

Strategic Role of Customer Relationship Management (CRM) In Leveraging Competitiveness of Private Universities in Kenya

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Abstract

This study investigated the strategic importance of Customer Relationship Management (CRM) in improving the competitiveness of private universities in Kenya. It evaluated the influence of CRM policy framework, technological systems, service delivery management, and collaboration networks on competitiveness, and assessed the moderating effect of institutional factors. Guided by CRM Theory, Relationship Marketing Theory, and the SERVQUAL model, the study adopted a mixed-methods cross-sectional descriptive design. The target population comprised 36 private universities and 432 respondents, from which a sample of 204 participants across 17 institutions was selected using stratified, purposive, and convenience sampling. Data were gathered using questionnaires, interviews, and focus group discussions. Validity was ensured through expert review, pilot testing, and factor analysis, while reliability (Cronbach's Alpha > 0.7) confirmed instrument consistency. Quantitative data were analysed using SPSS v30 and AMOS, while qualitative data were analysed thematically. Findings revealed that all CRM dimensions significantly influence competitiveness, explaining 55.5 per cent of the variance. CRM systems, service processes, and collaboration emerged as key drivers, though limited ERP integration constrained effectiveness. Institutional factors significantly moderated the CRM competitiveness relationship. The study concludes that CRM is a critical enabler of competitiveness and recommends an integrated, technology-driven, and institutionally aligned CRM approach.

Key terms: Competitiveness, CRM collaboration networks, CRM policy framework, CRM service delivery management, CRM technological systems.

INTRODUCTION

Customer Relationship Management (CRM) has evolved into a central strategic approach for organisations seeking to enhance performance, build long-term relationships, and sustain competitive advantage. Since its emergence in 1996 at the Gartner Consortium Forum, CRM has been conceptualised as an integrated business strategy that aligns internal processes, people, and technology to deliver superior value to customers (Buttle, 2021). It involves managing customer interactions through a coordinated, customer-centric approach across multiple communication channels and organisational functions (Kumar & Reinartz, 2018). By maximising the value of each customer interaction, CRM enables organisations to improve service quality, strengthen customer loyalty, and achieve sustainable growth (Kumar & Reinartz, 2018). In higher education, this strategic orientation has increasingly positioned CRM as a key tool for managing student relationships and enhancing institutional performance.

Globally, CRM has become a major driver of competitiveness in higher education by supporting student lifecycle management through data-driven personalisation, retention strategies, and predictive analytics (Prior et al., 2024). Universities across Europe, the United States, and Asia have integrated CRM into enterprise systems and customer-centric institutional cultures, leading to improved student satisfaction, engagement, and overall performance (Shalihati et al., 2025). In Africa, CRM adoption is gradually increasing as institutions seek to enhance student experience and stakeholder relationships; however, implementation remains uneven due to structural and contextual constraints (Mugimu, 2022; Babalola, 2024). Within East Africa, infrastructural limitations and limited empirical research continue to constrain the full realisation of CRM benefits, despite emerging improvements in communication and stakeholder engagement (Woldegiorgis, 2025). In Kenya, growing competition among universities and rising enrolment pressures have intensified the need for CRM as a strategic differentiator. Evidence indicates that CRM-driven policies, technologies, and stakeholder collaborations can enhance service delivery, student satisfaction, and operational efficiency, although implementation challenges persist (Kuria et al., 2021).

Despite its growing importance, empirical evidence on the integrated application of CRM and its influence on institutional competitiveness in private universities remains limited, particularly in the Kenyan context. Existing studies tend to focus on isolated CRM components, such as technology adoption or service quality, or are conducted in developed economies, with minimal attention to the combined influence of CRM policy frameworks, technological systems, service delivery processes, and collaboration networks. In addition, the moderating role of institutional factors, including leadership, organisational culture, resource capacity, and staff competencies, remains underexplored (Shalihati et al., (2025). This fragmented approach restricts a full understanding of how CRM can be effectively utilised as a strategic driver of competitiveness.

Private universities in Kenya operate in an increasingly competitive and dynamic higher education environment shaped by evolving student needs, technological advancements, and changing societal expectations. Although demand for higher education grew by 18.9 per cent between the 2017/2018 and 2022/2023 academic years, private universities recorded relatively low annual enrolment growth of 3.3 per cent, compared to 7.83 per cent in public universities, and continue to hold a limited market share of approximately 19–20 per cent (Commission for University Education, 2025). While CRM has been identified as a critical tool for improving student enrolment, retention, engagement, service management, and overall institutional performance many private universities in Kenya have not fully realised its potential (Kuria et al., 2021). CRM implementation is often fragmented and confined to isolated functions such as marketing, administration, or technology, rather than being embedded as a holistic, customer-centric institutional strategy integrated into core academic and service delivery processes.

Moreover, key CRM dimensions, strategic, analytical, operational, and collaborative, remain underutilised (Prior et al., 2024). Existing empirical studies largely focus on public universities or treat CRM as a single construct, overlooking its multidimensional nature. Consequently, there is limited empirical evidence on how CRM policy frameworks, technological systems,

service delivery management, and collaboration network management collectively influence institutional competitiveness, as well as how institutional factors moderate this relationship.

This study, therefore, examines how CRM policy frameworks, technological systems, service delivery management, and collaboration network management, moderated by institutional factors, influence the competitiveness of private universities in Kenya. It specifically aims to assess the strategic role of CRM in enhancing competitiveness by examining the effects of CRM policy frameworks, determining the impact of CRM technological systems, measuring CRM service delivery management, and analysing CRM collaboration network management, while also testing how institutional factors moderate the relationship between strategic CRM and competitiveness. The study is guided by the null hypotheses that CRM policy frameworks, technological systems, service delivery management, and collaboration network management have no significant effect on the competitiveness of private universities in Kenya, and that institutional factors do not significantly moderate the relationship between strategic CRM and competitiveness.

LITERATURE REVIEW

Empirical Review

Empirical literature shows that CRM practices significantly influence competitiveness in higher education institutions. Studies indicate that a well-structured CRM policy framework enhances institutional competitiveness by guiding customer-focused strategies, staff training, inclusion, and relationship management practices. These elements enable universities to effectively address student needs, improve service delivery, and strengthen market positioning and brand image.

Research further demonstrates that CRM technological systems play a transformative role in universities by enhancing communication efficiency, enabling personalised services, and providing data-driven insights into student behaviour (Buttle, 2021; Grant & Anderson, 2022). Features such as early warning systems help identify at-risk students and support timely interventions through academic advising, financial aid, and counselling services. This

reduces dropout rates and enhances student retention.

Empirical findings also show that CRM service delivery management improves responsiveness, engagement, and operational efficiency. Streamlined communication channels and faster resolution of student issues contribute to improved student experience and institutional competitiveness (Parasuraman et al., 1988).

Additionally, CRM systems contribute to financial sustainability by supporting student recruitment through effective marketing strategies, enhancing retention and re-enrollment, and increasing alumni engagement. These factors increase student lifetime value and institutional revenue, thereby strengthening long-term competitiveness.

Overall, empirical evidence confirms that CRM dimensions, policy framework, technological systems, service delivery management, and collaboration networks collectively enhance institutional competitiveness by improving student satisfaction, retention, and operational performance.

Theoretical Framework

The study is grounded in Relationship Marketing Theory (RMT), Customer Relationship Management Theory (CRMT), and SERVQUAL Theory, which collectively explain how CRM enhances competitiveness in private universities. RMT emphasises long-term relationship building through trust, commitment, personalisation, and value co-creation, enabling universities to strengthen student satisfaction, loyalty, and retention, thereby improving institutional reputation and competitiveness (Morgan & Hunt, 1994). CRMT complements this by focusing on the integration of people, processes, and technology to manage customer interactions effectively, promoting data-driven decision-making, lifecycle management, and system integration (Buttle, 2021; Grant & Anderson, 2022). Within universities, this supports personalised engagement, efficient service delivery, and improved performance, directly aligning with the study objectives on CRM policy, technology, and service delivery.

SERVQUAL Theory further reinforces the relationship between CRM and competitiveness by emphasising service quality as a key determinant of customer satisfaction and competitive advantage. Its five dimensions, reliability, responsiveness, assurance, empathy, and tangibles, shape student perceptions and experiences, which in turn influence retention and institutional performance (Parasuraman et al., 1988). Together, the theories form a robust framework for understanding the role of CRM practices in driving competitiveness in higher education, thereby supporting the testing of the study hypotheses.

Conceptual Framework

The conceptual framework of this study is based on the relationship between CRM components and institutional competitiveness, with institutional factors acting as a moderating variable. CRM policy framework provides the strategic foundation by guiding institutional practices, resource allocation, and customer-centric approaches. CRM technological systems support the operationalisation of these policies through automation, data analytics, and system integration. CRM service delivery management focuses on the execution of processes that enhance student experience, while CRM collaboration networks facilitate internal and external stakeholder engagement.

These four CRM dimensions are conceptualised as independent variables influencing the dependent variable, the competitiveness of private universities. Competitiveness is reflected through improved student enrolment, satisfaction, retention, service quality, institutional reputation, and operational efficiency.

Institutional factors, including leadership, organisational culture, resource availability, and staff competencies, moderate the relationship between CRM and competitiveness by influencing the effectiveness of CRM implementation.

This conceptualisation aligns with the study objectives and hypotheses, which seek to examine the individual and combined effects of CRM components and the moderating role of institutional factors on competitiveness.

Summary of Literature Review and Research Gap

The reviewed literature demonstrates that CRM is a multidimensional construct encompassing policy, technology, service delivery, and collaboration, all of which contribute to competitiveness. Theoretical frameworks (RMT, CRMT, and SERVQUAL) emphasise relationship building, system integration, and service quality as key drivers of performance.

However, most existing studies focus on isolated CRM components rather than their combined effect. Additionally, limited empirical research has examined the moderating role of institutional factors in shaping the CRM–competitiveness relationship, particularly in private universities in Kenya.

This study, therefore, addresses this gap by examining the integrated effect of CRM policy framework, technological systems, service delivery management, and collaboration networks on competitiveness, while also assessing the moderating influence of institutional factors.

METHODOLOGY

The study adopted epistemology research philosophy as it deals with how knowledge is acquired, understood and validated. It used a mixed methods paradigm, combining both positivism for examining quantitative data and interpretivism for understanding the qualitative data and social aspect of CRM. A mixed cross-sectional descriptive design was used to capture the phenomenon as it exists at a single point in time without manipulation. It was appropriate because it integrates quantitative (numerical patterns) and qualitative (contextual insights) data, providing a comprehensive understanding of the who, what, how, why, and where of the study.

The target population was organised into the organisation population and the respondents' population. The organisation population included all 36 private universities authorised to operate in Kenya (CUE, 2025). The respondent population consisted of the registrar, dean of students' affairs, marketing manager, ICT manager, three deans of schools and five student leaders. The study focused on twelve (12) respondents from each private university, making a total of 432. Private universities were selected as organisational respondents using stratified and simple

random sampling. The private universities were divided into strata, which included faith-based, trustee-operated, international, and entrepreneur-owned universities. Organisation respondents were selected from each stratum using random numbers. Respondents were selected using purposive and convenience sampling techniques. The registrar, dean of students' affairs, marketing manager, ICT manager and deans of schools were purposively selected due to their knowledge in university operations and diverse representation in academic, marketing, ICT, service delivery and strategic decision-making. In convenience sampling, participants are selected depending on availability and accessibility. Using the Cochran sampling formula, a sample of approximately 204 respondents was drawn from 17 universities at a 95 per cent confidence level and a 5 per cent margin of error. The study used structured questionnaires, interviews, and focus group discussion guides for data collection (Mwangi et al., 2025).

A structured interview guide was administered to the university administrators, the registrar, and the dean of students. A structured questionnaire was distributed to the deans of schools, ICT and marketing managers; a focus group discussion was conducted with five student leaders from each university. Content validity was examined by the supervisors and two CRM experts. Construct validity was assessed using factor analysis. A pilot pretest group from two private universities were used to test face validity. The study measured internal consistency reliability using Cronbach's alpha, and normality and distribution were examined using the Shapiro-Wilk test, skewness, and kurtosis. Variance Inflation Factors (VIF) examined the level of multicollinearity, Breusch-Pagan tests assessed the presence of heteroscedasticity, while Durbin Watson tested autocorrelation. F-statistics and p-values were used to evaluate the statistical significance of variables and the hypothesis at a 95 per cent level of confidence. Structural Equation Modelling (SEM) examined the direct, indirect and combined impact of CRM components on enhancing the competitiveness of private universities in Kenya.

The study used SPSS version 30 to analyse quantitative data. Frequency, mean, and standard deviation were applied as descriptive statistics to examine bio-data and variable constructs. Pearson's correlation

coefficient assessed the relationship between CRM components and institutional competitiveness, while multiple linear regression analysed the effect of each independent variable with other factors controlled. Qualitative data were examined through thematic analysis to derive patterns and insights.

Multilinear Equation was;
$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

Whereas: Y-Dependent variable-competitiveness of private universities in Kenya; X₁ CRM policy framework; X₂ CRM technological system; X₃ CRM Service delivery management processes; X₄ CRM collaboration networks management; X₅ represents the moderating variable (institutional factors).

β_0 is the constant representing the Y intercept when all other variables are zero (0); β_1 is the coefficient of the CRM policy framework; β_2 is the coefficient of the CRM technology; β_3 is the coefficient of the CRM Service delivery management processes; β_4 is the coefficient of the CRM collaboration Network; β_5 is the coefficient of the moderating variable (institutional factors).

ϵ = Stochastic Error term capturing unexplained variances in the model.

Qualitative data were analysed using thematic analysis. F-statistics and p-values were used to evaluate the statistical significance of variables and test the hypothesis at a 95 per cent level of confidence. Process Macro Model 1 test and moderated regression analysis examined the moderating effect of institutional factors on the relationship between CRM and competitiveness. Structural Equation Modelling (SEM) examined the direct, indirect and combined impact of CRM components on enhancing the competitiveness of private universities in Kenya.

Relationship Management Theory (RMT), CRM theory, and SERVQUAL theory provided a strong basis for data analysis and presentation. RMT and CRM theories guided the classification and analysis of CRM components, including policies, technology, service delivery processes, and collaborative CRM. SERVQUAL offered a framework for assessing university

competitiveness through five service quality dimensions: reliability, responsiveness, empathy, assurance, and tangibles. It is grounded on the idea that service quality is central to customer satisfaction, loyalty, and organisational competitiveness.

Ethical approval was obtained from the Presbyterian University of East Africa and NACOSTI, alongside permission from private universities and informed consent from participants. Participation was voluntary with the right to withdraw, and the study ensured non-discrimination, confidentiality, anonymity, and protection from any harm. The researcher upheld integrity, transparency, and objectivity, acknowledged

limitations, and used all data strictly for academic purposes.

FINDINGS AND DISCUSSION

Response Rate and Composition

The overall response rate was 93 per cent, indicating high participant engagement. All targeted participants for interviews and focus group discussions responded, while the questionnaire achieved an 82.35 per cent return rate. Creswell and Creswell (2023) note that a response rate above 80 per cent strongly supports the reliability and robustness of the findings by minimising non-response bias.

Table 1: Response Rate and Composition

Instrument / Category	Target Respondents / Sampled	Responses Received	Response Rate (%)	% Of Total Respondents (n = 189)
Questionnaire (85	70	82.3	37.0
• Deans	51	41	80.4	21.7
• ICT Staff	17	14	82.3	7.4
• Marketing	17	15	88.4	7.9
Interviews	34 (17 Registrars + 17 Deans)	34	100	18.0
Focus Groups (Students)	17 groups × 5 = 85	85	100	45.0
TOTAL	204	189	93.0	100.0

Source: Mwangi et al. (2025)

Reliability Test

Internal consistency reliability of CRM constructs was measured using Cronbach's Alpha.

Table 2: Cronbach's Alpha Coefficient (N=70)

Focus / Construct	Cronbach's Alpha
CRM policy framework	0.832
CRM technological system	0.850
CRM collaborative management	0.813
Institution factors	0.873

This indicates good internal consistency with Cronbach's Alpha coefficient above 0.8. According to Cooper and Schindler (2020), a value of $\alpha \geq 0.7$ is acceptable.

Factor Analysis

Factor Analysis was used to evaluate construct validity.

Table 3: Factor Analysis: Leveraging CRM for the Competitiveness of Private Universities

Construct	No. of Factors Extracted	Key Dimensions	KMO	KMO	Total Variance Explained
CRM Policy Framework	5	Customer Experience, Staff Training, Relationship Management, DEI, Data Privacy	0.813	94.01%	94.01%
CRM Technological System	5	Platform, Interoperability, Workflow Automation, Self-Service, Data Analytics	0.838	81.58%	81.58%
CRM Service Delivery Management	4	Administrative Automation, Communication, Support & Engagement, Feedback	0.828	78.75%	78.75%
CRM Collaboration Networks	3	Internal, Interdepartmental, Alumni Collaboration	0.802	71.26%	71.26%
Institutional Factors	1	Leadership, Culture, Resources, Staff Buy-in, Tech Readiness	0.814	71.02%	71.02%
CRM Competitiveness	1	Market Positioning, Throughput, Innovation, Service Quality, Stakeholder Engagement	0.812	63.07%	63.07%

The factor analysis confirms that all CRM constructs are valid, reliable, and multidimensional, with strong sampling adequacy ($KMO > 0.80$) and high explained variance exceeding recommended thresholds (Creswell & Creswell, 2023). CRM policy framework and technological systems exhibit the highest structural strength, indicating their foundational role in driving CRM effectiveness, while service delivery and collaboration networks highlight the operational pathways through which CRM enhances student experience and stakeholder engagement. However, collaboration networks and technological integration show some fragmentation, suggesting the need for better system interoperability and coordinated implementation.

Institutional factors emerged as a single, highly influential construct, confirming their critical moderating role in CRM success, while competitiveness was validated as a unified outcome driven by multiple CRM dimensions. Overall, the findings demonstrate that CRM is a comprehensive strategic system where policies, technology, service processes, and collaboration must be aligned and supported by strong institutional capacity to achieve sustainable competitiveness in private universities (Neuman, 2020)

Descriptive Statistics

Table 4: Mean and Standard Deviation of Key CRM Constructs (N = 70)

Construct	Mean	Std. Deviation
CRM Policy Framework	3.82	0.73
CRM Technological System	3.44	0.88
CRM Service Delivery Management	3.69	0.81
CRM Collaboration Management	3.57	0.76

The table offers valuable insights into the perceived influence of key CRM constructs on the competitiveness of private universities in Kenya. All four CRM variables leveraged competitiveness to a great extent.

Normality Test of Study Variables

The Shapiro–Wilk test, together with skewness and kurtosis statistics, was used to evaluate whether the

distribution of each construct approximated normality. According to Hair et al. (2019), skewness values within approximately ± 1 to ± 2 and kurtosis values within ± 3 are generally considered acceptable for normality in social science research. A Shapiro–Wilk test p-value greater than 0.05 indicates that the assumption of normality is not violated (Shapiro & Wilk, 1965).

Table 5: Shapiro-Wilk, Skewness and Kurtosis Normality Test Results (N = 70)

Main Variable Construct	No. of Indicators	Shapiro–Wilk (p)	Skewness	Kurtosis
CRM Policy Framework	5	0.068	-0.66	1.80
CRM Technological System	9	0.093	-0.40	-0.39
CRM Service Management	7	0.089	-0.49	-0.60
CRM Collaboration	5	0.065	-0.27	2.43
Institutional Factors	5	0.096	-0.77	0.68
Competitiveness	6	0.165	0.52	1.16

According to Neuman (2020), the results indicate all variables fall within the acceptable thresholds for normality.

Pearson Correlation Analysis

The study used Pearson Correlation Coefficient (r) to determine the strength and direction of the linear association between CRM and private university competitiveness in Kenya.

Table 6: Pearson Correlation Analysis

		FC	CRMP	CRMT	CRMSD	CCRM
Firm Competitiveness (FC)	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	70				
CRM Policy Framework (CRMP)	Pearson Correlation	.612**	1			
	Sig. (2-tailed)	.001				
	N	70	70			
CRM Technological System (CRMT)	Pearson Correlation	.654**	.682**	1		
	Sig. (2-tailed)	.001	.001			
	N	70	70	70		
CRM Service Delivery Management (CRMSD)	Pearson Correlation	.598**	.624**	.667**	1	
	Sig. (2-tailed)	.001	.001	.001		
	N	70	70	70	70	70
CRM collaboration networks management (CCRM)	Pearson Correlation	.571**	.605**	.629**	.648**	1
	Sig. (2-tailed)	.001	.001	.001	.001	
	N	70	70	70	70	70
Institutional Factors (IF)	Pearson Correlation	.701**	.675**	.694**	.662**	.689**
	Sig. (2-tailed)	.001	.003	.001	.002	.001
	N	70	70	70	70	70

Note: Correlation is significant at the 0.05 level (2-tailed)

Abbreviations:

FC = Firm Competitiveness

CRMP = CRM Policy Framework

CRMT = CRM Technological System

CRMSD= CRM Service Management

CCRM = CRM Collaboration Networks Management

IF=Institutional Factors

The table reveals strong, positive, and statistically significant correlations between CRM and the competitiveness of private universities.

Regression Analysis

The strength and statistical significance of each CRM predictor on private university competitiveness were examined using multiple linear regression.

Table 7: Regression Coefficients (N = 70)

Predictor	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig. (p)
Constant (β_0)	0.018	=	=	=	=
CRM policy framework (X_1)	0.341	0.062	.412	5.503	.001
CRM technological system (X_2)	0.278	0.059	.365	4.712	.001
CRM Service management (X_3)	0.224	0.067	.301	3.344	.002
CRM Collaboration (X_4)	0.189	0.051	.282	3.712	.001
Moderating Variable (X_5)	0.364	0.048	.287	7.583	.001
Residual (ϵ)	-0.063				

2-tailed test $p < .05$

Multilinear regression Equation of $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \epsilon$

$$Y = 0.018 + 0.341X_1 + 0.278X_2 + 0.224X_3 + 0.189X_4 + 0.364X_5 - 0.063$$

Y represents the dependent variable, the competitiveness of private universities in Kenya. X_1

represent CRM policy framework; X_2 , CRM technological system; X_3 , CRM Service delivery management; X_4 , CRM collaboration networks management, while X_5 represent moderating variable (Institutional factors).

Table 8: Multiple Regression Analysis Model Summary (N = 70)

R	R ²	Adjusted R ²	Std. Error	Sig. (ANOVA)
0.742	0.550	0.529	0.553	.001

The multiple regression model demonstrates a strong relationship between CRM and institutional competitiveness. There is a strong positive multi-correlation between CRM components and competitiveness ($R = 0.742$). 55 per cent of the variance in competitiveness is explained by CRM ($R^2 = 0.550$) and an adjusted R^2 of 0.529, indicating strong predictive validity.

These findings are supported by CRM theory, which highlights the role of effective relationship management in enhancing institutional performance and student satisfaction, while CRM systems enable data-driven engagement, personalization, and decision-making (Kumar & Reinartz, 2018; Prior et al., 2024). Relationship marketing theory further emphasises trust and long-term value creation (Morgan & Hunt, 1994), and the SERVQUAL model underscores the role of service quality, particularly

responsiveness and empathy, in improving competitiveness through superior student experiences (Grant & Anderson, 2022). Overall, the results confirm that the strategic role of CRM implementation significantly contributes to private universities' competitiveness.

ANOVA Summary

The ANOVA was used to test whether the regression model significantly predicts the competitiveness of private universities. It was used to show how well the regression model fits the overall data.

Table 9: ANOVA Summary (N = 70)

Source	df	SS	MS	F	Sig.
Regression	4	53.682	13.421	26.89	.001
Residual	65	32.417	0.499		
Total	69	86.099			

The overall regression model predicted the competitiveness of private universities in Kenya. The regression model is statistically significant and demonstrates strong explanatory power, with $F(4, 65) = 26.89$, $p < 0.05$. All CRM constructs are statistically significant and fit the regression model in explaining variation in competitiveness. The combined influence of CRM policy framework, CRM technological system, CRM Service delivery management, and CRM collaboration networks management significantly explains variations in competitiveness. Therefore, these CRM dimensions collectively contribute to enhancing the competitiveness of private universities in Kenya.

The findings are grounded in CRM theory, which holds that coordinated policies, technology, processes, and people enable better service and deeper customer (student) relationships (Buttle, 2021). The integration

of SERVQUAL theory further explains how perceived service quality dimensions directly influence student satisfaction and retention (Parasuraman et al., 1988). Relationship Marketing Theory supports the need for ongoing interactions, internal collaboration, and institutional trust-building (Morgan & Hunt, 1994), all of which are evident in the model. The multi-linear model demonstrates strong alignment with CRM and service quality theories, justifying its practical application in strategic planning for institutional growth and differentiation in higher education.

Moderated Regression Analysis

Moderated regression analysis and Process Macro Modelling were conducted to examine whether institutional factors influence the strength of the relationship between CRM and the competitiveness of private universities in Kenya.

Table 10: Moderated Regression Analysis (N = 70)

Interaction Term	Unstandardized Coefficient (β)	Std. Error	t-value	Sig. (p value)
CRM Strategies * Institutional Factors	0.162	0.070	2.21	0.030

The interaction term between CRM and institutional factors was found to be statistically significant, $\beta = 0.162$, $t(df) = 2.21$, $p = .030 < .05$. The positive beta coefficient (0.162) indicates that the relationship between CRM and competitiveness becomes stronger

as institutional factors are enhanced. Hence, institutional factors significantly moderate the relationship between CRM strategies and competitiveness ($p = 0.03 < .05$).

Structural Equation Modelling (SEM)

Using AMOS version 29, SEM was conducted to confirm model fit, assess structural relationships,

determine path coefficients, and test the reliability of the proposed relationships between CRM constructs and institutional competitiveness.

Table 11: Structural Equation Model (SEM) Fit Indices (N = 70)

Fit Index	Value	Threshold
Comparative Fit Index (CFI)	0.921	> 0.90
Tucker-Lewis Index (TLI)	0.903	> 0.90
Root Mean Square Error of Approximation (RMSEA)	0.042	< 0.08
Chi-Square/df (CMIN/df)	1.86	< 3.00
Standardized RMR (SRMR)	0.035	< 0.08

All criteria meet accepted SEM fit standards. Fit indices indicate a good model fit. All path coefficients of the CRM dimensions to competitiveness were statistically significant, confirming the direct influence of CRM on institutional competitiveness. This supports earlier findings in multiple regression analysis on the positive role of CRM in enhancing performance outcomes in private universities in Kenya.

Structural Path Coefficients

The standardised path coefficients demonstrated significant positive relationships between each CRM construct and institutional competitiveness, as shown in the table below.

Table 12: Standardised SEM Path Coefficients (N = 70)

Path	Unstandardized Estimate (β)	Std. Error	C.R. (t-value)	p-value
CRM policy → Competitiveness	0.35	0.06	6.83	.001
CRM technological → Competitiveness	0.29	0.07	5.14	.001
CRM Service delivery → Competitiveness	0.24	0.08	3.75	.001
CRM Collaboration → Competitiveness	0.19	0.07	3.38	.002

*p < .05 (Statistically significant)

The SEM Path diagram illustrates the direct impact of four CRM dimensions: CRM policy framework, Technologies, CRM Service delivery management, and CRM collaboration networks management on Institutional Competitiveness. CRM policy framework had the strongest positive path ($\beta = .35$), emphasising the strategic importance of formalised CRM policy framework.. CRM technological system ($\beta = .29$)

significantly influenced competitiveness, reflecting the role of digital infrastructure in driving student outcomes and institutional efficiency.

Service delivery management processes ($\beta = .24$) revealed the importance of personalisation, student-centred services, and responsive engagement in fostering loyalty and satisfaction. CRM Collaboration

Based on the regression results, all five null hypotheses (H_{01} – H_{05}) were rejected at the 0.05 level of significance. This indicates that CRM policy framework, CRM technological system, CRM service delivery management processes, and CRM collaboration networks management each have a positive and statistically significant effect on the competitiveness of private universities in Kenya. Additionally, institutional factors significantly moderate the relationship between CRM strategies and competitiveness. These findings highlight the critical role of well-structured CRM strategies and supportive institutional environments in enhancing the competitive advantage of private universities.

Summary of the Findings

CRM policy framework significantly enhances institutional competitiveness both directly and indirectly through CRM technological systems, service delivery management, and collaboration networks. A majority of respondents (72.9%) indicated that policies guide resource allocation, system integration, and innovation, improving automation, communication, and responsiveness, although challenges such as fragmentation, weak enforcement, and limited capacity persist. Statistical findings confirm strong positive correlations between CRM policy and key CRM components and competitiveness ($r = .605$ – $.682$, $p < .05$), reinforcing its strategic importance.

CRM technological systems were found to significantly improve competitiveness by enabling self-service portals, multichannel communication, and real-time data access, enhancing student experience and operational efficiency. About 70 per cent of respondents acknowledged these benefits, with strong correlations observed between technology and competitiveness ($r = .654$, $p < .05$). However, limited system integration (29.4%) and underutilization of advanced features such as AI and predictive analytics constrain CRM effectiveness (Marcinkevage & Kumar, 2025).

CRM service delivery management plays a critical role in enhancing competitiveness through improved communication, automation, and stakeholder engagement. Quantitative results show strong predictive power (β up to .39), particularly in administrative automation and multichannel

engagement, aligning with SERVQUAL dimensions of reliability and responsiveness (Parasuraman et al., 1988). However, weak personalisation, limited feedback systems (only 21% formalized), and reliance on manual processes reduce CRM's full impact.

CRM collaboration networks management also positively influences competitiveness, with strong correlations ($r = .571$, $p < .05$) and contributions to student opportunities, alumni engagement, and partnerships. While internal departmental collaboration is strong, interdepartmental coordination and external partnerships remain fragmented and underutilised due to a lack of CRM integration and structured systems.

The study further reveals that institutional factors such as leadership commitment, organisational culture, and resource availability significantly moderate the relationship between CRM and competitiveness ($\beta = .162$, $p = .003$). Institutions with strong leadership and ICT capacity achieve better CRM outcomes, while resistance to change, inadequate training, and poor infrastructure hinder effectiveness.

Overall, the findings confirm that all CRM dimensions, policy, technology, service delivery, and collaboration, are significant predictors of competitiveness, explaining over 50 per cent of performance variance ($R^2 \approx 0.529$; CFI = 0.921). The results align with CRM Theory, Relationship Marketing Theory, and SERVQUAL, emphasising that customer-centric strategies, service quality, and strong institutional support are essential for achieving sustainable competitive advantage in private universities (Buttle, 2021; Parasuraman et al., 1988).

CONCLUSION AND RECOMMENDATIONS

Conclusion: The study demonstrates that strategic (policy framework, technological systems) and operational (service delivery, collaboration networks) dimensions of CRM, when moderated by institutional factors, significantly enhance the competitiveness of private universities in Kenya. Interviews, focus groups, and quantitative analyses converge to show that CRM adoption is feasible, strategically valuable, and capable of driving student-centred transformation.

To fully realise CRM's potential, universities must adopt inclusive and cohesive policies, emphasising DEI and stakeholder engagement. Integrating digital and traditional communication platforms, including ERP, LMS, email, WhatsApp, and in-house CRM systems, is paramount. Private universities should further enhance service delivery with proactive, personalised, and predictive support across academic, emotional, and financial student needs. This should be coupled with strengthening collaboration networks internally and externally, fostering partnerships, research initiatives, and alumni engagement.

A multidimensional CRM model integrating strategic, operational, and institutional factors is validated, aligning with CRM theory, Relationship Marketing Theory, and SERVQUAL, offering both academic insight and practical guidance for achieving sustainable competitive advantage, student-centred transformation, and long-term growth in Kenya's private higher education sector.

Recommendations: Private universities in Kenya should adopt a holistic and strategic approach to Customer Relationship Management (CRM) by strengthening policy frameworks, investing in integrated technological systems, and enhancing service delivery processes. This entails co-creating inclusive CRM policies with stakeholders, embedding diversity, equity, and inclusion as well as data protection principles, and aligning these policies with broader institutional strategies to improve coherence and implementation. In addition, universities should expand the application of CRM technologies beyond administrative functions to include predictive analytics, personalised student support, and full lifecycle management. This requires investment in user-friendly and interoperable systems that enhance accessibility, responsiveness, and data-driven decision-making.

Institutions should further strengthen multichannel communication, automate service processes, and establish formal feedback mechanisms to improve responsiveness, personalisation, and overall service quality in line with SERVQUAL principles. At the same time, universities need to enhance CRM collaboration networks by improving internal coordination, formalising alumni engagement, and expanding

partnerships with industry and other stakeholders to support innovation and student opportunities. These efforts must be supported by strong institutional factors, including committed leadership, adequate resource allocation, a student-centred culture, and continuous staff training to ensure effective CRM implementation. By aligning leadership, technology, and organisational culture, universities can overcome fragmentation and fully leverage CRM as a strategic tool for improving student satisfaction, retention, and long-term competitiveness.

The application of this study underscores the need for private universities in Kenya to implement a comprehensive CRM strategy that integrates policy frameworks, technological systems, service delivery processes, and collaboration networks, supported by institutional enablers such as leadership, culture, and resources. Grounded in CRM Theory, Relationship Marketing Theory, and the SERVQUAL model, this approach emphasises personalised, responsive, and reliable service delivery while fostering trust, stakeholder engagement, and sustained competitiveness. Effective implementation requires participatory and data-driven processes, alignment with institutional strategies, continuous staff training, and robust feedback systems to ensure that CRM is embedded across all university functions.

The findings indicate that CRM is more than just a technological tool; rather, it is a strategic asset that promotes competitive advantage through service personalisation, stakeholder collaboration, and data-driven decision-making. Both theoretical and practical insights highlight the importance of integrating CRM with institutional systems, strengthening internal capacity, and promoting a culture of continuous improvement. At managerial and policy levels, universities and regulators should formalise CRM governance structures, enhance system interoperability, support staff development, and embed CRM within quality assurance frameworks to drive sustainable performance and innovation in higher education.

Future research should extend beyond the descriptive, cross-sectional design adopted in this study by employing longitudinal designs to assess the long-term impact of CRM on student outcomes, such as

retention, graduation, satisfaction, and employability, thereby clarifying its evolution as a strategic enabler of competitiveness. Comparative studies between public and private universities in Kenya would also provide valuable insights into context-specific drivers of CRM adoption and effectiveness. In addition, investigating emerging technologies like artificial intelligence, machine learning, and predictive analytics could deepen insights into real-time decision-making and personalised engagement in CRM systems. Finally, qualitative case studies focusing on the experiences of key stakeholders, including staff, students, alumni, and external partners, would provide richer insights into the practical implementation, challenges, and sustainability of CRM in higher education.

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