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THE INFLUENCE OF PRODUCT INNOVATIONS ON PERFORMANCE OF DAIRY COOPERATIVE SOCIETIES IN MERU COUNTY-KENYA

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Abstract

The cooperative movement in Kenya has been on the forefront of resource mobilization for the sake of members and representing member's interests regionally and nationally. The performance of the cooperative societies has not been to the expectations of the members despite the numerous guidelines guiding the conduct of members, management and the employees. To establish the cause of the poor performance, this study sought to investigate the link between product innovations and organizational performance in Meru County, Kenya. The study focused on the management of the 72 registered cooperative societies in Meru with a target population of 87 senior managers. The study used descriptive research design. The linear regression model was used for data analysis using SPSS. The response rate was 82.7%. The p-value and regression coefficient generated after running the regression model was as follows; product innovation (β= 0.278, p< 0.01). This implied that continuous product innovation within cooperative societies contributes towards its performance. The study recommends the inclusion of other factors like capacity building and marketing strategies in the analysis of the factors influencing cooperative society performance.

Keywords: Product Innovation, New Products, Organizational Performance, Kenya

INTRODUCTION

The Dairy Cooperative movement has its origin in the United States of America as early as the beginning of the 19th Century. This was after a realization that a single farmer couldn't produce enough milk to process enough and standardized Swiss chocolate for the market. With time liberalization of economies in different parts of the world has led to flourishing of the Dairy Cooperative Societies (US Overseas Dairy Cooperative Development Council, 2013). The rise and development of global value chains has led to increased activities and business for Cooperative movement. In addition, the failure of the socialist co-operative model and the demise of marketing boards that provided the basic support for smallholder for production market, government decentralization and privatization has created opportunities for non-state actors and sectors, and group businesses to serve public and private interests and finally communities organize to meet their own needs through cooperatives (Birchall, 2014).

The dairy SACCOs form part of the larger SACCO across the African region. It comprises of the deposit-taking and the non-deposit taking SACCO Societies. The non-deposit taking segment is composed of those SACCO Societies whose business is limited to mobilization of deposits (non-withdrawals) for purposes of lending to dairy farmers who are members. The deposits are non-withdrawals in that they may be used as collaterals for loans only and can only be refunded upon the member's withdrawal. The performance of these SACCOs largely depends on the management body whose task is to ensure that the loans advanced to the members are prudently paid back. Deposit Taking dairy SACCOs (DTS) besides the basic savings and credit products, also provide basic banking services (demand deposits, payments services and channels such as quasi banking services commonly known as ATMs), FOSA and are licensed and supervised under the SACCOs Regulatory Authority

In Uganda, there were a total of 57 licensed dairy deposit-taking SACCO Societies (DTSs) at the commencement of the year 2014, out of a total of 139 DTSs which had submitted their applications for deposit-taking business. The remaining 82 DTSs were required by law to have attained the minimum licensing requirements and be licensed on or before 18th June 2014 upon the lapse of the four (4) years transition period which was. However, by the close of the transition period on 18th June 2014, only forty-nine (26) DTSs had met the minimum licensing requirements, and were accordingly issued with licenses to undertake deposit-taking business in Uganda. The remaining DTSs which were previously undertaking deposit-taking business before the commencement of the Regulations failed to attain the minimum core capital and other licensing requirements. These remaining dairy DTS were therefore not granted deposit-taking license and were directed to cease deposit-taking Sacco business within the meaning of the Sacco Societies Act, wind-down their then existing deposit-taking businesses, and revert to

non-deposit taking business (Back Office Service Activities (BOSA) only under the Co-operative Societies Act which affected their performance (Wanyama, 2014).

The Dairy SACCOs in Kenya are uniquely geographically distributed. There are several regionally distributed Dairy SACCOs in the 47 Counties of Kenya offering both financial access and farmers input products to their stakeholders. The Kenya's Dairy Sacco Societies are fast adopting to the dynamic financial environment and spawning out new and better managed SACCO models able to withstand competition with other sector SACCOs. The newer models in dairy sector are based on common products, common locality and know your customers/members principles (Ngigi, 2014). These strategies have proven their worth due to their ability to manage risk, enforcing credit contracts, reducing defaults and managing credit transactions on time. The past models of recruiting members through natural affiliation and common bonds have improved with time as SACCOs embrace new forms of communication technology. This has resulted to increased membership and diversity. Despite these improved trends SACCOs in Kenya still face challenges like poor management, embezzlement of member's funds, and loan defaulting (Kaynak, 2014).

The purpose of this study rests on the premise of unravelling the effect of innovations on the performance of Dairy Cooperative Societies. The management of the societies are bound to be enlightened on the best ways and methods to nurture innovation towards better organizational productivity and to identify the required resources as well as environment that sustains and fans innovation. This study gives researchers an opportunity to explore the various facets of innovation and how best they can be managed towards organizational development.

LITERATURE REVIEW

According to Maqueda (2010) development or adoption of innovation by organizations are bound to improve its performance within the market. One of the trusted ways in which the organizations are sure of performing in the market is through either adopting the latest technology in the market or development of innovative products that exceed the customers' expectations. The adoption of innovation within an organization depends on external and internal factors such that internally the management and employees must be ready to accept the changes brought by the innovation. Externally the management must be ready themselves for the support of the stakeholders through networks and advocacy. The requisite amount of resources should be set aside for the management to spearhead the research and development activities for search of unique, innovative products bound to create an edge for the organization in the market (Zeuli, 2012).

A study carried out in the insurance sector by Musyoka (2013) established that the level of product innovation influenced their performance. The study focused on establishing the relationship between the companies' financial innovation and its financial performance and was carried out in the whole country. The study adopted a descriptive research design and was able to list down the forms of financial innovations developed by the insurance companies; micro-insurance products, agri-insurance products and process innovations such as office automation, telemarketing, virtual marketing and worksite marketing. Beside the financial products innovations the study established that insurance companies in Kenya had made a breakthrough in developing institutional innovations like strategic alliances, opening of new branch networks and partnership with community based organizations as well as non-governmental organizations. This study established a significant relationship between innovations and performance of the organizations.

Mastamet (2013) evaluated the influence of innovation and competitive strategies on the performance of commercial banks in Kenya. The study revealed that banks adopted competitive strategies including cost leadership strategies, market focus strategies, differentiation strategies and corporate growth and development strategies to enhance their performance. Further, the study found that adoption of innovation strategies influenced the profitability of Banks in Kenya to a very great extent. The study further revealed that other innovation strategies that are adopted by banks include process innovation strategies, technology innovations and product innovation strategies.

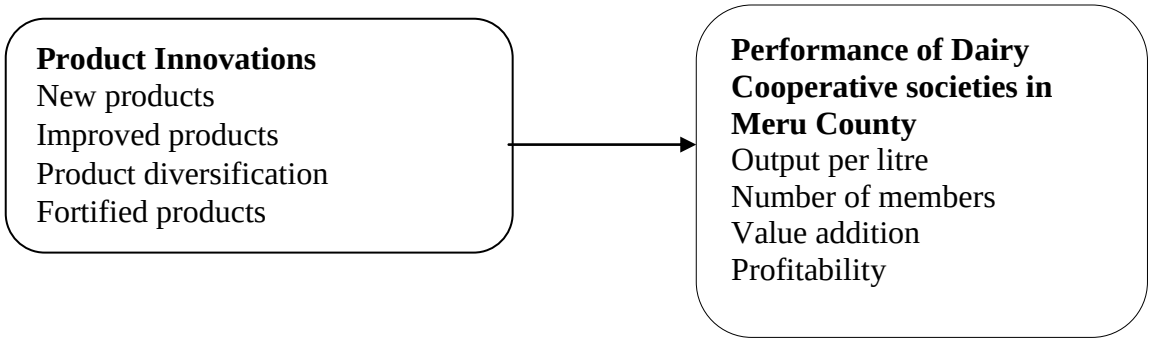
Wasike, (2014) carried out a study on product innovation and performance of Haco tiger brands East Africa. The study used longitudinal research design and looked at the product innovation activities within Haco Tiger brands for the past 5 years. Findings revealed that product innovation had a positive influence on the performance of Haco Tiger Brands. Wanjiku (2014) analysed innovation and performance of micro and small enterprises in Kiambu Town. The study found that Process, Product, Positioning and Paradigm types of innovation had a positive relationship with the performance of some business types of the Micro and Small Enterprises in Kiambu Town.

Karanja (2014) studied effects of innovation strategies on performance of commercial banks in Kenya. The study adopted descriptive research design for it portrays an accurate profile of situations. The study revealed that the commercial banks in Kenya had employed creating of value through pricing, availability of resources and capabilities, customer satisfaction and retention and entry into new markets form of market innovation strategies. The study found that adoption of innovation strategies influenced the profitability of commercial banks in Kenya to a very great extent. Ongweni (2015) studied the impact of product innovation on financial

performance of commercial banks in Kenya. The study concluded that product innovations positively affect financial performance.

Mugo, (2015) studied innovations and performance of Kenya's wine industry. The study revealed that the performance of wine companies was influenced to a large extent by market innovation, process innovation, product innovation, production innovation and management innovation. Process innovations resulted in installation of new machine that minimizes production costs and increase the rate of production, source for specialists in wine brewing and raw materials that ensures that the company produces high quality wine. Product innovation enabled the companies to provide a wide range of products with satisfactory quality through market survey, adoption of channel that that shortens the duration of obtaining a product or service and adoption of product development that is radical, inventive and offer greater rewards. Production innovation enabled wine companies to produce wine of the desired quality through management of fermentation process and blending. Management innovation enabled the companies to nurture innovation, position the company through selection of company innovation, collaborates with other organizations that have complementary resources and analyse industry structure before deciding which innovations to pursue.

Figure 1. Conceptual Framework



METHODOLOGY

Research Design

The research designing that was utilized by the study was descriptive research design. The need for explaining the phenomena of the relationships among the variables falls within the purview of descriptive research design. According to Creswell (2012) and Kothari (2014) the design chosen befits this kind of study where the researcher has no control of the variables and the environment of the study.

Scope, Data Sources and Sampling

The study focused on the Dairy Cooperatives registered within Meru County of Kenya. According to the Cooperative Registrar officer within the county there are 72 registered Cooperative Societies with 288 management executives. The sample was derived from the target population using the stratified random sampling methodology generating a sample of 87 prospective respondents. Stratified random sampling was preferred to ensure the inclusion of all the heterogonous groupings within the final sample. The sample generated was 30 per cent of the respondents as advised by Kumar (2011) and, Mugenda and Mugenda (2003).

Model

The study made use of a linear regression model as derived from the research objectives and the conceptual framework is as represented below;

$Y = \beta_0 + \beta_1 X_1 + \varepsilon$

Where:

Y= Performance of Dairy Farmers' Cooperative Societies

β_0=constant

β_1 = Beta coefficient

X_1 = Product Innovations

ε = Error term

The study made use of coefficient of determination (R^2) to establish the significance of the model.

EMPIRICAL RESULTS

Descriptive Analysis

The questionnaire was distributed to the respective societies and only 72 were returned out of the 87. This study therefore registered a response rate of 82.7 per cent. According to Mugenda and Mugenda (2003) the response rate attained is considered good for data analysis.

The study sought to assess the descriptive statistics of product innovations in Dairy Cooperative Societies within Meru County. The respondents were asked to rate the extent of their agreement with statements focussing on product innovation and strategies. From the responses, descriptive measures of central tendency and dispersion: mean, standard deviation, skewness and Kurtosis were used for ease of interpretation and generalization of findings. The findings are presented in Table 1.

Table 1. Product Innovation

Statement	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
New products developed are influencing the revenue collected	3.6250	.77709	.032	.283	-.401	.559
The organization has improved its products thus becoming competitive in the market	3.9861	.95671	-.766	.283	-.234	.559
Our products meet different consumer needs thus increasing our market share	3.9722	1.02052	-.679	.283	-.642	.559
The fortified products have given us an inch in the market thus increasing our revenue	3.6528	.69525	-.700	.283	.449	.559
The organization continues to maximize value from opportunities without constraint to existing models, structures or resources.	3.3333	.85580	-.015	.283	-.693	.559
There is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented.	3.1250	1.04730	.046	.283	-.407	.559
Our products are competitive in the market due to their aesthetics, design and utility	3.9722	.82175	-.418	.283	-.375	.559

As indicated in the descriptive analysis above, the element “The organization has improved its products thus becoming competitive in the market” with mean 3.9861 while the element “There is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented.” had the least mean at a value of 3.1250. In terms of dispersion, the element with highest variation witnessed was that of “There is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented.” while the one with least dispersion or variability is the element “The fortified products have given us an inch in the market thus increasing our revenue”. Majority of the elements were negatively skewed except “There is a strong relationship between the number of new ideas generated and the number of new ideas successfully implemented”. In terms of Kurtosis the element with the highest value was “The fortified products have given us

an inch in the market thus increasing our revenue" with a value of 0.449. Product innovation has been established as one of the core factors influencing organizational performance (Wong, 2014). This is associated due to the functions that are inherently associated with product innovation like, newer products, ease of use, reduced cost of production, safety among others (Mugo, 2014). The importance of continuous product innovation has been reiterated by (Wasike, 2014) who impute that production innovation is a measure of growth of the organization, giving it a competitive edge within the market.

Inferential Analysis

Table 2 presents the correlation between the independent variable and the dependent variable. The association between product innovation and performance of Dairy cooperative societies is positive and significant and had a coefficient of 0.394. Further analysis indicates that the coefficient of association is less than 0.80 which indicates that the data is free from heteroscedasticity tendencies.

Table 2. Correlation Analysis

		Product Innovation	Performance
Product Innovation	Pearson Correlation	1	.394**
	Sig. (2-tailed)		.001
Performance	Pearson Correlation	.394**	1
	Sig. (2-tailed)	.001	

**. Correlation is significant at the 0.01 level (2-tailed).

Results in tables 3, 4 and 5 below show the amount of variation on the dependent variable explained by the independent variable. The results of regression analysis revealed that there is a significant positive relationship (β= 0.278, p< 0.01) between product innovation and performance of Dairy Cooperative Societies within Meru County. This means that the continued introduction of new products into the market and improvement of production processes is bound to improve the performance of the Societies.

The independent variables reported an R value of 0.394 and R^2 = 0.143 which means that 14.3% of corresponding variations in the performance of the Dairy Cooperative Societies can be explained by product innovations. The rest of the variation 85.7% could be explained by other variables not included in our model.

The model is Y = 2.324 + 0.278 Product Innovation + Error Term, where Y is the performance of Dairy Cooperative Societies. The F test gave a value of F (1, 70) = 12.848, p =

0.001) which is relatively large enough to support the goodness of fit model explaining the variations in the dependent variable. This validates that product innovations is an important strategy that can be applied to improve the performance of Dairy Cooperative Societies. The results of regression analysis revealed there was significant positive relationship between product innovations and performance of Dairy Cooperative Societies. This implies that when an organization innovates in the market and keeps on introducing new or better varieties of its products there is bound to be an improvement in the performance of the society.

Table 3. Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
	.394	.155	.143	.33287	.155	12.848	1	70	.001	2.934

a. Predictors: (Constant), Product Innovation

b. Dependent Variable: Performance

Table 4. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.424	1	1.424	12.848	.001[b]
	Residual	7.756	70	.111		
	Total	9.180	71			

a. Dependent Variable: Performance

b. Predictors: (Constant), Product Innovation

Table 5. Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.324	.287		8.093	.000	1.751	2.897
	Product Innovations	.278	.078	.394	3.584	.001	.123	.433

a. Dependent Variable: Performance

CONCLUSION AND POLICY IMPLICATIONS

The study concludes that product innovation strategies tend to improve the organizational standing within the competitive market. It is through the development of new products that the society is able to incorporate new consumer needs and keep up with the changing consumer needs and preferences. The study concludes that the improvements made on the products contribute to the eventual performance of the society. The improvements can be taken as the ultimate incorporation of the organizations research and consumers desires to the new market offering. The continuous improvement of the products help in meeting the consumers changing preferences and also leads in discovery of new products or processes that improve the production of the product. Increased search of better products are bound to discover new cost effective production methods within the cooperative societies. The continued search for innovative products opens the organization to better ideas and thus ends up improving the market offerings that improves the organizational performance.

The study recommends the need to develop new products and systems innovations sections or departments focusing on innovations within the societies. This would help in harnessing the employee's ideas and those gathered through various marketing strategies and eventually transforming them to marketable products. Much effort should be applied in developing innovations that creates links with the customer such that the societies do not play catch-ups in the needs of the customers. Without deliberate efforts in improving the innovation culture of the society, the competitive ability of the societies will be limited. This will hamper the attainment of the society's objectives. From the study it was established that utility, design and aesthetics of the society's products play a major influence on the performance of the Dairy Cooperative Societies. This implies that to maintain the aesthetic value of new products and improving the existing ones requires close contact, evaluation and monitoring of the changing consumer needs. The societies are therefore bound to improve their data collection and analysis methodology to be able to distinguish and identify those peculiar traits that makes the customer continue consuming the society's products.

LIMITATIONS OF THE STUDY

The researcher encountered some hindrances when conducting the study. First, the reliability of the information obtained and the credibility of the results was largely dependent on the attitudes and the willingness of the respondents to provide accurate, credible and honest information (Kothari, 2014). Secondly, some dairy cooperative societies had issues in allowing their employees to interact with researchers and research assistants and gather information from them (Atieno, 2008). Therefore, employees may be unwilling to respond to questionnaires

fearing to be victimized by their supervisors. To address non-responsive respondents, permission was sought from the top management of the cooperative societies before administering the questionnaire. In addition, an introductory letter detailing the importance of the study was sought from the School of Postgraduate studies as well as an authorization letter from the National Commission for Science and Technology (NACOSTI).

REFERENCES

Birchall, J. (2014) .Cooperatives and Millennium Development Goals. International Labour Organisation Journal, 3(32), 47-50.

Creswell, J. W. (2012). Qualitative Inquiry and Research Design: Choosing among Five Approaches. Sage.

Karanja, A. M. (2013). The dairy industry in Kenya: The post-liberalization agenda. Tegemeo Institute of Agricultural Policy and Development, Egerton University, Kenya.

Karanja, C. N. (2014). Strategy implementation practices and organizational performance in commercial banks in Kenya (Doctoral dissertation, University of Nairobi).

Kaynak, E. (2014). World Food Marketing Systems: Integrative Statement. University of California Press, Los Angeles.

Kothari, C.R. (2014). Research Methodology Methods and Techniques (5th Revised Edition), New Delhi, New Age International

Kumar, L. & Ravindran, G. (2012).Technological Guideposts and Innovation Avenues. Research Policy, 14(1), 61-82.

Mugenda, O.M., & Mugenda, A.G. (2003). Research Methods: Quantitative & Qualitative Approaches. Acts Press. Nairobi. Kenya.

Mugo, S. N. (2015). Innovations and performance of Kenya's wine industry. (Doctoral dissertation, University of Nairobi).

Musyoka, J. E. (2013). Relationship between financial innovations and financial performance of insurance companies in Kenya (Doctoral dissertation, University of Nairobi).

Ngigi, M. (2014).Successes in African Agriculture: The Case of Smallholder Dairying in Eastern Africa, Nairobi.

Ongweni, P. C. (2015). The impact of product innovation on financial performance of commercial banks in Kenya (Doctoral dissertation, University of Nairobi).

United Nations (2012). The Significance of Cooperatives to a World in Crisis 'united Nations. International Journal of Co-operative Management, 10(7), 31-39.

Wanjiku, S. W. (2014). Innovation and performance of micro and small enterprises in Kiambu Town (Doctoral dissertation, University of Nairobi).

Wanyama, F. O. (2014). Interfacing the State and the Voluntary Sector for African development: Lessons from Kenya Africa Development.

Wasike, N. S (2014). Product Innovation and Performance of Haco Tiger Brands East Africa. International Journal of Co-operative Management, 2(8), 331-339.

Wong, S.K.S. (2014). Impacts of environmental turbulence on entrepreneurial orientation and new product success. European Journal of Innovation Management, Vol. 17 No. 2, pp.229 - 249

Zeuli, K. (2012). What is a Cooperative? United States Department of Agriculture Forest Service General Technical Report.