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**EFFECTIVENESS OF BUDGETS AND BUDGETARY CONTROL IN  
COST MONITORING AND CONTROL: A CASE STUDY OF KPLC;  
WEST REGION.**

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**RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINSTRATION, EGERTON UNIVERSITY.**

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## DECLARATION

I, Samuel Njoroge Njogu, do hereby declare that this project is my original work and has not been presented for the award of a degree in any University.


S.N. Njogu

Sign. ..... Date. 23/08/05

MBA STUDENT

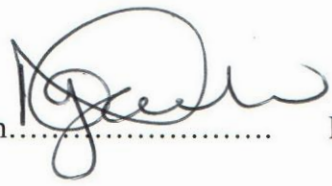
This research project has been submitted for examination with our approval as University Supervisors.

MR. J. R. N. Gachara

Sign. ..... Date. 24/8/05

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## **DEDICATION**

This research project is dedicated to the entire Lincoln Njogu family. To Mum, my two brothers Kuira and Ndei and my four sisters Wairimu, Waithera, Wanjira and Wanjeri, who supported and encouraged me so much throughout my studies; to you I say, you are really great. To my wife Wairimu, my son Njogu and my two daughters Muthoni and Wanjiku, at times it was not easy to explain why I had to leave you alone as husband and father when you needed my presence the most but your understanding, love and prayers have borne fruit; to you I say poa sana.

To my research project supervisors Mr. J. R. N. Gachara and Mr. F. Mamati who devoted a lot of their time to guide me through, especially Mr Gathara; to you I say thank you.

I have no words to thank each one of you, may the almighty God bless you abundantly; you have been my inspiration.

## ABSTRACT

This study analyzes the effectiveness of budgets and budgetary control in Parastatals with an aim of establishing the relationship between budgeted expenditure and actual expenditure in a financial period. The study also aims at establishing if budgets and budgetary control systems have an effect in monitoring and controlling expenditure. The population for this study was drawn from KPLC's West Region's financial records for the past five years to 30<sup>th</sup> June 2003. The region has three branches. A closed ended questionnaire was administered on both the budget holders and managers for purposes of establishing the type of managerial action taken in controlling costs. The numerical data was analyzed by means of the Time Series technique, Spearman's Rank of Correlation Coefficient and the hypothesis tested by way of the Anova method. On one hand managerial action was tested by means of the Likert Scale, while on the other factors influencing budgeting and budgetary control systems were determined by ranking responses from a questionnaire. The study established that budgets and budgetary control systems in the Region are not effectively used for the intended purposes. It was also established that the type of action taken by management did not necessarily depend on budgeted expenditure and that other factors influenced monitoring and controlling costs

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## LIST OF ABBREVIATIONS

EAP&L	-	East African Power & Lighting Company Limited.
ERB	-	Electricity Regulatory Board.
GOK	-	Government of Kenya.
IPPs	-	Independent Power Producers.
KenGen	-	Kenya Electricity Generating Company.
KPC	-	Kenya Power Company.
KPLC	-	Kenya Power and Lighting Company Limited.
MOE	-	Ministry of Energy.
KShs	-	Kenya Shillings.



## CHAPTER ONE: INTRODUCTION

### 1.1 Background information

Kenya Power Company was created by an Act of parliament in 1954. At the time, its operations were managed by East African Power & Lighting Company Limited, for purposes of transmitting and distributing electric power from Uganda through the Tororo-Juja line. Following the break up of the East African Community in 1983, operations of EAP&L in Kenya were taken over by KPLC. In 1997, restructuring of Kenya's power sector was carried out and The Electric Power Act amended. Under the reforms, the functions of electric power generation, transmission and distribution were separated. The roles of key players in the power sector were restructured with KPLC being left to deal with the transmission and distribution functions. On the other hand, Kenya Electricity Generating Company Limited was left with the function of generating electric power and selling it in bulk to KPLC. By restructuring the sector, five key players namely: - KenGen, KPLC, Electricity Regulatory Board, Independent Power Producers and Ministry of Energy, were brought on board under the Act. (Milestone in history of KPLC, 2000)

The role of ERB under the Act is to review electricity tariffs, enforce safety and environmental regulatory standards in the power sector as well as safeguarding the interests of electricity customers. The IPPs are made up of private companies who own power stations and sell power in bulk to KPLC. The MOE plays the role of formulating policy on the energy sector in addition to administering the Rural Electrification Schemes.

The GOK owns 50.95% of KPLC's share capital through an indirect share holding by Treasury and National Social Security Fund of 40.42% and 10.53%, respectively. KPLC has been operating a budgeting and budgetary control system over the years since inception, for purposes of monitoring and controlling expenditure and for internal reporting and this forms the basis of the study.

A number of organizations including, public utilities (parastatals), ministries and non-profit making organizations prepare and use budgets for their operations. Budgets, by definition, have to be prepared in advance; and for this reason, they are often referred to in terms of being part of a feedforward system. This system incorporates the most important aspect of management control, which is, looking at situations in advance, thinking about the impact and implications of things in advance and attempting to take control of situations in advance. (James R & Pendlebury M, 1984).

A budget may also be defined as a plan of operation expressed in monetary terms including detailed forecasts of income and expenditure for a defined period. The effective management of business units is closely tied to effective management of income and expenditure, which in turn is closely linked to effective budget management. Effective budget management entails the estimation of income and expenditure for all activities, the provision for anticipated future expenditure and the distribution of funds by budgetary groups and the monitoring of actual performance. It also entails monitoring of available funds and the management of non-recurrent funds allocated for specific activities and initiatives.

A budget is a financial plan, which sets forth the resources necessary to carry out activities and meet financial goals for a future period of time. A master budget presents a company's overall financial plan for the coming year or other planning period. Among the master budget's usual components are the operating budget and the cash budget. The operating or recurrent budget summarizes the firm's operating plan for the period and includes both revenue and expenditure budgets. A cash budget on the other hand is a summary of projected cash balances, receipts from operations and payments for financing and investing activities. (Engler, 1993)

The act of budgeting entails setting of standards upon which performance can be measured. It is a process, which is generally understood to form the cornerstone of a management control system and as a supporting tool for planning, control, coordination, communication, performance evaluation and motivation. It is envisaged that the way that budgets are used can tell you a lot about the firm's culture. Firms with a strict autocratic culture will tend to use a tightly controlled budgetary system. Those with a more open culture will use budgeting as an aid to discussion and empowerment. Whatever the culture, the manager has the responsibility to meet the budgetary requirements, which are to help control income and expenditure so as to draw attention to wastage, losses and inefficiency; emphasize and clarify responsibilities; and enable delegation of authority to subordinates with clear budget targets.

Planning is critical in project management. (Mbeche, 2000). Planning means listing details of what is required to successfully complete the project along the three dimensions of quality, time and cost.

The budgeting process in KPLC incorporates a policy on social welfare. For instance, in the rural electrification projects funded by the government but implemented by KPLC, customers make payment for capital contribution either through deferred payment, group schemes or individual arrangements. The parastatal is involved in educating the public on better methods of electricity usage, matters of reforestation, and tariff setting, among others. The company's annual budget also takes into account the costs that will enable it meet its corporate mission 'to efficiently transmit and distribute high quality electricity throughout Kenya at cost effective tariffs; to achieve the highest standards of customer service; and to ensure the Company's long term technical and financial viability.' (Milestone in history of KPLC, 2000)

## **1.2 Problem statement**

A budgeting and budgetary control system has been practiced in KPLC since inception. Budget holders are asked to prepare budgetary estimates for their cost center every financial year. The budgetary estimates are then passed over to the board for approval. Management oversees implementation of budgets through a budgetary control process. However, at the end of each financial period, actual costs have tended to differ from the budgets. While as budget holders are not obligated to explain the causes of variances, management does not adequately analyse variances as they arise. This study therefore seeks to assess the effectiveness of budgets and budgetary control system in monitoring and controlling costs.

### **1.3 Objectives of Study**

The main objective of this study is to determine the effectiveness of budgets and budgetary control in monitoring and controlling costs. The specific objectives are to: -

- i) Establish the relationship between budgeted and actual year-end expenditure.
- ii) Establish the type of action management takes in controlling expenditure.
- iii) Identify factors other than budgeted expenditure, which influence budgeting and budgetary control process.

### **1.4 Hypotheses**

- i) There is no significant difference between budgeted and actual expenditure in KPLC's financial statements.
- ii) The type of managerial action taken depends on factors affecting the budgeting process.
- iii) Factors other than budgeted expenditure influence the budgeting and budgetary control system.

### **1.5 Justification of study**

KPLC has been chosen for purposes of this study as it is a quoted company in the Nairobi stock exchange and is among companies forming 'the NSE 20 share index'. For a company to fall under this category, it must comply with requirements of the Capital Market Authority, operate its business in conformity with the requirements of the Companies Act and apply the Generally Accepted Accounting Practices in preparing its financial records.

This study is important in that it would enable comparison of actual expenditure with a predetermined measure. Information obtained will point out if budgets by themselves are sufficient in monitoring and controlling expenditure. It would also establish if there are other factors that may contribute to the actual year-end expenditure and if so how management responds to them.

### **1.6 Scope and limitations**

This study will examine if budgeting and budgetary control process is carried out in a predetermined manner as regards its preparation, approval, implementation and control. It will also examine if management is faced with other factors that may influence monitoring and controlling costs.

Whereas budgets set out statements of monetary, numerical or non quantitative aspects of an organization's plans for the coming period, budgetary control analyses what happened when those plans came into being, and what the organization did or did not do to correct any of the variations.

The study will focus on the factors relevant to budgeting and budgetary control as tools for monitoring and controlling costs. Since the organizational structure and management style in KPLC may be different from those operated by other entities, this study may not be fully applicable in another business set-up. The fact that resources in terms of money and time were limited to undertake research in other parastatals for purposes of comparison of data and the fact that there are 'restrictions on management information to outsiders', made this study be confined to KPLC only.

## 1.7 Definitions of terms

**Fixed budget:** A fixed budget is one based on a fixed volume of activity. It may lose its effectiveness in planning and controlling if the actual capacity utilization is different from what was planned for that particular period.

**Flexible budget:** A flexible budget is one that is designed to change in response to changes in output levels or, on occasions, changes in other relevant factors, like the level of activity.

**Feedforward and feedback systems:** The term feedforward refers to looking at situations in advance, thinking about the impact and implications of things in advance and attempting to take control of situations in advance. Feedback on the other hand refers to advice, criticism and information given or received with regard to how good or useful the budgeting system is performing towards cost management.

**Variance:** A variance is the difference between an actual and budgeted figure. It can be favourable or adverse. Favourable cost variances occur when the actual costs are lower than the budgeted ones while adverse cost variances occur when the actual costs exceed the budgeted ones. Variances help to provide a warning of rising costs and are a pointer to the level of efficiency attained. This allows management to implement a new strategy to offset the variances either within the same cost center or across different cost centers.

Variations with respect to revenue variations are not discussed under this caption as the study is narrowed down to costs only. However, suggestions have been made to academicians to undertake research in this area.

Cost center: A cost center is a section of an organization, for instance a division, department, building or individual, for which a budget is prepared.

Budget period: The budget period is the period for which a set of budget estimates is prepared. Typically the budget period is of one year's duration, and will be designed to coincide with an organization's financial, or fiscal year.



## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Background

The word budget in English originated from the French word Bougette, which means a leather bag, or a large sized purse, which travelers in earlier centuries hung on the saddle of their horses. The treasurer's bougette was a predecessor of the small leather case from which the Ministers for Finance in countries like Britain and Kenya still present their annual financial plans for the state to the National Assembly. Over time the meaning of the word budget has shifted to the financial plan itself. In fact as we know it today the budget is the central instrument of the expenditure policy. (Biwott E. 2001)

A budget provides the firm with a plan against which an employee's performance may be measured. Most of the public entities in Kenya do not use budgets and budgetary control processes as a tool for monitoring and controlling costs and have to wait for the central government to step in and bail them out of any financial quagmire. Public utilities were initially created with the primary objective of satisfying societal needs. In the year 2004, for instance, local authorities, including, Nairobi City Council, Mombasa Municipal Council and Kisumu Municipal Council, succumbed to strikes by unpaid workers as there was no revenue to pay salaries and wages, due to inadequate revenue collection plans and poor cost management systems, among others.

By incorporating a firm's goals into a formalized plan for the coming year, managers define their operational and financial objectives and thereby remove many unforeseen pitfalls. This formalized plan forces coordination and

communication between the functional areas within the company. (Engler, 1993). Had the local authorities discussed above incorporated a feedforward system in their operations they would most probably not have gotten themselves into the pitfalls.

A formalized budget provides employees with a target to reach. They therefore know what is expected from them prior to performing their duties, rather than being notified later on that their performance was not in accordance with the firm's expectations. (Engler, 1993).

Without clear administration of budgets through budgetary control, organizations are not able to prioritize and control expenditure hence depleting annual appropriations before the end of the financial period. This may be one of the factors, which contributes to losses in public entities. The lack of a gauge to compare actual performance for both recurrent and capital commitments leads to helplessness on the part of management. Unlike private sector companies, public organizations are mainly concerned with the provision of public goods to members of the society. Their budgets are therefore mainly intended for authorising actions and providing ceilings for managerial action (Horngren, 1983).

Budgets occupy a leading place among special tools of management employed to direct and control the affairs of large and multifarious organizations. They are used not only by governments where budgeting had its origin but also by private bodies in industry and commerce and in families. All have found out that the budgetary

system can be an invaluable tool in planning, formulating policy, and keeping a check and in its execution. (The Royal Institute of Public Administration, 1979)

## **2.2 The budgeting process**

The basic concept of budgeting involves estimating future performance, comparing actual results with estimates and analyzing the difference between them. Factors that are relevant in determining the type or style of organizations budgets and its effectiveness includes the type of organization's leadership style, personalities of people affected by the budget, the method of preparation and the desired results of the budgeting process. The functional aspects of budgeting include better planning, coordination, implementation, control, and evaluation of events as a basis by which efforts are rewarded. (David, 1973).

It would be easy to state that the budgeting process begins when the first budget is prepared, and is complete when the master budget is finalised. In reality, the budgeting process begins, for many organisations, a long time before the budget period begins; and the process ends once the budget period has ended. This means the budgeting process is a very lengthy process. Typically, for a parastatal like KPLC, the pre-budgeting phase can begin up to a year before the budget period starts. For example during financial year 2004/5, the budgeting process started in August 2003 and was completed in December the same year, that is, six months before the budget year was to begin.

Factors to incorporate in a budgeting process includes the fact that usually, the larger the organization, the more costly it is to prepare budgets in terms of cost and

time. Budgets are based on unknown and some known facts. If research is not done correctly, the budget is worthless and time may be wasted. If an expense is overestimated, spending to the budget limit may create a problem for the organization, (Colville, 1989).

A budget slack may however occur when organizations prepare a lax budget for purposes of making corporate objectives easily attainable. This may lead to managers wishing to simultaneously satisfy their own personal goals together with those of the firm. In many cases the two sets of goals may not be perfectly congruent. This could especially be true at the lower-levels of management since in the upper- level, managers have autonomy in carrying out their duties and would not wish to distort their budgets (David, 1973).

When a budget holder is asked to prepare budget for the coming year, there could be a tendency to build in unreasonably high estimates because of the fear that management will most likely cut the budget to tighten it. Management on their part, are likely to suspect that employees deliberately inflate budget estimates to allow for reckless spending, hence they will most likely then cut the budget estimates. This may result in a vicious cycle in which employees inflate budgets and managers cut them. Managers may therefore be led to believe that inflated budgetary estimates are an ever-present problem in budget construction. It may probably be impossible to eliminate this kind of phenomenon, but managers should try to control its abuse or have it kept at reasonably low levels (David, 1973).

In a participative budgeting set up, it is likely that the budget holders have no formal training and this could explain the lack of a proper budgeting process and budgetary control on costs. On the other hand in an autocratic environment budgets may be too rigid which may lead the business to suffer adversely due to inability to react to internal and external changes on time (David, 1973).

### **2.3 Budgetary control**

The process of budgetary control involves initial establishment of budgets, preparation of performance reports showing actual operations and reporting of the actual results including variances. Based on these reports, a responsible official analyses the variances and corrective action taken. (Simiyu, 1979)

Budgets are simply exercises in calculation unless they are used. When we use a budget, we do so as part of a system of budgetary control. That is, we have some basic ideas of what we want to do, we prepare budgets to help us achieve those ideas; and then once we have done whatever it is that we wanted to do, we check to see if we kept to our budget. (Williamson, 1999)

The control cycle in budgeting should involve the comparison of actual performance against standards, analysing and interpreting the variances, deciding on what action to be taken as a result of variances; and, taking of action, which may be to alter the standards after which actuals will be compared again. (Dew and Gee, 1973).

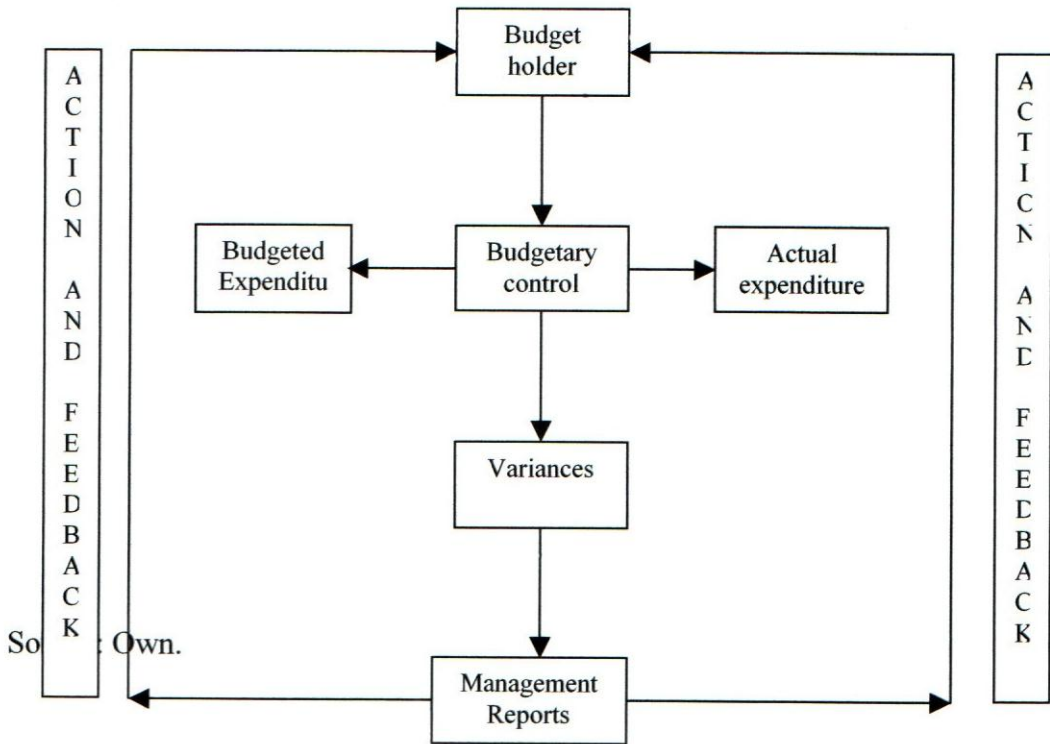
Budgetary control is the process of managing the approved budget over a period of time so as to ensure that expenditure is within the limitations of available appropriations and available revenues, (Dew and Gee, 1973).

Budgetary control is an example of a feedback system where actual outcomes are compared to budgets. The budgetary process is one of a feedforward system; in that expected outcomes are compared with desired outcomes such as, spending levels, return on investment and market share. These are revised in successive iterations until a desired outcome is identified. In practice it may be observed that many public utilities do not simply adopt a feedback approach such as comparison of actual to budget. Those that do, operate processes which require periodic re-forecasting of likely outcomes in order to better manage their planning and control activity, (Williamson, 1999).

#### **2.4 Conceptual Framework**

The budgeting cycle involves preparation of estimates, approval and application of the budget as a tool for monitoring and controlling of costs. In a particular financial period, actual results are compared to budgets and variances determined. Through the budgetary control process the causes of either favourable or adverse variances are established. A communication channel for action and feedback transverses between the budget holder and management through which the budget holder explains why variances arose, corrective action is then taken and a vicious cycle ensues. This process can be depicted diagrammatically as follows:

**Graph 1: Budgetary control process.**



## **CHAPTER THREE: METHODOLOGY OF RESEARCH**

### **3.1 Population**

The primary data used in this study was drawn from KPLC's financial records for the last five years ending 30<sup>th</sup> June 2003. The data comprised of budgeted and actual cost on an annual basis. The population was made up of a total of 150 cost centers within KPLC's West Region. The region formed a good representation of the entire organization, having three branches and each branch having at least 50 cost centers. For purposes of determining the effectiveness of budgets and budgetary control system as a tool for monitoring and controlling costs, a questionnaire was circulated to the budget holders.

The reasons for choosing this population was due to ease in accessing data from the financial records; less time spent by respondents while filling in the questionnaires; and low costs in administering the questionnaires.

### **3.2 Sample size**

A sample size of 60 cost centers was drawn, based on 20 budget centers in each of the branches. It was felt that since the budget centers in all the branches are homogenous, any sample that is greater than 30 would be considered large enough to closely approximate the population parameters. (Daniel and Terell, 1968).

### **3.3 Sampling Technique and Procedure**

Each of the three branches in the west region formed a stratum. A sample was then drawn at random using the lottery method. For this purpose, all cost centers in a branch were written on small pieces of paper, which were then folded and placed



in a small box. After mixing the pieces of paper inside the box thoroughly and shaking the box, a piece of paper was drawn at random until a sample size of 20 cost centers per branch was reached.

### **3.4 Data collection technique**

A data collection sheet was used for purposes of collecting numerical data, from the financial records for five consecutive years. For the non-parametric data, a questionnaire was administered to the budget holders.

### **3.5 Data analyses and lists of hypothesis**

The numerical data was initially analysed by means of the Time Series, to determine trend, cyclical variations and existence or non-existence of correlation between the two variables. Subsequently, the Spearman's Rank Correlation Coefficient was calculated to determine the statistical magnitude of the difference. Finally, the Two-Way Anova method was applied to test the first hypothesis. To test the second hypothesis, an analysis of responses from a questionnaire, which had earlier been administered on the budget holders, was done by means of the Likerts scale while observed responses were ranked from the second questionnaire to test the third hypothesis.

## CHAPTER FOUR: FINDING AND DISCUSSIONS

### 4.1 Findings

To test the relationship between the two variables, the time series technique was applied on the consolidated figures for the budgeted and actual costs from each of the three branches as summarised in Table 1 below. A time series graph was then drawn to determine the trend, annual variations and also establish the correlation.

Table 1: Annual costs (Currency in KShs. Millions)

BRANCH X					
	1998	1999	2000	2001	2002
Actual	452.44	571.71	995.07	1,248.23	1,177.27
Budget	378.91	370.32	1,163.42	1,205.47	985.83

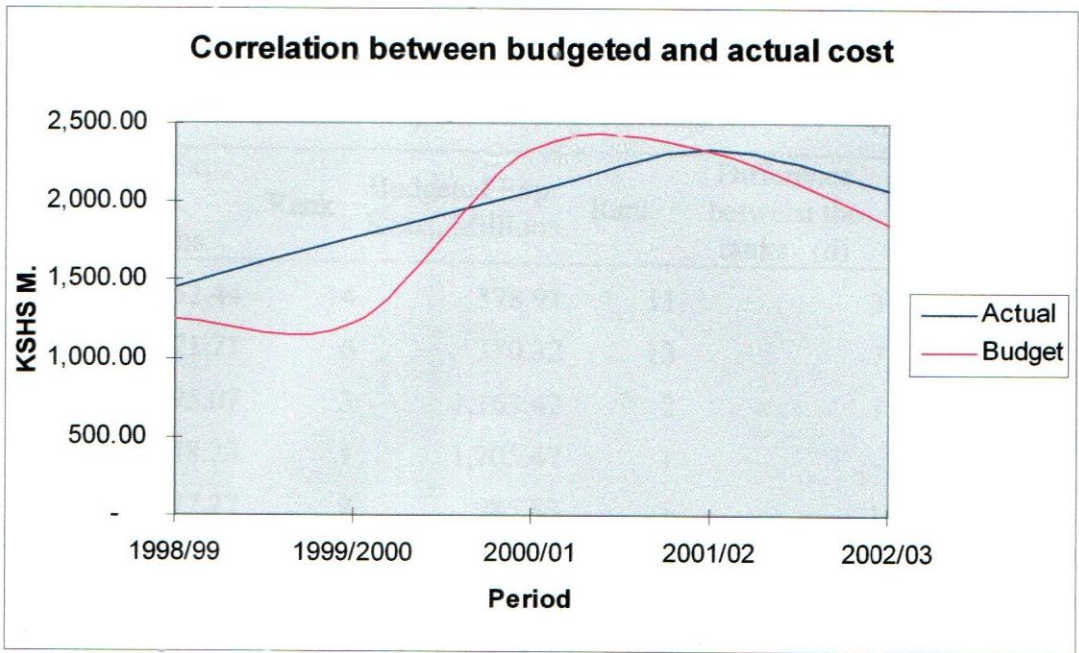
BRANCH Y					
	1998	1999	2000	2001	2002
Actual	544.48	653.76	575.41	542.33	536.26
Budget	497.83	489.49	619.56	553.51	555.34

BRANCH Z					
	1998	1999	2000	2001	2002
Actual	458.41	543.56	500.18	542.48	360.24
Budget	375.56	363.58	545.27	556.82	316.06

COMBINED					
	1998	1999	2000	2001	2002
Actual	1,455.34	1,769.03	2,070.66	2,333.04	2,073.77
Budget	1,252.30	1,223.39	2,328.25	2,315.79	1,857.23

Source: Research Findings

Graph 2: Time Series



Source: Research Findings

The graph shows a fairly high correlation between budgeted costs and actual costs. During the financial year 2000/1 there was a reported savings when members of staff voluntary agreed to forego some of their allowances so as to keep the Company afloat. The Company had been faced with reduced revenues following a prolonged drought over a period of two years.

To test the correlation, a data table was created from the two sets of variables. The first column shows the actual expenditure and the second one shows the budgeted expenditure. The expenditure in each of the two columns is then ranked. Ranking is achieved by giving ranking '1' to the biggest number in a column, '2' to the second biggest value and so on. The smallest value in the column will get the lowest ranking. This is repeated for both sets of data.

The difference (d) between the ranks of the two data in each row of the table is then determined. The rank of the second measurement (budgeted expenditure) is

subtracted from the rank of the first one (actual expenditure). The differences are then squared ( $d^2$ ) so as to remove negative values and then summed up ( $\sum d^2$ ).

Table 2: Computation of spearman rank correlation

	Actual Exp. KShs. Millions	Rank	Budgeted Exp. KShs. Millions	Rank	Difference between the ranks (d)	$d^2$
1)	452.44	14	378.91	11	3	9
2)	571.71	6	370.32	13	-7	49
3)	995.07	3	1,163.42	2	1	1
4)	1,248.23	1	1,205.47	1	-	-
5)	1,177.27	2	985.83	3	1	1
6)	544.48	7	497.83	9	-2	4
7)	653.76	4	489.49	10	-6	36
8)	575.41	5	619.56	4	1	1
9)	542.33	10	553.51	7	3	9
10)	536.26	11	555.34	6	5	25
11)	458.41	13	375.56	12	1	1
12)	543.56	8	363.58	14	-6	36
13)	500.18	12	545.27	8	4	16
14)	542.48	9	556.82	5	4	16
15)	360.24	15	316.06	15	-	-
						$\sum d^2 = 204$

Source: Research Findings

Spearman Rank Correlation formula is as shown:

$$(R^2) = 1 - \frac{6 \sum d^2}{n^3 - n}$$

Where:

$(R^2)$  = Spearman's Rank Coefficient

$\sum d^2$  = summation of the squared ranks

$(d^2)$  = Squared ranks

$(n^3)$  = cubed appearances in the variables

Substituting in the above formula:  $(R^2) = 1 - \frac{6 \times 204}{3,375 - 15} = 1 - 0.36 = 0.64$

At 0.64, the value of  $R^2$  suggests a fairly strong positive correlation between budgeted and actual expenditure.

#### **4.2 Testing hypotheses**

The first hypothesis was tested by means of the two-way ANOVA method using data in Appendix III, so as to determine if there was a significant difference between budgeted and actual costs during the period. The results of this test in Appendix V, indicates that there is no significant difference between the budgeted and actual costs in KPLC records for the period under which the study was carried out.

The second hypothesis was tested through the Likert scale so as to establish the type of action taken by management to control costs. For this purpose, a summary was made from data collected from a closed ended questionnaire, which had earlier been administered on the budget holders. Responses made by the respondents were ranked in a scale. Table 4 below shows the scores and rankings obtained.

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Table 3: Type of action taken by management to control costs

		5	4	3	2	1	Scores	Rank
1	Budget holders prepare budgetary estimates annually before being passed over to the board for approval.	52	5	3	0	0	289	1
2	Upon approval of the budget, management oversees its implementation process.	41	9	6	2	2	265	2
3	Before approval by the board, Management at every stage of the process involves budget holders.	3	2	2	7	46	89	14
4	Budget holders are required to monitor their respective cost center budgets, on a daily basis.	3	19	10	11	17	160	6
5	Budget holders are responsible for the variances in their cost centers.	30	8	17	3	2	241	4
6	Budget holders are asked explain why adverse variances arose.	3	4	3	2	48	92	13
7	Budget holders are asked to explain why favourable variances arose.	3	3	7	6	41	101	12
8	Budget holders who exceed their budgetary allocations are asked to give explanations.	6	12	10	9	23	149	7
9	Budget holders who do not exceed their budgetary allocations are commended.	5	6	5	12	32	120	10
10	Inappropriate explanations given by budget holders who exceed their allocations may lead to cautionary or a warning letters.	4	3	7	6	40	105	11
11	Operations may be interrupted temporarily if a branch exceeds its entire budgetary allocation during a particular period.	26	17	5	5	7	230	5
12	Budgetary reallocation is allowed within the branch, from a cost center with a favourable variance to another one with an adverse variance, but within the same division.	9	5	3	14	29	131	9
13	Management regularly intervenes to bail out a branch whose overall position is adverse.	8	6	8	9	29	135	8
14	For purposes of meeting contingencies and other eventualities as they arise, management creates a special budgetary allocation fund annually.	35	12	9	3	1	257	3

Source: Research findings

Out of fourteen major factors of concern with respect to types of action taken by management, eight scored below the mean score of 150. This implied that these factors were lacking and needed to be addressed if the budgeting and budgetary control system were to be effectively applied as a tool for monitoring and controlling costs. In summary, budget holders felt, in the order of preferences, that management did not fully involve them in the budgeting process, they were not required to explain adverse variances, they were not required to explain favourable variances, they were not requested to explain how favourable variances arose, they were not required to explain the causes of over expenditure, they were not commended for not having exceeded the budget, reallocations across cost centers were not allowed; and, there was no intervention to bail out branches with overly adverse variances.

The third hypothesis was tested to determine if budget holders were knowledgeable about budgeting and the budgetary control processes. The aim was to establish whether or not factors other than budgeting and budgetary control processes influenced actual expenditure. The results of this analysis were then ranked such that those with low scores meant they were lacking thus calling for attention.

Table 4: Factoring influencing budgeting and budgetary control system

		3	2	1	Scores	Rank
1	As a budget holder, I have been preparing budgets for over 5 years	50	8	1	167	5
2	Budget holders are provided with budget guidelines on an annual basis for use in preparing budgetary estimates.	47	11	2	165	6
3	Prior training is conducted to all budget holders before being asked to prepare the budgetary estimates.	6	5	49	77	13
4	Budgets are prepared on the basis of estimated actual plus/minus a certain percentage.	56	2	2	174	3
5	Budgets are prepared only once in a financial year.	60	0	0	180	1
6	Budgetary estimates are prepared at least three six months before the start of the financial period.	55	2	3	172	4
7	The board approves the budgetary estimates.	58	0	2	176	2
8	A budget holder is required to constantly monitor his/her costs center budget.	30	3	27	123	9
9	A budget holder who exceeds the budgetary allocation in a particular period is asked give an explanation.	5	6	52	79	12
10	Explanations are sought immediately the variances arise.	10	5	45	85	10
11	A budget holder who reports a cost saving in the financial period is commended.	2	25	33	89	11
12	The major causes of variances are price escalations and slashing of estimates (before approval of budget is granted)	45	3	12	153	7
13	Human error does not significantly contribute to the variances.	30	8	22	128	8

Source: Research Findings

The above table has summarized those factors, which are considered important in a budgeting environment. The existence of these factors helps in improving the effectiveness of budgeting and budgetary control system as a tool for monitoring and controlling costs. Out of the thirteen factors, four scored less than the mean score of 90, which meant that they were lacking and required attention. For



effective budgeting controls management should ensure that budget holders receive prior training, budget holders who exceeded budgets were are asked to give explanations, budget holders who reported cost saving are commended; and, explanations as to why variances arose should be sought from budget holders immediately they arise for purposes of timely and effective decision making.

## **CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

Budgets and budgetary control systems are not adequately used as tools for monitoring and controlling costs. Sufficient follow-up methods were lacking to deal with variances. Budget holders are not strictly required to explain the causes of variances neither are they commended for spending below the approved limits. Prior training on the budget holders was lacking and budgetary estimates were slashed without due consultation at the approval stage. Investigations were not immediately carried out to establish the causes of variances for purposes of timely corrective actions.

### **5.2 Recommendations**

In order to enhance performance, budgets and budgetary control systems should serve the intended purposes of effectively monitoring and controlling costs. Users of budgets should be knowledgeable of its usefulness as a tool for reducing wastage in terms of time, material and money. Management should consult with the budget holders during the budgeting process so that the notion that budgets are forced on them is removed. The causes of variances should be investigated as they arises and corrective action taken immediately. Budgets should be used to build in harmony, democracy and motivation in a firms operations and not disharmony and discontent.

A budget committee is helpful in providing an independent opinion on the effectiveness of operating a budgeting and budgetary control system as it is composed of professionals from different disciplines such as accounting,

engineering, personnel, administration and others. Such a committee would help in critiquing the budgetary control process before making suggestions for improvement.

### **5.3 Limitations of the study**

The study focused on historical data from KPLCs financial records for the past five years. The information obtained may not necessarily be useful in projecting future operations though it would be an indicator to avoid past mistakes. Due to the limited time required to complete this research project, I did not establish the magnitude of errors made during the budgeting process and degree of amendments made on estimates before approval was granted given the various information systems applied. I also did not establish from the annual budgets how management reflected its preparedness to catastrophe on installations and other major assets, which are vulnerable to heavy repercussions if due care is not adequately incorporated in the budgets.

### **5.4 Suggestions for further research**

A further research to establish the reasons for differences between budgeted and actual costs should be made with a view to determining if factors outside the entity, such as political interference, have an influence on budgeting and budgetary control process. There is some degree of likelihood that budget holders undertake budget construction as a mere formality and are not self-driven in cost management practices especially where estimates they provide are reduced without due consultation. A research to compare the budgeting processes in the environment where democratic and participative management style is practiced

and another one where it is not should therefore be conducted. A research to determine the consistency in budgeting and budgetary control process and levels of profitability over a period of time should also be done. It would also be interesting to academicians to establish the interrelationship if any, between organizations, which have a well, established budget committee and those that do not. This would help in determining if budgets and budgetary control system have an influence in cost monitoring and control especially in this era of performance contracts where one is rewarded more given a the boarder bottom line.

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## APPENDIX I: DATA COLLECTION SHEET

	DESCRIPTION	1998/99			1999/2000			2000/1			2001/2			2002/3		
		Actual	Budget	Variance	Actual	Budget	Variance	Actual	Budget	Variance	Actual	Budget	Variance	Actual	Budget	Variance
		KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.	KShs.
1	Purchase of energy															
2	Consumables															
3	Other fuels															
4	Salaries															
5	Welfare and benefits															
6	Travelling															
7	Training															
8	Depreciation															
9	Bad debts															
10	Transport															
11	Taxes															
12	Management exps															
13	External															
14	Office															
15	Legal															
16	Insurance															
17	Advertising															
18	Public relations															
19	Commercial services															
20	Development															
21	Third parties															
22	Financial expenses															
23	Write offs															
	Total expenditure															

Table 5

23 major expense items, which are under the control of each manager in the three branches, were selected and used in the determination of whether there are significant differences between budgeted and actual expenditures.

## APPENDIX II: LETTER TO RESPONDENTS

The Budget Holder,

XYZ cost center.

---

Date .....

### **REF: REQUEST TO FILL IN THE ATTACHED QUESTIONNAIRE**

Dear Sir/Madam

I am a postgraduate student in the faculty of Commerce at Egerton University. For my final research project, I am conducting a research project on effectiveness of Budgets and Budgetary Control in Monitoring and Controlling Costs: case study of KPLC; West Region. Your cost center has been chosen to form part of the study. I kindly request you to fill in the attached questionnaire. Any information that you provide will be treated in strict confidence. Neither your name nor your staff number will be required.

A copy of the research project will be availed to you on request.

Your co-operation will be greatly appreciated.

Yours Sincerely,

Samuel N. Njogu

MBA Student – Egerton University

J.R.N. Gachara

Research Supervisor



**APPENDIX III: QUESTIONNAIRE**

**SECTION A – GENERAL INFORMATION**

This section aims to gather general information and establish if budget holders are knowledgeable about the procedures involved in budgeting and budgetary control processes.

1) As a budget holder, I have been preparing budgets for over 5 years.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

2) Budget holders are provided with budget guidelines on an annual basis for use in preparing budgetary estimates.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

3) Prior training is conducted to all budget holders before being asked to prepare the budgetary estimates.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

4) Budgets are prepared on the basis of estimated actual plus/minus a certain percentage.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

5) Budgets are prepared only once in a financial year.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

6) Budgetary estimates are prepared at least three six months before the start of the financial period.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

7) The board approves the budgetary estimates.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

8) A budget holder is required to constantly monitor his/her costs center budget.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

9) A budget holder who exceeds the budgetary allocation in a particular period is asked give an explanation.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

10) The explanations are sought immediately the variances arise.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

11) A budget holder who reports a cost saving in the financial period is commended.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

12) The major causes of variances are price escalations and slashing of estimates  
(before approval of budget is granted).

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

13) Human error does not significantly contribute to the variances.

Agree \_\_\_\_\_

Disagree \_\_\_\_\_

Not aware \_\_\_\_\_

Thank you for your help in answering the above questions.

Date.....

## SECTION B

This section aims to establish the type of action management takes to control expenditure. An analysis using the Likert scale is then ranked from the following closed ended questionnaire, which is scored from 1-5 and determined as follows:

Strongly agree [ 5 ]

Agree [ 4 ]

Neither agree nor disagree [ 3 ]

Disagree [ 2 ]

Strongly disagree [ 1 ]

- 1) On an annual basis, budget holders prepare budgetary estimates before being passed over to the board for approval.
- |                            |     |
|----------------------------|-----|
| Strongly agree             | [ ] |
| Agree                      | [ ] |
| Neither agree nor disagree | [ ] |
| Disagree                   | [ ] |
| Strongly disagree          | [ ] |
- 2) Upon approval of the budget, management oversees its implementation process.
- |                            |     |
|----------------------------|-----|
| Strongly agree             | [ ] |
| Agree                      | [ ] |
| Neither agree nor disagree | [ ] |
| Disagree                   | [ ] |
| Strongly disagree          | [ ] |
- 3) In case an amendment to the estimates is to be made before approval; management involves the budget holders at every stage of the process.
- |                            |     |
|----------------------------|-----|
| Strongly agree             | [ ] |
| Agree                      | [ ] |
| Neither agree nor disagree | [ ] |
| Disagree                   | [ ] |
| Strongly disagree          | [ ] |
- 4) Budget holders are required monitor their own cost center budgets on a daily basis.
- |                            |     |
|----------------------------|-----|
| Strongly agree             | [ ] |
| Agree                      | [ ] |
| Neither agree nor disagree | [ ] |
| Disagree                   | [ ] |
| Strongly disagree          | [ ] |

5) Budget holders are responsible for the variances in their cost centers.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

6) Budget holders are asked explain why adverse variances arose.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

7) Budget holders are asked to explain why favourable variances arose.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

8) Budget holders who exceed their budgetary allocations are asked to give explanations.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

9) Budget holders who do not exceed their budgetary allocations are commended.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

10) Inappropriate explanations given by budget holders who exceed their allocations may lead to cautionary or a warning letters.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

11) Operations may be interrupted temporarily if a branch exceeds its entire budgetary allocation during a particular period.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

12) Budgetary reallocation is allowed within the branch, from a cost center with a favourable variance to another one with an adverse variance, but within the same division.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

13) Management regularly intervenes to bail out a branch whose overall position is adverse.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

14) For purposes of meeting contingencies and other eventualities as they arise, management creates a special budgetary allocation fund annually.

Strongly agree [ ]

Agree [ ]

Neither agree nor disagree [ ]

Disagree [ ]

Strongly disagree [ ]

In case you have any comments you would like to make regarding budgeting and budgetary control processes, as a budget holder in KPLC, please write them below.

---

---

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Thank you for your help in answering the above questions.

Date \_\_\_\_\_

**APPENDIX IV: SUMMARY OF ANNUAL COSTS**

		Actual (KShs Million)	Budget (KShs Million)
BRANCH X	1998/99	452.44	378.91
	1999/00	571.71	370.32
	2000/01	995.07	1,163.42
	2001/02	1,248.23	1,205.47
	2002/03	1,177.27	985.83
BRANCH Y	1998/99	544.48	497.83
	1999/00	653.76	489.49
	2000/01	575.41	619.56
	2001/02	542.33	553.51
	2002/03	536.26	555.34
BRANCH Z	1998/99	458.41	375.56
	1999/00	543.56	363.58
	2000/01	500.18	545.27
	2001/02	542.48	556.82
	2002/03	360.24	316.06

Table 6

Branch X, Y and Z represent Central Rift branch, West Kenya branch and North Rift branch, respectively.



**APPENDIX V: TEST OF HYPOTHESIS: TWO-WAY ANOVA METHOD**

Table 5a: Computation of variance (KShs. Millions)

	Actual	Budgeted	Count	Sum	Average	Variance
X	452.44	378.91	2	831.35	415.68	2,703.33
X	571.71	370.32	2	942.03	471.02	20,278.97
X	995.07	1163.42	2	2,158.49	1,079.25	14,170.86
X	1248.23	1205.47	2	2,453.70	1,226.85	914.21
X	1177.27	985.83	2	2,163.10	1,081.55	18,324.64
Y	544.48	497.83	2	1,042.31	521.16	1,088.11
Y	653.76	489.49	2	1,143.25	571.63	13,492.32
Y	575.41	619.56	2	1,194.97	597.49	974.61
Y	542.33	553.51	2	1,095.84	547.92	62.50
Y	536.26	555.34	2	1,091.60	545.80	182.02
Z	458.41	375.56	2	833.97	416.99	3,432.06
Z	543.56	363.58	2	907.14	453.57	16,196.40
Z	500.18	545.27	2	1,045.45	522.73	1,016.55
Z	542.48	556.82	2	1,099.30	549.65	102.82
Z	360.24	316.06	2	676.30	338.15	975.94
Actual			15	9,701.83	646.79	71,944.02
Budgeted			15	8,976.97	598.46	82,388.45

Table 5b: Computation of Anova

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	2,084,253.224	14.00	148,875.23	27.28	9.8E-08	2.48
Columns	17,514.06732	1.00	17,514.07	3.21	0.09485	4.60
Error	76,401.26388	14.00	5,457.23			
Total	2,178,168.556	29.00				

From the above, there is no significant difference between the overall budgeted and actual costs (in the columns), as the computed value  $F=3.21$  is less than the critical value  $F=4.600109908$ , at 5% degrees of freedom.