

**BUDGETARY CONTROL PRACTICES AND PERFORMANCE
OF PUBLIC MEDICAL LABORATORIES IN
HOMA BAY COUNTY, KENYA**

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DECLARATION

This research project is my original work, as far as I am aware it has never been submitted to any university or any other institution of higher learning for the award of a degree or any other academic award

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Signature.....

Date

This research project has been submitted for examination with my approval as the university supervisor.

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Date.....

ACKNOWLEDGEMENT

Glory is to the almighty father, the source of wisdom and the hope for the patient,

Appreciation to Dr. Joshua Wanjare, for encouragement, support and guidance,

Thanks to My beautiful wife, Winnie for support, prayers and patience,

Son of Queen, we have travelled this far; The Journey is not over yet.

ABSTRACT

This study was carried out with the objective of determining the effect of budgetary control practices on performance of public medical laboratories in Homa Bay County, Kenya. To achieve the study objective, descriptive design was applied and both secondary and primary sources were used to obtain data. Structured questionnaire, of a five point Likert scale was administered to subordinate laboratory technicians in a total of 43 active public medical laboratories in Homa Bay County. Descriptive statistics was applied in analysis assisted by Statistical package for social sciences (SPSS) in analysis of data gathered and ANOVA (Analysis of Variance) assisting in comparing value differences between variables. Findings indicated that budgetary control practices had effect and a strong correlation on performance of public medical laboratories in Homa Bay County. Specifically, setting of standards and goals and taking corrective action had a positive effect while monitoring and measuring performance and analyzing variance had a negative effect. Study revealed big financing gaps between plans, budgets and actual costs and found that the workforce was demotivated. On the basis of the findings, it was suggested that the application of budgetary control practices should not overtake or displace exceptional leadership and suitability of operations within any unit. It was further recommended that there be placed mechanisms to exert motivation towards reading, interpreting and executing control practices for them to serve the ultimate purpose and to offer viable, sustainable and desirable results.

DEDICATION

This project is dedicated to my loving father Mzee Peter Giriago Ogada.

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ABBREVIATIONS AND ACRONYMS

CDF	Constituency Development Fund
DHIS	District Health Information System
CHMT	County Health Management team
HIV	Human Immunodeficiency Virus
HMB	Hospital Management Board
ISO	The International Organization for Standardization
KEMSA	Kenya Medical Supplies Authority
Lab	Laboratory
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NGO	Non Government Organization
SCHMT	Sub County Health Management Team
TB	Tuberculosis

CHAPTER ONE: INTRODUCTION

1.1 Background

This study focuses on budgetary controls and performance with intent to find both positive and negative aspects of practices associated with budgetary controls that would have influence on performance of public entities. Budgeting Control practices easily translate into guidelines that govern performance. In a study by Adongo (2012), it was observed that, the effect of budgetary control practices on performance was positive among state bodies who exhibited propensity to predict organizational milestones. Voigt (2010) recommends use of budgets as practical devices to advancing goals and standards. To deliver on their mandates, all levels of government prepare and approve into law a plan of revenue and expenditure in a document called the Budget (Maritim, 2013). A budget is a product of forecasting, its control along with prudent execution should satisfactorily meet expectations

The study is anchored on the theory of Public expenditure, as advanced by Adams (1985), Agency theory (Ross & Barry, 1970) and the Institutional Theory (North, 1991). Budgetary control practices and performance are well related by agency theory where the interests of both the agent and owners are at stake. The theory of Public expenditure ties the experiences of individuals with public expenditure. The institutional theory further ties performance and controls when it posits that through institutionalization, public units are able to attain durable and stable performance outcomes.

Budgetary control practices should offer timely, accurate and complete data to all actors in execution. To achieve desirable results, standards, goals, performance and operational approaches must be strongly chained in budgetary practices (Maritim, 2013). There is increased pressure on Laboratories to test and provide results which are availed rapidly, interpreted accurately and applied correctly. This has been a challenge with increasing population, complexity of illnesses exhibiting similar traits and inadequacy in resource base. This paper intends to uncover the effect of budgetary control Practices on performance in public medical laboratories in Homa Bay County.

1.1.1 Budgetary Control Practices

Lambe et al. (2015) refer to budgetary control practices as the established mechanisms used to guarantee that actual results conform to planned activities. The practices are about budgetary goals and performance standards modeled to serve as structure upon which an entity effectively measures and analyses overall performance (Lambe et al., 2015). Pandey (2008), points out at Budgetary Controls as the blueprint of departmental budgets relating the responsibilities of the executive to the requirements of a policy and the perpetual comparison of exact budgeted results either to attain coveted tasks. The practices are therefore actual application of budgets as means of cost control including budget formulation, coordination of operations, assigning responsibility, comparing the actual performance with budgeted and acting on results to maximize performance. A budget according to Egbunike (2014) is a futuristic, comprehensive and coordinated plan denoted in monetary values for undertaking business. The budgetary control practices tie daily performance with cost and revenue elements. It is through the practices that the management gathers information that supports decision making relating to actual and

budgeted results. This enables efficient utilization of resources, accurate judgment of standards set, establishment of order, direction and discipline.

The budgetary control practices are systematic procedures with the first step being setting of standards and goals of operation (Jones, 2010). Standards are the criteria against which actual results are measured. Standards and goals offer the platform upon which entities endeavor to execute. The budget acts as tool for setting précised and scalable standards and goals (Kamau et al., 2017). Labs set standards and goals that offer direction. Labs draw up targets of cases that it can optimally handle against which actual workload is compared. The second phase involves Monitoring and measurement of performance. Performance should be measured in objective and reliable ways. Notable approaches towards measurements include observation, sample checking and action reports. Measurement can be done as work progresses or at the end in similar units as per standards set. In lab measurements may be in terms of the number of patients served or the set of cases tested. Lambe et al. (2015) advices that, appraisal must be made of both controllable and uncontrollable factors. These factors may not be directly under the purview of the management. They recommend that provisions must be made in line with the uncertain results, whether favorable or adverse. Analysis of performance variances is a third practice. Analysis is done after the comparison of actual output and plan has revealed the variances. Analysis is much simple if standards and goals are set in quantitative values (Jones, 2010). A lab is a key area in the medical field and analysis of deviations in lab performance must the given urgent and significant attention. Taking corrective action is the final practice in budgetary controls. Whenever variances are

beyond the acceptable limit, especially in a critical unit like a lab, then appropriate measures are taken to correct the situation and stall reoccurrences. It is general practice in labs to take investigation into causes of deviation and use such causes as basis for future planning, to strengthen communication and decisive corrective action. Despite the relevance of budgetary controls, a more rigorous and scientific evaluation of its practices and impact on performance of laboratories has not been demonstrated in Kenya.

1.1.2 Performance

Performance according to Neely et al. (1997) is the process of quantifying the efficiency and efficacy of an action. Salem (2003), describes performance as being about work done and results achieved. It is concerned with outcomes of what is executed since it avails the crucial tie to the goals of the entity, financial contributions and the satisfaction of clients. Performance of the business of whatever size and diverse quality should have goals set. There is a connection aspect that sees the execution targets that must be met to accomplish the goals. There is also the association aspect that shows the measures to be deployed in comprehending if targets are met.

Performance measures can be of two types; those that focus on the results, output or outcome and those that focus on the inputs that determine the results. Budgetary performance can be examined using budget compliance, value for money, and achievement of budget objectives (Kamau, 2017). Tools are identified by (Kamau, 2017) as a measurement practice. Key performance indicators and metrics (KPI & Metrics) is one such tool. KPI & Metrics provides measure of performance of business or

government units in comparison to goals. It enables rich data driven performance evaluation and effective decision making and gives clear operational status.

Kaplan, (2010) identifies use of customer metrics to measure performance. This deals with on-time delivery, lead time and customer measured defects. This study will focus on customer (patient) metrics in depicting performance indicators. This is because budgetary control practices that invest in approaches lead to better service quality, which leads to higher customer satisfaction and in turn to increased customer satisfaction and loyalty. The public medical labs are not profit centers but largely are cost centers and thus their successes cannot be purely captured by financial indicators but by also looking at the workload; the number of patient cases handled, measured and accounted for in budgetary terms. Given the reasoning by Hubbard (2009) that the threshold number of performance indicators should be in line with the capability of human brains to process information, this paper will mainly pursue quantity and operational cost elements as indicators of priority. Cost is about price, orders and budget values, and Quantity is about units (work load) supplied and demanded (Neely et al., 1997). Laboratory is a service center where patients are interested in providers who understand them, give them right information and advice. Customers (Patients) need convenient access to the right products and they appreciate services provided easily, quickly and correctly (Kaplan, 2010).

Labs are required to function optimally. Optimum performance level is the best level or most favorable state that can possibly be achieved (Singh et al., 2009). In short term forecasting of optimal levels, commodity consumption is utilized in estimating the workload that a facility is supposed to handle. A Forecast for twelve months or over,

provides the levels of requirements for different commodities which are then compared with capacity for any desirable adjustments (Baazel ,2013) as cited by (Ndegwa, 2017).The performance level is determined through exposing deviations from targets and realigning systems and practices (Gregory, 2015). The budgeting process which consists of prediction, implementation, and control of budget must give answers on which lab commodities to be offered, financing sources, and the consequences on lab performance. The determination of the laboratory optimal size includes the assessment of the progressive lab expenditure and of the entire budgetary control framework.

1.1.3 Public Medical Laboratories in Homa Bay County

A medical lab is place where tests are carried out on clinical specimens in order to obtain information about the health of the patient as pertaining to the diagnosis, treatment and prevention of diseases (Marek, 2011). The public medical labs are owned and managed by the government. Kenya medical laboratory technicians and technologists board does the accreditation of labs. There are 114 public medical laboratories across HomaBay County (Homa Bay County Department of Health, 2018), however only 43 are active. Each laboratory is in a specific medical facility under the purview of the department of health services. The main purpose of the laboratories is to offer medical tests to patients but also to provide consultative services to physicians, Health managers, occupational health environment and insurance schemes. Lab services must be consistent and dependable to correctly asses and manage patients with different illnesses. Every effort must be made for lab performance to be at acceptable standards.(World Health Organisation, 2002). Medical tests may be undertaken away from the lab rooms. This

may therefore mean that; a laboratory is a way of thinking about scientific investigations. It is an intellectual process as opposed to a building with specialized equipment. The Homa bay laboratory network is structured into four levels with the lowest level one, serving primary health care to the highest level four, serving referral services at the County teaching and referral Hospital. Level one has 58 laboratories; Level four has only one laboratory. Level two has 39 laboratories and three has 16 laboratories, both are respectively serving health centers and sub county hospitals.(Homa Bay County Department of Health, 2018). The budget cycle at Health facilities is restricted at Quarterly basis. Laboratory subunits make quarterly estimates which are subjected for consideration by the Hospital Management team (HMT). The HMT subjects the consolidated budget to Hospital Management Board (HMB) for further review and approval. The board reviews and forward approved budgets to CHMT through the SCHMT. (Governance Guidelines for Hospital Management Boards, 2019).

Laboratory commodity supply systems are fully devolved to counties except for the HIV/TB and malarial commodities which are sourced nationally and distributed to various facilities by KEMSA. Facilities may source commodities using locally generated funds. Partners may also top up HIV/TB related commodities in cases of stock outs (Homa Bay County Department of Health, 2018). Data is collected by laboratories using Laboratory registers and request forms. This information is collated monthly in a standard of operation (SOP) document known as MOH 706, for reporting workload and commodity utilization (Homa Bay County Department of Health, 2018).

World Health Organization is exerting pressure on counties to plan for and invest in laboratory networks (World Health Organisation, 2002). There are a myriad of issues emerging or current that are either without guidance or capability with the counties to handle. There is need for integrated approach to infections caused by human interaction with animals. Constant threat from bioterrorism seeks assessment and control of resources towards biosafety and biosecurity. Laboratories and blood banks experience chronic shortage of blood for transfusion. Large laboratories need international accreditation such as ISO 15189 while smaller ones to national standards. There are increasing cases of tests done outside of laboratory settings causing concerns in terms of communication, quality and safety. Laboratory results are only useful if available in real time, interpreted accurately and applied correctly (World Health Organisation, 2002). Efforts to contain such issues require enormous resources measured in shillings. This calls for proper interface between Laboratory performance and the Budgetary Control practices.

1.2 The Research Problem

In Homa Bay County, the budget process and the control systems are based largely on qualitative procedures. The processes are consultative, participatory, rigorous and lengthy, but what is astonishing is the ever mismatch between revenue allocation and expenditure. Salem (2003) states that confusion exists on what constitutes a government performance and what should be emphasized when measuring performance. Health facilities are struggling with sourcing funds through their own internal collections. Support also comes from donors in form of grants and supplementing commodities. Disbursements from equitable share are hardly realized. Public medical laboratories in

Homa Bay are exhibiting symptoms of poor budgets and inadequate requirements. Urban based laboratories are better stocked than their rural counterparts; they actually suffer chronic shortages due to erroneous and erratic supplies. The problems force patients to bypass local lower levels to seek checkups or interventions from urban based labs.

The county budgetary controls are centralized and relegated to the elite with no time to the rigor of evidence based process. Key responsibility centers like the laboratories are likely to be excluded or ignored in supervisory, monitoring and analytical schedules. Lab test menus do not fully reflect what is exactly available and applicable. Some patients seek attention from private labs and across the borders or revert to alternative traditional clinical interventions. This research study therefore seeks to find if budgetary control practices effect performance of public medical laboratories in Homa Bay County.

Empirical studies relating to budgetary control practices and or versus performance of devolved functions in Kenya are remote. It is upon this remote nature that this study is based. Labs were chosen due to the fact that health care is fully devolved and the labs are critical centers of scientific and financial intensity. Egbunike and Unamma (2017) studied budgeting, budgetary control and performance evaluation of Nigerian hospitality firms. They concluded that there were significant variances in budgery controls and performance evaluation. They recommended that performace analysis should inform budgeting. Miritim (2013) concentrated on the Effects of Budgeting process on financial performance of parastatals he found that budgetary controls determine budget variances which assist in evaluating operational costs. Kamau et al (2017) took a case study on Kenyatta national hopital to ascertain the effect of budgetary process on budget

performance. The study found that control practices should be enforced in state corporations.

Gathecha (2017) attempted to find about the effect of budgetary control on operational performance of public hospitals in Kiambu County and obtained that there existed a positive effect. Ngugi (2015) researched on budgetary control and performance of CDF in Machakos County. The study concluded that budgets have potential of reducing ambiguity in achieving goals and recommended further study on specific practices of budgetary controls. It is obvious from the above evidence that specific practices of budgetary controls and performance has registered less focus. And where studies have come closer there has been none aligning county departments down to their subunits of performance with bottom up approach as a concern. Furthermore majority of the studies have deployed qualitative research techniques to Primary data.

1.3 Research Objective

The objective of this study is to determine the effects of budgetary control practices on performance of the laboratories in Homa bay County

1.4 Value of the Study

The study should form a basis for further study to other researchers, research institutions and scholars of Budget and health finance. It should generate additional knowledge on the subject matter of consumption of essential health commodities, their supply and their inadequacy. Empirical studies in Kenya on the area of budgetary control and performance have been minimal with none in relation to devolved clinical laboratories.

The findings from the study are intended to enlighten the Budget formulators on the role of scientific evidence in achieving appropriate estimates; the formulators who may also be the implementers will appreciate the need to adhere to the service charters and to manage the clients more efficiently. It should serve as an impetus to policy makers in aligning budgetary practices to performance. To oversight it should trigger the need to eliminate the culture of non-applicability of policy.

The study aims at helping the citizens in making informed contributions during public participation as required by the law. Further being the ultimate end users of the laboratory supplies and health care in general, the study should serve in improving their health seeking behaviors.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses theories related to the study. It examines related literature on the resulting effects on performance from the practices of budgetary control and give a summary.

2.2 Theoretical Literature Review

This study is anchored on the theory of Public Expenditure, the Agency theory, and the Institutional theory.

2.2.1 Theory of Public Expenditure

The theory of Public expenditure (Adams, 1985), states that the experiences of the individual in the private income may be relied on in determining the public expenditures. Public income is part of social income upon which the government appropriates its budget. The allocation of public resources among spending units is under the same influence as the individual budget (Adams, 1985). There is a budgetary distribution norm for the primary public services that should reflect equity and any variance from the norm should be explained by the government Kham and Hildreth (2002). Laboratories though public units, do set their targets just like individual persons depending on their revenue and spending ability

2.2.2 Agency Theory

Ross and Barry (1970) developed the agency theory. The theory focuses on the relationship between the principles and agents who are expected to perform in the interest of the principals. It says the objectives of the principals may be opposed to Agency costs (Panda et al., 2017). The theory implies separation of ownership and control. Ownership is held by shareholders (principals) who donate power to the managers (agents) to take charge of the business on their behalf, we learn that from Ross (1973). The point of contention is whether the Agents are performing their own interests or those of the owners. The public medical labs have control of their activities and are supposed to represent the public interest. Public units are seen as agents of the Citizens (principal) because they are obligated to plan and perform to a certain level of public expectation in exchange of for their budgetary allocations (Kamau et al.,2017). Assessment on the association between the agency costs and the agent's performance by Wiseman (1998) reveals that the agents are rational, anti-loss or risk and they are capable of trading off between internal and external interests. The theory exemplifies linearity between the agent's performance and practices that set goals and enable execution. According to Fama and Jensen (1983), the agency problem is due to the fact that manager who formulate and implement their own decisions are not the bearers of the consequences. The citizen, the patients may be the bearers of lab performance even though they don't directly partake planning, execution and controls. Blattman and Miguel (2010) advises competing interests to prefer bargaining solutions, this way they will avert destructive conflicts.

2.2.3 Institutional Theory

Institutional Theory was developed by North (1991). According to Scott (2013), An institution is bundle of beliefs rules, roles, material resources and symbolic elements that are divergent in nature. Entities and their subunits exist with institutional environment. Institutionalization is about how practices within an entity are widely accepted without disputes regarding their evaluation, evidence or relevance and if they can withstand challenges (Greenwood et., 2011).It is through institutionalization that durable and stable operational levels are attained. Deinstitutionalization is however the process by which the legitimacy of established practice erodes or discontinues. The theory is concerned with the analysis of structure, characteristics and performance within units, it shows that compliance to requirements enhances legitimacy and reduces uncertainty.

Medical labs interact with stakeholders who determine in part their performance and control practices. Labs must contend with external influences of divergent cultures, legal obligations, and competing demands from different players like NGOs, labour unions, control and audit agencies, medical practitioners, politicians and the patients. The theory is chief in enabling alternative analysis of questions regarding nature and structure of budgetary control practices and corresponding results in the public medical labs. The theory can be useful in unpacking the statistics for central planning and control within counties versus use of quantitative information at decentralized units like labs. Relevant aspects that affect laboratories in achieving their targets may be unique to public practice, devolution, resource availability and executional sophistry. Maritim (2013) explains that the ability of players in understanding the means- end relationship, routine and task

variety is very crucial. There is need in the case of laboratories to consider integrated budgeting approach to keep pace with emergent technology and uncertain infections. Health is an institution with formal rules of action, interaction, and interpretations that guide and constrain decision makers, while a Hospital is an Organization.

2.3. Budgetary Control Practices and Performance

A study by Hope (2013) in the United States on how managers could break free from performance trap, confirms that budgeting offers opportunity for setting goals and standards of performance to be entrenched with subsequent comparison of actual performance. Nearly all dimensions of finance are implicated in Budgeting. Budgeting is aligned to costing, performance measurement and compensation. Mohamed et al.(2015) examined how budgetary control can impact performance. They confirmed that variance analysis and zero based budgeting enhance budgetary control and improve performance of organizations. Godfrey (2017) assessed the impact of budgetary control on organizational performance in public institutions in Tanzania. Questionnaire and interviews were used in data collection. The study revealed a correlation between budget deficit and disruption of normal operations; it also found poor budgetary controls to be responsible for slacks in organizational performance.

Gachithi (2010) looked at Factors that influence budget implementation in public institutions in Kenya; he focused on one state university of Nairobi using descriptive approach and concluded that budget processes were facing a lot of challenges but were strong planning tools for the future. According to Onyango and Wanyoike (2014) citizens attempt to rapidly and effectively attain fulfillment from public services to a particular

degree that government is capable. Irrespective of the possible gains from budgetary controls, there is doubt on performance by public entities. Wanyoike (2015) opines that the citizenry see no justification in terms of evidence and reliability in the budgeting processes and practices that offer guidance on performance.

A study by Onduso (2013) on the effect of budgets on financial performance of manufacturing companies in Nairobi used both primary and secondary data and regression model was applied to obtain the relationship between variables. The study found linearity between budgets and financial performance and recommended robust systems, process prioritization and capacity building.

Studies by Adongo (2012) had the objective of establishing what relates to or affect budgetary control systems and financial performance. Descriptive survey design and a critique of literature used revealed that, the effect of budgetary control on financial performance was positive among state bodies who exhibited propensity to predict organizational milestones. Ngugi (2015) in researching the relationship between budgetary control and performance of constituency development funds in Machakos county based the study on control and contingency theories. the use of descriptive statistics aided in finding that information flow, participation and monitoring represents the core management function that ensure performance is as designed.

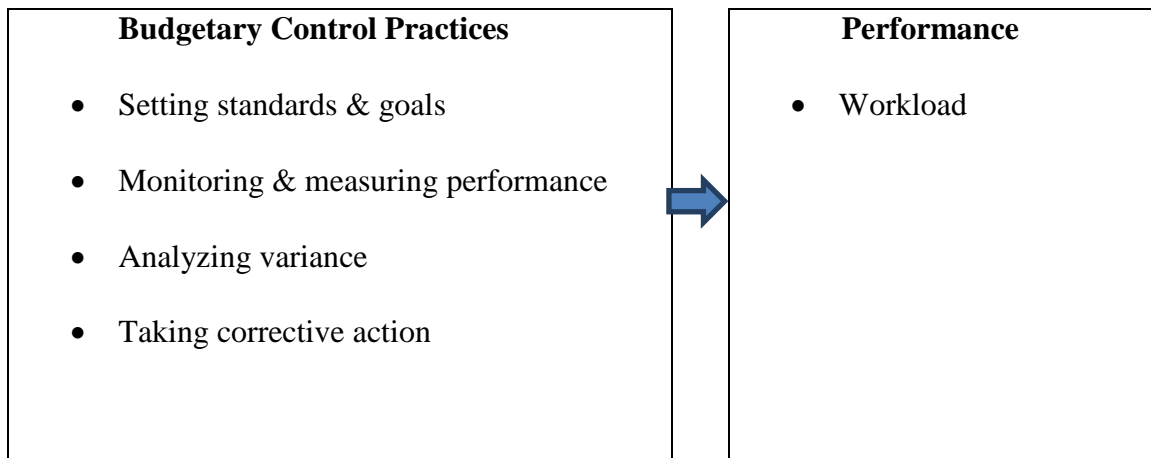
2.4 Summary of Literature Review and Knowledge gap

The literature review reveals that budgetary controls are poly centric with enormous effect on performance. Budgets state policy outcomes, make priorities, and program goals and objectives. Controls delineates overall public expenditure and measures its performance, impact and effectiveness (Hyde, 1992). Public budgeting lacks coherent theory. It is partly political, partly economic, partly accounting. Business performance is driven by budgetary controls, what is not clear is whether optimal estimates are core and central elements of consideration in budgetary and performance aspects. Higher operational costs, strained resource base and dissatisfied citizenry may be linked to defects in quantification. Taylor and Taylor (2009) opine that; there is increasing realization of the possible gains from exploring performance through alternate spectrums and systems. Budgetary pleas in public entities resemble the portfolios the investors deal with in the private sector. Efficient portfolios are considered acceptable depending on the risk and the returns the portfolios produce. Likewise budgeting in public is faced with selecting the ultimate or the optimal portfolio from the set of possible financial estimates. The theory posits that the government officer will go for a budget that maximizes utility subject to a risk return combination, (Kham and Hildreth, 2002).it appear that Budgets are being implemented by agencies with greater attention on profitability, economy, and efficiency with least focus on outcomes and effectiveness by subunits like the public medical laboratories. There is less focus on specific budgetary control practices and their effect on performance by devolved entities and subunits in Kenya.

2.5 Conceptual Model

Fig. 1 below illustrates the effect of budgetary control practices on performance on public medical laboratories in Homa bay County. Performance, the dependent variable; will be measured by workload and operational costs that will be extracted from official records.. This is a modified model borrowed from Gathecha (2017).

Fig 2.1: Conceptual Model



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter is designed to show the research methodology applied in actualizing the research objective in a logical manner. It comprises; research design, population, data sampling, data collection and data analysis.

3.2 Research design

The study applied descriptive research design in detailing how the study was undertaken. Descriptive design is a scientific method involving observing and describing the behavior of variables without influencing them in any way (Cooper & Schindler, 2014). As put by Sekaram (2003), descriptive design is important where the characteristics of a phenomenon are known to exist. Adongo (2012) Concurrs that descriptive design is useful in developing a snapshot of a given phenomenon that involves big sample size which is the case with this study. This design was useful in depicting effects between budgetary control practices and Laboratory performance without influence from the reseacher.

3.3 Study Population

The Study population is the entire group of things, individuals, or occurrences that the study intends to investigate (Sekaram, 2003). This study targeted 43 active labs out the 114 Public medical laboratories in Homa Bay County (Homa Bay County Department of Health, 2018).

3.4 Sampling

A large sample of population was used. Use of a large sample size broadens the range of data and improves the quality of its analysis, Cooper and Schindler (2014). The population for this study consisted of all the public medical laboratories listed in (Homa Bay County Department of Health, 2018), however labs which are not active at the time of the study were left out.

3.5 Data Collection

The study applied secondary data obtained from existing records that include health web sites eg. the District Health Information System (DHIS), lab registers, summery reports and other MOH-documentations. Further information was gathered from Departmental Financial analysis, Fiscal and strategic plans. Government data was useful saving effort, time and money with high propensity to accurate interpration and correct application. Primary data was also gathered through structured questionnaire. Linkerts scales helped in gathering percetions on practices of budgetary controls from the subornate staffs at the labs.

3.6 Data Analysis

Quantitative analysis was used in evaluation of numeric information on workload, budget values, commodity quantity and cost obtained from records. Statistical package for social sciences (SPSS) assisted in data analysis and ANOVA (Analysis of Variance) suited comparing value differences between variables, inferential statistics fitted in deducing

conclusions. Graphs and tables were used in presenting data. Qualitative analysis also assisted in expressing empirical literature.

3.7 Analytical Model

Analytical model estimates or classifies data values and makes predictions based on past records. A multivariate regression model was used in determining the effect of budgetary control practices on performance of laboratories in Homa bay County. The independent variables were the budgetary control practices. The dependent variable was performance , measured in workload. The regression model to be applied in the study is as here below:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where:

Y = Performance; measured as the sum of score assigned to workload

α = Intercept

X1 = Setting standards and goals

X2 = Monitoring and measuring performance

X3 = Analyzing performance variances

X4 = Taking corrective action

ε = Error term

$\beta_1, \beta_2, \beta_3, \beta_4$ Are regression Coefficients

CHAPTER FOUR: DATA PRESENTATION, FINDINGS AND DISCUSSION

4.1 Introductions

The objective of the study was to determine the effect of budgetary practices on performance of public medical laboratories in Homa Bay County. Data in relation to the objective of the study was obtained from both official secondary sources and by use of structured questionnaires. The findings are described and presented in tables and graphs. Data gathered from various lab technicians through questionnaires was coded and analyzed using SPSS. Further a correlation and regression analysis was performed on the results.

4.2 Response Rate

The target population was 43 public medical labs in relation to effect of budgetary control practices on performance of public medical labs in Homa Bay County. The study received data from 26 respondents. Response rate from the target group was thus 60 % this is reliable enough to convincingly determine the effect of budgetary control practices on performance of public medical labs.

Table 4.2.1: Response Rate

Description	Questionnaires Administered	Questionnaires Filled And Returned	Percentage
respondents	43	26	60%

4.3 General information

Homa bay county has a system of 114 public medical lab across the county whose vision is to provide quality, affordable and sustainable medical laboratory services through appropriate technologies and competent personnel that will contribute to improvement of the health of Homa Bay county residents.

Table 4.3.1: County lab commodity financing

Optimal Estimates	Actual Budget	Variance	Actual cost
112,668,313	30,000,000	92,668,313	21,280,000

Source: secondary data

For Homa Bay County to optimally operate, it is estimated that it should have an actual budget of Ksh. 112,668,313.00 to cater for essential commodities. This is besides what is optimally required from the national government and donor contributions. However for the year under review Homa Bay lab commodity actual budget was Ksh. 30,000,000.00 Only.

Table 4.3.2: Estimates of tracer lab commodities

Expected Funding	County Government	National Government
Budgetary Value	34,901,387.47	57,580,916.52

Source: Secondary data

Tracer is a list of essential commodities and supplies that are required to be available at a medical lab at any given time. Commodities may also be categorized as vital or as non-essential. Secondary data reveals that Homa Bay county labs do experience challenges regarding inadequate financing and staffing. It records high staff attrition rates and low staff motivation. There are no proper storage for lab supplies which are constantly depleted. These result to frequent service interruption, failure to offer full test menus and weak bacteriology services in most labs

Table 4.3.3: M&E and Reporting

Type of Report	frequency	Destination
Workload	Monthly	DHIS
Financial	Monthly	Finance Office
Commodity consumption data	Monthly	DHIS
Disease surveillance reports	Weekly/monthly	IDRS
Human resource reports	Quarterly	Human Resource office

Source: Secondary data

Table 4.3.4 above indicates reports generated periodically and continuously. Each lab in the county collects, collates and prepares reports that are disseminated either electronically or physically to CHMT which is the immediate supervisor. Oversight is also done by the county auditor and the county assembly. The reports are designed to facilitate control. The reports contain carefully chosen data focusing key variables. They

indicate actual results comparable to budget plan and goals. They are fundamentally performance reports that in essence inform budgetary decisions.

4.4 Descriptive analysis of budgetary control practices

The respondents were asked to respond by indicating the degree to which they agree or disagree with different parameters within different budgetary control practices in their labs in a five point Likert scale. The scales were ranging from “strongly disagree” (1) to “strongly agree” (5). The mean scores ranging between 0 to 2.4 represent a perception of strongly disagree, mean scores of 2.5 to 3.4 represent a moderate perception. Mean scores of 3.5 to 5 on a continuous Likert scale would represent perceptions of both agree and strongly agree. A standard deviation greater than 0.8, indicates a significant variance on the effect of the variable in the view of the respondents. The results are detailed in tables indicating mean, standard deviation, and variance values of respective variables.

Table 4.4.1: Setting standards and goals

Statistic	Category	f	%	Mean	Standard Deviation
Our lab has annual work plan	Agree	16	61.5	4.38	0.50
	Strongly Agree	10	38.5		
Our plans are within the general performance norms	Disagree	1	3.8	4.00	0.75
	Not Sure	4	15.4		
	Agree	15	57.7		
	Strongly Agree	6	23.1		

Plans ensure order and discipline	Disagree	1	3.8	3.88	0.71
	Not Sure	5	19.2		
	Agree	16	61.5		
	Strongly Agree	4	15.4		
Plans/budgets clearly set priorities and accurately predict performance requirements	Disagree	3	11.5	3.81	0.98
	Not Sure	6	23.1		
	Agree	10	38.5		
	Strongly Agree	7	26.9		
Budgets help in tracking expenditure and assist in reducing operational costs	Disagree	4	15.4	3.62	0.90
	Not Sure	5	19.2		
	Agree	14	53.8		
	Strongly Agree	3	11.5		
Our budgets provide resources for performance	Disagree	3	11.5	3.69	0.97
	Not Sure	8	30.8		
	Agree	9	34.6		
	Strongly Agree	6	23.1		
Our lab budgets are costed according to availability of funds and expected cash flow changes	Not Sure	7	26.9	3.85	0.61
	Agree	16	61.5		
	Strongly Agree	3	11.5		
We are trained and we have full information needed in preparing budgets	Strongly Disagree	16	61.5	1.58	0.86
	Disagree	6	23.1		
	Not Sure	3	11.5		
	Agree	1	3.8		

Budgets lead to cost effective procurement	Strongly Disagree	1	3.8	3.54	1.07
	Disagree	3	11.5		
	Not Sure	8	30.8		
	Agree	9	34.6		
	Strongly Agree	5	19.2		
overall				3.59	

Source: Primary data

As indicated in the table 4.4.1 above setting standards and goals was found to be a practice that would effect performance of medical labs with an overall mean of 3.59. The availability of annual work plans had highest had a mean of 4.38 and a standard deviation of 0.50 planning within the general performance norms had a mean of 4.00 and a standard deviation of 0.75 Plans ensuring order and discipline had a mean of 3.88 and a standard deviation of 0.71 Plans/budgets clearly setting priorities and accurately predicting performance requirements had a mean of 3.81 and a standard deviation of 0.98, Budgets helping in tracking expenditure and assist in reducing operational costs had a mean of 3.62 and a standard deviation of 0.90, Costing according to expectation and availability of funds had a mean of 3.85 and a standard deviation of 0.61, budgets providing resources for performance had a mean of 3.69 and a standard deviation of 0.97, capability in preparing budgets had a mean of 1.58 and a standard deviation of 0.86, Budgets leading to cost effective procurement had a mean of 3.54 and a standard deviation of 1.07. The results are as shown in table 4.4.1

Table 4.4.2: Monitoring and measuring performance

Statistic	Category	f	%	Mean	Standard Deviation
Our lab has proper reporting tools	Not Sure	1	3.8	4.38	0.57
	Agree	14	53.8		
	Strongly Agree	11	42.3		
Our lab records are prompt and correct	Disagree	1	3.8	4.04	0.82
	Not Sure	5	19.2		
	Agree	12	46.2		
	Strongly Agree	8	30.8		
Our lab performance is monitored regularly and this enhances focus and confidence	Disagree	5	19.2	3.46	0.95
	Not Sure	7	26.9		
	Agree	11	42.3		
	Strongly Agree	3	11.5		
Our lab performance is monitored internally and this increases success in achieving targets	Disagree	2	7.7	3.46	0.81
	Not Sure	13	50.0		
	Agree	8	30.8		
	Strongly Agree	3	11.5		
Our lab performance is monitored externally and this eliminates conflict of interest	Disagree	5	19.2	3.19	0.85
	Not Sure	13	50.0		
	Agree	6	23.1		
	Strongly Agree	2	7.7		
Monitoring and measurement are aimed at determining whether budgets	Disagree	2	7.7	3.88	0.82
	Not Sure	4	15.4		

are effective	Agree	15	57.7		
	Strongly Agree	5	19.2		
Monitoring helps in meeting goals and standards	Disagree	2	7.7	3.77	0.82
	Not Sure	6	23.1		
	Agree	14	53.8		
	Strongly Agree	4	15.4		
Monitoring and measurements put much pressure on lab technicians this is demotivating	Strongly Disagree	11	42.3	2.00	1.10
	Disagree	7	26.9		
	Not Sure	6	23.1		
	Agree	1	3.8		
	Strongly Agree	1	3.8		
M&E reports are disseminated accordingly	Disagree	3	11.5	3.27	0.67
	Not Sure	13	50.0		
	Agree	10	38.5		
Overall				3.49	

Source: primary data

From the results indicated in table 4.4.2 above, it was evident that Monitoring and measuring performance would effect performance with an overall mean of 3.49. The findings in the table below indicate that; Availability of proper reporting tools had a mean of 4.38 and a standard deviation of 0.57, Making prompt and correct record had a mean of 4.04 and a standard deviation of 0.82, enhancing focus and confidence through regular monitoring had a mean of 3.46 and a standard deviation of 0.95, Internal monitoring increasing success in achieving targets had a mean of 3.46 and a standard deviation of 0.81, external monitoring eliminating conflict of interest had a mean of 3.19 and a

standard deviation of 0.85, Monitoring and measurement determining whether budgets are effective had a mean of 3.88 and a standard deviation of 0.82, Monitoring helping in meeting goals and standards had a mean of 3.77 and a standard deviation of 0.82, pressure from monitoring and measurements is demotivating had a mean of 2.00 and a standard deviation of 1.10, proper dissemination of M&E reports had a mean of 3.27 and a standard deviation of 0.67. The results are as shown in table 4.4.2.

Table4.4.3: Analyzing performance variances

Statistic	Category	f	%	Mean	Standard Deviation
Our lab performs regular variance analysis	Disagree	1	3.8	4.04	0.77
	Not Sure	4	15.4		
	Agree	14	53.8		
	Strongly Agree	7	26.9		
Our lab performance analysis is done internally giving the practice independence	Disagree	5	19.2	3.27	0.78
	Not Sure	9	34.6		
	Agree	12	46.2		
Our lab performance analysis is done externally leaving internal officers to concentrate on other matters	Disagree	10	38.5	2.92	0.84
	Not Sure	8	30.8		
	Agree	8	30.8		
Computers are used in determination of variances and this increases accuracy	Disagree	4	15.4	3.65	0.89
	Not Sure	4	15.4		
	Agree	15	57.7		
	Strongly Agree	3	11.5		

Causes of variances are investigated	Disagree	5	19.2	3.19	0.80
	Not Sure	12	46.2		
	Agree	8	30.8		
	Strongly Agree	1	3.8		
Variance analysis always help in identifying problem areas	Disagree	3	11.5	3.88	0.77
	Not Sure	1	3.8		
	Agree	16	61.5		
	Strongly Agree	6	23.1		
Favorable variance is due to supervision and controls	Disagree	3	11.5	3.96	0.87
	Not Sure	1	3.8		
	Agree	16	61.5		
	Strongly Agree	6	23.1		
Performance are affected by use of budgets to appraise work	Disagree	6	23.1	3.58	1.03
	Not Sure	3	11.5		
	Agree	13	50.0		
	Strongly Agree	4	15.4		
Other ways of analytics should be recommended	Disagree	4	15.4	3.23	0.86
	Not Sure	15	57.7		
	Agree	4	15.4		
	Strongly Agree	3	11.5		
Overall				3.52	

Source: primary data

As shown in table 4.4.3 above, Analysis of variances was found to be a practice that would determine how a lab would perform with an overall mean of 3.52. According to the findings, agreement on performance of regular variance analysis had a mean of 4.04 and a standard deviation of 0.77, internal analysis giving the practice independence had a mean of 3.27 and a standard deviation of 0.78, external analysis leaving internal officers to concentrate on other matters had a mean of 2.92 and a standard deviation of 0.84, use of computers in determining accurate variances had a mean of 3.65 and a standard deviation of 0.89, Investigating causes of variances had a mean of 3.19 and a standard deviation of 0.80, Analysis helping in identifying problem areas had a mean of 3.88 and a standard deviation of 0.77, supervision and controls causing favorable variances had a mean of 3.96 and a standard deviation of 0.87, Performance affected by use of budgets to appraise work had a mean of 3.58 and a standard deviation of 1.03, Recommendation of other of analytical methods had a mean of 3.23 and a standard deviation of 0.86. The results are as shown in table 4.4.3.

Table 4.4.4: Taking corrective action

Statistic	Category	f	%	Mean	Standard Deviation
Monitoring and analysis always lead to designing corrective actions	Disagree	4	15.4	3.58	0.90
	Not Sure	6	23.1		
	Agree	13	50.0		
	Strongly Agree	3	11.5		
Our lab initiates the corrective actions	Disagree	5	19.2	3.88	1.03
	Agree	14	53.8		
	Strongly	7	26.9		

	Agree				
Our lab benefits from the corrective actions	Not Sure	5	19.2	4.08	0.69
	Agree	14	53.8		
	Strongly Agree	7	26.9		
Our lab receives material and leadership support in taking corrective measures	Not Sure	4	15.4	4.15	0.67
	Agree	14	53.8		
	Strongly Agree	8	30.8		
Corrective action is guided by performance analysis	Disagree	2	7.7	3.46	0.86
	Not Sure	14	53.8		
	Agree	6	23.1		
	Strongly Agree	4	15.4		
Corrective actions realign performance to desired goals and standards, assist in meeting targets	Not Sure	6	23.1	3.96	0.66
	Agree	15	57.7		
	Strongly Agree	5	19.2		
Corrective actions reduces waste and spoilage	Not Sure	6	23.1	4.04	0.72
	Agree	13	50.0		
	Strongly Agree	7	26.9		
We sometimes revise our annual goals	Disagree	9	34.6	2.96	0.87
	Not Sure	10	38.5		
	Agree	6	23.1		
	Strongly Agree	1	3.8		
we are fairly staffed and equipped	Strongly Disagree	1	3.8	3.00	0.89
	Disagree	7	26.9		

	Not Sure	9	34.6		
	Agree	9	34.6		
Transfer of workers is a corrective measure	Strongly Disagree	1	3.8	2.88	0.82
	Disagree	7	26.9		
	Not Sure	9	34.6		
	Agree	9	34.6		
Overall				3.60	

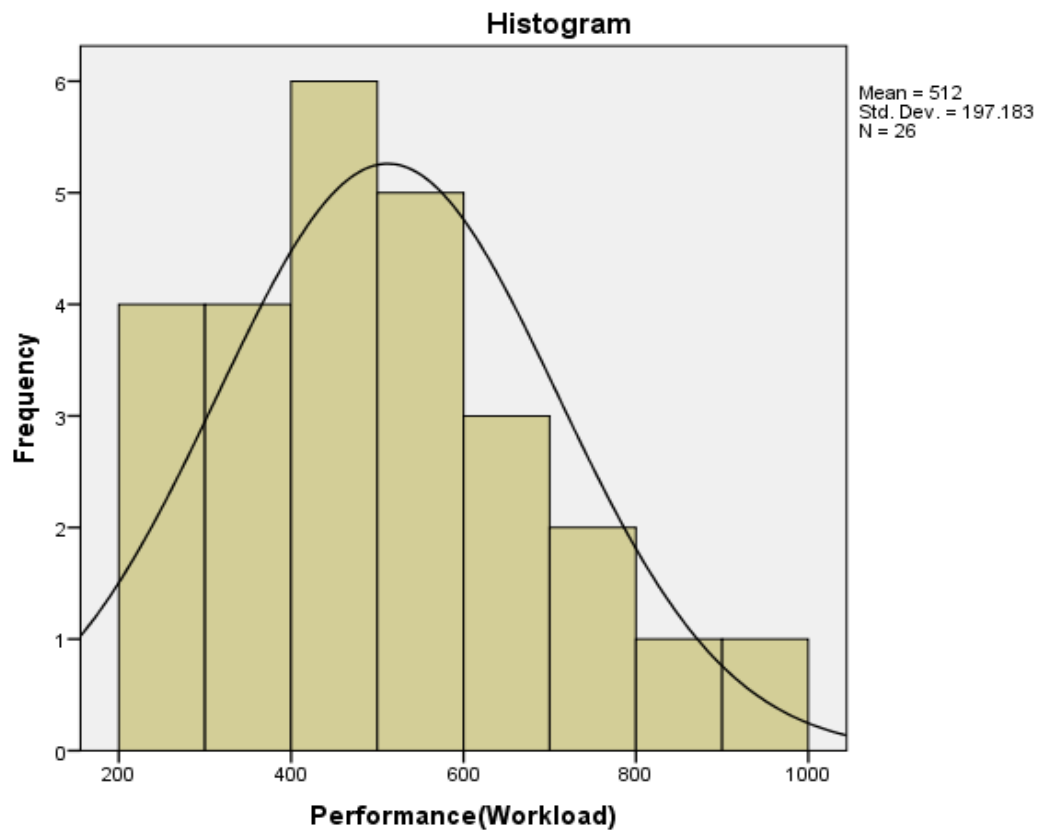
Source: primary data

The results as indicated in table 4.4.3 above revealed existence of the effect of taking corrective action on performance with an overall mean of 3.60. Monitoring and analysis always leading to designing corrective actions had a mean of 3.58 and a standard deviation of 0.90, labs initiating the corrective actions had a mean of 3.88 and a standard deviation of 1.03, lab benefiting from the corrective actions had a mean of 4.08 and a standard deviation of 0.69, receiving materials and leadership support in taking corrective measures had a mean of 4.15 and a standard deviation of 0.67, performance analysis guiding corrective actions had a mean of 3.46 and a standard deviation of 0.86, realigning of performance to meeting targets had a mean of 3.96 and standard deviation of 0.66, Reducing waste and spoilage had a mean of 4.04 and standard deviation of 0.72, revising annual goals had a mean of 2.96 and standard deviation of 0.87, fair staffing and equipping of laboratories had a mean of 3.00 and standard deviation of 0.89 and transfer of staff being a corrective action had a mean 2.88 and a standard deviation of 0.82.

4.5 Descriptive analysis of performance (dependent variable)

The dependent variable under the study was performance as measured by workload. Data on this variable was obtained from the DHIS. According to the histogram in figure 4.1, performance distribution of 26 labs is skewed to the left. This indicates that majority of the labs are performing below average workload of 512 with a standard deviation of 197.183, min of 203 and max of 985.

Figure 4.1 Laboratory Performance by workload



Source: secondary data

Table 4.5.1: Descriptive analysis of combined variables

Statistic	Mean	Std. Deviation
Performance (Workload)	512.00	197.183
Setting Standards and Goals	2.96	1.428
Monitoring and measuring performance	2.96	1.428
Analysing variance	2.92	1.412
Taking corrective action	2.96	1.428

Source: primary data

The study on determination on the effect of budgetary control practices on performance of the laboratories in Homa bay County was based on several variables. The variables included setting Standards and Goals, Monitoring and measuring performance, Analysing variance and Taking corrective action. The mean value of performance was 512.00 and the standard deviation was 197.183. Setting standards and goals had mean score of 2. 96 and a standard deviation of 1.428. Monitoring and measuring performance and taking corrective action had the same descriptive statistics with setting standards and goals. While analyzing variance had a mean of 2.92 and a standard deviation of 1.412. The results in Table 4.5.1. above indicate that the variables combined had a moderate perception from respondents.

Table 4.5.2: Correlation analysis

Correlations		Performance (Workload)	Setting Standards and Goals	Monitoring and measuring performance	Analysing variance	Taking corrective action
Pearson Correlation	Performance (Workload)	1.00	-0.94	-0.94	-0.94	-0.94
	Setting Standards and Goals	-0.94	1.00	1.00	0.99	1.00
	Monitoring and measuring performance	-0.94	1.00	1.00	0.99	1.00
	Analysing variance	-0.94	0.99	0.99	1.00	0.99
	Taking corrective action	-0.94	1.00	1.00	0.99	1.00
Sig. (1- tailed)	Performance (Workload)		0.00	0.00	0.00	0.00
	Setting Standards and Goals	0.00		0.00	0.00	0.00
	Monitoring and measuring performance	0.00	0.00		0.00	0.00
	Analysing variance	0.00	0.00	0.00		0.00

	Taking corrective action	0.00	0.00	0.00	0.00	
N	Performance (Workload)	26.00	26.00	26.00	26.00	26.00
	Setting Standards and Goals	26.00	26.00	26.00	26.00	26.00
	Monitoring and measuring performance	26.00	26.00	26.00	26.00	26.00
	Analysing variance	26.00	26.00	26.00	26.00	26.00
	Taking corrective action	26.00	26.00	26.00	26.00	26.00

Table 4.5.2 shows the relationship between both the dependent and independent variables separately. Workload is significantly correlated with the budgetary control practices (setting standards and goals, monitoring and measuring performance, analyzing variance and taking corrective action) in such a way that if any of the independent variables goes high, performance diminishes. That is an inverse relationship (correlation of -0.94, p-value <0.0001)

Table 4.5.3: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.94	0.89	0.88	67.78

a. *Predictors: (Constant)*, Taking corrective action and analyzing variance.

b. *Dependent Variable:* Performance as measured by workload

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. The table above indicates the value of R squared as 0.89 meaning there was a variation of 89% on performance of public medical labs that could be attributed to budgetary control practices at a 95 % confidence interval. R is the correlation coefficient indicating the relationship between variables under study. The analysis is as indicated in table 4.5.3 above.

Table 4.5.4: Analysis of Variance (ANOVA)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	861749.86	1.00	861749.86	187.55	<0.0001
Residual	110274.14	24.00	4594.76		
Total	972024.00	25.00			

a. *Dependent Variable:* Performance (Workload)

b. *Predictors: (Constant)*, Setting of standards, monitoring and measuring performance, analyzing variance and taking corrective action.

Source: Primary data

The ANOVA (Analysis of Variance) shows that the model is statistically significant and thus predictions are effective. The analysis is as indicated in table 4.5.4 above.

Table 4.5.5: Regression analysis of Coefficients

Model	Coefficient	P-value	Lower 95%CI	Upper 95%CI
Constant	896.34	<0.0001	832.25	960.43
Setting Standards and Goals	0.38	0.001	0.26	0.66
Monitoring and measuring performance	-0.38	0.023	-0.69	-0.18
Analysing variance	-131.48	<0.0001	-151.30	-111.67
Taking corrective action	0.37	0.048	0.15	0.76

Given the data from table 4.5.5 above, the established multiple linear regression equation is thus:

$$Y=896.34+0.38X1-0.38X2-131.48X3+0.37X4$$

The regression equation above has indicated that when all the independent variables (Setting standards and goals, monitoring and measuring performance, Analysing variance and taking of corrective action) are held at a constant Zero, the performance measured by workload would be 896.34. a unit increase in setting standards and goals would increase performance by a factor of 0.38, a unit increase in Monitoring and measuring performance would reduce performance by a factor of 0.38, a unit increase of Analysing variance would reduce

performance by a factor of 131.48 and a unit increase in Taking corrective action would increase performance by a factor of 0.37.

The confidence level for the analysis was set at 95% and since the p- value is less than 0.05 it implies that the independent variable is statistically significant. Regression results indicate that performance as measured by workload is influenced by setting of standard ($p=0.001$), monitoring and measuring performance ($p=0.023$), analysis of variance ($p<0.0001$) and taking of corrective action ($p=0.048$).

As indicated in the regression model, the independent variables with negative coefficient have a direct effect to the dependent variable. Therefore performance measured by workload diminishes proportionately with increase in practices of monitoring and measuring performance and Analyzing variance. Setting of standards and Taking corrective action proportionately improves performance measured by workload. The analysis are as indicated in table 4.5.5 above.

4.6: Discussion of Empirical Results

Generally the findings of the study are consistent with the agency theory that assumes parties act rationally to maximize their own self-interest as measured in economic terms. Both goals and corrective measures are quantified in monetary terms and the respondents being the receivers of allocations of inputs are perceiving the practices of setting standards and goals and the practice of taking corrective actions to be positive in exerting outcomes. The finding were also consistent with Institutional Theory developed by North (1991) that describes an institution as bundle of beliefs rules, roles, material resources and symbolic elements that can be accepted, rejected or challenged regarding their evaluation, evidence or relevance.

The study revealed negative perception from respondents regarding M & E. Further the study shows that Homa Bay County is making less allocations compared to the optimum requirements this confirms the theory of public expenditure by budget (Adams, 1985) which asserts that allocation of public resources among spending units is under the same influence as the individual budget in the private life.

The results show that there is a positive relationship between performance and setting of standards and goals. This confirms observation by both Adongo (2012) and Gathecha (2017) that, the effect of budgetary control practices on performance was positive among public entities. The study shows that variance analysis has negative effect on performance and this disapproves the findings by Mohamed et al.(2015) that confirmed that variance analysis enhances budgetary control and improves performance of organizations. The study however confirms findings of Godfrey (2017) that, budgetary controls could be responsible for slacks in organizational performance. The study found monitoring and performance measurement to have negative effect on performance; this is opposed to observations made by Ngugi (2015) that monitoring represents the core management function that ensure performance is as designed.

Finally, it can be said that effects on Performance depends on whether focus is on the results, output or outcome and whether focus is on the inputs that determine the results. It is also observed that the application of budgetary control practices should not overtake or displace exceptional leadership and suitability of operations within any unit

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter deals with summary of the study findings, conclusions and recommendations in relation to the objective of the study. It also highlights limitations of the study and offers suggestions on possible areas for further study.

5.2 Summary

This study found applications of budgetary control practices within public medical laboratories in Homa Bay County, Kenya. The practices were found to be actual applications reflecting on both inputs of resources and output of laboratory services. The study looked into 26 public medical laboratories and made a determination that; effect of the budgetary practices on their performance is negative.

The study applied descriptive design with a target of 43 labs. Secondary data was gathered from government documents. Primary data was gathered through structured questionnaire that successfully secured response from 26 labs, being a 60% response rate.

5.2.1 Effect of Setting standards and goals

Setting of standards and goals was found to have an overall positive effect on lab performance. On specific questions; more than 60% of the respondents agreed that they had annual work plans and the plans are within norms of practice. Over 61% agreed that budgets are costed according to availability of funds and that budgets would ensure order and discipline. However less than 40% agreed that budgets provide resources required,

less than 40% agreed that Budgets help in tracking expenditure and assist in reducing operational costs. Only 3.8% agreed that they had training and skills in budgeting. Budgetary goals that aim at service capability requirements are a source of hope.

5.2.2 Effect of Monitoring & measuring performance

Monitoring and measuring performance was revealed by the study as critical to lab performance. The study however found it with overall negative effect on performance. On specific questions; over 90% either agreed or strongly agreed that labs had proper reporting tools and were making prompt and correct records. 50% were not sure about both internal and external evaluations. However 57.69% agreed that M&E puts much pressure on lab technicians leading to demotivation. M&E process which lacks distinctive relevance, reasonable accuracy and concise explanation would be unfair.

5.2.3 Effect of analyzing variance

Analysis of variance was found to have an overall negative effect on performance. On specific questions; over 53% agreed that analysis is regular, use of computers in determination of variances increases accuracy, supervision and controls cause favorable variance and that use of budgets in work appraisal affect performance. The study revealed that; 57.7% were not sure with recommending other ways of analytics. Indeed whether other forms of analytics would be useful will depend on if they are fully designed,, practically interpreted and reasonably applied.

5.2.4 Effect of Taking corrective action

The findings indicate Taking corrective action to have an overall positive effect on performance. On specific questions; over 53% agreed that labs initiate the corrective actions, labs benefit from the corrective actions, labs receive material and leadership support in taking corrective measures and that corrective action is guided by performance analysis. However a minority of 34% agreed that they were fairly staffed and equipped and majority disagreed on whether AWP were revised. Proper understanding of the current state of affairs as opposed to desirable state enables corrective measures through management by exception.

5.2.5 The effect of optimal requirement

The study found that actual allocation by Homa Bay County to lab commodities was 26.63% of the optimal requirement. Actual cost value was found to be 19% of the optimal requirement. The essential commodities and supplies that are required to be available at a medical lab at any given time registered high stock out levels. There is thus poor correlation between expectations and the gains derived from budgetary control practices in relation to public medical labs in Homa Bay County. It should be inspiring if control practices would be of benefit in deriving required results.

5.3 Conclusion

The study findings lead us to make conclusions and to draw important implications. The aim of budgetary control practices is to identify, set and achieve proportionate performance depending on fulfillment of clearly defined goals. The study found that key performance indicators and metrics (KPI & Metrics) are applied in public medical labs as measurement tools. Setting of standards and goals initiates the sequence and taking of corrective actions concludes. The budgetary control practices are not magical robots to guarantee success. Their application can indeed cause negative effects in part or as a whole on desired results. The application of budgetary control practices should not overtake or displace the exceptional leadership and suitability of operations within any unit (lambe et al, 2015). Measurement and analysis that focus on end results like workload may easily attract negative perception from the subordinates as targeting them unfairly. While those that focus on determinants of performance may likely receive positive perceptions from the subordinates as they relate to input quality, flexibility in operations and novelty which may be in their favour.

Based on the study the public medical laboratories applied budgetary control practices. The correlations were found to be moderate. It was concluded that the independent variables when held at zero would exert a performance (workload) of 896.34. The regression model was found to be significant. Finally it was concluded that there is an overall effect of budgetary control practices on performance with workload diminishing proportionately with increase in practices of monitoring and measuring performance and analyzing variance. The two practices focus on the workload, which is the output relating to the services and social contributions resulting from the efforts of the subordinates. The

methods of measuring, appraising and reporting performance attracted negative perception from the subordinate. They appear to have no control over the causes of financial gaps and resultant variance in outcome and would wish to put the blame elsewhere.

Setting of standards and goals and taking corrective actions on the other hand proportionately cause increment on performance. The two practices focus on inputs (Human resource, finance, lab commodities and equipment) supplied to the subordinates through efforts from elsewhere. The subordinate positively appreciated setting of standards and goals. They demonstrated understanding of the meaning and use of standards and goals. They also agree with planning methods and processes except that they need relevant training. They demonstrated pleasure in inclusive participation in corrective actions. They also seem to approve follow ups and possible rewards and incentives from corrective actions.

5.4 Recommendations

Budgetary control practices are important in effecting performance hence capacity building on key players should be undertaken. Training should be offered to lab technicians and hospital boards on budgeting this would increase their knowledge on budgetary performance. Legislators should also be trained on linking taxpayers' funds and outcome of services offered by public institutions. None the less inefficiencies in part of performers must not be allowed to hide behind budgeting and financial anomalies.

The study discovered that there are 114 accredited public medical labs in the county but only a few are active from time to time. To offload the strain exerted on the active labs, it

is suggested that more funds be channeled towards recruiting additional lab technicians and equipping of labs.

The county leadership should pay more attention to the medical sector and especially critical units like labs that act as the heart of operations. The controls practices are aimed at serving the ultimate goals and can only offer positive results if there is motivation towards reading, interpreting and executing them. There should be mechanisms of putting frequented low Morales by health service providers at check to ensure that there is willing cooperation and voluntary participation of actors.

Based on the findings, more funds should be allocated to the health agencies with an aim of meeting optimal requirements. The county governments should disburse funds meant for procurement of lab commodities as planned. This will allow timely budgeting at lower units and supply of essential commodities to prevent frequent stock outs caused by lack of adequate funding.

Budgetary practices may fail if laboratory goals and expectations happen to supersede sector or overall public objectives. Overall goals should be put in their proper perspective for instance; adequate investment should be made towards primary health care with an aim for reducing morbidity that results into frequented lab visits. This calls for an integrated approach of all critical actors within the health sector to investigate other factors that influence service deliveries.

Budgetary reviews should be done frequently to understand performance trends and evaluation of quality services as a reflection of budgetary inputs is given priority. Flexibility should replace the formal rigidity in the budgetary practices to suit

uncertainties. Both Internal and external monitoring and evaluations should not conflict but be consistent to avert situations of laxity in performance.

Study revealed big financing gaps between plans, budgets and actual costs. It is thus suggested that disciplinary measures be taken against any officials found to be unscrupulous. Furthermore standards and requirements are based on adapted international norms contrary to viable and sustainable expectations; it is advisable that goals be realistic.

5.5 Limitations of the study.

The study was conducted in one county targeting one subunit within the health sector with data collected from a handful of subordinate staff. There was reluctance in providing both primary and secondary data from county staff. The study also witnessed both financial and time constraints.

5.6 Recommendations on Further Research

The study confined itself to public medical laboratories in Homa Bay County, Kenya. This research should be replicated in other counties and or other public service agencies. The study confined its findings to determining positive or negative effect of budgetary control practices on performance. Further research can also be done on the impact of performance on budgetary aspects or why some budgetary control practices have positive effect while others have negative effect on performance. These should be done with balanced focus on perception of all the stakeholders including the patients, management and subordinate staff.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

The questionnaire seeks to collect information on the effect of budgetary control practices in performance of public medical labs in Homa Bay County

PART A: PERFORMANCE

Laboratory/ Facility Name:

Level/Category:

Number of Lab technicians:

Measure	Actual Output	Optimum Output
Workload (cases)		
Types of lab Items		
Cost of lab items Consumed		
Average Patient wait Time		

PART B: SETTING OF STANDARDS AND GOALS

Kindly respond by indicating the degree to which you agree or disagree

Strongly Disagree(1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5)

PRACTICE OF SETTING OF STANDARDS AND GOALS		1	2	3	4	5
1	Our lab has annual work plan					
2	Our plans are within the general performance norm					
3	Plans ensure order and discipline					
4	Plans/budgets clearly set priorities and accurately predict performance requirements					
5	Plans are made before budgeting					
6	Our lab makes quarterly budgets					
7	Budgets originate at the lab units and are refined at higher levels					
8	Our budgets provide resources for performance					
9	Our lab budgets are costed according to availability of funds and expected cash flow changes					
10	We are trained and we have full information needed in preparing budgets					
11	Budgets lead to cost effective procurement					
12	Budgets help in tracking expenditure and assist in reducing operational costs					

PART C: MONITORING AND MEASURING PERFORMANCE

Kindly respond by indicating the degree to which you agree or disagree

Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5)

PRACTICE OF MONITORING & MEASURING PERFORMANCE		1	2	3	4	5
1	Our lab has proper reporting tools					
2	Our lab records are prompt and correct					
3	Our lab performance is monitored regularly and this enhances focus and confidence					
4	Our lab performance is monitored internally and this increases success in achieving targets					
5	Our lab performance is monitored internally and this eliminates conflict of interest					
6	Monitoring and measurement are aimed at determining whether budgets are effective					
7	Monitoring helps in meeting goals and standards					
8	Monitoring and measurements put much pressure on lab technicians this is demotivating					
9	M&E reports are disseminated accordingly					

PART D: ANALYSING PERFORMANCE VARIENCE

Kindly respond by indicating the degree to which you agree or disagree

Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5)

		1	2	3	4	5
PRACTICE OF ANALYZING PERFORMANCE VARIANCE						
1	Our lab performs regular variance analysis					
2	Our lab performance analysis is done internally giving the practice independence					
3	Our lab performance analysis is done externally Leaving internal officers to concentrate on other matters					
4	Performance are affected by use of budgets to appraise work					
5	Computers are used in determination of variances and this increases accuracy					
6	Causes of variances are investigated					
7	Variance analysis always help in identifying problem areas					
8	Favorable variance is due to supervision and controls					
9	Other ways of analytics should be recommended					

PART E: CORRECTIVE MEASURES

Kindly respond by indicating the degree to which you agree or disagree

Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), Strongly Agree (5)

		1	2	3	4	5
PRACTICE OF TAKING CORRECTIVE ACTIONS						
1	Monitoring and analysis always lead to designing corrective actions					
2	Our lab initiates the corrective actions					
3	Our lab benefits from the corrective actions					
4	Our lab receives material and leadership support in taking corrective measures					
5	Corrective action is guided by performance analysis					
6	Corrective actions realign performance to desired goals and standards, assist in meeting targets					
7	Corrective actions reduces waste and spoilage					
8	We sometimes revise our annual goals					
9	we are fairly staffed and equipped					
10	Transfer of workers is a corrective measure					

**APPENDIX II: LIST OF PUBLIC MEDICAL LABORATORIES IN
HOMA BAY COUNTY**

COUNT	MFL CODE	FACILITY NAME
1	13777	MARINDI SCH
2	13962	OGANDE DISP
3	14172	WIGA DISP
4	16766	MINIAMBO DISP
5	16986	NYALKINYI
6	19858	MAKONGENI H/C
7	19861	KODUOGO
8	13488	ASUMBI H/C
9	13643	KAGER DISP
10	13769	MANYATTA DISP
11	13843	NDIRU H/C
12	13849	NGEGU DISP
13	13875	NYAGORO H/C
14	13958	OBWANDA DISP
15	14036	RANGWE SCH
16	14038	RARIW DISP
17	13701	KISEGI SCH
18	13753	MAGUNGA H/C
19	13920	NYANDIWA H/C
20	13870	NYADENDA H/C
21	13946	NYATOTO H/C
22	14130	SUBA SCH
23	13463	ADIEDO DISP
24	13653	KANDIEGE SCH
25	13668	KENDU SCH
26	13795	MAWEGO H/C
27	13812	MIRIU H/C
28	13974	OLANDO DISP
29	14039	RARUOWA DISP
30	14168	WAGWE H/C
31	13705	KITARE H/C
32	13798	MBITA SCH
33	13967	OGONGO SCH
34	14075	SENA H/C

35	14150	TOMMBOYA H/C
36	13589	GOT KOJOWI H.C
37	13686	KIASA DISP
38	13751	MAGINA H/C
39	13761	MALELA DISP
40	13813	MIROGI H/C
41	13841	NDHIWA SCH
42	14011	PALA H/C
43	17747	ANGIYA DISP