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Extent of Technology Application in Customer Relationship Management Practices of Commercial Banks in Kenya

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Abstract

In their new approaches to marketing, innovative organizational managers have moved to more humanistic and relationship-based models. Companies are realizing that their most valuable assets are relationships with customers and other key stakeholders. This implies that if a firm manages its customer relationships better than its competitors, it will not only succeed in retaining current customers but will also attract new customers. As a result of this new focus on marketer-customer relationships, and in consideration of the substantial competitive benefits and opportunities that are assumed to emerge, significant efforts have been undertaken in the business world to develop tools and methods that can facilitate the implementation of relationship marketing strategies. The recent past has seen a proliferation of hardware systems and software applications designed to facilitate the management of customer relationships. Technology-facilitated customer initiatives have been launched by many companies in every industry, by organizations large and small, public and private, profit and non-profit. This study sought to establish the extent of technology application in customer relationship management (CRM) practices of commercial banks in Kenya. An exploratory and quantitative survey research design was adopted. Data was collected from key informants using a self-administered structured questionnaire. The descriptive analysis of the data revealed that the most engaged CRM technology by the commercial banks is real-time transaction processing and automated branch integration while the key drivers of the banks CRM technology were inferentially established to be real-time banking, electronic-based customer interactivity, and cashless transactions. The study has significant value to management practice and future research on the concept of CRM strategy.

Keywords: Relationship Marketing, Customer Relationship Management, CRM Technology

1. Introduction

One of the major developments within today's business practice is the increasing interest in customer relationship management (Langerak & Verhoef, 2003). Marketers continue to place increased strategic emphasis on building relationships with customers and investing in relational information technology. Recent literature on marketing theory and practice acknowledge the increasing emphasis on designing customer-centric strategies and processes by organizations in order to realize lifetime value of customers (Coltman, 2007; Hunter *et al.* 2007; Jain *et al.*., 2007; Ramani & Kumar, 2008). The paradigm shift towards customer relationship management (CRM) has re-oriented marketing activities to emphasize relationships with individual customers as a means of developing sustainable competitiveness.

Scholars in marketing (Christopher *et al.,* 1991; Gummesson, 1994; Sheth & Parvatiyar, 1995; Gronroos, 2000) concur with the proposition concerning the influence of CRM on a firm's

competitiveness. They assert that with the emergence of new technologies and processes, marketers are now beginning to understand each customer better than ever before and are choosing with whom to do business and how to manage customers' behaviors and attitudes. In most cases, technology enables this to be achieved at lower costs than mass marketing; and because better information is made available to management, companies improve effectiveness and efficiency in their interaction with customers. For instance, the Internet represents a powerful technology for building and maintaining a variety of business relationships. As a result, Sin *et al.* (2005) note that customer relationship management software has been rapidly and eagerly tailored to the capabilities of the Internet, allowing businesses to forge new forms and magnitudes of customer relationships.

Foss, Stone, and Ekinci (2008) also argue that companies have invested or are planning to invest huge amounts to implement CRM strategies, tools and infrastructure in order to win the battle in the increasingly competitive economy. As a result, the growth in demand for CRM solutions has been increasing. Gartner estimated that the global market for CRM software exceeded USD 7.4 billion in 2007, up 14 percent from 2006 (Barker, 2007). In the same vein, Forrester estimate that worldwide revenues for CRM solutions would continue to grow to USD 10.9 billion by 2010 (Band, 2007). This worldwide trend of CRM adoption is also evident in most Kenyan organizations. Often built around complex software packages, CRM systems promise to allow companies to respond efficiently, and at times instantly to shifting customer desires, thereby bolstering revenues and customer retention while reducing marketing costs.

1.1 Review of the Customer Management Strategy

As Nevin (1995) points out, the terms CRM and relationship marketing have been used to reflect a variety of themes and perspectives. Some of these themes offer a narrow functional marketing perspective while others offer a perspective that is broad. A narrow perspective of CRM arising from recent developments in Information Technology (IT) is a focus on individual or one-to-one relationships with customers that integrate database knowledge with a long-term customer retention and growth strategy (Peppers & Rogers, 1993). On the other hand, Berry (1995) has a strategic viewpoint of CRM. He has stressed that attracting new customers should be viewed only as an intermediate step in the marketing process and that developing closer relationship with these customers and turning them into loyal ones should be equally important aspects of marketing. Thus, relationship marketing can be seen as attracting, maintaining and enhancing customer relationships.

Significant conceptual literature has been written suggesting key issues to be considered to attain effective CRM implementation. For instance, according to Harris (2001), CRM links the customer-facing functions of marketing, sales and customer service. However, greater operational benefits can be achieved once the system is linked to other parts of the organization such as finance, order processing, and distribution or externally to business partners. Linking together more processes that are activated whenever a customer places an order makes for greater operational efficiency as all functions are in tune with customer needs. Consequently, there are three key elements to a CRM system. Firstly, customer information is collected from all channels (touch points, for example, post, web, phone, and face-to-face). Secondly, this information is deposited into one central CRM database. Thirdly, CRM database is made

available to customer-facing functions and staff in real time. Invariably, CRM systems tend to be made up of a hybrid of software applications. The range of CRM- related software applications tend to fall into three distinct categories: operational CRM, analytical CRM, and collaborative CRM. Operational CRM refers to software that is actually deployed and used by organizations. Analytical CRM refers to programs developed to help extract customer intelligence thereby aiding the decision–making process and collaborative CRM refers to applications used between partners. This explanation clearly demonstrates the key role of IT in CRM implementations.

In considering how CRM should be implemented, Payne (2002) is also of the view that IT has a pivotal role to play in enabling companies to maximize profitability through more precise targeting of market segments and the micro-segments within them. Technology can greatly assist in managing the data required to understand customers so that appropriate CRM strategies can be adopted. In addition, the use of IT may enable the necessary data to be collected to determine the economics of customer acquisition, retention and lifetime value. Powerful new technological approaches involving the use of databases, data marts, data warehouses, data mining, and one-to-one marketing are now assisting organizations to increase customer value and their own profitability. Jain *et al.* (2007) also argue that selection of the right technology hardware and its deployment at customer touch points is critical for capturing right information and producing meaningful reports for decision-making purposes.

1.2 Review of the Commercial Banking Sector in Kenya

The structure of the financial industry in Kenya comprises of commercial banks, investment banks, Savings and Credit Cooperative Societies (SACCOs), stock brokerage entities, mortgage financing companies, Micro-Finance Institutions (MFIs) and foreign exchange bureaus. Commercial banks are the most dominant players in Kenya's financial industry. The setting of the research is Kenya's commercial banking sector.

The commercial banks are licensed and regulated pursuant to the provisions of the Banking Act and the Regulations and Prudential Guidelines issued thereunder. Since they are the dominant players in the Kenyan banking system, closer attention is paid to them while conducting off-site and on-site surveillance to ensure that they are in compliance with the laws on the regulations. The CBK annual economic review for 2008 outlines that the Kenyan banking sector is dominated by six large banks which account for approximately 58 percent of the market share. In view of this, there are considerable opportunities in the economy to expand banking services to parts of the population that do not hold bank accounts, particularly in the rural areas. This would provide a greater pool of savings to finance the productive investments of Kenya Vision 2030. Banking institutions will also need to cope with continuously changing business environment and increased new requirements via Information and Communication Technology (ICT) platforms. Hence, banks are expected to continue aggressively designing new products that leverage on ICT to remain competitive. Down streaming into the retail market segment is also expected to continue particularly with the licensing of deposit-taking microfinance institutions in 2008. Additional capital injection is expected as banking institutions expand into the region in search of growth opportunities in line with trends towards regional and economic integration. Competition will also intensify as Pan-African banking

groups from South and West Africa target Kenya as their East and Central African regional hub. Finally, diversification into other financial services such as insurance, securities, and financial advisory services is also anticipated as customers increasingly seek 'one-stop financial supermarkets'. These developments are expected to enhance banking products being offered and bring more Kenyans into the banking space.

Kenya's commercial banking sector is poised for major realignments on account of the stiff competition that the sector is witnessing. The need to invest in very expensive technology among other investments, amidst declining margins as banks try to out-compete each other and in an era of credit rates control means that banks have to seek to understand fully their target customers and create superior value if they are to achieve market competitiveness.

1.3 Focus of the Study

Banking is a customer-oriented services industry; therefore, the customer is the focus and customer relationship management the differentiating factor. Sarel and Marmorstein (2007) concur that at the core of banks' CRM initiatives is the belief that by identifying customers who have the potential to be profitable over the long term and addressing their specific needs, banks can deliver greater value to these customers, enhance their competitive position and generate higher returns to shareholders. Also, by recognizing that not all customers are equally attractive, banks can allocate limited resources more effectively. Customers who are potentially more appealing must be given special attention, offered customized solutions and be provided with enhanced services. Banks ought to identify who their potentially profitable customers are, understand their particular needs and offer the customized services needed to attract, retain and grow their relationships with them.

The commercial banking sector was deliberately chosen for this study since service companies have a high propensity to relationship building than non-service companies (Berry, 1995; Ang & Buttle, 2006). As Kotler (2004) observes, CRM makes the most sense in data-rich industries such as banking, insurance, and telecommunications. Ryals and Payne (2001) also posit that CRM is of particular value in service organizations such as banking, utilities, retailing and healthcare whose enormous customer base may cause them to lose touch with individual customers. In Kenya, the commercial banks are a relevant setting to study CRM applications since CRM is largely adopted and the industry has high competitive intensity.

This study sought to establish the extent to which the commercial banks in Kenya apply key CRM technology platforms such as ATM machines, internet, and mobile banking, telemarketing and so on to enhance their customer relationship management practices

2. Methodology

The study utilized an exploratory and quantitative survey research design and targeted all the 43 commercial banks operating in Kenya as at December 2008.

The study was cross-sectional (that is, snapshot or one-shot) as the research respondents were interviewed just once. Cross-sectional studies have been found to be robust for effects of relationships studies (Coltman, 2007; O'Sullivan & Abela 2007; Raman & Kumar, 2008).

A self-administered questionnaire with a five-point Likert-type scale (interval scale) requesting the respondents to indicate the extent to which their organizations applied a set of CRM technology applications was used. The key informant method was used to collect the data where the marketing manager or a senior officer responsible for marketing strategy or CRM initiatives in each bank was the respondent. Only one respondent was interviewed in each bank. Where a bank has branches or subsidiaries, the group marketing director or the most senior officer responsible for marketing strategies was interviewed since he/she is conversant with the status of CRM strategies being implemented by the subsidiaries or branches. The views of key informants are widely used in marketing studies (Tan & Lischert, 1994; O'Sullivan & Abela, 2007; Ramani & Kumar, 2008) as they are deemed the most knowledgeable about the issues under investigation for which they are directly responsible.

Data was analyzed using both descriptive and inferential statistics. Descriptive statistics included measures of location (mean) and measures of dispersion (standard error mean) while factor analysis was used to establish the underlying CRM technology level drivers in the banks.

3. Results and Discussions

The analysis of data established the level of technology used by the commercial banks as well as the CRM technology drivers.

3.1 Level of Technology Use by Commercial Banks in Kenya

When the level of CRM technology use within the banks was assessed, the results highlighted in Table 1 show that on a scale of 1 to 5 (where 5= to a great extent and 1= not at all), banks engage real-time transaction processing and automated branch integration (mean score = 4.14) to a great extent. Video conferencing (mean score = 1.68) and interactive voice response (mean score= 1.85) are used at a very small extent. Overall, the extent of technology level within the commercial banks is moderate (overall mean score = 3.03).

Table 1: Level of CRM Technology Use at the Commercial Banks

Technology Level Measure	Sample Size	Mean	Standard Error Mean	t-value	Significance (p-value)
Use of ATMs	34	3.7647	0.23905	15.748	0.000
Use of internet banking	34	2.9706	0.19109	15.545	0.000
Use of mobile banking	34	2.4706	0.19456	12.699	0.000
Use of computer telephony integration	34	3.0588	0.24232	12.623	0.000
Use of telemarketing	34	2.5294	0.20351	12.429	0.000
Use of interactive voice response	34	1.8529	0.16424	11.282	0.000
Use of video conferencing	34	1.6765	0.17773	9.433	0.000
Use of credit cards	34	3.1176	0.27610	11.292	0.000
Use of real time transaction processing	34	4.1471	0.16958	24.455	0.000

Use of automated branch integration	34	4.1471	0.19862	20.879	0.000
Overall self-assessment	34	3.5294	0.15360	22.978	0.000

Overall mean score= 3.03

t-test for equality of means: test value =0 (Ho: there is no difference expected between the means, at α =0.05, 2-tailed); reject Ho if p-value ≤ α, otherwise fail to reject Ho if p-value > α

Source: Research Data

The results of one-sample t-test in Table 1 indicate that the variability among the means of the measures of level of technology were all statistically significant. Thus, the level of technology varied from one bank to another with the highest difference being noted in real-time transaction processing (t-value= 24.46), followed by overall self-assessment (t–value= 22.98, $p < 0.05$). The lowest statistical difference was reported in video conferencing (t-value= 9.43, $p < 0.05$) followed by interactive voice response (t-value= 11.28, $p < 0.05$).

3.2 CRM Technology Level Drivers at the Commercial Banks in Kenya

When the 11 measures of technology level were subjected to factor analysis, the results in Table 2 reveal that there were four critical factors driving the technology level of the banks which cumulatively accounted for 75.46 percent of the total variance in this construct. Factor 1 had four most dominant loadings (internet banking; real-time transaction processing; automated branch integration and overall self-assessment) which together accounted for 23.80 percent of the variance in this construct; this factor was thus labeled real-time banking. Factor 2 had three most dominant loadings (computer telephony; interactive voice response; and video conferencing) contributing 20.63 percent of the variance and was subsequently labeled electronic-based customer interactivity. Factor 3 also had three most dominant loadings (ATMs, mobile banking and credit cards) contributing 17.48 percent of the variance and was labeled cashless transactions. Factor 4 had only one most dominant loading (telemarketing) which contributed 13.55 percent of the construct variance and was subsequently labeled telemarketing.

Table 2 also indicates that the Barlett's test of sphericity was >0.5 (Kaiser-Meyer-Olkin measure of sampling adequacy= 0.592) and therefore the data could appropriately be subjected to factor analysis. In addition, the null hypothesis that the population correlation matrix is an identity matrix is rejected since the p-value is small (0.000). Thus, factor analysis was considered an appropriate technique for analyzing the technology level correlation matrix. In order to determine the factor analysis model fit, residuals were computed between observed and reproduced correlations. There were 29 (52 percent) non-redundant residuals with absolute values greater than 0.05, indicating an acceptable model fit.

Table 2: Results of Factor Analysis for Technology Level Measures

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.592
Bartlett's Test of Sphericity	Approx. Chi-Square	157.493
	Degrees of freedom	55
	Significance (p-value)	.000

Total Variance Explained in Technology Level

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Measure	Total	Percent of Variance	Cumulative Percent	Total	Percent of Variance	Cumulative Percent
1	4.209	38.264	38.264	2.618	23.804	23.804
2	1.603	14.577	52.841	2.269	20.627	44.431
3	1.461	13.282	66.123	1.923	17.480	61.911
4	1.027	9.336	75.459	1.490	13.548	75.459
5	.715	6.500	81.959			
6	.616	5.601	87.559			
7	.426	3.870	91.430			
8	.355	3.225	94.654			
9	.269	2.441	97.096			
10	.219	1.990	99.086			
11	.101	.914	100.000			

Extraction Method: Principal Component Analysis. 4 factors extracted.

Rotated Component Matrix

Measure	Factor			
	1	2	3	4
ATMs	.163	.436	.630	.158
Internet banking	.685	.016	.161	.448
Mobile banking	-.063	-.070	.860	.175
Computer telephony integration	.086	.729	.009	.405
Telemarketing	.296	.128	.093	.834
Interactive voice response	.323	.759	.152	.165
Video conferencing	.094	.878	.082	-.232
Credit cards	.384	.247	.692	-.359
Real time transaction. processing	.773	.201	-.338	-.100
Automated branch integration	.780	.235	.209	.133
Overall self-assessment	.746	.148	.290	.369

Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 10 iterations.

4. Conclusions and Recommendations

This study focused on establishing the extent of technology application in CRM practices in Commercial Banks in Kenya. This is useful in the understanding of the critical benefits accruing from an effective customer orientation and how CRM strategy helps develop the capabilities that create superior customer value.

When it comes to the technology deployed to CRM practices in the Commercial Banks, the most engaged practices are real-time transaction processing and automated branch integration while the least engaged are video conferencing and interactive voice response.

Further, the key underlying forces or drivers of the banks' technology level deployed to CRM practices was found to be real-time banking, electronic-based customer interactivity, and cashless transactions.

This study adds value to management practice by offering invaluable insights on CRM decisions to managers to bolster the competitiveness of their organizations. In particular, the study provides managers with a greater understanding of the levels of the competitive CRM technology commitment necessary to achieve sufficient CRM practices effectiveness.

The results on technology confirm the common observation on how integrated software is providing an edge to banks with huge networks in Kenya. It is also inconveniencing when a client's deposit is not immediately reflected on their accounts, hence the huge adoption of real-time banking for competitiveness.

Although this study produced meaningful results, it was also subject to certain limitations which in turn provide avenues for further research. First, the study engaged only a single variable, namely CRM technology. Inclusion of more study variables in future studies such as marketing productivity, organizational performance and a variety of other contextual factors and establishing the relationship among such variables would provide a more elaborate conceptual framework which would provide more robust insights on the concept of CRM strategy.

Further as is typical of most empirical strategy research, the results of this study are based on self-reported data of the best-informed managers. Although senior managers are adequate for reliable and valid data (Tan and Lischert 1994), the information that a firm generates is not the only source of information about its levels of CRM strategy initiatives and organizational performance. It may be important to combine internal information (such as the managers' responses to questionnaires) with the views held by its customers, competitors, and distributors on its CRM strategy. To address this limitation, future research can combine the viewpoints of customers and other key organization stakeholders with the results of organization's self-assessment of its CRM practices in order to generate more valid conclusions. Indeed, a research that takes the customer perspective of measuring the effectiveness of a firm's CRM strategy could be appropriate.

Finally, the fact that the study was based on a single industry setting that is, the service industry of the commercial banking sector in Kenya, also limits the generalizability of the results. Although the industry specificity of a study enhances its internal validity, caution should be taken when generalizing these findings to other industries. Nonetheless, the results of this exploratory study provide a good start from which more robust studies on practices and effectiveness of CRM strategy could be developed.

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