The Effect of Customer Relationship Management on the Performance of Commercial Banks in Tanzania

Omari K. Mbura [†] and Mohammed S. Baraza [‡]

Abstract

This study explores the effect of customer relationship management (CRM) on the performance of Commercial Banks in Tanzania. Data are collected through a survey from 272 employees across various departments within 19 commercial Banks and analysed by using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that technology-based CRM, customer knowledge management, and CRM organization exert positive and significant effect on the performance of commercial banks. However, customer orientation, while positively related, remains statistically insignificant. This study provides policy recommendations to policymakers who are engaged in designing CRM strategy with a view to enhance robust performance of commercial Banks in Tanzania.

Key Words: Customer Relationship Management; Firm performance; CRM Organization; Technology-Based CRM; Customer Orientation; Customer Knowledge Management; Tanzania

JEL Classification Codes: M31, M41

[†] Associate Professor, University of Dar es salaam Business School, Department of Marketing, P.O. Box 35046, Dar es salaam, Tanzania, Email: mburao@yahoo.com

[‡] Lecturer, University of Dodoma, Department of Accounting and Finance, P.O. Box 1208, Dodoma, Tanzania, Email: barazaem@gmail.com

1. Introduction

The global shift from product-centric to customer-centric business models has prompted service-oriented firms, including commercial banks (CBs), to adopt Customer Relationship Management (CRM) strategies as a means of enhancing competitiveness, ensuring long-term survival, and improving performance (Almanick & Zadeh, 2017). The performance of CBs holds a catalytic role in the broader financial sector, given their pivotal contribution to macroeconomic stability and national development. Commercial banks drive economic growth through their influence on GDP, employment creation, and the delivery of essential financial products and services. The Tanzania Banking Sector Report (2023) highlights that CBs remain a key employer, engaging 16,731 individuals across various institutions. Therefore, improving the performance of CBs through the effective deployment of CRM strategies is vital for sustaining their contribution to national economic growth and financial sector resilience (Bhat & Darzi, 2016; Kebede & Tegegne, 2018; Soltani et al., 2018).

Commercial banks increasingly adopt and invest in Customer Relationship Management (CRM) strategies to align with the prevailing customer-centric business paradigm, a shift driven by globalization and rapid technological advancement (Soltani *et al*., 2018). These investments aim to enhance service quality, promote customer satisfaction and loyalty, and ultimately improve overall organizational performance (Dubey & Sangle, 2019). Intensified competition in the financial services sector—fueled by greater customer access to alternatives and competitive pricing structures (Motiwalla & Thompson, 2009)—has further emphasized the strategic importance of CRM. Key CRM dimensions such as Customer Orientation (CO), Customer Knowledge Management (CKM), CRM Organization (CRMO), and Technology-Based CRM (TBCRM) are increasingly recognized as vital internal strategic resources (Sin *et al*, 2005). Grounded in the Resource-Based View (RBV) theory (Penrose, 1959), this perspective holds that an organization's sustained competitive advantage stems from the effective deployment of valuable, rare, inimitable, and non-substitutable (VRIN) resources. Both tangible and intangible assets—such as technological infrastructure, data systems, organizational capabilities, and customer insight—contribute to performance outcomes. In this context, CRM initiatives function as strategic internal resources that, when effectively leveraged, can drive superior performance in commercial banks.

Customer orientation (CO) is a foundational element of an effective Customer Relationship Management (CRM) system, emphasizing the alignment of a firm’s strategic objectives with the needs and preferences of its customers (Jayachandran et al., 2005). Customer Knowledge Management (CKM) focuses on the systematic collection, storage, analysis, and interpretation of customer data to support informed decision-making and improve firm performance (Mohammad et al., 2013). CRM Organization (CRMO) refers to the establishment of appropriate managerial and structural enablers—such as modern infrastructure, updated technologies, robust customer information systems, employee training, and performance-based incentives—that facilitate the successful execution of CRM strategies (Akroush *et al*., 2011). Technology-Based CRM (TBCRM) involves the deployment of hardware and software tools that enable firms to build and sustain long-term, profitable relationships with customers (Rafiki *et al*., 2019).

Collectively, these CRM initiatives enhance the coordination of customer-related processes by enabling firms to detect patterns in customer purchasing behavior, thereby supporting the development of targeted marketing campaigns and ultimately boosting organizational performance (Buttle & Maklan, 2019). Moreover, banks increasingly utilize CRM technologies for their analytical capabilities, which improve the effectiveness of cross-selling, reduce customer attrition, and enhance customer retention strategies. This is consistent with Buttle's (2009) argument that data mining tools empower banks to identify customers at risk of defection, design targeted win-back strategies, uncover cross-selling opportunities, and optimize communication channels for marketing offers—activities that collectively contribute to improved firm performance.

Although an extensive body of literature underscores the strategic importance of Customer Relationship Management (CRM) in enhancing firm performance, empirical evidence on the CRM–performance relationship within developing economies remains limited (Kebede & Tegegne, 2018), particularly in the context of Tanzania's banking sector. Moreover, existing empirical findings—predominantly derived from studies in developed and emerging economies—are inconclusive. While some studies report strong positive associations between CRM practices and firm performance (Bhat & Darzi, 2016; Kebede & Tegegne, 2018; Krasnikov *et al*., 2009; Lebdaoui & Chetioui, 2020; Soltani *et al*., 2018; Woodcock & Stone, 2012), others find no significant relationship (Awasthi & Sangle, 2012; Frow & Payne, 2009; Rafiki *et al*., 2019; Santouridis & Tsachtani, 2015; Sofi *et al*., 2020). These discrepancies may be attributed in part to contextual differences, as the market environments of developed and emerging economies differ significantly from those in developing countries such as Tanzania. Developing economies are often characterized by macroeconomic instability, institutional uncertainties, technological disparities, inflationary pressures, and fluctuating interest rates—factors that can affect both the implementation and outcomes of CRM strategies (Mirkovski *et al*., 2019). These socio-economic and structural variations underscore the necessity for context-specific studies that examine the unique market dynamics of less developed economies, such as Tanzania.

Given the inconsistent findings in prior research, the central issue is no longer whether Customer Relationship Management (CRM) matters, but rather which specific CRM initiatives are most relevant and impactful within the Tanzanian commercial banking context. To address this, the study analyzes data from 19 commercial banks operating in Tanzania, evaluating the significance and relative influence of key CRM dimensions on firm performance. Specifically, it examines the effects of Customer Orientation (CO), Customer Knowledge Management (CKM), CRM Organization (CRMO), and Technology-Based CRM (TBCRM) on the performance of commercial banks. Furthermore, the study seeks to identify which of these CRM strategies exerts the greatest impact on bank performance. Anchored in the Resource-Based View (RBV) theoretical framework, this research offers a novel contribution to the CRM–firm performance literature by contextualizing CRM effectiveness within a developing economy. It addresses a critical empirical gap and provides insights that may inform both scholarly inquiry and managerial decision-making in comparable emerging market settings.

The remainder of the paper is structured as follows: Section 2 reviews the relevant literature; Section 3 outlines the methodology; Section 4 presents and discusses the empirical findings; and Section 5 concludes with policy recommendations.

2. Literature Review

2.1 Theoretical Framework: Resource-Based View and CRM

This study adopts the Resource-Based View (RBV) as its theoretical foundation. Introduced by Penrose (1959), RBV posits that a firm's sustainable competitive advantage stems from its internal resources, both tangible and intangible. These resources, when valuable, rare, inimitable, and non-substitutable (VRIN), provide the foundation for enhanced performance and market success. Wright and McMahan (1992) further argue that internal resources such as processes, systems, and policies yield long-term advantages when strategically aligned. In alignment with Sin *et al* (2005) CRM-firm performance model based on RBV, this study conceptualizes CRM strategies CO, CKM, CRMO and TBCRM as essential resources, with their implementation representing a strategic investment by commercial banks. Numerous studies have widely invoked the RBV to examine the link between firm resources and performance (Alam *et al.,* 2021; Migdadi, 2020; Rafiki *et al,* 2019). Their research findings suggest that CRM and business performance are positively correlated.

These dimensions, which are further examined in the subsequent sections, serve as the basis for evaluating how CRM strategies influence the performance of commercial banks in Tanzania. To enhance service delivery and foster customer acquisition and retention, commercial banks must allocate resources toward human capital by recruiting qualified personnel, offering training, providing motivation, and ensuring competitive compensation. Additionally, banks invest in ICT by acquiring or leasing the necessary technologies to support effective CRM execution. The uniqueness with which these strategies are employed by a specific firm captures the concept of VRIN.

2.2 CRM and Firm Performance

CRM has evolved into a pivotal strategy for improving firm performance by strengthening customer relationships and enhancing service delivery. As Gruber and Svensson (2012) and Mandic (2011) observe, effective CRM practices support firms in identifying profitable customers, managing customer data, offering customized services, and delivering value-added experiences. This, in turn, fosters competitive advantage. Drawing on the RBV framework, CRM is recognized as a valuable resource that enhances organizational capabilities and customer engagement (Akroush *et al.,* 2011; Bhat and Darzi, 2016; Lebdaoui and Chetioui, 2020). A customer-oriented business culture, when complemented by well-integrated organizational and technological systems, can significantly improve performance (Kebede and Tegegne, 2018; Meher and Mishra, 2019). These observations align with Sin *et al* (2005) CRM-firm performance model and justify a focused investigation into CRM components as performance drivers.

2.3 Thematic Review and Hypotheses Development

2.3.1 Customer Orientation (CO) and Firm Performance

Customer orientation emphasizes placing customer needs at the center of business operations and strategy. According to Kim (2008), firms that align their processes with customer expectations witness improved loyalty, higher repeat purchases, and enhanced performance. Studies by Bhat and Darzi (2016) and Nasution and Rafiki (2018) assert that customer orientation enables firms to identify and retain high-value clients, thereby gaining a competitive edge. Other studies (e.g., Soltani *et al.,* 2018; Lebdaoui and Chetioui, 2020) find strong positive links between customer orientation and firm performance. However, Rafiki *et al* (2019) and Becker *et al*, (2010) argue that

the impact of customer-oriented strategies on firm performance may be limited. These studies vary in terms of the industries explored, socio-economic contexts, and research methods used, which may have led to inconsistent findings, highlighting the need for a context-specific evaluation of the influence of CO on commercial banking performance in Tanzania.

2.3.2 Customer Knowledge Management (CKM) and Firm Performance

The Customer Knowledge Management (CKM) refers to the collection, analysis, and utilization of customer data to improve service and business outcomes. Mohammad *et al*, (2013) and Nguyen *et al*, (2007) argue that CKM is central to enhancing customer relationships and delivering tailored solutions. Ziyae *et al,* (2019) further classify customer knowledge as a rare and strategic resource that allows firms to respond dynamically to market demands. Empirical studies (Soltani *et al.,* 2018; Meher and Mishra, 2019) show that CKM improves firm responsiveness and performance. However, Garrido-Moreno and Padilla-Meléndez (2011) and Zahari *et al,* (2023) caution that its contributions may be marginal without organizational readiness and strategy alignment. Existing research offers conflicting conclusions on CKM's impact. This might have been associated with the studies' contextual differences. The role CKM within the Tanzanian commercial banks remains underexplored, particularly in terms of strategic application and measurable outcomes bringing significance of the current study.

2.3.3 CRM Organization (CRMO) and Firm Performance

A well-structured CRM organization enables efficient coordination, communication, and resource integration. According to Sin *et al*, (2005), and Mohammad *et al*, (2013), organizational design including management structures, human resources, and operational systems must be tailored to support CRM goals. Sofi and Hakim (2018) also highlight that CRM alignment facilitates collaboration and departmental synergy. However, Yim *et al*, (2014) argue that CRM-oriented structuring contributes little to competitive advantage, a claim contradicted by Akroush *et al.* (2011) and Kebede and Tegegne (2018), who report a strong link between CRM organization and firm performance. Differences in the industries studied and country specific economic environments may have contributed to the inconsistent impact of CRMO on performance, as evidenced by these studies. This underscores the importance of this study in addressing the limited empirical research on how internal CRM structuring affects performance within African banking contexts, based on Tanzanian commercial banking sector.

2.3.4 Technology-Based CRM (TBCRM) and Firm Performance

Advancements in information and communication technology (ICT) have transformed CRM implementation. Tools such as CRM databases, analytics, and automation enhance operational efficiency, customer interaction, and personalized service delivery (Mukerjee and Singh, 2009; Mohammad *et al*, 2013). Soltani *et al.* (2018) argue that ICT increases employee productivity and customer satisfaction. Nonetheless, some scholars (Sofi *et al.,* 2020; Santouridis and Tsachtani, 2015) question the extent to which technology-driven CRM directly influences firm performance, suggesting that human and strategic factors may moderate its effects. The uptake, advancement, and practical integration of ICT may differ across countries and sectors, highlighting a probable reason for inconsistent impact of TBCRM observed. Moreover, despite increased ICT investments in Sub-Saharan Africa, few studies have examined how technology-based CRM affects commercial banks in developing economies. This gap underscores the need for context-specific analysis, since countries or sectors with well-developed internet and telecommunications

infrastructure adopt ICT more quickly and effectively in comparison to ones with limited access and slower integration.

2.4. Summary and Hypotheses

This review synthesizes theoretical and empirical insights into the relationship between CRM strategies and firm performance within the RBV framework. A review of relevant literature reveals that CRM is a multi-faceted concept comprising four key dimensions: customer orientation, customer knowledge management, CRM organization, and technology-driven CRM. This aligns with the widely accepted view that effective CRM implementation relies on the integration of people, technology, strategy, and processes, elements that must interact to enhance firms' performance (Sin *et al*, 2005). However, despite that integration of these components is considered crucial for achieving strong firm performance, empirical studies reveal a mixed result, necessitating a relevant sectoral setting for testing this theoretical assumption. The Tanzanian banking sector, characterized by evolving customer expectations and increasing digitalization, provides a fertile ground for testing these relationships. The following gaps are evident: limited empirical validation of CRM components in Sub-Saharan African contexts, inconclusive findings on the performance impact of customer orientation and CKM, and under-researched organizational and technological enablers of CRM in commercial banking. This study aims to fill these gaps by empirically assessing the influence of CRM strategies on the performance of commercial banks in Tanzania. More specifically, the following hypotheses are tested:

(i) **Hypothesis 1(H1):** Customer orientation exerts a positive influence on the performance of commercial banks in Tanzania.
(ii) **Hypothesis 2 (H2):** Customer knowledge management exerts a positive influence on the performance of commercial banks in Tanzania.
(iii) **Hypothesis 3 (H3):** CRM organization exerts a positive influence on the performance of commercial banks in Tanzania.
(iv) **Hypothesis 4 (H4):** Technology-based CRM exerts a positive influence on the performance of commercial banks in Tanzania.

3. Methodology

3.1 Population and Study Area

The study focused on commercial banks in Tanzania, recognizing that banks are clients-centred and implement CRM programmes in various ways because of their operational nature (Karakostas *et al.,* 2005). As of 2024, there were 34 regulated commercial banks in Tanzania, 33 headquartered in Dar es Salaam while one located in Zanzibar (BOT, 2024). The research concentrated on the main branches and headquarters of these banks. The choice was made because these locations are pivotal for gathering substantial data on CRM and bank performance, as plans, strategies and policies are formulated and principally accounted for at the headquarters and main branches (Kessy, 2019).

3.2 Sample Size and Sampling Technique

Since the population of commercial banks is known i.e., 34, its sample size was determined using the Yamane's formula given as follows*:* $n = \frac{N}{1+N(e)^2}$. Where '*N'* represents the population size*, 'n'* is the sample size, and '*e'* stands for the acceptable sampling error (Yamane, 1967). Thus, the

sample size of commercial banks was calculated as 31, i.e., $n = \frac{34}{1+34(0.5)^2} = 31$. However, due to various factors including internal policies that restricts access to information, 22 commercial banks agreed to participate in the study, 3 during pilot study which is 10 percent of the sample (Connelly, 2008), and 19 in the main study. It is from these CBs where the sample of respondents were drawn. The actual sample size of respondents was determined by the formula $n^a = (N*100)/re$, where '*re'* denotes the expected response rate and '*N'* is the minimum sample size, computed as $N \geq 50+8m$ for studies aiming to analyze multiple correlations among variables (Tabachnick and Fidel, 2007), '*m'* representing the number of predictor variables. The general guidelines for response rates *(re)* in various fields indicate a mean response rate of 35% for business-related studies (Mellahi and Harris 2016). Since this study comprises of four predictor variables, the minimum required sample size (*N*) of respondents was calculated as 82, i.e., $N \geq 50+8(4)$. Therefore, based on a 35% expected response rate, the study's actual sample size of respondents (n^a) becomes 234, i.e., (82×100)/35.

3.3 Data Collection

Data were collected using self-administered structured questionnaires distributed between January and March 2024. The questionnaire consisted of two sections: the first captured respondents' demographic characteristics, while the second focused on key constructs, namely customer orientation (CO), customer knowledge management (CKM), CRM organization (CRMO), technology-based CRM (TBCRM), and bank performance (BP). These constructs were measured using a validated five-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). All survey items were adapted from the established framework developed by Sin, Tse and Yim (2005) to ensure the reliability and validity of the measurements.

A pilot study was conducted with 54 respondents, representing 10 percent of the sample drawn from three commercial banks (CBs), following Connelly (2008). Insights gained from the pilot led to minor revisions prior to the full-scale data collection. Both the pilot and main study data were gathered from randomly selected employees across key departments, including customer service, operations, credit, sales and marketing, customer relationship, ICT, and management. These departments were purposively selected given their direct involvement in the adoption, implementation, and evaluation of CRM practices (Kessy, 2019). As Saunders *et al*, (2019) emphasize, reliable research data typically stems from cases that are inherently informative and relevant to the study's focus.

Although the intended sample size was 234 respondents, a total of 380 questionnaires were distributed to account for potential issues such as non-responses, with researcher's intervention provided only when necessary. Of the 380 questionnaires distributed, 288 were returned within the stipulated timeframe. However, 16 responses were excluded due to errors or incomplete data, resulting in 272 usable questionnaires for analysis. This yields an effective response rate of 72% (272/380), which is considered acceptable, as a response rate exceeding 50% is generally regarded as sufficient for research purposes (Field, 2009).

3.4 Data Analysis

The analysis employed a two-stage approach: first, validating the measurement model, and second, assessing the hypothesized relationships through structural model evaluation (Sarstedt *et al* , 2017). These procedures were conducted using the partial least squares structural equation modeling (PLS-SEM) technique. The measurement model was then assessed by running a

standardized PLS-SEM algorithm to confirm the model's validity and reliability. Subsequently, bootstrapping with 5,000 subsamples, using a one-tailed test at a 5% significance level (95% bias-corrected confidence interval), was performed to evaluate the hypothesized relationships between the constructs in the structural model. Partial Least Squares Structural Equation Modeling (PLS-SEM) is utilized to examine the proposed relationships because it is well-suited for analyzing complex models with numerous constructs, can effectively handle small to medium sample sizes, and accommodates non-normal data distributions (Hair *et al.,* 2019). Considering the exploratory context of CRM's influence within Tanzania's banking sector and the multifaceted nature of CRM elements, PLS-SEM offers a robust approach for evaluating both the measurement and structural components of the model.

4. Empirical Findings and Discussion

4.1 Reliability and Validity of the Measurement Model

In practice, when evaluating measurement models, it is essential to assess construct reliability using metrics such as composite reliability (CR) (Becker *et al.,* 2023; Hair *et al.,* 2019). In addition, the model's convergent and discriminant validity must be examined based on average variance extracted (AVE), indicator loadings, and the heterotrait-monotrait (HTMT) correlation ratio and Fornell-Larcker Criterion (Hair *et al.,* 2021; Henseler, Ringle and Sarstedt, 2016). The results presented in Table 1 and Appendix 1 confirm the model's reliability since the composite reliability measures (Rho_c and Rho_a) exceed the recommended threshold of 0.7 (Hair *et al.,* 2019; Shrestha, 2021). Moreover, the model demonstrates convergent validity, with AVE values above 0.5 and item loadings above 0.7 for all constructs, except for the BP1, BP3, CKM7, and CO6 indicators. These indicators were nevertheless retained in the model, following Hair *et al.* (2011), who argue that loadings above 0.4 can be maintained if overall model reliability and validity are not compromised. Finally, the HTMT ratios remained within the acceptable thresholds of 0.85 or 0.90 and based on Fornell-Larcker criterion, the square root of AVE for each construct (bolded values in Table1) was greater than the correlations with other constructs (Henseler *et al*, 2016), providing further confirmation of the model's discriminant validity**.**

Table 1: Fornell-Larcker Criterion

Fornell&Larcker	BP	CKM	CO	CRMO	TBCRM
BP	**0.748**				
CKM	0.598	**0.768**			
CO	0.545	0.762	**0.777**		
CRMO	0.642	0.736	0.687	**0.789**	
TBCRM	0.584	0.651	0.663	0.730	**0.792**

Source: Aurthors (2024)

4.2 Structural Model Analysis

The structural model analysis aimed to examine and validate the relationships between CRM dimensions and the performance of commercial banks (CBs). The primary rationale for investigating CRM stems from its potential influence on firm performance, as highlighted by Sin, Tse and Yim (2005). The conceptual model was evaluated using the PLS-SEM approach by analyzing standardized regression weights (β-coefficients) alongside the significance of the paths (p-values and t-statistics). Prior to conducting the structural analysis, preliminary assessments such

as evaluating model fit and testing for multicollinearity were performed to ensure the robustness of the analysis (Hair *et al.,* 2019).

4.2.1 Model Fit and Multicollinearity Tests

The foundation of model fit assessment lies in evaluating how well the specified theoretical model reflects the underlying reality as captured by the empirical data (Hair *et al.,* 2019; Kline, 2015). In essence, model fit indicates the model's capacity to explain the relationships among the measured variables. In the PLS-SEM framework, model fit validation involves several fit indices, including the Chi-Square (χ^2), Normed Fit Index (NFI), Standardized Root Mean Square Residual (SRMR), squared Euclidean distance (d_ULS), and geodesic distance (d_G) (Hu and Bentler, 2009; Schuberth, Rademaker and Henseler, 2023). The model fit analysis results (Table 2) confirm that the model satisfies the required fitness benchmarks, with SRMR < 0.08, d_G and d_ULS showing minimal differences between the estimated and saturated models (≈ 0), a non-significant χ^2 at the 5% level, and NFI values ranging between 0 and 1, collectively demonstrating a good fit to the data (Hu and Bentler, 1999; Schuberth *et al,* 2023). However, given the limitations of the χ^2 test in the PLS-SEM context, as opposed to its application in covariance-based SEM (CB-SEM), researchers employing the PLS-SEM approach typically place greater emphasis on the alternative fit indices (Schuberth *et al* , 2023).

Additionally, the study assessed potential multicollinearity issues using the Variance Inflation Factor (VIF). As shown in Table 2, all constructs exhibited VIF values within the acceptable threshold of below 3 to 5 (Hair *et al.,* 2019), indicating no significant multicollinearity concerns among the variables. This suggests that the constructs did not produce overlapping or redundant effects. Furthermore, the results confirm the absence of common method bias, as all VIF values from the collinearity assessment were below 3.3 (Kock, 2015). With the confirmation of model fit and the absence of multicollinearity issues, the structural model analysis proceeded to examine the relationships between constructs and to test the research hypotheses.

Table 2: **Model Fit and Multicollinearity Tests Results**

Model Fit Indices	Saturated model	Estimated model	Relationship Paths	VIF Inner Model
SRMR	0.058	0.058	CO->BP	2.836
d_ULS	2.23	2.23	CKM->BP	3.111
d_G	1.006	1.006	CRMO -> BP	2.924
χ^2	478.36	478.36	TBCRM -> BP	2.413
NFI	0.872	0.872		

Source: Authors (2024)

Note:

(i) BP – bank performance,
(ii) CKM – customer knowledge management,
(iii) CO – customer orientation,
(iv) CRMO – CRM organization, and
(v) TBCRM – Technology-based CRM.

4.2 Structural Model Analysis

4.2.2 Hypotheses Testing

Building on the Resource-Based View and extant literature that recognizes CRM components as strategic internal resources, this study tests the following hypotheses regarding their impact on Tanzanian commercial banks' performance:

(i) **H1:** Customer Orientation positively influences commercial banks' performance.
(ii) **H2:** Customer Knowledge Management positively influences commercial banks' performance.
(iii) **H3:** CRM Organization positively influences commercial banks' performance.
(iv) **H4:** Technology-Based CRM positively influences commercial banks' performance.

Testing these hypotheses provides critical insights into which CRM strategies yield the greatest performance benefits for commercial banks operating in Tanzania's unique economic environment. The findings can guide resource allocation and strategic focus, helping banks optimize CRM investments amid evolving customer expectations and competitive pressures. The findings (Table 3) reveal that customer orientation (CO) exhibits a positive but statistically non-significant effect on CB performance ($\beta = 0.037$; $t = 0.473$; $p = 0.318$), thus providing no support for H1. Interpreted through the lens of the Resource-Based View (RBV) theory, which underpins this study, these positive yet insignificant results suggest that allocating resources toward CO alone may not necessarily translate into superior performance outcomes for commercial banks within the Tanzanian banking context.

Table 3: Hypotheses Testing Results

Hypotheses and Paths	β-coefficients	SE	t-statistics	p-value	Decisions
CO -> BP	0.037	0.079	0.473	0.318	Unsupported
CKM -> BP	0.206	0.092	2.249	0.012	Supported
CRMO -> BP	0.330	0.079	4.161	0.000	Supported
TBCRM -> BP	0.185	0.073	2.54	0.006	Supported

Source: Authors (2024)

Note:

(i) BP – bank performance,
(ii) CKM – customer knowledge management,
(iii) CO – customer orientation,
(iv) CRMO – CRM organization, and
(v) TBCRM – Technology-based CRM

Contrary to the CRM-firm performance model proposed by Sin, Tse and Yim (2005), and supported by various empirical studies (Akroush *et al.,* 2011; Mohammad *et al*, 2013; Bhat and Darzi, 2016; Lebdaoui and Chetioui, 2020; Nasution and Rafiki, 2018; Soltani *et al.,* 2018), the findings of the current study align more closely with the works of Becker, Greve and Albers (2010), Franke and Parks (2006), and Rafiki *et al,* (2019), all of whom found a non-significant relationship between CO and firm performance. These inconsistencies may be attributed to differences in study contexts. This suggests that the relationship between CO and firm performance may vary significantly based on the firm's operating environment, underscoring the importance of the present study's objectives in validating the CRM-firm performance relationship model within specific contextual settings.

Hypothesis 2 (H2) explored the potential influence of customer knowledge management (CKM) on the performance of commercial banks (CBs). The results (Table 3) reveal a positive and statistically significant effect of CKM on CB performance ($\beta = 0.206$; $t = 2.249$; $p = 0.012$), thereby supporting H2. These findings suggest that investing in CKM strategies enhances the overall performance of CBs in Tanzania, reinforcing the positive CRM-firm performance relationship model proposed by Sin *et al*, (2005) and aligning with the Resource-Based View (RBV) theory. Moreover, the results are consistent with prior studies by Bhat and Darzi (2016), Mohammad, Rashid and Tahir (2013), Soltani *et al.* (2018), and Zaim *et al*, (2007), which concluded that firms can enhance their performance through effective CKM strategies. However, some studies have reported contrasting results. For example, Zahari *et al*, (2023) found that customer knowledge, a key element of CKM, had no significant impact on firm performance.

Customer Knowledge Management (CKM) enables commercial banks (CBs) to gain a deeper understanding of their customers' needs and preferences, facilitating more effective product marketing. This is achieved through three key strategies: knowledge for customers (providing information that meets their needs), knowledge about customers (gathering insights into customer characteristics and behaviors), and knowledge from customers (gathering insights through direct interactions) (Bhat and Darzi, 2016). Cheng *et al.* (2013) suggest that firms can enhance their marketing strategies by leveraging data mining and data warehousing to analyze knowledge repositories, thereby improving their understanding of customer preferences and ultimately enhancing firm performance. The significant positive influence of CKM on CB performance observed in this study is likely attributable to the allocation of resources toward CRM strategies, underscoring the value of CKM in improving overall business outcomes.

The findings (Table 3) reveal a positive and statistically significant impact of both Customer Relationship Management Organization (CRMO) ($\beta = 0.333$; $t = 4.16$; $p = 0.000$) and Technology-Based CRM (TBCRM) ($\beta = 0.185$; $t = 2.54$; $p = 0.006$) on the performance of commercial banks (CBs), supporting Hypotheses H3 and H4, respectively. These results, interpreted through the lens of the Resource-Based View (RBV), suggest that CBs' investments in managerial, human resources, structural, technological, and operational areas are crucial for enhancing performance. In addition to supporting the CRM-firm performance relationship model proposed by Sin, Tse and Yim (2005) and reinforcing RBV theory, the findings align with previous studies by Akroush *et al.* (2011), Kebede and Tegegne (2018), Mohammad, Rashid and Tahir (2013), and Soltani *et al.* (2018), all of which reported similar results.

Commercial banks (CBs) prioritize recruiting staff with the necessary expertise and skills, ensuring they are equipped with up-to-date technology. Additionally, CBs invest in regular employee training, offer competitive incentives and compensation, and automate systems for tracking and addressing customer grievances and satisfaction. These factors likely contribute to the positive and significant impact of Customer Relationship Management Organization (CRMO) on CB performance, as observed in this study. This aligns with the findings of Mohammad *et al*, (2013) who emphasized that when all business aspects—such as technology, structure, operations, human resources, and management—are integrated to foster strong firm-employee relationships within the CRM system, superior performance outcomes are achieved.

Furthermore, CRM technology plays a crucial role in digitizing customer touchpoints, ensuring that essential data are captured, accurately analyzed, and effectively utilized for the benefit of commercial banks (CBs). According to Lebdaoui and Chetioui (2020), Technology-Based CRM (TBCRM) enhances operational efficiency, improves customer experience, reduces costs, strengthens data management and security, enables personalized banking, and supports the development of new financial products. Technological advancements have thus transformed the banking industry by making operations more efficient, secure, and customer-centric while fostering innovation. In line with Buttle and Maklan (2019), CRM technology—such as adaptable software systems, computer-aided designs, and timely production databases—enables businesses to effectively manage customer data and relationships, ultimately leading to enhanced performance. This likely explains why TBCRM has a significant and positive impact on the performance of Tanzanian CBs.

4.2.3 Importance-Performance Map Analyses

The Importance-Performance Map Analysis (IPMA) was conducted to identify and rank the predictor variables—specifically customer orientation (CO), customer knowledge management (CKM), Customer Relationship Management Organization (CRMO), and technology-based CRM (TBCRM)—based on their relative importance (total effects) in influencing the target variable, which is commercial banks' (CBs') performance (Ringle and Sarstedt, 2016). More specifically, this procedure aimed to evaluate and compare the contribution of each predictor variable to CB performance, addressing one of the key objectives of this study. According to Tailab (2020), a unit increase in the performance of a predictor variable enhances the performance of the target variable by the magnitude of the predictor variable's unstandardized total effects.

The results (Table 4) indicate that the CRMO variable demonstrates the greatest total effect in explaining commercial banks' (CBs') performance, with an importance score of 0.330, followed by customer knowledge management (CKM) with an importance score of 0.206, technology-based CRM (TBCRM) with an importance score of 0.185, and customer orientation (CO) with an importance score of 0.03. A one-unit improvement in these variables enhances CBs' performance in proportion to their total effects (Tailab, 2020). Consequently, CRMO, CKM, and TBCRM contribute most significantly to CBs' performance, while CO contributes the least. These findings align with the statistical significance results from hypothesis testing, which indicated that CO has an insignificant effect on CBs' performance. According to the Importance-Performance Map Analysis (IPMA) evaluation criteria (Wyrod-Wrobel and Biesok, 2017), a variable or strategy with minimal contribution to performance (i.e., low importance) should be considered redundant and excluded from the investment plan or model. Therefore, CBs should reconsider investment in CO strategy.

Table 4: Stone-Geisser's Q^2, IPMA Coefficients and Effect Sizes (f^2)

Outcome Variable	Q^2 predict Initial Model	Q^2predict Revised Model	IPMA Paths	IPMA Coefficients	Predictor Variables	f^2
BP1	0.16	0.163	CKM -> BP	0.206	CO	0.001
BP2	0.322	0.323	CO -> BP	0.037	CKM	0.025
BP3	0.171	0.172	CRMO -> BP	0.330	CRMO	0.069
BP4	0.296	0.296	TBCRM -> BP	0.185	TBCRM	0.026
BP5	0.358	0.360				
BP6	0.280	0.284				
BP7	0.157	0.160				
BP8	0.226	0.230				
BP9	0.196	0.199				

Source: Authors (2024)

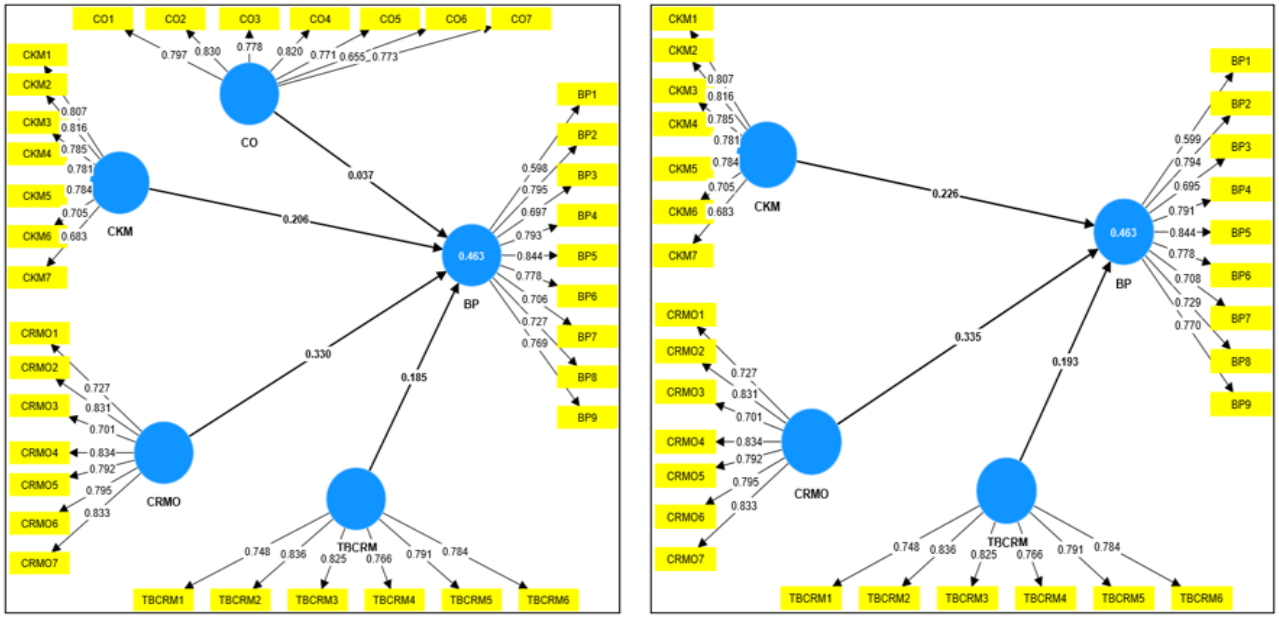
4.2.4 Revised Model

Based on the study's hypothesis testing and IPMA results, the CRM-firm performance model proposed by Sin *et al*, (2005), was revised by removing the insignificant variable, customer orientation (CO). After its removal, the model was re-estimated using Smart PLS 4.0.9.5. Figure 1b present the revised model, illustrating the relationships between customer knowledge management (CKM), Customer Relationship Management Organization (CRMO), technology-based CRM (TBCRM), and commercial banks (CBs') performance. As discussed earlier, three of the four hypotheses are positive and statistically significant, aligning with the CRM-firm performance model proposed by Sin *et al*, (2005). In other words, this study empirically confirms that three CRM variables CRMO, CKM, and TBCRM significantly explain CBs' performance in the Tanzanian banking sector, while customer orientation (CO) does not.

4.2.5 Explanatory Power and Predictive Relevance of the Models

The explanatory power of the models was assessed using the coefficients of determination (R^2) and effect sizes (f^2). The R^2 values indicate the extent to which the predictor variables (CO, CKM, CRMO, and TBCRM) account for the variance in the outcome variable, which is commercial banks' (CBs') performance. R^2 values of 0.25, 0.50, and 0.75 represent weak, moderate, and substantial levels of explanatory power, respectively (Hair *et al.,* 2011). The effect sizes (f^2) measure the impact on the R^2 value of the dependent variable when a predictor variable is removed from the model. According to Cohen (1988), effect size values greater than 0.35, 0.15, and 0.02 are considered large, medium, and small, respectively. This implies that a variable with an f^2 size below 0.02 has a negligible effect when excluded from the model.

Figure 1a. R^2 Value for the Initial Model **Figure 1b. R^2 Value for a Revised Model**



Figures 1a and 1b: Smart PLS Structural Model Outputs

Note:

(i) BP – bank performance,
(ii) CKM – customer knowledge management,
(iii) CO – customer orientation,
(iv) CRMO – CRM organization, and
(v) TBCRM – Technology-based CRM

The findings (Table 4) from the original model (Figure 1a) indicate that the CRM variables customer orientation (CO, $f^2 = 0.001$), customer knowledge management (CKM, $f^2 = 0.025$), Customer Relationship Management Organization (CRMO, $f^2 = 0.069$), and technology-based CRM (TBCRM, $f^2 = 0.026$) collectively demonstrate moderate explanatory power, as reflected by an R^2 value of 0.463. This means that approximately 46.3% of the variance in the performance of commercial banks (CBs) is explained by these CRM constructs, consistent with the CRM-firm performance model proposed by Sin *et al*, (2005). Notably, after the removal of the insignificant CO variable, the revised model (Figure 1b) retained the same R^2 value of 0.463, confirming that excluding CO has no meaningful impact on explaining CBs' performance in the Tanzanian context. These findings align with Cohen's (1988) effect size guidelines, the IPMA results, and the hypothesis H1 testing outcomes.

The predictive relevance of the model, indicated by the Stone-Geisser Q^2 statistic (Geisser, 1974; Stone, 1974), reflects the model's ability to predict future or unseen observations (Hair *et al.,* 2021). According to Geisser and Stone (1974), a Q^2predict value greater than zero suggests that the model has sufficient predictive accuracy for the indicators of each dependent construct. The results (Table 4) indicates that the Q^2predict value of all outcome variable indicators for both initial and revised model are within the prescribed threshold, indicating that both models have high ability

to predict out of sample observations i.e., data that was not used to estimate the CRM-CBs' performance model examined in this study.

5. Concluding Remarks

This study sets out to examine the relationship between key Customer Relationship Management (CRM) dimensions customer orientation (CO), customer knowledge management (CKM), Customer Relationship Management Organization (CRMO), and technology-based CRM (TBCRM) and the performance of commercial banks (CBs) in Tanzania. The results reveal that three of the four dimensions (CKM, CRMO, and TBCRM) significantly influence CB performance, while CO does not show a significant effect. Consequently, the original CRM-firm performance model proposed by Sin, Tse and Yim (2005) was revised by removing the CO variable, refining the model to better fit the Tanzanian context.

The Importance-Performance Map Analysis (IPMA) further reinforced these findings, showing that CRMO has the highest overall impact on CB performance, followed by CKM, TBCRM, and CO in order of importance. Together, the three significant CRM dimensions explain approximately 46.3% of the variability in CB performance, underscoring their relevance and strength as reliable predictors in this setting.

From a theoretical perspective, the study advances the understanding of the CRM-performance relationship by demonstrating that the original Sin, Tse and Yim (2005) model does not universally apply across all contexts, particularly within developing economies. The discovery that CO has no significant effect in the Tanzanian CB industry challenges assumptions drawn from studies in other regions and emphasizes the importance of context-specific model validation. The revised model, supported by the Resource-Based View (RBV) theory, highlights CKM, CRMO, and TBCRM as the key drivers of performance for CBs in Tanzania, providing a more tailored framework for future research and academic exploration.

From a managerial standpoint, the findings offer practical insights: since CRM dimensions act as organizational resources (inputs), and CB performance represents the outcomes (outputs), the significant positive relationships observed suggest that investments in CKM, CRMO, and TBCRM generate clear performance benefits. In contrast, the non-significant effect of CO suggests that investment in this area may yield limited or even negative returns. This information is highly valuable for CB management teams, policymakers, and decision-makers who need to prioritize resource allocation and optimize CRM strategies for maximum performance impact.

Despite these valuable contributions, the study has certain limitations. First, because the research focused exclusively on Tanzanian commercial banks, caution should be exercised when generalizing the findings to other countries or banking sectors. Second, the cross-sectional design limits the ability to capture changes over time, suggesting a need for future longitudinal studies to understand the long-term effects of CRM on performance. Third, the study did not explore whether CO might impact other important outcomes not included in the performance model, such as customer satisfaction, loyalty, or innovation.

These limitations present valuable opportunities for future research. Researchers are encouraged to test the revised CRM-performance model across different banking categories and in other

developing economies to assess its generalizability. Additionally, further investigation into the CO dimension is warranted, as it may have important influences on other organizational outcomes beyond financial performance. Expanding the scope of inquiry in these ways will strengthen the broader understanding of CRM strategies and their role in driving success in diverse banking environments.

References

Akroush, M. N., Dahiyat, S. E., Gharaibeh, H. S., and Abu-Lail, B. N. (2011) 'Customer relationship management implementation'. *International Journal of Commerce and Management*, 21(2) pp. 158-191. Available at: DOI:10.1108/10569211111144355.

Almanick, M.S., and Zadeh, S.A. (2017) 'Concurrent evaluation of customer relationship management and organisational excellence: an empirical study'. *Performance Improvement Quarterly*, 30(1), 55-88. Available at: https://doi.org/10.1002/piq.21240

Awasthi, P., and Sangle, P.S. (2012) 'Adoption of CRM technology in multichannel environment: a review (2006–2010)'. *Business Process Management Journal*, 18(3) pp. 445-471.

BOT. (2024). *Annual Report 2023/24.* Dar es Salaam: Bank of Tanzania. Available at: www.bot.go.tz

Becker, J.-M., Cheah, J.-H., Gholamzade, R., Ringle, C. M., and Sarstedt, M. (2023) 'PLS SEM's most wanted guidance'. *International Journal of Contemporary Hospitality Management*, 35(1) pp. 321-346. Available at: doi.org/10.1108/IJCHM-04 2022-0474

Becker, U.J., Greve, G. and Albers, S. (2010) 'How to prevent CRM implementations from failing'. *GfK Marketing Intelligence Review*, 2(2) pp. 34-41.

Bhat, S.A., and Darzi, M.A. (2016) 'Customer relationship management: an approach to competitive advantage in the banking sector by exploring the mediational role of loyalty'. *International Journal of Bank Marketing*, 34(3) pp. 388-410.

Buttle, F. (2009) *Customer relationship management: Concepts and technologies*. 2nd ed. Butterworth-Heinemann

Buttle, F., and Maklan, S. (2019) *Customer relationship management: concepts and technologies*. 4th ed. Routledge. Available at: DOI:10.4324/9781351016551

Cohen, J. (1988) *Statistical power analysis for the behavioral sciences*. 2nd edn. Lawrence Erlbaum Associates

Connelly, L.M. (2008) 'Pilot Studies'. *MEDSURG Nursing*, 17(6) pp. 411-412

Dubey, N.K., and Sangle, P. (2018) 'Customer perception of CRM implementation in banking context: scale development and validation'. *Journal of Advances in Management Research*, 16(1) pp. 38-63.

Field, A. (2009) *Discovering statistics using SPSS*. 3rd ed. SAGE Publications Ltd.

Franke. G.R., and Parks. J. (2006) 'Salesperson adaptive selling behaviour and customer orientation: a meta-analysis. *Journal of Marketing Research,* 43(2006) pp. 693-702.

Frow, P., and Payne, A. (2009) 'Customer relationship management: a strategic perspective'. *Journal of Business Market Management*, 3(1) pp. 7 – 27.

Garrido-Moreno, A., and Padilla-Meléndez, A. (2011) 'Analysing the impact of knowledge management on CRM success: the mediating effects of organizational factors. *International Journal of Information Management*, 31(2011) pp. 437– 444.

Geisser, S. (1974) 'A predictive approach to the random effects model'. *Biometrika*, *61*(1) pp. 101–107

Gruber, J., & Svensson, M.H. (2012) *A multiple case study: Analyzing the critical factors of customer relationship management implementation.* Linnaeus University.

Hair Jr, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., Danks, N.K., and Ray,S. (2021*) Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R.* Springer

Hair, J. F Jr., Black, W.C., Babin, B.J., and Anderson, R. E. (2019) *Multivariate data analysis.* 8ed. Cengage.

Hair, J. F., Ringle, C. M., and Sarstedt, M. (2011) 'PLS-SEM: indeed a silver bullet'. *Journal of Marketing Theory and Practice*, 19(2) pp. 139–152. Available at: https://doi.org/10.2753/MTP1069-6679190202

Henseler, J., Ringle, C.M., and Sarstedt, M. (2015) 'A new criterion for assessing discriminant validity in variance-based structural equation modeling'. *Journal of the Academy of Marketing Science*, (43) pp. 115–135. Available at: DOI 10.1007/s11747-014-0403-8

Hu,L. T. and Bentler, P.M. (2009) 'Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives'. *Structural Equation Modelling,* 6(1) pp. 1-55

Jayachandran, S., Sharma, S., Kaufman, P., & Raman, P. (2005) 'The role of relational information processes and technology use in customer relationship management'. *Journal of Marketing. 69*(4) pp. 177-92. Available at: http://dx.doi.org/10.1509/jmkg.2005.69.4.177

Kebede, A. M., and Tegegne, Z. L. (2018) 'The effect of customer relationship management on bank performance: in context of commercial banks in Amhara region, Ethiopia'. *Cogent Business and Management*, 5(1) pp. 1–9. Available at: DOI: 10.1080/23311975.2018.1499183

Kessy, S.A (2019) 'The influence of relationship marketing strategies on the performance of commercial banks in Tanzania'. *Tanzania Journal of Development Studies,* 17(2) pp. 115-130

Kim, B.Y. (2008) 'Mediated effects of customer orientation on customer relationship management performance'. *International Journal of Hospitality and Tourism Administration*, 9(2) pp.192-218. Available at: DOI: 10.1080/15256480801909089

Kline, R.B. (2015) *Principles and practice of structural equation modeling*. 4th ed. New York, London: Guilford Press.

Kock, N. (2015) 'Common method bias in PLS-SEM: a full collinearity assessment approach'. *International Journal of E-Collaboration*, 11(4) pp. 1–10. Available at: https://doi.org/10.4018/ijec.2015100101

Krasnikov, A., Jayachandran, S., and Kumar. V. (2009) 'The impact of customer relationship management implementation on cost and profit efficiencies: evidence from the U.S commercial banking industry'. *Journal of Marketing*, 73(2009) pp. 61-76.

Lebdaoui, H., and Chetioui, Y. (2020) 'CRM, service quality and organizational performance in the banking industry: a comparative study of conventional and Islamic banks'. *International Journal of Bank Marketing*, 38(5) pp. 1081-1106. Available at: DOI: 10.1108/IJBM-09-2019-0344

Mandic, M., (2011) 'Important elements in customer relationship management'. *International Journal of Management Cases*, 13(3) pp. 347-351.

Meher, J. R., and Mishra, R. K. (2019) 'Assessing the influence of knowledge management practices on organizational performance'. *VINE Journal of Information and Knowledge Management Systems*, 49(3) pp. 440–456. Available at: DOI:10.1108/VJIKMS-04-2019-0050.

Mellahi, K. and Harris, L.C. (2016) 'Response rates in business and management research: an over view of current practice and suggestions for future direction'. *British Journal of Management,* 27(2) pp. 426–437.

Migdadi, M.M. (2020) 'Knowledge management, customer relationship management and innovation capabilities'. *Journal of Business and Industrial Marketing*, 36(1) pp. 111-124.

Mirkovski, K., Davison, R.M., and Martinsons, M.G. (2019) 'The effects of trust and distrust on ICT-enabled information sharing in supply chains: evidence from small- and medium-sized enterprises in two developing economies'. *The International Journal of Logistics Management*, 30(3) pp. 892-926

Mohammad, A. A., Rashid, B. B., and Tahir, S. B. (2013) 'Assessing the influence of customer relationship management (CRM) dimensions on organization performance: an empirical study in the hotel industry'. *Journal of Hospitality and Tourism Technology*, 4(3) pp. 228–247. Available at: DOI:10.1108/JHTT-01-2013-0002

Motiwalla, L. F., and Thompson, J. (2009) *Enterprise Systems for Management*. Pearson Upper Saddle River: Prentice Hall.

Nasution, F. N., and Rafiki, A. (2018) 'The effect of CRM on organization performance: a study of medium enterprises in Indonesia'. *Journal of Entrepreneurship Education*, 21(1) pp. 24–49.

Nguyen, T. H., Sherif, J. S., and Newby, M. (2007) 'Strategies for successful CRM implementation'. *Information Management and Computer Security*, 15(2) pp. 102–115. Available at: DOI:10.1108/09685220710748001

Rafiki, A., Hidayat, S.E., and Al Abdul Razzaq, D. (2019) 'CRM and organizational performance: a survey on telecommunication companies in Kuwait'. *International Journal of Organizational Analysis*, 27(1) pp. 187-205

Ringle, C.M. and Sarstedt, M (2016) 'Gain more insight from your PLS-SEM results: the importance-performance map analysis. *Industrial Management and Data Systems*,116(9) pp. 1865-1886

Santouridis, I., and Tsachtani, E. (2015) 'Investigating the impact of CRM resources on CRM processes: a customer life-cycle based approach in the case of a Greek bank. *Procedia Economics and Finance*. 19(2015) pp, 304-313

Sarstedt, M., Ringle, C.M., and Hair, J.F. (2017). *Partial least squares structural equation modeling: handbook of market research.* Springer International Publishing

Saunders, M.N.K, Lewis, P., and Thornhill, A. (2019). *Research methods for business studies*. 8th ed. Pearson Education Limited.

Schuberth, F., Rademaker, M. E., and Henseler, J. (2023) 'Assessing the overall fit of composite models estimated by partial least squares path modeling'. *European Journal of Marketing*, 57(6) pp. 1678–1702.

Shrestha, N. (2021) 'Factor analysis as a tool for survey analyses. *American Journal of Applied Mathematics and Statistics*, 9(1) pp. 4-11. Available at: DOI:10.12691/ajams-9-1-2

Sin, Y.M., Tse, C.B., and Yim, H.K. (2005) 'CRM: Conceptualization and scale development'. *European Journal of Marketing*, 39(11/12) pp. 1264-1290.

Sofi, M. R., Bashir, I., Parry, M. A., and Dar, A. (2020) 'The effect of customer relationship management (CRM) dimensions on hotel customer's satisfaction in Kashmir'. *International Journal of Tourism Cities.* Available at: DOI: 10.1108/IJTC-06-2019-0075

Sofi, M.R., and Hakim, I.A. (2018) 'Customer relationship management as tool to enhance competitive effectiveness: model revisited'. *FIIB Business Review,* 7(3) pp. 201–215. Available at: DOI: 10.1177/2319714518798410

Soltani, Z., Zareie, B., Milani, F. S., and Navimipour, N. J. (2018) 'The impact of the customer relationship management on the organization performance'. *The Journal of High Technology Management Research,* 29(2) pp. 237–246. Available at: DOI: 10.1016/j.hitech.2018.10.001

Stone, M. (1974) 'Cross-validatory choice and assessment of statistical predictions'. *Journal of the Royal Statistical Society*, *36* (2) pp. 111–147.

Tabachnick, B. G. and L. S. Fidel. (2007) *Using multivariate statistics*. 5th ed. Boston: Allyn and Bacon/Pearson Education

Tailab, M. M. K. (2020) 'Using importance-performance matrix analysis to evaluate the financial performance of American banks during the financial crisis'. *SAGE Open,* 10(1) pp. 1–17.

TBA. (2023) Diversity and inclusion in the banking sector. Available at: www.tanzaniabankers.org

Woodcock, N., and Stone, M. (2012) 'Simple strategies to win and keep customers profitability'. *Database Marketing and Customer Strategy Management,* 19 pp. 275-285. Available at: DOI: 10.1057/dbm.2012.25

Wright, P., and McMahan, G. (1992) Theoretical perspectives for strategic human resources management. *Journal of Management*, 18(2) pp. 295-332

Wyrod-Wrobel, J., and Biesok, G. (2017) 'Decision making on various approaches to importance-performance analysis'. *European Journal of Business and Technology,* 3(2) pp. 123–131.

Yamane, T. (1967) *Statistics. an introductory analysis.* 2nd edn. New York: Harper and Row.

Yim, F. H., Anderson, R.E. and Swaminathan, S. (2014) 'Customer relationship management: its dimensions and effect on customer outcomes'. *Journal of Personal Selling and Sales Management*, 24(4) pp. 263-278.

Zahari, A. S. M., Mahmood, R., and Baniamin, R. M. R. (2023) 'The effect of customer knowledge management on organizational performance'. *International Journal of Academic Research in Business and Social Sciences,* 13(4) pp. 187 – 200.

Zaim, H., Tatoglu, E., and Zaim, S. (2007) 'Performance of knowledge management practices: a causal analysis'. *Journal of Knowledge Management,* 11(6) pp. 54-67

Ziyae, B., Rezvani, M., and Zareai, F. (2019) 'Explaining the entrepreneurial effect of customer knowledge management on product innovation of electronic businesses'. *Journal of Organisational Studies and Innovation*, 6(3) pp. 12-24.

Appendix 1: Indicator Loadings, Composite Reliability, AVE and HTMT

Construct	Indicators	Indicator Loadings	CA	Rho_a	Rho_c	AVE	HTMT
BP	BP1 <- BP	0.598	0.9	0.91	0.919	0.56	<0.85
	BP2 <- BP	0.795					
	BP3 <- BP	0.697					
	BP4 <- BP	0.793					
	BP5 <- BP	0.844					
	BP6 <- BP	0.778					
	BP7 <- BP	0.706					
	BP8 <- BP	0.727					
	BP9 <- BP	0.769					
CKM	CKM1 <- CKM	0.807	0.883	0.886	0.909	0.56	<0.85
	CKM2 <- CKM	0.816					
	CKM3 <- CKM	0.785					
	CKM4 <- CKM	0.781					
	CKM5 <- CKM	0.784					
	CKM6 <- CKM	0.705					
	CKM7 <- CKM	0.683					
CO	CO1 <- CO	0.797	0.889	0.894	0.914	0.603	<0.90
	CO2 <- CO	0.830					
	CO3 <- CO	0.778					
	CO4 <- CO	0.820					
	CO5 <- CO	0.771					
	CO6 <- CO	0.655					
	CO7 <- CO	0.773					
CRMO	CRMO1 <- CRMO	0.727	0.898	0.905	0.92	0.623	<0.85
	CRMO2 <- CRMO	0.831					
	CRMO3 <- CRMO	0.701					
	CRMO4 <- CRMO	0.834					
	CRMO5 <- CRMO	0.792					
	CRMO6 <- CRMO	0.795					
	CRMO7 <- CRMO	0.833					
TBCRM	TBCRM1 <- TBCRM	0.748	0.881	0.881	0.91	0.627	<0.85
	TBCRM2 <- TBCRM	0.836					
	TBCRM3 <- TBCRM	0.825					
	TBCRM4 <- TBCRM	0.766					
	TBCRM5 <- TBCRM	0.791					
	TBCRM6 <- TBCRM	0.784					

Source: Author (2024)