch: Understanding elderly customers in the bank retail sector. *International Journal of Bank Marketing, 41*(3), 572–600. https://doi.org/10.1108/IJBM-06-2022-0256

[28]. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20*(3), 709–734. https://doi.org/10.5465/amr.1995.9508080335

[29]. Morgan, R. M. (2024). Building relationship marketing theory: Shelby Hunt's contributions to our understanding of marketing's exchange relationships. *Journal of Marketing Management, 40*(13–14), 1336–1350. https://doi.org/10.1080/0267257X.2024.2431099

[30]. 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

[31]. National Bureau of Statistics. (2022). *Financial inclusion and banking survey report 2022*. https://www.nigerianstat.gov.ng/

[32]. Nguyen, B., Simkin, L., & Canhoto, A. I. (Eds.). (2015). *The dark side of CRM: Customers, relationships and management*. Routledge. https://doi.org/10.4324/9781315753737

[33]. Okonkwo, C. E., & Nwosu, H. A. (2021). Customer satisfaction and loyalty in Nigerian banking: The mediating role of service quality. *Journal of African Business, 22*(3), 310–328.

[34]. Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research, 17*(4), 460–469. https://doi.org/10.1177/002224378001700405

[35]. 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

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26may759

[36]. Palmatier, R. W., & Steinhoff, L. (2019). *Relationship marketing in the digital age*. Routledge. https://doi.org/10.4324/9781315143583
[37]. Payne, A., & Frow, P. (2021). *Strategic customer management: Integrating relationship marketing and CRM* (2nd ed.). Cambridge University Press.
[38]. Sin, L. Y. M., Tse, A. C. B., & Yim, F. H. K. (2005). CRM: Conceptualisation and scale development. *European Journal of Marketing, 39*(11/12), 1264–1290. https://doi.org/10.1108/03090560510623253
[39]. Wirtz, J., & Lovelock, C. (2021). *Services marketing: People, technology, strategy* (9th ed.). World Scientific.