THE IMPACT OF MARKETING INFORMATION SYSTEM COMPONENTS ON QUALITY MANAGERIAL DECISION MAKING IN FINANCIAL INSTITUTIONS IN KENYA; CASE STUDY OF AGRICULTURAL FINANCE CORPORATION

Mugwe, D.K.
Jomo Kenyatta University of Agriculture
KENYA.

Ogwoka, O.
Jomo Kenyatta University of Agriculture
KENYA.


ABSTRACT

For any organization to be competitive in this turbulent environment, management have to consistently make the right decisions on the basis of information. Marketing information system (MIS) is praised for its assistance in quality decision making. This study seeks to investigate the impact of the same in financial institution in Kenya. A case study of Agricultural Finance Corporation was carried out. A semi-structured questionnaire was used for data collection. Data collected was analyzed using descriptive statistics, chi-square and logit model. The study results indicate that only three of the four components of MIS has an impact on quality decision making in financial institutions in Kenya. Based on the findings, the study has recommended increased vigilant in the components of MIS particularly the marketing research, marketing intelligence, and market decision support system.
Key Words: Financial Institutions, Managerial Decision Making, Management Information System (MIS)

Introduction

Decision-making is a fundamental aspect of management at all levels in an organization. For any organization to be competitive in this turbulent environment, management have to consistently make the right decisions on the basis of information. Kotler (2006) advocate that decision-making is the point at which plans, policies and objectives are translated into concrete actions. The new financial environment is about differentiating banking products, increased choices, security and accessibility. The ability of financial Institution to deliver products and services in the most efficient and effective manner is key to performance and relevance. This calls for companies to take steps towards IT-based marketing information systems.

Jobber and Fahy (2007) defines MIS as a system in which marketing data is formally gathered, stored, analyzed and distributed to managers in accordance with their informational needs on a regular basis. Amaoke (2012) compares military or diplomatic intelligence to marketing information systems to some extent. This is because MIS gathers, process, store potentially useful information that currently exist in fragmented unorganized, but open and avoidable form in several locations inside and outside organization. Talvinen and Saarinen (1995) assert that there is ample evidence that it is increasingly important for organizations to make effective use of information systems to support marketing management, particularly in competitive or rapidly changing environments. Armstrong and Kotler (2007) suggest that marketing information system is efficient tool providing past, present and projected information relating to internal operations
and external intelligence. It supports the planning, control, and operational function in an organization by furnishing uniform information in the proper time frame to assist the decision maker.

Following Talvinen et al (1992), MIS is divided into four subsystems or components: the internal record systems, the market intelligence systems, the research systems and the market decision support systems. The internal records systems provide information on sales, costs, inventories, cash flow and accounts receivable and payable. The market intelligence system supplies information concerning the external marketing environment. The research system is relevant to specific marketing situation facing the company while the marketing decision support systems (MDSS) comprises statistical techniques and decision models to assist marketing managers in making better analysis and decisions. Through these four subsystems, the company could more effectively monitor its marketing environment and be able to make decisions that can give the business a competitive edge.

The level of competition in the Kenyan financial sector has increased tremendously over the years and is expected to intensify with the entry of new players in the industry. The financial sector has not been spared by the brunt of globalization. Mergers and acquisitions have become a common phenomenon in this sector as a means of growth. For firms to survive it has become imperative that they have to make quality decisions which will enable them stay ahead of their competitors by providing peculiar products than the competitors. The new financial environment is about differentiating banking products, increased choices, security and accessibility. The ability of financial institution to deliver products and services in the most efficient and effective
manner is key to performance and relevance. This calls for companies to take steps towards ICT-based marketing information systems. Studies carried out on the MIS in the financial institutions do not address their impact on quality decision-making (Perera, 2002; Koiyet, 2004; and Kuria 1981).

Agricultural Finance Corporation (AFC)

The Agricultural Finance Corporation (AFC) is a wholly owned Government Development Finance Institution (DFI) that was established in 1963 initially as a subsidiary of the Land and Agricultural Bank. In 1969, it was incorporated as a full – fledged financial institution under the Agricultural Finance Corporation Act, Cap 323 of the laws of Kenya. Today, AFC remains the leading government credit institution mandated to provide credit for the sole purpose of developing agriculture. This role is crucial given that agriculture is the mainstay of the Kenyan economy where 80% of the Kenyan population, which is rural based, relies on agriculture as their main support system. Agricultural Finance Corporation has a total of 40 branches distributed all over the country with the headquarter in Nairobi, development house. The corporation has employed more than 1000 staff members. The number of loan clients as of December 2000 was 22,000.

Components of a Marketing Information System (MIS)

The aim of MIS is to bring together desperate items of data into a coherent body of information. It is a system in which marketing data is formally gathered, stored, analyzed and distributed to managers in accordance with their informational needs on a regular basis. The major components of an MIS include the internal reporting systems, marketing research system, marketing
intelligence system and marketing models (Talvinen et al., 1992). Although MIS may vary in
the degree of sophistication, a fully-fledged MIS should have these components, the methods
(and technologies) of collection, storing, retrieving and processing data notwithstanding.
Collection of information is a continuous process that gathers data from a variety of sources
synthesizes it and sends it to those responsible for meeting the market places needs. Within the
MIS there has to be the means of interpreting information in order to give direction to decision.
The effectiveness of marketing decision is proved if it has a strong information system offering
the firm a sustainable competitive advantage.

Marketing information systems and decision making

Many authors have discussed the significance of embracing marketing information systems with
regards to decision making. Violana (1989) suggests that through innovations in MIS,
information services function can have a more direct role in marketing’s ability to achieve a
bank’s business goals. According to Amoake (2012), MIS can often give financial institutions
and other organizations a competitive advantage by providing the right information to the right
people in the right format and at the right time. Marketing information systems support
managerial decisions in products development, distribution, pricing decisions, promotional
effectiveness, and sales forecasting in financial institutions.

Sisodia (1992) suggests that the most important attribute of MIS is its ability to facilitate cross-
selling. This is particularly true for the banking industry which is characterized by a high
preponderance of products, a high number of customers and many unprofitable ones too. Sisodia
(1992) adds that a major ability of MIS is to build switching costs between the financial
institution and its customers. Switching costs can take two forms; monetary and psychological. Banks can build switching costs though MIS by increasing the length and depth of relationships the customer has with them. These switching costs can, in turn, promote loyalty. However, holding customers “hostage” because of high switching costs is not a tenable long-term strategy.

MIS use in decision-making plays a significant role in customer retention. Complete and accurate information on the customer can enable financial institutions reduce the risk in transacting with the customer likely to default on a loan (Colgate, 1998). This will then assist them in the decision to reject the application for the loan or the setting of an interest rate to reflect this risk.

**Materials and Methods**

This study adopted a descriptive research design to provide the current data on the Marketing information systems components and how they relate and affect the quality of decision at AFC. The target population of this study was the entire management staff from different levels of management of the AFC Nairobi branch which has at least 30% of the total employee population which is a fair representation of the total employee population. Cluster sampling method was done to get the sample from senior level management (strategic), middle level managers (control) and the lower level cadre (operational). Research instrument used to collect the data was a questionnaire. Descriptive analysis, chi-square and logit model were used to analyse the data.
Research Findings and Discussions

Components of MIS at AFC

Organizations use different MIS components to pursue their marketing objectives. From the findings, 41% of the respondents indicated that AFC had internal record component, 34% cited that AFC had marketing research component, 13% indicated presence of marketing intelligence component and 12% indicated presence of marketing decision support system component. This implies that at AFC there exists all the four components of MIS as revealed by Talvinen et al (1992) but in different levels.

Components of MIS and decision making

The study found that the marketing information was highly related with quality decision in organizations ($r_s=0.294$). This implies that when there was a lot of research on marketing, the quality of the decision also upgraded. An increase in the marketing intelligence was also associated with quality decisions ($r_s=0.164$). The study also found that when the organization initiated and enforced the marketing decision support systems, the quality of the decisions in the organization were better ($r_s=0.158$). The above findings show that marketing research, intelligence and marketing decision support systems (MIS) are positively associated with high quality decision making in the organization.

Indicators of MIS influence on quality of decisions in an organization

The study established that MIS influenced the performance of the organization in various ways. Firstly, the study noted that MIS had improved the quality of decision made in the organization (Mean=3.53). Secondly, MIS enabled the management to make decisions on the basis of
complete and accurate information (M=3.6). This was possible because of the marketing intelligence and marketing research which generates adequate information good for making decisions. Another indicators of the MIS in the organization was increased productivity and effectiveness in doing business (M=3.75). This was possible because of the marketing support systems which helps the organization to come up with adequate knowledge and measures to capture and make profits for the firm. MIS also facilitated quick feedback between the organization and the customers (M=3.57) and lastly reduction in transaction costs (M=3.62).

**Impact of MIS on the quality of decisions**

The impact of the factors on the quality of decisions was determined using an ordered logit model. Table 1 shows the model testing results, which establishes it was fit for the study population. The significant p-value (0.0361) is the probability of getting the chi-square statistic (4.344) if there is no effect of the predictor variables on the dependent variable. This implies that the predictor variables are statistically significant as at least one of the parameter is not equal to zero thus the model is fit for the study.

<table>
<thead>
<tr>
<th>Model</th>
<th>-2 Log Likelihood</th>
<th>Chi-Square</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
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<tr>
<td>Intercept Only</td>
<td>44.494</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Final</td>
<td>40.151</td>
<td>4.344</td>
<td>4</td>
<td>.0361</td>
</tr>
</tbody>
</table>

Link function: Logit.

Table 2 shows the threshold values from one level of quality of decisions to the other. The Wald test statistics are used to show the effect of each of the predictor variables on the dependent variable when other predictor variables were held constant. For this study, marketing research
(8a) (p-value = 0.0138), marketing intelligence (8b) (p-value = 0.015) and marketing decision support systems (8d) (p-value = 0.0483) are all statistically significant in predicting the quality of decision made at AFC. The internal record (8c) (p-value = 0.412) is however not a significant variable to predict the Quality of decisions at AFC.

The parameter show ordered log-odds estimate of a unit increase in any of the predictor variables on the dependent variable. From the study findings, a unit increase in marketing research would result into a 1.126 unit increase in the ordered log-odds of being in higher level of making a quality decision if the other variables were kept constant. A unit increase in marketing intelligence would increase the ordered log-odds by 0.167 units of making quality decision at AFC if other factors were kept constant. Similarly, a unit increase in marketing decision support systems would increase the ordered log-odds by 0.641 units of making quality decisions at AFC if the other factors are kept constant.

The confidence level 95% is used to indicate the confidence interval of a predictor variable if the rest of the factors are in the model. For a given predictor with a level of 95% confidence, it means that we are 95% confident that the "true" population regression coefficient lies in between the lower and upper limit of the interval.
Table 2 Parameter Estimates

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>Wald</th>
<th>Df</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
<th>95% Confidence Interval</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
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<tr>
<td>Threshold [q7 = 2.00]</td>
<td>-3.029</td>
<td>1.009</td>
<td>9.002</td>
<td>1</td>
<td>.003</td>
<td>-5.007</td>
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<tr>
<td>[q7 = 3.00]</td>
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<td>.774</td>
<td>1.854</td>
<td>1</td>
<td>.0173</td>
<td>-2.570</td>
<td>.463</td>
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<tr>
<td>[q7 = 4.00]</td>
<td>2.475</td>
<td>.865</td>
<td>8.183</td>
<td>1</td>
<td>.004</td>
<td>.779</td>
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<td>Location [q8a=1.00]</td>
<td>1.126</td>
<td>.760</td>
<td>2.199</td>
<td>1</td>
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<td>-.362</td>
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<tr>
<td>[q8b=1.00]</td>
<td>.167</td>
<td>.929</td>
<td>.032</td>
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<td>.015</td>
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<tr>
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<td>.674</td>
<td>1</td>
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<tr>
<td>[q8d=1.00]</td>
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<td>.915</td>
<td>.491</td>
<td>1</td>
<td>.0483</td>
<td>-1.152</td>
<td>2.434</td>
</tr>
</tbody>
</table>

Link function: Logit.

Conclusion and recommendations

The study concludes that the components of Marketing Information Systems (MIS) at AFC are majorly four: the internal record systems, the market intelligence systems, the research systems and the market decision support systems. The study concludes that MIS improves the quality of decisions made by the organization, enables the management to make decisions which reflect complete and accurate information, increased productivity and effectiveness in doing business, facilitates quick feedback between the organization and the customers and also reduces transaction costs. The study also concludes that the MIS affects the quality of marketing decisions made by the firm at varying degrees. Increase in marketing research, marketing intelligence and marketing decision support systems increases the opportunities of making high quality decisions. Internal records as a component of MIS was not found significant to impact the quality of decision making. This could be attributed to the introduction of computerization of activities at AFC, which might ensure the internal records are taken care of automatically though it can be noted with concern that only 41% of MIS had internal records component.
The study recommends adoption of a mechanism of gathering market information for better performance and more accurate decision on marketing. It also recommended that the management strengthen the internal processes and monitoring for the better marketing intelligence to ensure quality decision making. Marketing decision support systems should be upgraded to increases its reliability for high quality decisions.

REFERENCES


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