

FACTORS INFLUENCING PERFORMANCE OF IRRIGATION COOPERATIVES IN EMBU COUNTY, KENYA

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ABSTRACT

Irrigation cooperatives in the past years were seen as main source of income in communities. Members of these cooperatives depended entirely on cooperatives to cater for health, financial and education needs of their families. Currently people have shifted their focus from these cooperatives to other financial institution while a significant number of irrigation cooperatives have closed down. This study therefore sought to determine the factors that influence performance of irrigation cooperatives. The guiding objectives of the study were to assess how levels of education and training of members and organized marketing of irrigation cooperative produce on the performance of the cooperatives, assessing the influence of governance structure and the influence of technology application on existing cooperatives. Performance of irrigation cooperatives formed the dependent variable while the factors that influence the performance formed the independent variables. This study adopted a descriptive research design. The population of the study was 1552 members. Through random sampling a sample of 161 members was obtained and data was collected using questionnaires. Validity of the instruments was ensured through opinions and expert judgments of university experts. Reliability of the instruments was estimated using split half technique through a pilot study in Tharaka Nithi County. Data was analyzed using descriptive statistics and inferential statistics with the help of the Statistical Package for Social Sciences. The study found that Irrigation cooperatives offers

scholarship for the staff and the response in the study indicates that 54.04% strongly agreed while 40.99% agreed. This concludes that 95.03% of the members of the irrigation cooperatives believe scholarship to staff has great impact on the performance. It is further revealed that Cooperatives offering Seminars, workshops and where conferences are open for all members of staff, out of 161 respondents who participated in the study 90.9% strongly agreed, 9.1% agreed. The findings showed that the influence of Product promotion through advertisement whereby out all respondents who participated in the study 64.59% strongly agreed, 27.32% agreed, and these provided a total of 91.92% of the total respondents who agreed that advertisements has great influence towards the performance of irrigation cooperatives. The study showed that governance structure met all legal requirements and out of 161 respondents who participated in the study 60.86% strongly agreed to this and 39.13% agreed. This concludes to a 100% of the respondents agreeing thus the study established that governance functions are very influential on the performance of irrigation cooperatives. The results on how technology influences performance of irrigation cooperatives in Embu County established that systems had been installed to enhance transaction processing, technology enhances accuracy, reliability of irrigation cooperatives and that information systems bring information timeliness, and technology allows for a reduction in transactions costs and timely communication. It is revealed that 78.26% said technology influence on systems enhancing transaction processing is very

influential to performance and 21.73% agreed on it being influential. The study concluded that level of education and training, organized marketing for products, governance structure and technology significantly affects the performance of irrigation cooperatives in Embu County. The study recommended that irrigation cooperatives should continuously check on the levels of education and train their members, adopt new forms of organized marketing for products, enhance their

governance structure and adopt new and the current forms of technology. This study will be of important to the government and policy makers because they will be able to determine how to sustain and improve operations of existing irrigation cooperatives. This study will also be of immense help to academicians and researchers in providing useful literature.

Key Words: *performance, irrigation cooperatives, Embu County, Kenya*

INTRODUCTION

Cooperative is defined as an autonomous association of persons, united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise (Najamudden et.al, 2012).It is a business driven by values which includes self-help, responsibility, democracy, equality, equity and solidarity (King &Ortman, 2007). The key principles of cooperatives act as great pillars for success of each and every cooperative whether internationally, in Africa, in Kenya as well as in Embu County. These principles include voluntary and open membership, democratic member control, economic participation by members, autonomy and independence, education training and information, cooperation among cooperatives and concern for the community in general(ICA,2013).

As Hollis and Sweetman (1998) point out, referring to historic organizations is valuable as their long histories can provide guidance on issues that cannot be addressed in Institutions formed only a decade ago. Irrigation Cooperative movements begun in Europe in 19th century primarily in England and France. In Belgian cooperative development was marked by three distinct movements: Christian, socialist and non-aligned (Van Bekkum& Van Dijk; 1997). Because of ideological and political reasons linked to the development of the Belgian labor movement, producer cooperatives were virtually non-existent. Unlike France, where the cooperative movement is organized according to sectoral Groupings (producer, agricultural, consumer), in Belgium, as in Italy, the cooperative Movement is structured on an ideological and inter-cooperative basis (Ibid; 1997).

Irrigation cooperatives in Africa have their origins in foreign models that were largely designed to achieve exterior motives. In early human societies, people learnt to cooperate and work together to increase their success in hunting, fishing, gathering food, building shelter and meeting other individual needs as well as group needs. Traditional systems of cooperation, mutuality, reciprocity and solidarity existed in all African societies and have remained vibrant till

today particularly in rural areas and in urban informal economy. Irrigation cooperatives in Africa have a common bond derived from ethnic origin, social class, income level, professional occupation or a combination. Approximately seven per cent of the African population reportedly belongs to a cooperative, though some countries like Egypt, Senegal, Ghana, Kenya and Rwanda reports a higher penetration rate of over ten per cent.

Africa has promoted small-scale irrigated cooperatives as a means of ensuring food security as well as improving the standard of living of the rural people for many years (Hillel, 1997). Irrigation cooperatives help farmers increase their yields and incomes by pooling their resources to support collective service provisions and economic empowerment. They generate valuable benefit to members which includes marketing of produce as a cooperative, pooling of limited resources together, enjoying economies of scale, organized farming, shared responsibility, easier access to credit and maximization of returns. Given their primary remit to contribute to smallholder farmer production, agricultural cooperatives are seen as critical in achieving the government's development targets in the Performance and Transformation Plan, and focusing on other types of cooperatives requires an alternative framework for analysis (Crosby et al., 2000).

STATEMENT OF THE PROBLEM

The cooperative movement plays an important role in wealth creation, food security and employment generation and hence participates in poverty alleviation. There have been international and national campaigns for the formation of cooperatives and with the devolution taking effect in 2013 the counties also have joined the campaign on the same. Many of the cooperatives which are well organized and managed have demonstrated the benefits that accrue from them which would help in achieving national development goals (Chekwony, 2008). The policy objective of Kenya cooperative movement is to spur sustainable growth by focusing on achievement of desired outcome through strengthening of the movement and improving cooperative extension service delivery in areas that the public and private sector have not ventured. Embu County faces numerous challenges which affect performance. Some of these cooperatives have recorded poor performance over the years. This poor performance is as a result of poor levels of education and training of members, lack of organized marketing, lack of governance structure lack of technology, diseases and pests, lack of member full participation in the operations of the cooperatives, initial capital among many others. The study therefore sought to investigate these factors influencing performance of irrigation cooperatives in Embu County and come up with viable solutions and recommendations in order to address the problem hindering the success of the existing irrigation cooperatives.

PURPOSE OF THE STUDY

The purpose of this study was to establish the factors influencing performance of irrigation cooperatives in Embu County, Kenya.

OBJECTIVES OF THE STUDY

1. To assess how levels of education and training of the members influence performance of the irrigation cooperatives in Embu County.
2. To determine how organized marketing for products influences performance of irrigation cooperatives in Embu County.
3. To examine how governance structure influences the performance of irrigation cooperatives in Embu County.
4. To establish how application of technology influences performance of irrigation cooperatives in Embu County.

THEORETICAL FRAMEWORK

A theory is a system of explaining phenomenon by stating constructs and laws that iterate constructs to each other (Mugenda & Mugenda, 2003). Theories that relate to the study include the homeostasis theory which maintains that, in any activity, people accept a certain level of subjectively estimated risk to their health, safety, and other things they value, in exchange for the benefits they hope to receive from that activity. In other words, individuals adjust their level of risk-taking behavior depending on the safety measures that are in place (Wilde, 2014). Thus, if the level of subjectively experienced risk is lower than is felt acceptable, people tend to engage in actions that increase their exposure to risk. If, however, the level of subjectively experienced risk is higher than is acceptable, they make an attempt to exercise greater caution. In either case, people will choose their next action so that the subjectively expected amount of risk associated with that next action matches the level of risk accepted. In other words, individuals adjust their level of risk-taking behavior depending on the safety measures that are in place (Wilde, 2014).

Evidence obtained from the literature shows that the social capital theory is relevant to this study. This study considered the theory and adopted it as theoretical framework, useful for our understanding of the role of cooperative societies in economic development. The social capital theory emanates from social capital which the World Bank (1998: 2) defined as “the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development”. The social capital theory postulates that when people act or function in a group as in a cooperative society or self-help group, it leads to the economic and social development of the group, individuals in the group and the immediate community where such group operates from (World Bank, 1998; Anderson et al., 2002). Social development is the improvement in relationship between people while the economic development is divisible into two parts as improvement in financial condition and physical progress such as material acquisition. This is significant because economic development does not take place without increase in physical material acquisition and financial resources (Jainaba et al., 2005; Holmgren, 2011). The economic development in social capital includes improvement in economic condition of the people which may be physical and financial. Relating to this the assets acquisition is physical economic development while enterprise profit, living is an indication that participation

in an association such as a cooperative can lead to physical capital and financial capital (Anderson et al., 2002).

RESEARCH METHODOLOGY

Research Design

The study sought to investigate factors that influence the performance of irrigation cooperatives in Embu County. Therefore, a descriptive research design was used in the study. The choice of descriptive research design is because it is enabled to reveal and measure the strength of the target group's opinion, attitude and behavior with regards to the factors influencing performance of irrigation cooperative projects in Embu County, Kenya.

Target Population

The study focused on members of the eight irrigation cooperatives of Embu County as provided for by Embu county cooperative commissioner. The target population was 1552 members from all the eight active irrigation cooperatives.

Sample Size and Sampling Procedure

The study employed Random sampling. Members were selected through random sampling. Random sampling was preferred because it gives each subject an equal chance of taking part in the study (Calmorin, 2007). The random sampling was necessitated by guidelines given by Nasiuma (2003).

$$n = \frac{NC^2}{C^2 + (N-1)e^2}$$

Where: n = population; c = coefficient of variation which is <30% - >20%; e = standard error which is fixed between 2-5%; Taking a coefficient of variation of 26.8% and a standard error of 0.02 out of a target population of 1552 members, a sample of 161 is obtained.

Sampling Procedures

The researcher employed random sampling to come up with the required and appropriate sample size. The advantage of employing random sampling is accuracy since all objects have equal chances of being selected from the whole population and in detail also reliable statistics about the whole population obtained (Kathuri & Pals, 2003).

Research Instruments

Primary data was obtained from irrigation cooperative through use of a questionnaire. Questionnaires were preferable because they enable the researcher to establish rapport with the respondents while at the same time get accurate information. This also eases the standardization of responses and solicits for similar information from the respondents capturing both dependent and the independent variables. The questionnaires were organized into the following sections in which the respondent had to answer. General information on which irrigation cooperative a member belonged to as well as the number of years a person has been a member of the irrigation cooperative, Level, influence and employment of levels of education and training, Level, influence and employment of organized marketing of products, Level, influence and employment of governance structure and the Influence of technology application.

Data Collection procedure

The population of the study was 1552 people. Through random sampling a sample of 161 members was obtained and data was collected using questionnaires. Validity of the instruments was ensured through opinions and expert judgments of university experts.

Data Analysis Technique

Data was cleaned by being checked for logical consistency and any unnecessary data removed. It was then being refined and analyzed using statistical package for social sciences (SPSS) version 23 for windows. Descriptive and inferential statistical data analysis methods were used to analyze the collected data. Descriptive statistics included the mean, frequency and percentages and they were used to summarize the data into a meaningful form. Correlation analysis and regression analysis were adopted as the major inferential statistical data analysis tools where correlation was used to show the strength of the relationship among the variables while regression was used to show the relationship between the dependent and independent variables. The results of data analysis were then be presented in frequency tables and percentages

RESEARCH RESULTS

Levels of Education and Training and Performance of Irrigation Cooperatives

Irrigation cooperatives offers scholarship for the staff and the response in the study indicates that 54.04% strongly agreed while 40.99% agreed. This concludes that 95.03% of the members of the irrigation cooperatives believe scholarship to staff has great impact on the performance. It is further revealed that Cooperatives offering Seminars, workshops and where conferences are open for all members of staff, out of 161 respondents who participated in the study 90.9% strongly agreed, 9.1% agreed. This indicates that all the respondents believe that seminars and workshops are of great impact towards good performance of the irrigation cooperatives. The finding further revealed on how levels of education and training of the members influence performance of the

irrigation cooperatives in Embu County established that the irrigation cooperatives offer scholarships for staff, seminars, workshops and conferences are open for all members and that the irrigation cooperatives benchmarks with the best performing cooperatives. The findings also found that cooperatives conduct and sponsors research aimed at improving its operation and that cooperative participate in agricultural show/fares to show case its produce. The findings also revealed that the level of application of staff scholarships, the level of application of seminars, the level of application of conferences and the level of application of exhibition was very high and that the application of education and training activities was very influential on the performance of irrigation cooperatives.

Organized Marketing for Products and Performance of Irrigation Cooperatives

The findings showed that the influence of Product promotion through advertisement whereby out all respondents who participated in the study 64.59% strongly agreed, 27.32% agreed, and these provided a total of 91.92% of the total respondents who agreed that advertisements has great influence towards the performance of irrigation cooperatives. In irrigation cooperatives the target market for the produce was 72.67% of respondents who strongly agreed whereas 27.32% agreed; these provided a 100% of the respondents agreeing that target marketing has great influence towards the performance of irrigation cooperatives. The findings on how organized marketing for products influences performance of irrigation cooperatives in Embu County found that product promotion through advertisement and the target market for the produce has been segmented into groups and that the marketing department conducts market survey respectively and that marketing department conducts market intelligence to establish economy change in that order. These findings further revealed that the levels of application of organized marketing techniques by irrigation cooperatives were high.

Governance Structure and Performance of Irrigation Cooperatives

The results on how governance structure influences the performance of irrigation cooperatives in Embu County revealed that various governance structures affect the performance of irrigation cooperatives and that the level of employment of various government structure by irrigation cooperatives was very high. The study showed that governance structure met all legal requirements and out of 161 respondents who participated in the study 60.86% strongly agreed to this and 39.13% agreed. This concludes to a 100% of the respondents agreeing thus the study established that governance functions are very influential on the performance of irrigation cooperatives.

Technology and Performance of Irrigation Cooperatives

The results on how technology influences performance of irrigation cooperatives in Embu County established that systems had been installed to enhance transaction processing, technology enhances accuracy, reliability of irrigation cooperatives and that information systems bring information timeliness, and technology allows for a reduction in transactions costs and timely

communication. It is revealed that 78.26% said technology influence on systems enhancing transaction processing is very influential to performance and 21.73% agreed on it being influential. The results revealed that to integrate technology cooperatives require training of staff and that technology is very influential tool for enhancing the performance of irrigation cooperatives.

CONCLUSIONS

The findings of the study found that level of education and training influences the performance of irrigation cooperatives. Based on these finding the study concludes that levels of education and training of irrigation cooperatives members influences the performance of irrigation cooperatives in Embu County. The results further established that organized marketing for products influences performance of irrigation cooperatives in Embu County. These findings further revealed that the levels of application of organized marketing techniques by irrigation cooperatives were high. Based on the finding the study concludes that organized marketing for products influences the performance of irrigation cooperatives in Embu County. The results on how governance structure influences the performance of irrigation cooperatives in Embu County revealed that various governance structures affect the performance of irrigation cooperatives and that the level of employment of various government structure by irrigation cooperatives was very high. The findings established that technology influences performance of irrigation cooperatives in Embu County established that systems had been installed to enhance transaction processing, technology enhances accuracy, reliability of irrigation cooperatives and that information systems bring information timeliness and technology allows for a reduction in transactions costs and timely communication. As per this finding, the study concludes that governance structure influences the performance of irrigation cooperatives in Embu County.

RECOMMENDATIONS

The study concludes that levels of education and training of irrigation cooperatives members influences the performance of irrigation cooperatives in Embu County. The study therefore recommends that irrigation cooperatives in Embu should constantly check on the levels of education and carry out training activities as such training would help enhance their cooperatives performance. The study concluded that organized marketing for products influences the performance of irrigation cooperatives in Embu County. The study therefore recommends that irrigation cooperative in Embu County should enhance the level of application of organized marketing for products activities so that they enhance the performance of their irrigation cooperatives. The study concluded that governance structure influences the performance of irrigation cooperatives in Embu County. Thus, the study recommends that irrigation cooperatives in Embu county should enhance their governance mechanisms as such would enhance transparency and accountability which would improve performance of their irrigation cooperatives. The study also concluded that technology influences the performance of irrigation cooperatives in Embu County. Hence, the study recommends that the management of irrigation

cooperative in Embu County should embrace technology and use the current forms of technology to enhance the performance of their irrigation cooperatives.

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