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## Effect of Operating Cost Management on Financial Performance of Sweet Potato Marketing Cooperatives in Kenya

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### **Abstract:**

*Sweet potato production and sale in Kenya, is a major economic activity that should be creating employment thus increasing GDP. Thus this study sought to determine how operating cost management affects the financial performance of sweet potato marketing cooperatives in Kenya. The study design was descriptive research design. The target population was four sweet potato marketing cooperatives registered as at December, 2015 by the Commissioner of cooperatives in Kenya comprising of Homabay, Bungoma, Busia and Siaya counties which also formed the study target units. Census sampling was used to select sample of the population. Secondary data over the ten year-period covering 2006-2015 was obtained. Data was collected using secondary data collection sheet and analyzed using multiple panel regression models. Limitations faced during data collection included high illiteracy levels amongst cooperative members. This was controlled by taking the officials through the facets of operating cost management to have them understand the concepts under enquiry. The study findings showed that operating cost management had significant influence on financial performance of sweet potato marketing cooperatives in western Kenya and tests for significance also showed that the influence was statistically significant. The study recommendation is to have sweet potato marketing cooperative officials and members trained on operating cost management aspects.*

**Keywords:** *Operating cost management, financial management, sweet potato marketing cooperatives*

### **1. Introduction**

Past trends show that unit prices of sweet potatoes in Kenya have been increasing since the year 2003, a likely indication of rising demand for the crop (Rono *et al.*, 2006). According to CPPMU (2010) the area under sweet potato production in Kenya in 2009 increased by 24%, production in tones by 16% while the unit price per 100 kg bag in Kenya shillings in various markets increased by 43%.

The average sweet potato yield in Kenya is about 10 tons/hectare (GOK, 2010) which is below the genetic potential of 32-37 tons/hectare (FAO, 2008). The average national per capita consumption of sweet potato is about 25 kg/person/year and is highest around Lake Victoria basin. Sweet potato (*Ipomea batata* L.) is an important traditional crop that is grown customarily by small-scale farmers mainly for household consumption. (Carey *et al.*, 2000; Ndolo *et al.*, 2001; Githunguri & Migwa, 2004). Research by Nungo *et al.* (2007) on the development and promotion of sweet potato products in western Kenya revealed that sweet potato utilization has for a long time been limited to boiling, roasting and chewing raw.

In Kenya, the sweet potato farmers have formed marketing cooperative societies with the aim of collective bargaining for their sweet potato produce both locally and internationally. In many national and regional contexts, cooperatives are seen as important organizational tools for responding to social and economic failures and for assisting in the development and revival of local communities. This is because, as Majee & Hoyt (2011) astutely observe, cooperatives bring people together to meet a shared need through operation of a democratically controlled business and build capital in communities where they are located.

#### *1.1. Statement of the Problem*

Despite the high government of Kenya support to the agriculture sector and specifically sweet potato farming, much documented evidence still report failure in the sector. For instance, Nungo *et al.* (2007) indicate that sweet potato farming has for a long time been limited to boiling, roasting and chewing raw. *On the other hand*, according to USAID in Andea (2012), sweet potato global market is growing every year, presenting opportunities for export and for subsistence farmers to improve their food security situation and boost income from the sales of surplus.

### 1.2. Research Objective

To establish the influence of operating cost management on financial performance of sweet potato marketing cooperative societies in Western Kenya.

### 1.3. Hypothesis

- $H_0$ : Appropriate operating cost management do not influence the financial performance of sweet potato marketing cooperatives in Western Kenya.
- $H_0$ : Sweet potato marketing cooperatives do not practice prudent operating cost management

## 2. Literature Review

A Study by Ton (2009) surveyed the effects of labour on profitability at a retail market in Boston and established that increasing the amount of labour at a store is associated with an increase in profitability through its impact on conformance. The researcher further observed that too much corporate emphasis on payroll management may motivate managers to operate with insufficient labour levels, which, in turn, degrades profitability. Labour is largely required for the land preparation, planting and harvesting at the farm level and all these are meant to generate more output for sale. In the short-run, labour exhibits increasing marginal productivity.

While collective marketing through the cost control practices offers producers better prices, some cooperative members sell directly to large traders. They take advantage of the linkages the cooperative has made with the large traders to access the traders. The reasons some individual cooperative members do not sell to the cooperative include high transport cost involved in delivering the produce to the market as not all payment for sale to the cooperative may be made at once. Sometimes the cooperative pays for part of the sales immediately and the remainder is paid later after the produce is sold. The practice of bypassing the cooperative to sell directly to large traders is being encouraged by the traders despite high marketing costs involved, since they pay lower prices when they buy directly from individual producers. When production costs are high, there are instances of collusion by the large traders not to buy at all from the cooperative, making it difficult for the cooperative to find a market for the members' produce.

Lastly, Tache (2006) conducted a study which found that farmers were convinced and decided to have their own financial institution to empower themselves. They showed their readiness and commitment to help themselves by good contribution of registration fees. The study recommended that support was needed to be given to the SACCOs to start computer-based accounting and financial management system; and technical training and monitoring support was needed to promote the SACCOs. Tache's (2006) study very heavily emphasized formation of SACCOs and the usefulness of common bond but it never showed how performance can be enhanced by the cost control measures. As observed by Brignall & Modell (2000) the ability to accurately forecast cost performance allows organizations or project teams to confidently allocate capital, reducing financial risk, possibly reducing the cost of capital.

### 2.1. Research Methodology

Descriptive research design applied on secondary data involved collecting and analyzing data from cooperative societies over a period of ten years (2006-2015) where it was constituted and analyzed in form of panels. This research design is suitable in studies where both the cross-sectional and longitudinal characteristics of the units being studied are required (Gujarati, 2003).

### 2.2. Research Results

The objective of this analysis is to find out if there exists a relationship between operating cost Management practice and financial performance and to this extent, the linear regression analysis which shows the relationship between the dependent variable which is financial performance as measured by ROI and independent variable which is operating cost management practice. For this variable, the regression model is summarized in Table 1

Model	Unstandardized Coefficients	Standardized Coefficients		t	Sig.
	B	Std. Error	Beta		
Constant	14.895	.945		15.763	.000
Cost management	.433	.029	.602	15.092	.000

Table 1: Regression Coefficients –Cost management and ROI

Using the summary presented in Table 1 a linear regression model of the form,

$Y = \alpha + \beta X_i$  can be fitted as follows:

$$Y = 14.895 + 0.433 X_i$$

The results indicate that a one percentage change in operating cost management leads to 43.3% increase in return on amounts invested by the marketers.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.602	.363	.361	4.36333

Table 2: Model summary-operating cost management and ROI

The results on Table 2 of the linear regression shows  $R^2=0.361$  indicating that the change in ROI of the societies can be explained significantly by the operating cost management practice, upto 36.1 %. On the other hand, the value of r which is 0.602 is an indication that there is a strong linear relationship between operating cost management and ROI by the marketers in Kenya.

This finding agree with the findings of Ton (2009), who surveyed the effects of labour on profitability at a retail market in Boston and established that increasing the amount of labour at a store is associated with an increase in profitability through its impact on financial performance. The finding also agrees with that of Salawati et al. (2012) who observed that in the 1980s inventories of raw materials, work-in-progress components and finished goods were kept as a buffer against the possibility of running out of needed items. They further averred that nevertheless, large buffer stock consumes valuable resources and generate hidden costs sentiments, concurring with study finding by Nyabwanga & Ojera (2012) that too much stoking consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss. The study concluded that stock control is an important undertaking by the sweet potato cooperative societies that would curb perishability when in excess and at the same time ensure sufficient quantities to supply.

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression		1	4336.653	227.782	.000
Residual	7615.461	298	19.039		
Total	11952.115	299			

Table 3: ANOVA –Operating cost Management and ROI

Table 3 shows a significant F-statistic of 227.782 at 0.00 level of significance since the significance of the F-statistic is less than 0.05. This implies that the model in use was significantly fit and can be used to make predictions. As we reject the null hypothesis  $H_0: b_0=b_1=0$  and take the alternative that at least one Coefficient of the model is greater than zero. This implies that operating cost management as a variable in this study cannot be ignored when explaining the factors that have an influence on ROI. Operating cost management is therefore a significant variable that must be taken into account when studying performance of sweet potato farmers.

### 2.3. Discussion

The objective of the study sought to establish the influence of operating cost management on financial performance of sweet potato marketing cooperatives in Kenya. Results revealed that operating cost management had positive influence on financial performance as measured by ROI. This is supported by the coefficient of determination which shows that operating cost management explain the variations in return on investment of sweet potato marketing cooperative societies in Kenya. The test for significance also showed that the influence was statistically significant and hence the alternative hypothesis was accepted. This means that operating cost management is good at skimming out profits and having a good return to their initial outlay.

### 2.4. Conclusions and Recommendations

Based on the study findings, it can be concluded that operating cost management affect financial performance of sweet potato marketing cooperatives in Kenya positively. The adoption of the operating cost management by the sweet potato marketing cooperatives has a high potential of improving financial performance hence better returns to the farmers. The formation of cooperative societies has made the adoption rate to be high among the cooperative society officials though farmers need to be sensitized more on the need to adopt fully the management of working capital. Sweet potato farming has continued to perform well even when production of other crops has been declined over the years. This can be explained by the adoption of management of operating cost management which has enabled cooperatives to realize enhanced returns for its members as compared to traditional means of selling at the farm gate prices to middle men.

It should also be noted that the financial performance of sweet potato marketing cooperatives is not purely and wholly derived from the management of operating cost management because there are other drivers of financial performance in the farming sector like; climatic condition, quality of management, soil types and crop choices by the farmers.

### 2.5. Recommendations

Since operating cost management is becoming the most important concern of the business enterprises with the emphasis of producing better quality products at minimal costs, there is need therefore for the marketing cooperatives to work more vigorously towards minimal cost reduction strategies. Cooperative officials and farmers need to embrace more the aspects of cost control like the collective purchase of inputs, marketing and transportation of the farm produce to achieve the economies of scale. There is also need to have both cooperative officials and the farmers trained more on cost reduction strategies by government agencies and other stakeholders to boost the returns from their investments.

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