

# EFFECT OF BUDGETING ON FINANCIAL SUSTAINABILITY OF DAIRY CO-OPERATIVE SOCIETIES IN UASIN GISHU COUNTY, KENYA

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**Abstract:** Financial sustainability is key to the survival of an organization because it leads to long-term survival and effectiveness of the organization. The challenge however for all organizations is how to achieve their goals such as financial sustainability which solely depends on its ability to manage cash. The purpose of the study was to establish the effect of budgeting, cash accounting on the financial sustainability of dairy co-operatives. The study adopted the theory of budgeting. This study adopted a descriptive survey research design. The target population of the study was 260 employees from the accounting and finance department of 65 dairy co-operatives. The sample size was 160 respondents. Stratified and simple random sampling were employed. A pilot study was conducted in Nandi County to test for validity and reliability of the research instruments. Content validity was used as a validity test while reliability was tested using Cronbach's alpha coefficient. Descriptive statistics including mean, percentages and frequencies and inferential statistics were employed to analyze the data. In addition, inferential statistics that is correlation coefficient was used to make inferences of the population using data drawn from the population whereas descriptive statistics was used to summarize data from the population. The study findings found that budgeting had a positive and significant effect on financial sustainability of dairy cooperatives ( $\beta=0.170$ ,  $p<0.05$ ). The study concluded that budgeting, enhances financial sustainability of dairy cooperatives. It also concluded that with effective budgeting, one can predict the future expenses and costs and accordingly work towards the expected revenues hence may realize the required level of financial sustainability. This study recommended that budgeting should be practiced to ensure cash is allocated to all items and that all allocations as well as expenditures are done as per the budgets. The investors, government, employees and the researchers benefit from this research because it gives insight into cash management practices that can be used in achieving financial sustainability. It also forms a basis for policy makers in policy development on financial sustainability of dairy co-operatives.

**Keywords:** Budgeting, Financial Sustainability, Cash Management, Dairy Cooperatives.

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## 1. INTRODUCTION

### 1.1 Background of the Study

The dairy industry singly contributes about 14% of agricultural GDP and 3.5% of total Kenya's GDP (Majiwa, Murage & Kavoi, 2017). The dairy industry is a major activity in Kenya and it plays a considerable role in ensuring nutritional health, income source to approximate 1.8 million mini-scale farmers and employment creation hence impacting many lives. Dairy cooperative societies are units where people meet common economic, social, cultural needs through interacting and pooling their resources together. Cooperative societies are owned and democratically controlled by their members (Ndungu, Muliro, Omwamba, Oosterwijk & Jansen 2016).

The dairy cooperatives enhance income development and create job opportunities hence boosting the living standards of its members (Kumari & Malhotra 2016). Co-operatives provide a platform where the members can market their produce, get technical inputs, health services and the field output such as fertilizers. The dairy cooperatives provide services to its members such as loan disbursement, extension education and market creation (Mumanyi, 2014). Cooperative societies to be in a position to carry out their mandate effectively, they need to be financially sustainable. For an organization to be financially sustainable, it needs to have efficient financial operations, make a profit, maintain adequate liquidity levels and be able to overcome the challenges of bankruptcy.

Analysis of financial sustainability is vital because it determines the ability of dairy cooperative societies to provide financial services in the coming future, as well as make profits. Cash management is important for a dairy cooperative to enable it to be financially sustainable by maximizing their resources and hence avoid the risk of insolvency (Ross, Modigliani, Randolph, Westerfield, Dockson, Jordan & Roberts, 2011). For cash management to be effective, determination of the right amount of cash to hold must be considered by critically analyzing the opportunity cost of holding too much cash and the trading cost of holding too little cash.

Budgeting is a detailed process explaining the flow of cash of a firm over a specified period of time. It clearly shows all the cash receipts components and a schedule that tracks cash payments to suppliers with respect to purchases. A budget is a comprehensive financial plan that clearly shows the organization's financial plan in achieving its core objectives through effective financial planning (Oral & CenKakkaya, 2015). Budgets establish the cash position of cooperative societies given the cash inflows and outflows over the period under consideration. In order for cooperative societies to reach their potentials and achieve sustainability, they must prepare cash budgets (Uwonda, Okello & Okello, 2013).

Turkish dairy farming has great importance due to its huge contribution to the economy through the creation of employment. One of the most significant changes in Turkish agricultural economy over the past ten years has been the rising contribution of the dairy farming sector in the agricultural gross domestic product. According to Yilmaz & Ata (2016), dairy production constitutes 26.5% in the agricultural production value while the greatest contributor to dairy production value comes from cow milk which is at 42%. Despite the great contribution of dairy in Turkey, problems in the farms are inevitable with poor management and governance, lack of training and awareness, weak financial status and poor financial management capacity, poor and lack of cooperation among cooperatives and conflicts among members (Okan, 2013).

In Netherlands, cooperative members cooperate with the cooperatives and improve on their cash management practices. Dairy cooperatives have expanded internationally through exporting and investing in foreign distribution networks, either individually or in joint ventures with foreign partners. Despite their huge contribution to the economy, the dairy cooperatives have faced numerous challenges such as concentrated retail sector, low bargaining power, high prices, and fluctuations, lack of sustainability and high Competition (Bijman & Iliopoulos, 2014). Their poor cash management practices with lack of clear cash accounting, poor management, and governance greatly affects their performance.

In India, milk production is ranked first with dairy providing a livelihood to 60 million rural households. Dairy cooperatives provide various services to its members like input services, market access and veterinary aid which makes it more advantageous to be a member than a non-member (Santosh, Reddy, Satyanarayana, & Mahender, 2017). Dairy cooperatives are extraordinary bodies initiated and supported by common business needs and aspirations. They are basically legal institutions driven by the member's welfare rather than profit-oriented. Despite all these huge contributions of dairy cooperatives, they are faced by myriad problems such as poor managerial skills inadequate capital, low member participation, corruption and embezzlement of funds. This has led to inefficiency and poor financial performance of these institutions and thus impacting negatively on their sustainability (Siddharaju, 2012).

Nigerian dairy cooperatives are formed with the sole purpose of meeting people's basic needs. Dairy cooperatives provide its members with extension education services, employment, and farm inputs. In addition, dairy cooperatives provide opportunities to farmers to group themselves for the purpose of providing services which will boost the output of members (Nweze, 2014). Bhuyan (2007) highlighted that rural cooperatives numerously contribute to the livelihoods of the farmers by mobilizing and distributing credit to them. The problems encountered by these cooperatives include poor cash accounting, low membership and lack of enough capital among others (Nweze & Nwafor, 2014).

In Tanzania, dairy co-operatives recruit members from the local community and hence resulting in them sharing a common geographical area. The chief beneficiaries, sole savers and sole decision-makers are the members of the cooperative. The dairy co-operatives funds come from members' savings and deposits (Shrestha, 2015). Over the year's co-operative member's registered high increases of incomes, improved housing and decline of health expenditures compared to non-members (Sharma, 2017). However, many co-operatives and dairy co-operatives in Tanzania face problems of poor management, embezzlement of funds, and lack of working capital, poor business practice and high loan default rates (Maghimbi, 2010).

Kenya has a long history of dairy cooperative development that has been characterized by strong growth, thus making a significant contribution to the overall economy. Lumbwa Co-operative Society was the first to be formed in 1908 by the European Farmers with the main objective of purchasing farm inputs such as chemicals, seeds, and fertilizers. In addition, these cooperatives also created a market for their farm products to take advantage of economies of scale. Later the dairy cooperative society was formed in 1928 in Nanyuki known as Nanyuki Cooperative Creameries and later enactment of the Kenya Cooperative Ordinance of 1930 leading to the registration of KCC and KFA in 1931. By the time of independence in 1963, there were 1,030 cooperative Societies in existence with 655 being active with a total membership of 355,000 (Ambani, 2015).

In Uasin Gishu County, dairy co-operatives are considered a reliable and stable source of income that can be managed by both small scale and large scale farmers (Kipyego, Kipchillat & Kapkiyai 2015). According to the International Cooperatives alliance 2012 statistics, 1 out of 5 is a member of a co-operative society. Kenyans directly or indirectly derive their lives from the Co-operative Movement. According to Buluma, Kungu & Gichohi (2017), the operations of dairy cooperatives take the form of milk intake, milk sales, and farmer payments. These cooperative societies are faced with various challenges especially after liberation hence their poor performance and lack of sustainability.

According to the Kenya market-led dairy program (2015), the main problem is the lack of strong forensic cash forecasting of their books by the department of cooperatives, which is responsible for overseeing their operations and determining their financial performance. These factors influence their lack of sustainability and hence poor performance of the dairy cooperative societies. The other problems include lack of training and unpreparedness by cooperative societies to modernize and embrace change, poor marketing strategies and competition from other players, lack of essential services and poor management and leadership since majority of cooperative leaders are either illiterate or with low education levels, exposure and trainings, mismanagement and corruption influenced the financial performance of dairy cooperative societies in Kenya and hence their sustainability.

Dairy production in Kenya, as in many developing countries, is carried out by small-scale dairy farmers located in rural areas, often with very few technology skills. For most Kenyan dairy farmers, their only source of income comes from selling milk. But over the years, many small-scale producers have pooled their resources and built up strong cooperative societies that collect the milk and then sell it on to bulk processors. Some cooperatives belong to an even bigger union that also processes milk from its members before selling the final product in retail markets. Most of the dairy farmers are young and are faced with new technological challenges. For dairy cooperatives to survive they have to streamline their operations and improve their management processes (Kibiego, 2015).

## 1.2 Statement of the Problem

Dairy farming has for a long time been a regular source of income to farmers and has overtime grown and expanded since independence (Mahida, Sendhil, Sirohi, Chandel, Ponnusamy & Sankhala, 2018). The sector contributes 17% to the GDP annually and is highly dominated by small scale farmers who account for the most supply of milk in the country especially in the central and rift valley regions (Maina, Gitau, & Van 2018). Financial sustainability is vital to the long-term survival and effectiveness of all types of organizations including cooperative societies. Despite dairy cooperatives in Uasin Gishu County being considered a reliable and stable source of income, these co-operatives still face diverse and significant challenges ranging from lack of proper management skills, poor infrastructure, high cost of dairy feed meals, lack of stable prices for their produce and increase in fraud and accountancy scandals in the financial reporting. This has contributed to this trend of poor performance of the cooperative societies and hence a threat to their sustainability (Olando, Mbewa & Jagongo, 2012). Approximately 37% of the dairy cooperatives in Uasin Gishu County face cash flow challenges. Moreover, 23% of all cooperatives delayed paying their members in 2017 (Kenya Year Book, 2018). This

poor management of dairy societies results in among other challenges, delayed payments to its members, lack of sufficient growth of the cooperatives and hence a significant drop in its wealth maximization leading to lack of farmers' satisfaction and morale (Kipyego, Kipchillat & Kapkiyai, 2015). This poses a negative impact by members pulling out leading to the collapse of these cooperatives and hence wastage of resources. It was against this backdrop that the study sought to establish the effect of budgeting practices on the financial sustainability of dairy co-operative societies in Uasin Gishu County, Kenya.

### Objective of the Study

The study sought to establish the effect of budgeting on the financial sustainability of dairy co-operative societies in Uasin Gishu County.

### Hypotheses of the Study

*H<sub>01</sub>: Budgeting has no effect on the financial sustainability of dairy co-operative societies in Uasin Gishu County.*

## 2. LITERATURE REVIEW

### 2.1 Theory of Budgeting

The theory of budgeting was advanced by Hirst in 2007. The theory states that an effective budgetary control solves a firm's need to plan and also considers how to confront future potential risks and opportunities by putting in place an efficient system of control. According to the theory, budgets are the principal components of an efficient control process and huge importance to efficient budgetary control. Budgets are a collection of future plans and forecasts. Budgeting projects future financial performance of an organization and enables evaluation of the financial viability of a chosen strategy.

Budgets are important in providing estimates of future sales revenues and expenditure by the setting of objectives for a coordinated management policy. The assumptions of this theory are that budget procedure pushes managers to set aside some effort to make targets and objectives before the movement starts. The budget procedure powers supervisors to survey current working conditions and help in anticipating and actualizing required changes. Toward the finish of a period, the spending enables chiefs to assess execution, find risky territories, bottlenecks and give answers to these issues (David, 2008).

The theory has been scrutinized in light of the fact that there might be a lot of dependence on the system as a substitute for good administration. The budgetary framework, maybe due to undue weight or poor human relations, may cause enmity and decline inspiration. Fluctuations are similarly as much of the time because of evolving conditions, poor control or general vulnerabilities as because of general administrative execution (David, 2008). Spending plans are created around existing hierarchical structures and offices which might be unseemly for current conditions and may not mirror the hidden monetary substances. The very presence of all-around recorded plans and spending plans may make inactivity and absence of adaptability in adjusting change (David, 2008).

The theory of budgeting is relevant to this study in that budgeting allows the setting of standards for performance by establishing a comparison of actual cash with the set cash standards. In the contest of the present study, the theory of budgeting facilitates an understanding of the importance of not only budgeting but also budgetary control in dairy cooperative societies. The budgets enable forecasting of future cash revenues and cash expenditures which enables dairy cooperatives to plan rationally and appropriately for the future.

### 2.2 Empirical Review

This section presents important empirical research findings from relevant literature on budgeting.

#### Budgeting and Financial Sustainability

Yolla (2018) did a study on the effects of budgeting on financial performance: a study of selected dairy firms in Kinondoni District, Dar es Salaam Tanzania. The results also revealed that formalized budgetary control leads to a higher growth of profit of a firm. It was also found that the formal budgeting planning and the formal budgetary control show different patterns in terms of their effect on financial performance. The formal budgeting planning has a stronger impact

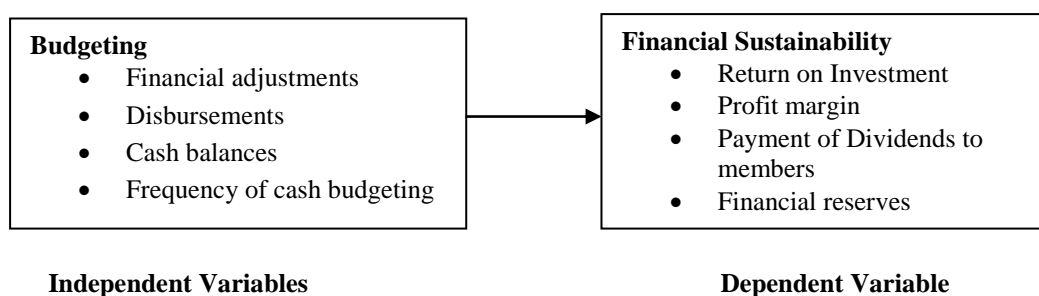
on the growth of sales of dairy firms, compared to the formal budgetary control. This study was carried out in Tanzania while the current study was carried out in Kenya.

Pimpong and Laryea (2016) conducted a study on budgeting and its impact on financial performance: The case of dairy institutions in Mauritius. Budgeting plays a significant role in the performance of businesses. Budgets provide useful information for superiors to evaluate firm performance and inform financial allocation strategies across various components of a firm. The findings of the study revealed that, budget coordination has a statistically significant moderate positive relationship on firm performance. This study was conducted in Mauritius whereas the current study was conducted in Kenya.

Olando (2012) did a study on the assessment of the budgeting practices as a determinant of growth of wealth of SACCOs in Meru County. The study wanted to establish the association of financial stewardship and the growth of SACCOs' wealth, establish the association of capital structure and the growth of SACCOs' wealth, and establish the association of funds allocation strategy and the growth of SACCOs' wealth. The study findings indicated that growth of Sacco's wealth depended on budgeting practices, and budgeting through the funds' allocation strategy. The study recommended that SACCO should improve their accountancy procedures, continuously review credit policies, establish irrecoverable loan provision policies, develop staff recruitment policies and use appropriate budgeting practices. This study was conducted in Meru County and focused on Sacco's wealth while the current study will focus on the financial sustainability of dairy cooperatives in Uasin Gishu County.

Silva (2012) evaluated the effect of budgeting on the performance Saccos in the dairy industry in Sri Lanka. An appraisal of the budgetary procedure in Sri Lanka was finished utilizing factors, for example, spending plan, coordination, control, correspondence, and assessment. The study demonstrated that budgetary procedure has a critical relationship with the money related maintainability of the dairy industry in Sri Lanka. Dairy organizations keep up a sound budgetary procedure which adds to more elevated amounts of money related maintainability consequently a positive relationship. The study was carried out in Sri Lanka while the current study was carried out in Uasin Gishu County and will look at the sustainability of dairy cooperatives.

Mwangi and Wekesa (2015) did a study to evaluate the effect of budgetary control on financial management in Stima Sacco Society, Kenya. It examined how cost control influenced financial management in the Sacco. The study revealed that the relationship between cost control and financial management was statistically significant. It was concluded that unlike cost control, budgetary control was very important in the management of finances at the Sacco. Among the discoveries was that budgetary interest influences the degree of profitability and spending promise to direct degrees. This study was carried in Stima SACCO and their budgetary control whereas the current study was limited to dairy cooperatives and their financial sustainability.



**Figure 2.1: Conceptual Framework**

### 3. RESEARCH METHODOLOGY

#### Research Design

According to Cooper and Schindler (2014), research design involves the collection, measurement, and analysis of the collected data. They further add that research design is the general plan of how one goes about answering the research question and hence aids the researcher in the allocation of the limited resources by posing crucial choices in methodology. A descriptive research design was adopted which helped find out who, what, where, when, or how in this research (Cooper & Schindler, 2014). Descriptive studies help the researcher to understand the characteristics of a group in a

given situation, think systematically about aspects in a given situation, offer ideas for further probe and research and finally help make certain simple decisions.

### Target Population

According to Kombo and Tromp (2006) population is a group of individuals, objects or items from which samples are taken for measurement, it is an entire group of persons or elements that have at least one thing in common. The target population is the total number of subject targeted by the study (Mugenda & Mugenda, 2003). The target populations for this study was 260 employees from the finance department of 65 dairy co-operatives societies in Uasin Gishu County in Kenya. The accessible population is a subset of the target population. It is the part of the target population which the researcher can actually access (Kothari, 2004). The accessible population used was one officer from the finance department, one officer from the accounts department and two committee members from each dairy co-operatives society in Uasin Gishu County.

**Table 3.1: Target Population**

Sub department	Population	Percentage
Managers	65	25%
Cashiers	65	25%
Committee Members	130	50%
Total	260	100.0%

### Sampling Size and Sampling Techniques

According to Quinlan (2011), one principle of sample size is, the smaller the population, the bigger the sample ratio has to be for an accurate sample. The following factors are required to determine sample size: Heterogeneity of the population, the magnitude of the acceptable error and the confidence level. This study used Yamane's (1967) formula for the finite population to calculate the sample size:

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

$$n = \frac{N}{1 + N(e)^2} \quad n = \frac{260}{1 + 260(0.05)^2} = 160 \dots\dots\dots \text{Equation 3.1}$$

Where  $n$  represents the sample size,  $N$  represents the size of the population and  $e$  represents the sampling error at a 95% level of confidence.

**Table 3.2: Sample Size**

Strata	Population	Sample size
Managers	65	40
Cashiers	65	40
Committee Members	130	80
Total	260	160

For this study, stratified and simple random sampling were used to get samples of employees from the different departments. The sampling frame was dairy co-operatives societies in Uasin Gishu County in Kenya.

### Data Collection Instrument

The primary data for this study was collected through questionnaires. Semi structured questionnaires was used which was carefully designed to cover relevant topics of the research. A questionnaire is a research instrument with the aim of informing the researcher on the requirements needed and draw out the various responses in terms of empirical data from respondents in order to achieve the desired objective. Debois (2016) noted that a questionnaire is an instrument for collecting data, and almost always involves asking a given subject to respond to a set of oral or written questions.

### Pre-Test of Research Instruments

According to Nixon (2002), pre-testing is the main chance for researchers to gauge the meaning attributed to survey questions before it is too late. A Pilot study was carried out to test the validity and how reliable the research questionnaires are. The pre-test involved 10% of the sample population hence 16 questionnaires were used in the pilot study which was carried out in Nandi County.

### Validity of the measuring Instrument

Kothari (2004) defines validity as the degree to which an instrument measures what it is supposed to measure. Validity explains how well the collected data covers the actual area of investigation. The validity of the content of the instrument was ascertained through critical analysis by research experts which comprise of my supervisors to ensure that the content in the questionnaire was effective, appropriate and relevant to the study.

### Reliability of the Questionnaire

According to Kothari (2004), measuring instrument is reliable if it provides consistent results. This means that the instrument should give the same results if administered repeatedly. Reliability tests was carried out via questionnaires. This study used an internal consistency technique to ensure reliability. A coefficient above or equal to 0.7 is considered sufficient for most cases (Sreevidya & Sunitha, 2011).

### Data Collection Procedure

An introductory letter was sought from Jomo Kenyatta University which helped to collect data for analysis. The principal researcher visited the co-operatives societies in Uasin Gishu County during the data collection process and made arrangements for information gathering. The questionnaires were self-administered by the researcher and gathered them. The respondents were briefed on the intention of the research and a data sheet given to them, which was on the first page of the data collection tool. They read the information leaflet and decide whether to take part in the study.

### Data Processing and Analysis

The collected data was first cleaned, classified and coded to facilitate analysis. Secondly, data solicited was analyzed using inferential and descriptive statistics. Analysis of data was done with the help of SPSS (Version 23.0). Descriptive including frequencies, percentages, mean and standard deviation as well as inferential statistics that is regression model and pearson correlation coefficient was adopted to analyze the data. The regression model was used to establish the significant difference between cash management practices and financial sustainability of dairy co-operative societies. Data was presented using tables, figures and graphs.

Inferential statistics was done through a regression model.

$$Y_i = \alpha + \beta_1 X_1 + \epsilon \dots \dots \dots \text{Equation 3.2}$$

$y$  Represents the dependent variable (Financial sustainability)

$\alpha$ - the constant of equation (represents the changes that cannot be explained by independent variables in the model)

$X_1$  Represents budgeting

$\beta_1$ , are the coefficients of independent variables

$\epsilon$  - error term

The measures of the financial sustainability of co-operatives societies was the generation of income, the meeting of operational expenses, income diversification and financial reserves. The study measured the financial sustainability of co-operatives societies using a likert scale (1 to 5)

## 4. RESEARCH FINDINGS AND DISCUSSION

### Response Rate

Fowler (2014) defined response rate as the number of people who responded to questions divided by the total number of respondents in the survey. A total of 160 questionnaires were administered to one officer from the finance department, one officer from the accounts department and two committee members from each of the 65 dairy co-operatives society in

Uasin Gishu County. Out of the 160 questionnaires administered, 153 were correctly filled and returned. This represented 95.6 per cent response rate. This implies that the number of questionnaires returned were adequate for analysis. Field (2013) hypothesized that a response rate of 75% is appropriate for analysis. The results for response rate are presented in Table 4.1.

**Table 4.1: Response Rate**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Wrongly filled	7	4.4
Returned questionnaires	153	95.6
Administered questionnaires	160	100

### Pilot Study Results

The questionnaire tool was subjected to a pilot study to determine its reliability. The pilot study involved 10% of the sampled respondents hence 16 respondents were randomly picked from the dairy cooperatives in Nandi County. The pilot results were as follows;

**Table 4.2: Reliability Results**

<b>Objective</b>	<b>Alpha value</b>	<b>Number of items</b>
Financial sustainability	0.783	4
Budgeting	0.811	4

The pilot results indicated that the reliability of the financial sustainability of dairy co-operative societies was 0.783 using Cronbach's alpha test of reliability. According to Sekaran and Bougie (2011) a cronbach's alpha of 0.7 and above is considered good. The study results revealed that all the variables gave an alpha test value of greater than 0.70, therefore all the items were regarded reliable hence valid for data analysis.

### Demographic Information

Background information is aimed at providing relevant information about the respondents. The study grouped demographic information in terms of gender, years of working and the education level.

#### 4.4.1 Distribution of Respondents by Gender

The study sought to establish the distribution of respondents by gender as shown in Table 4.3

**Table 4.3: Gender of the Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	94	61.0
Female	59	39.0
Total	153	100.0

The study findings on the gender of the respondents showed that 94 (61.0%) were male while 59 (39.0%) were female. This shows that most of the finance officers and committee members of the dairy cooperatives were male. It also shows that the study managed to minimize the influence of gender biasness by collecting data from both genders and their opinions were represented in the study.

#### Distribution of Respondents by Years of Work

**Table 4.4: Years of work**

<b>Years of work</b>	<b>Frequency</b>	<b>Percent</b>
1-5 Years	17	11.0
6-10 Years	67	44.0
11-15 Years	69	45.0
Total	153	100.0



The study results on the years of work of the respondents indicated that 17 (11.0%) of the respondents had served for 1-5 years; 67 (44.0%) had served for 6-10 years whereas 69 (45.0%) had served for 11-15 years. According to Bass (2015) age brings in experience, responsibility and skill and this was clearly shown from the findings that the majority of the respondents were experienced, responsible and skilled. It also implies that the majority of the respondents had served for 11-15 years and that the study collected data from all the years of service represented in the study.

#### Distribution of Respondents by Level of Education

**Table 4.5: Education Level of Respondents**

Educational Level	Frequency	Percent
Certificate	51	33.0
Diploma	57	37.0
Undergraduate Degree	35	23.0
Total	153	100.0

The study findings on the education level of the respondents indicated that 51 (33.0%) were certificate level, 57 (37.0%) were diploma graduates; 35 (23.0%) had undergraduate degree. The majority of respondents had a diploma which was a satisfactory level of education that can comfortably facilitate proper understanding of the questionnaire. This implies that the respondents were knowledgeable and therefore understood the study questions and this could be interpreted to mean that they gave a true and fair view of the study questions.

#### Descriptive Findings and Discussions

The study examined the views of different respondents on cash management practices and financial sustainability of dairy cooperative societies in Uasin Gishu County. The respondents were requested to indicate their views on a likert scale ranging from:-Strongly Disagree=1, Disagree=2, Undecided=3, Agree=4 and Strongly Agree=5. The frequencies and percentages of the findings were recorded. The findings were also presented in form of mean and standard deviation.

#### Budgeting and Financial Sustainability of Dairy Co-operative Societies

The first objective of the study was to establish the effect of budgeting on financial sustainability of dairy co-operative societies in Uasin Gishu County. The study focused on the financial adjustments, disbursements, cash balances and frequency of cash budgeting. The researcher was interested with the opinions of the respondents on the extent to which such constructs affect financial sustainability. The study findings were as shown in Table 4.6.

**Table 4.6: Budgeting and Financial Sustainability of Dairy Co-operative Societies**

Statements		SA	A	U	D	SD	Total	Mean	Std Dev
i.Financial adjustments are carried out to ensure adequacy of cash allocations in the budgets	F	43	65	24	13	8	153	3.8	1.047
	%	28.1	42.4	15.8	8.6	5	100	76	
ii.There is prudent disbursement of cash in the firm	F	46	61	22	22	8	153	3.79	1.074
	%	30.2	39.6	14.4	14.4	5	100	75.8	
iii.Cash balances are accounted for in the cooperative society	F	34	95	21	3	0	153	4.04	0.342
	%	22.3	61.9	13.7	2.2	0	100	80.8	
iv.Financial adjustments done to ascertain the deficits and surpluses of cash allotted to various operations	F	64	43	26	12	8	153	3.93	0.346
	%	41.7	28.1	17.3	7.9	5	100	78.6	

The respondents were requested to give their views on whether financial adjustments are carried out to ensure adequacy of cash allocations in the budgets and the study findings revealed that 108 (70.5%) of the respondents agreed that financial adjustments are carried out to ensure adequacy of cash allocations in the budgets as compared to 21 (13.6%) who

disagreed. This was confirmed by Mean=3.80 and SD = 1.047. These findings were supported by Silva (2012) who noted that keeping sound budgetary procedures which adds to more elevated amounts of money related to maintainability and consequently a positive relationship. The respondents were also requested to give their views on whether there is prudent disbursement of cash in the firm. The study results revealed that 107 (69.8%) agreed that there is prudent disbursement of cash in the firm (Mean=3.79; SD=1.047) while 30 (19.4%) disagreed. This was in agreement with findings by Pimpong and Laryea (2016) who revealed that cash disbursement plays a significant role in the performance of businesses.

In addition, the respondents were asked if cash balances are accounted for in the cooperative society and the study findings revealed that 129 (84.2%) of the respondents agreed that cash balances are accounted for in the cooperative society (Mean=4.04; SD=0.342) while 3 (2.2%) disagreed. This was affirmed by Orlando (2012) who noted that cash management is developed for businesses with uncertain cash inflows and outflows. This approach allows lower and upper limits of cash balance to be set and determine the return point (target cash balance). The lower limit or safety cash balance is set by the firm's management, but both the upper limit and return point depend on the spread.

Moreover, the study results revealed that 107 (69.8%) of the respondents agreed that financial adjustments done to ascertain the deficits and surpluses of cash allotted to various operations (Mean=3.93; SD=0.346) whereas 20 (12.9%) were in disagreement. These results were in agreement with results by Mwangi and Wekesa (2015) who observed that cash adjustments influences financial management of a firm. The study revealed that the relationship between cash adjustments and financial management was statistically significant. Majority of dairy co-operative societies used a combination of both top-down and bottom-up approach when preparing budgets. The dairy co-operative societies prepare annual budgets covering 12 months. Majority of dairy co-operative societies involve the heads of various departments, managing directors and administrative heads.

### Inferential Analysis

In this section, the study sought to test the relationship between the study variables.

### Correlation Analysis

Pearson correlation analysis was used to test the association between the study variables. Pearson correlation was used to measure the extent of correlation between variables of the study and to show the strength of the linear relationship between variables in the correlation ranges between +1 and - 1, where  $r > 0.7$  indicates a strong positive relationship,  $r = +0.5$  and below 0.7 indicates a moderate relationship and where  $r = +0.49$  and below indicates a weak relationship between study variables. Where  $r = 0$  indicates that there is no relationship. The study findings were as tabulated in Table 4.7.

**Table 4.7: Overall Correlation Analysis**

		Budgeting	Financial Sustainability
Budgeting	Pearson Correlation	1	
	Sig. (2-tailed)		
Financial Sustainability	Pearson Correlation	.507(**)	1
	Sig. (2-tailed)	0.000	0

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

The study findings indicated that there was a statistical significant positive effect of budgeting on financial sustainability of dairy co-operative societies ( $r = 0.507$ ,  $p < 0.05$ ). This implies that a unit change in budgeting leads to 50.7% change in financial sustainability of dairy co-operative societies. When budgeting is positive, financial sustainability is also positive. Therefore, dairy co-operatives should promote and enhance budgeting as a positive element as they work towards achieving financial sustainability. These findings were supported by Mutya (2018) who revealed that positive relationship exists between budgeting and financial sustainability of dairy co-operative societies.

### Multiple Regression Model

The study used multiple linear regression analysis to determine the combine linear relationship between the dependent variable (Financial sustainability) and the independent variables (Budgeting, Cash accounting, Cash forecasting and Cash monitoring). The study results were as tabulated in table 4.8, 4.9 and table 4.10.

**Table 4.8: Multiple Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.921 <sup>a</sup>	0.891	0.812	0.0812

**a. Predictors (Budgeting)**

The model indicated the simple correlation was 0.921 which indicates a degree of correlation. The total variation (the adjusted R<sup>2</sup> of the study model is 0.812 with the R<sup>2</sup> = 0.891) in financial sustainability of dairy co-operative societies was 89.1% explained by cash management practices (R Square=0.891, Standard Error=0.0812). This means that the linear regression explains 89.1% of the variance in the data. This implies that there was no first order linear auto-correlation in the multiple linear regression data. This further implies that 89.1% of variation in financial sustainability is accounted for by cash management practices (Budgeting) in the study while 10.9% of the financial sustainability is accounted for by other factors out of the study.

**Assessing Fit of Multiple Regression Model**

Analysis of variance was used to determine if the multiple regression model was fit for the data. The results were shown in Table 4.17

**Table 4.9: ANOVA Model**

ANOVA							
Model			Sum of Squares	Df	Mean Square	F	Sig.
1	Regression		15.338	4	3.835	66.853	.000 <sup>a</sup>
	Residual		4.302	149	0.057		
	Total		19.64	153			

a Predictors: (Constant), Budgeting

b Dependent Variable: Financial sustainability

The next output table is the F-test. The linear regression's F-test has the null hypothesis that the model explains zero variance in the financial sustainability (F=66.853, p=0.000<sup>a</sup>). The F-test is highly significant, thus it is assumed that the model explained a significant amount of the variance in financial sustainability. This implies that the multiple regression model was fit for the data and hence budgeting, cash accounting, cash forecasting and cash monitoring affects financial sustainability if dairy cooperatives.

ANOVA model predicted financial sustainability of dairy co-operative societies significantly well (p=0.000<sup>a</sup>). This indicated the statistical significance of the regression model that was run and that overall the regression model statistically significantly predicted the financial sustainability of dairy co-operative societies (it was a good fit for the data).

**Regression Analysis**

T-test of statistical significance of each regression coefficient was conducted in order to determine the beta which indicates how strongly the independent variable affects the dependent variable. Table 4.10 shows the results.

**Table 4.10: Budgeting and Financial Sustainability**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.369	0.224		1.648	0.207
Budgeting	0.170	0.026	0.304	6.604	0.000

a. Dependent Variable: Financial sustainability of dairy co-operative societies

Table 4.10 shows the regression coefficients results where budgeting had a positive and significant effect on financial sustainability of dairy cooperatives ( $\beta=0.170$ ,  $p<0.05$ ). The multiple regression equation generated for the study was as follows.

$Y$  (Financial sustainability of dairy co-operative societies) = 0.369 (Constant) + 0.170 (Budgeting)

**$Y=0.369 + 0.170X_1 + \dots$ .....Equation 4.1**

From the regression equation, cash accounting was the most important variable to financial sustainability of dairy co-operative societies contributing 49.4 percent to financial sustainability of dairy co-operative societies while budgeting contributed 45.7%, cash forecasting 30.4% and that cash monitoring contributed 23.1% to financial sustainability of dairy co-operative societies respectively. The constant value of 0.369 implies that at zero budgeting, cash accounting, cash forecasting and cash monitoring affects financial sustainability of the dairy co-operatives.

In Table 4.10, the coefficients refers to the slope of the regression line and amount of variance each predictor contributes to the general regression equation. The budgeting coefficient parameter is 0.170 meaning that for every adjustment in one unit of budgeting, would result in a 0.170 change in financial sustainability of dairy cooperatives while all other variables are kept constant. The coefficient parameter of cash accounting is 0.263 meaning that for every change in one unit of cash accounting, would resulted in a 0.263 change in financial sustainability of dairy cooperatives while all other variables kept constant.

### Hypothesis Testing

In this section, the study sought to test the hypotheses of the study.

#### Hypothesis Testing of Budgeting and Financial Sustainability

The first null hypothesis postulated that budgeting has no significant effect on financial sustainability of dairy co-operative societies in Uasin Gishu County. The study findings indicated that there was a positive and significant effect of budgeting on financial sustainability of dairy co-operative societies ( $\beta=0.170$ ,  $p<0.05$ ). The study therefore rejected the null hypothesis and accepted the alternate hypothesis which showed that there was a a statistical significant effect of budgeting on financial sustainability of dairy co-operative societies in Uasin Gishu County. This implies that a positive change in budgeting leads to a positive change in financial sustainability of dairy co-operative societies.

These findings are attributed to the fact that budgeting is key in determining all the cash receipts components and tracking of cash payments to suppliers with respect to purchases. Budgets show the organization's financial plan in achieving its core objectives through effective financial planning. These findings were supported by Yolla (2018) who did a study on the effects of budgeting on financial performance and the findings indicated that more formalized budgeting planning leads to higher sales revenues. The results also revealed that formalized budgetary control leads to a higher growth of profit of a firm. Budgets in dairy co-operative societies serve to aid control, aid both short and long term planning, communicate plans, and coordinate activities and also to evaluate performance. These findings were also supported by Mutya (2018) who revealed that positive relationship exists between budgeting and financial sustainability of dairy co-operative societies.

## 5. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### Summary of Findings

This section discusses the summary of the effect of budgeting on the sustainability of dairy cooperatives.

The study objective was to examine the effect of budgeting on the financial sustainability of dairy co-operative societies in Uasin Gishu County. The results revealed that budgeting had an effect on financial sustainability of dairy co-operative societies while the regression coefficients results showed that budgeting had a positive and significant effect on financial sustainability of dairy cooperatives. This implied that when budgeting is positive, financial sustainability is also positive. Therefore, dairy co-operatives that practices budgeting realize financial sustainability. Budgeting through cash allocations and disbursement provides useful information for superiors to evaluate firm performance and inform cash allocation strategies across various components of a firm. Budgets in dairy co-operative societies serve to aid control, aid both short and long term planning, communicate plans, and coordinate activities and also to evaluate performance.

### Conclusions of the Study

The study concluded that budgeting had a significant effect on financial sustainability. Through effective budgeting, one can predict the future expenses and costs and accordingly work towards the expected revenues hence may realize the required level of financial sustainability.

### Recommendations to Practice and Policy

The study made the following recommendations as per the objectives of the study. On Budgeting the study recommended that budgeting should be practiced within the co-operatives to ensure cash is allocated to all vote heads and that all allocations as far as expenditure is concerned should be done as per the budgets. This will ensure there is proper management of cash in terms of receipt and expenditure of cash within the dairy co-operative societies. As regards cash accounting, the study recommended the management of the dairy co-operative societies to ensure that their organizations have appropriate accounting measures that will allow for accountability in these dairy co-operative societies, prevent all financial risks like fraud and misappropriation of cash. These measures should also ensure that loan processes are valid and have been verified before the disbursement of cash. In addition, the dairy co-operatives should try and put in place accounting systems so as to ease in record keeping and thus the entire recordkeeping process.

It is furthermore recommended that cooperative societies should fully adhere to all procedures and guidelines regarding cash monitoring. This means that nothing should be done without keeping a record of cash received or spent in the organization. This will increase the level of cash tracking thus good financial sustainability. Dairy co-operative societies should moreover, formulate and implement appropriate cash monitoring strategies to enable them manage risks, minimize losses and improve financial sustainability.

### Recommendations to Theory

The study found that cash management practice plays a major role in the financial sustainability of an organization. The study results revealed that through effective budgeting, one can predict the future expenses and costs and accordingly work towards the expected revenues hence may realize the required level of financial sustainability. Majority of dairy co-operative societies also set specific benchmarks as a combination of monetary value and percentages. Most of the dairy co-operative societies also review their budgetary planning and control procedures and changes such as format and time are made during such reviews. This was supported by theory of budgeting which states that budgeting enables the organization to plan rationally and forecast future revenues.

The study revealed that maintaining cash records and accounts for the dairy cooperative is helpful in understanding how money is spent and income is earned; finding ways of reducing expenses and increasing incomes that is increasing profits as well as making decisions about increasing or decreasing concentrate feeds, growing pastures and fodder crops, buying and selling of items/products. This was emphasized by the Accounting theory which explains that the recording of business transaction for the purpose of effective decision making in business.

### Suggestions for Further Studies

The study recommends similar studies be carried out in other organizations within the dairy industry within the country, and studies on other cash management practices such as auditing and book-keeping and their influence on financial performance of other organizations within the dairy industry. This is because different organizations adopt different cash management practices. Carrying out other studies in other organizations will provide a basis for comparison of the results.

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