

**INFLUENCE OF BUDGET DEFICITS ON EDUCATION SERVICE DELIVERY IN
PUBLIC SECONDARY SCHOOLS IN NYANDARUA COUNTY, KENYA**

Samuel Njama Waweru

**A Thesis Submitted to the Graduate School in Partial Fulfilment of the Requirements
for the Conferment of the Degree of Master of Education in Educational Management
of Laikipia University**

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DECLARATION AND RECOMMENDATION

Declaration

I declare that this thesis is my original work and has not been presented for the award of a degree or diploma in this or any other university.

Signature..... Date.....

Samuel Njama Waweru

Registration Number: ML21/1205/15

Recommendation

This report has been submitted for examination with our approval as the University Supervisors.

1. Signature Date

Dr. Peter Githae

Department of Curriculum and Education Management

Laikipia University

2. Signature Date

Dr. Isaac King'ori

Department of Psychology, Counselling and Educational Foundations

Laikipia University

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DEDICATION

To my wife Tabitha and children, Ian and Alvin. Thank you for being a pillar in my life

ABSTRACT

Provision of educational services in schools is contingent upon sound school funding and budgeting. Budget deficits in public schools in Kenya occur when actual expenses exceed planned expenses due to several factors such as failure by guardians and parents to honour timely payment of fees. This ultimately impedes the schools' capacity to provide pertinent educational services such as provision of supplies, staffing and facilitating co-curricular activities. Reviewed literature revealed scanty empirical data about the influence of school budget deficits on the provision of these critical educational services. This study therefore examined how budget deficits affect the procurement of key educational supplies, staffing and participation in co-curricular activities by public secondary schools in Nyandarua County, Kenya. The study was underpinned by two theories: The Human Capital Theory and the Capital Theory of School Effectiveness and Improvement and adopted a descriptive survey research design. The target population were the 105 principals of public secondary school in Nyandarua County as of 2023, and one County Director of Education. Cluster sampling and simple random sampling techniques were used to select 82 respondents from all public-school principals. A semi-structured questionnaire was used to gather quantitative and qualitative primary data from the principals. For triangulation, the information generated was supplemented by qualitative responses obtained through an interview on the County Director of Education and Quality Assurance Officer of Education in Nyandarua County. Validity was enhanced through input and critique of the instruments by experts in the Department of Curriculum and Education Management of Laikipia University after consultation by the researcher. Reliability of the questionnaire was determined through internal consistency technique using data obtained from a pilot study carried out in two secondary schools in Nyandarua County but which were not part of the main study sample. A Cronbach alpha coefficient of 0.81 was obtained which was above the set threshold of 0.7. Collected quantitative data were coded and keyed in and analysed using Statistical Package for Social Science (SPSS) computer programme version 24.0. Inferential statistics, specifically simple and reverse regression were used to test hypotheses at an alpha level of .05. The study findings showed that influence of budget deficit on participation in co-curricular activities ($r=-0.29$; $p<0.05$) and on staffing ($r=0.074$; $p>0.05$) is statistically significant but not on supply of essential goods and services ($r=0.071$; $p<0.05$). Regression analysis revealed that procurement of essential goods and services = $1.907 + 0.144$ (Budget Deficit); staffing = $2.062 + 0.202$ (Budget Deficit); and Participation in co-curricular activities = $1.978 - 0.097$ (Budget Deficit). A relatively stronger but negative association was found between the budget deficit and involvement in co-curricular activities; a positive weak correlation between the budget deficit and personnel and supply of necessities. Budget deficit arise due to delayed disbursement of government funds, parents' inability to pay fees in time and failed income generating activities. This affects procurement of essential goods and services, staffing and schools' participation in co-curricular activities. The study recommends that stakeholders including the government, parents and financial institutions should all work towards favourable fiscal practices that resolves budget deficits

TABLE OF CONTENTS

DECLARATION AND RECOMMENDATION	ii
Copyright.....	iii
DEDICATION	v
ACKNOWLEDGEMENT	iv
ABSTRACT.....	v
TABLE OF CONTENTS	vii
LIST OF TABLES	xi
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS AND ACRONYMS	xiv
OPERATIONAL DEFINITION OF KEY TERMS	xv
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	7
1.3 Aim and Objectives of the Study	8
1.3.1 General Objective	8
1.3.2 Objectives of the Study	8
1.4 Research Hypotheses	8
1.5 Significance of the Study	9
1.6 Scope of the Study.....	9
1.7 Limitations of the Study	10
1.8 Assumptions of the Study	10
CHAPTER TWO	11
LITERATURE REVIEW	11

2.0 Introduction.....	11
2.1 Financing of Education in Secondary Schools	11
2.1.1 Context of Funding Secondary School Education.....	11
2.2 Overview of Secondary School Funding in Kenya	13
2.3 Sources of Budget Deficits in Public Secondary Schools	17
2.4. Influence of Budget Deficits on Supply of Essential Goods and Services	18
2.5 Influence of Budget Deficits on Staffing in Public Secondary Schools	20
2.6. Influence of Budget Deficits on Participation in Co-curricular Activities	21
2.7 Possible Remedies to Address Challenges of Fiscal Planning in Public Secondary Schools	23
2.7 Theoretical Framework.....	23
2.7.2 Human Capital Theory.....	23
2.7.1 Capital Theory of School Effectiveness and Improvement	24
2.8 Conceptual Framework.....	26
CHAPTER THREE	28
RESEARCH METHODOLOGY	28
3.1 Introduction.....	28
3.2 Research Design	28
3.3 Study Area	29
3.4 Target Population	29
3.5 Sample Size and Sampling Procedure	30
3.6 Data Collection Instruments	31
3.6.1 Validity of the Instruments.....	32
3.6.2 Reliability of the Instruments	32
3.7 Data Collection Procedure	33
3.8 Data Analysis	34

3.9 Ethical Consideration	36
CHAPTER FOUR.....	38
RESULTS AND DISCUSSIONS	38
4.1 Introduction.....	38
4.2 Instruments Response Rate	38
4.3 Demographic Characteristics of the Respondents.....	38
4.3.1 Age of the Respondents	38
4.3.2. Gender of the Respondents	39
4.3.3 Education of the Respondents	40
4.3.4. Period Served as a Principal.....	41
4.3.5 Source of Funding	41
4.4 Influence of Budget Deficits on Supply of Essential Goods and Services	42
4.5 Influence of Budget Deficits on the Supply of School Items	44
4.6 Influence of Budget Deficits on Staffing	49
4.7 Budget Deficits Deficit	52
4.8 Influence of Budget Deficit on Participation in Co-curricular Activities.....	56
4.8 Results on Tests of Hypotheses on the Influence of Budgetary Deficits of Delivery of Essential School's Services	59
4.8.1 Correlation among Variables of the Study.....	60
4.8.2 Reverse Regression Analysis of the Variables.....	61
4.8.3 Influence of Budget Deficits on Staffing	63
4.8.4 Influence of Budget Deficit on Participation in Co-curricular Activities.....	66
4.9 Comparative Analysis between Budget Deficit and Delivery of Education Services ..	68
4.10 Challenges Facing Fiscal Planning in Public Secondary Schools.....	71
4.11 Possible Remedy to Address Challenges of Fiscal Planning	75
CHAPTER FIVE.....	78

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	78
5.1 Introduction.....	78
5.2 Summary of Key Findings	78
5.2.1 The Influence of Budget Deficits on Study Variables	78
5.2.2 Findings on Relative Influence of Budget Deficits on Education Service Delivery	79
5.3 Conclusions	80
5.4 Recommendations	81
5.5 Areas for Further Research	82
REFERENCES.....	83
APPENDICES.....	92
APPENDIX A: PRINCIPALS’QUESTIONNAIRE	92
APPENDIX B: INTERVIEW SCHEDULE FOR THE COUNTY DIRECTOR OF EDUCATION.....	98
APPENDIX C: KREJCIE AND MORGAN’S SAMPLE SIZE TABLE	99
APPENDIX D: MAP OF THE STUDY AREA.....	100
APPENDIX D: RESEARCH PERMIT	101
APPENDIX E: AUTHORIZATION FROM THE COUNTY DIRECTOR OF EDUCATION.....	102

LIST OF TABLES

	Page
Table 1.1 Winners of National School Football Competition between 2019 and 2022	6
Table 3.1 Schools in Nyandarua County according to Sub counties as in 2014	30
Table 3.2 Sample Size of Schools for the Study.....	31
Table 3.3 Data Analysis Matrix.....	35
. Table 4.1 Age of the Respondents	39
Table 4.2 Gender of the Respondents	39
Table 4.3 Education of the Respondents	40
Table 4.4 Period as a Principal	41
Table 4.5 Source of Funding	42
Table 4.6 Status of Procurement of Supplies	42
Table 4.7 Influence of Budget Deficits on the Supply of School Items	45
Table 4.8 Influence of Budget Deficits on Staffing	50
Table 4.9 The Influence of Budget Deficits on Supply of Essential Goods and Services	53
Table 4.10 Influence of Budget Deficit on Participation in Co-Curricular Activities.....	57
Table 4.11 Variables Correlation.....	60
Table 4.12 Model on Supply of Essential Goods and Services	62
Table 4.13 Analysis of Variance (ANOVA) for Supply of Essential Goods and Services	62
Table 4.14 Regression Model Coefficients	63
Table 4:15 Model on Influence of Budget Deficit on Staffing.....	64
Table 4.16 Analysis of Variance (ANOVA) on the Influence of Budget Deficit on Staffing	64
Table 4.17 Regression Model Coefficients for Staffing and Budget Deficit	65
Table 4.18 Model on the Influence of Budget Deficit on Participation in Co-curricular Activities.....	66

Table 4.19 Analysis of Variance (ANOVA) on the Influence of Participation in Co-curricular Activities.....	67
Table 4.20 Regression Model Coefficients	67
Table 4.21 Comparative Analysis for Budget Deficit and Delivery of Education Services ...	69
Table 4.22 Delivery of Education Services	72
Table 4.23 Themes on Possible Remedies to Address Challenges of Fiscal Planning.....	76

LIST OF FIGURES

	Page
Figure 2.1 Relationship Among Variables Subsumed in The Study	26

LIST OF ABBREVIATIONS AND ACRONYMS

BBC:	British Broadcasting Corporation
BoG:	Board of Governors
BoM:	Board of Management
CDF:	Constituency Development Fund
EDSS:	Enhanced Direct Support to Schools
FDSE:	Free Day Secondary Education
FDSS:	Free Day Secondary Schools
GED:	Global Education Digest
IGAs:	Income Generating Activities
KCSE:	Kenya Certificate of Secondary Education
LATF:	Local Authorities Transfer Fund
MoE:	Ministry of Education
PDSS:	Public Day Secondary schools
PTA:	Parent Teachers Association
RoK:	Republic of Kenya
TSC:	Teachers Service Commission
UIS:	UNESCO Institute for Statistics
UNESCO:	United Nations Educational, Scientific and Cultural Organization
USA:	United States of America

OPERATIONAL DEFINITION OF KEY TERMS

Budget: refers to description of an estimate of the income and costs for a given future period of time (Arnold & Artz, 2019). In this study budget refers to an itemized document that shows how a public secondary school plans to obtain money and how it will spend the money.

Budget Deficit: Refers to a shortfall in terms of the amount of money obtained against the amount of money anticipated during the budgeting process (Hamza, Bhatti, & Kiran, 2019). In this study budget deficit refers to the negative difference in the actual amount of money that public secondary schools have and the amount in their budget at specific moments in their annual financial / fiscal plans and which was indicated by indicative sources of budget deficit in this study.

Co-curricular Activities: refers to initiatives, educational opportunities, and extracurricular activities that supplement classroom curriculum. This indicates that the experiences have a relationship to or reflect the academic programme (Thompson, Ansoglenang, & Antwi, 2019). In this study this referred to undertakings that students participate, in the course of learning in public secondary schools that are not core to the curriculum. They include such activities as games, music, drama and athletics and for which regular competition with other schools are held.

County: Refers to the largest administrative unit in the devolved system of governance as enshrined in the Constitution of Kenya of 2010

Education Services: In this study these refer to those services provided in secondary education. These included services such as student support, learning environment management, specialized instructions, curriculum development, professional development, college and career readiness and innovative educational experiences.

Fiscal Planning: Refers to the deliberate planning undertaken by institutions and covering specific periods such as 12 months, and beyond.. In this study fiscal planning referred to regular financial planning that public secondary schools do regularly in order to plan on how they will source and spend their money.

Planning: describes the process of creating a plan for a certain course of action (Leverkus, 2020). In this study, planning was used to indicate formulating programmes aimed at achieving goals and objectives of schools.

Public Secondary Schools: Institutions that provide formal education to learners after Primary school level and sponsored by the government through public taxes.

School Staffing: Refers to the process of hiring, positioning and overseeing employees in a school, including provision and management of both teaching and non-teaching staff (Castetter & Young, 2000). In this study staffing refers to the process in which BoM in schools fill personnel gaps in public secondary schools for achievement of goals and objectives.

School Supplies: Refer to amount of goods and materials available for use. In this study, school supplies refer to the essential commodities that a public secondary school requires in order to fulfil its mandate.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Education is both an essential human right and a driver of both human and economic progress. According to Cole, (2022) quality education is a critical antecedent for socioeconomic development of any society. With regard to this context Kenya has continuously reformed its education curriculum to align it with its changing needs and aspirations. The country's policy on education and training envisage a curriculum that successfully develops the knowledge, skills, competencies as well as lifelong disposition of its citizens to meet the human capital needs of the country (Wanuri, 2022). The focus is on building capacity to develop the learner's repertoire of skills and competencies required in the country. The extent to which education fulfils students' fundamental learning needs and enhances their lives and overall educational experience is considered a measure of quality education (Madani, 2019).

To enable timely implementation of a high-quality curriculum that supports the development of well-rounded learners, a stable financial foundation is necessary. The curriculum functions as a purposeful and systematic selection of skills, values, and knowledge. It influences the design of the teaching, learning, and assessment processes by addressing questions like what, why, when, and how students should study (Mendoza, Ramírez, González, & Moreira, 2022).. While having high-quality curriculum content is essential for students to achieve excellent learning outcomes, the content also has to be reinforced and supported by efficient delivery methods (Müller & Wulf, 2021).. Requirements for effective delivery strategies include procurement of co-essential learning equipment, staffing that comprise both teaching and non-teaching staff and active participation in co-curricular activities. Thus, it is crucial that school administration make sure there are enough funds to meet these needs.

In order to implement a curriculum that develops all-round learners, schools need to have sound financial resource management. A good financial resource management starts with budgeting which consists of educational programme, expenditure plan and revenue plan. Education programme is what the school undertakes or expects to undertake for the whole year (Roskvist, Eggleton, & Goodyear-Smith, 2020) while expenditure plan contains a number of vote heads that should be catered for (Karlsson, McPherson, & Pampallis, 2020). The revenue plan states

clearly where the various vote heads should be financed from. This can come from government allocations, grants, fees and income generating projects (Ayina & Kasujja, 2020).

When a budget is adopted in the public sector, it means that the administration has made a series of decisions that ultimately align projected resources with the demands of the entity (Alsharari, 2022). Therefore, the budget is a by-product of the process of fiscal planning (Allen, Betley, Renteria, & Singh, 2020). Fiscal planning allows an organization to identify threats to its financial conditions, set goals and strategies, present existing fiscal problems in a transparent manner, and adopt best practices for assessing, monitoring, and implementing public policies (ElBerry & Goeminne, 2021). Provision of education services requires proper budgeting and funding (Pambudi, Hidayati, Putri, & Wibowo, 2021). The indicators for quality education services include quality procurement plans for supplies, adequate and qualified staffing (Siswanto & Hidayati, 2020) and effective participation in co-curricular activities (Ordaz, Tan, Skett, & Herremans, 2021) among others. Poor fiscal planning can lead to fiscal laxity and eventual budget deficit.

As per a report by Navarro (2022) the Philippine government invests about \$64 per student on secondary education each year. This is rather small in comparison to the \$7,500 in the United States of America (USA) and the \$5,000 in Singapore. The government finds it challenging to raise spending on education because of the massive budget imbalance and other pressing issues facing the Philippines. The low amount of funding leads to underfunded libraries, inadequate classrooms and teachers, poor teacher training, and a continuous need for curriculum development (Chin, et al., 2022).

To increase access to education, many African governments abolished school fees and took upon themselves the burden of financing the cost of education provision, which would normally have been directly drawn from the school fees (Gruijters, Abango, & Casely-Hayford, 2024). In most cases, the governments did so by creating a common fund through which all public students across the board would be allocated a specific amount of money per year. It has been praised that the elimination of school fees in countries offering basic (primary and secondary) education throughout Africa is essential to ensuring that the majority of the continent's population has access to education. It has sparked a previously dormant desire for education and motivated kids from underprivileged homes to pursue an education (Doyle &

Keane, 2019). Even Nevertheless, there are still many obstacles to overcome before the continent can reach the goal of Education for All (EFA).

Findings on school funding in Sub-Saharan Africa done in five countries that included Uganda, Lesotho, Ethiopia, Malawi and South Africa showed that there was commendable effort in devolving financial powers to schools and districts (Mkandawire, 2024). However, the schools servicing middle class neighbourhoods were the primary benefactors of this financial policy in all of the countries. This is due to the fact that teachers and administrators working in the schools have better financial management techniques, more advanced school financial systems, and managers who have the social capital and cultural background to stand up for themselves when money is paid out late or in smaller amounts than anticipated. These managers also tend to be more self-assured as institutional managers. Even in cases where efforts are made to guarantee the benefit of these schools, in general, those serving underprivileged and marginalized areas lose out. In Malawi, the only programme that appeared to be truly improving extremely marginalized schools was the Enhanced Direct Support to Schools (EDSS) initiative (Mkandawire, 2024). Review of literature did not identify a study that has focused on achievement in Kenya.

According to a working paper by Ogawa (2021), the removal of user fees from Kenyan government primary schools in 2003 caused a shift in demand toward private education rather than a large increase in net enrolment in public schools. This is demonstrated by the concurrent rise in enrolment in private elementary schools and the amount paid in tuition (Ogawa, 2021). Additionally, the research showed that after Free Primary Education (FPE), financing for public primary schools decreased, and the central government's capitation grants more than made up for the loss of free money to public schools. What did change however, in response to FPE was the socio-economic composition of pupils in public schools. This is due to the fact that, despite the fact that FPE was effective in enhancing the educational opportunities available to students from lower-income families, wealthy families reportedly sent their kids to private elementary schools, which exacerbated socioeconomic segregation in the educational system (Ogawa, 2021).

Delays in disbursing Government funds often lead to budgetary deficits for free education, a situation in which expenditures exceed revenue available to schools and which can lead to schools failure to achieve their operational goals (Nyakundi & Onsomu, 2023). Enrolment

increased by 15% from 1,180,267 in 2007 to 1,382,211 when free secondary tuition was implemented in 2008 (Oketch, Sika, & Otieno Gogo, 2019). During the formal launch of the Free Day Secondary Education Programme former Kenyan president Mwai Kibaki, emphasized that FDSEP's main objective was to ensure that children from low-income households received a high-quality education that would allow them to access opportunities for self-advancement and become contributing members of society (Imana, 2020). According to Kibaki, parents would cover the cost of boarding and purchase uniforms for their children, while the government would cover tuition fees.

Free Day Secondary Education (FDSE) was introduced in 2008 with the goal of addressing issues such as low educational quality and low secondary school completion rates, high educational costs, and little community involvement, particularly among low-income and impoverished families (Olang'o, Malechwani, Murage, & Amuka, 2021). The Basic Education Act (2013) enhanced the delivery of free basic education by enforcing Article 53 of the Kenyan Constitution of 2010 and other enabling measures intended to promote and regulate free and compulsory basic education (Skelton & Mutu, 2024). This meant that public schools would benefit most from Government secondary education support (Nixon, 2020). However, on the flip side, the schools became more vulnerable to Government's failure to remit funds in time and to remit insufficient funds. This led to budgetary deficits with consequences on provision of key education services in schools. This partly informed the reason why this study focused on secondary rather than primary schools.

The delivery of high-quality educational services has been negatively impacted by the Kenyan government's inability to timely send funds to schools in accordance with the Free Day Secondary Education (FDSE) policy. The government's allotted funds for each student are mostly kept on file and are never fully or promptly disbursed (Bett & Ahonobadha, 2024). A study by Momanyi and Muchimuti, (2020) discovered that the cost of required items and other direct payments by parents is exorbitant; the government's FDSE subsidies are insufficient and do not get paid on time. There is a severe lack of teachers in high schools, textbook-to-pupil ratios are lower than ideal and the physical infrastructure necessary for instruction and learning in the classroom is inadequate. Even though secondary school fees were eliminated, a monitoring report by EFA - Global revealed that indirect expenses are still twelve to twenty times higher than parents' monthly income in rural areas, making secondary school education

unaffordable for low-income families. According to a study by Kamau (2021) that assessed secondary school principals' leadership responsibilities and students' involvement in extracurricular activities in Kenya, Ministry of Education (MoE) officials, principals, and teachers should give non-academic skill development as much consideration as academic knowledge. However, the study did not address the issue of how budget deficits could limit secondary school principals' and School Management Boards' effort to develop co-curricular activities, provide adequate staffing and meeting their supplies needs in the County.

Secondary education services are essential to Kenya's youth empowerment and national development. With initiatives like the 100% transition policy, which guarantees that all children advance from elementary to secondary school, the government has worked hard to increase access and quality. The Sustainable Development Goals (SDGs), which place a strong emphasis on inclusive, egalitarian, high-quality education for all, and Kenya's Vision 2030 are both in line with this initiative (Ministry of Education, 2019). Literature above shows that the scarce economic resources relative to the size of population that needs education means that it has not been possible for the Government to fully meet the budget requirement to provide quality education. This has led to sharing the costs with parents and communities of the schools involved. Subsequently, the achievements envisaged under free schooling that included increased enrolment, quality infrastructure, adequate teaching and learning resources including capacity to participate in extra-curricular activities and sufficient staffing have not been realized (Simiyu, 2021). In order to address the teacher shortage, principals in many schools are also asking parents for fees and rerouting monies intended for supplies and infrastructure development to the hiring of instructors (Ondong, 2024). In the same light, the Government's sponsored public secondary schools are still forced to ask parents to bear the burden for some expenses that cannot be borne sufficiently by the annual Government allocation of Ksh 22240 per student. The disbursement of these funds is often delayed or insufficient while fees from parents are delayed and sometimes never paid (Mohammed & Apiung, 2024).

Even though there is not any empirical evidence to support Nyandarua County's secondary school budget deficit, underfunding of schools is visible when they compete nationally in sports and other events in which well-funded schools can participate successfully. For example, as shown in Table 1, the schools that have won the boys and girls football competition nationally between the years 2019 to 2022 are those that are well endowed in resources:

Table 1.1 Winners of National School Football Competition between 2019 and 2022

Year	Boys	Girls
2022	Ebwali Secondary school	Butere Girls Secondary School
2021	Not held due to COVID 19	
2020	Not held due to COVID 19	
2019	Kakamega High	Butere Girls
2018	St Anthonys Kitale	Kwale Girls
2015	Passenga	Nginda Girls

Source; Airtel rising stars term 2B KESHA Championship, July 2022

As indicated in Table 1, except for Passenga secondary school in Nyandarua county, all other schools are well known and endowed with resources. The contrary is observed for games that are individual based. In athletics, a number of schools have featured in 2015 and 2022 (Kenya Secondary Schools Sports Association, 2022) This implies that there is a connection between students' abilities to play games and the resources that are available in classrooms.

On staffing, it is observed that there is shortage of teachers where most day schools' Boards of Management (BoMs) hire teachers based on Curriculum Based Establishment (CBE). Anuna, (2023) state that despite disparate staffing criteria set by the Teachers Service Commission (TSC) and the Ministry of Education (MoE), many Kenyan schools continue to be understaffed and the distribution of hired teachers is unfair. The onset of decentralized teachers' recruitment in Kenya in 2001 brought little relief to this shortage but was quickly eroded in 2003 when many schools were established through CDF (Thuo & Kioko, 2023).

This investigation concentrated on the Influence of budget deficit on supplies, staffing and involvement in extracurricular activities in public secondary education in Nyandarua County. The County has 105 public secondary schools (Schools net, 2020) The high number of secondary schools means that any failure to timely remit FDSE funds could have profound impact on provision of quality secondary education in Nyandarua County. This is supported by

the number of schools that have uncleared bills running for over an year as reported by some members of the local KESSHA chapter. Thus negatively affects education services and by extension standards in Nyandarua County in recent years, for example, the mean score at Kenya Certificate Secondary Education (KCSE) in the year 2019 had no single public school in the top 20 from Nyandarua County. The first school was Karima girls, a national school, at position 45 followed by Nyandarua High school at position 119 nationally. It is for this reason that the study identified the County as the focus area with the aim of establishing how budget deficit could be influencing sourcing of supplies, staffing and participation in co-curricular activities in public secondary schools in the County.

1.2 Statement of the Problem

Provision of educational services requires proper budgeting and funding. Public secondary schools in Kenya are Government sponsored but are forced to ask parents to bear the burden for provision of some services, expenses of which cannot be borne sufficiently by the annual Government allocation of Kshs.22240 per student. However, many schools grapple with increasing amount of outstanding suppliers' debts that often run into two years. For example, 35 school principals who met in Olkalou highlighted the concern of uncleared bills during a Kenya Association of Head teachers held in 2022, which is an indicator of budget deficit. The report indicates that the problem was acute that some suppliers were hesitant to deal with schools. Indicators of quality educational services include quality procurement plans and timely payment for supplies, adequacy of qualified staffing and effective participation in co-curricular activities among others. Although secondary school education policy makers, Ministry of Education (MoE) officials, school principals, and teachers should devote equal emphasis on developing students' non-academic talents as they do on the academic component, budget limitations may inhibit these efforts. The effects of financial shortages on the provision of educational services in public secondary schools in Nyandarua County are little documented empirically. In order to help the pertinent educational stakeholders, make informed policy decisions, this study aimed to close this information gap.

1.3 Aim and Objectives of the Study

1.3.1 General Objective

The aim of this study was to examine how budget deficits in public secondary schools in Kenya's Nyandarua County affect the provision of educational services, such as necessary supplies, sufficient staffing, and successful involvement in extracurricular activities. These services include supplies of essential goods and services, staffing and participation in co-curricular activities.

1.3.2 Objectives of the Study

The study addressed the following specific objectives;

- i. To investigate the Influence of budget deficits on supply of essential goods and services in public secondary schools in Nyandarua County, Kenya.
- ii. To assess the Influence of budget deficits on staffing in public secondary schools in Nyandarua County, Kenya.
- iii. To establish the Influence of budget deficits on participation in co-curricular activities in public secondary schools in Nyandarua County, Kenya.
- iv. To find out possible remedies to address challenges of fiscal planning in public secondary schools in Nyandarua County, Kenya.

1.4 Research Hypotheses

To achieve the objectives, the study tested the following null hypotheses at an alpha level of .05 that covered objectives (iii) and (iv).

H₀₁: Budget deficits have no statistically significant Influence on the supply of essential goods and services in public secondary schools in Nyandarua County, Kenya.

H₀₂: Budget deficits have no statistically significant Influence on staffing in public secondary schools in Nyandarua County, Kenya.

H₀₃: Budget deficits have no statistically significant Influence on participation in co-curricular activities in public secondary schools in Nyandarua County, Kenya.

H₀₄: There is no statistically significant difference in the Influence of budget deficits on the procurement of essential goods and services, staffing and participation in co-curricular activities in public secondary schools in Nyandarua County, Kenya.

1.5 Significance of the Study

This study has contributed to the body of knowledge on the impact of the government's decision on the financial capacity of secondary schools to deliver education services (Bett & Ahonobadha, 2024). This information is valuable to the planners in the Ministry of Education and Ministry of Finance in making informed policy decisions, as it has helped them understand the challenges that secondary schools face in providing critical educational services.

The study has provided insight to parents on the prevailing financial situation in secondary schools in Nyandarua County. This could influence them to become more proactive and committed in paying relevant school fees and providing other requisite services. The findings will provide the Ministry of Education officials with insight into the challenges faced by school administrators on the ground in their effort to ensure quality education services in their schools. To the Ministry of Finance, the information generated by the study should assist the planners in assessing the sufficiency of funds allocated to schools. It has also provided insights valuable to school principals in their endeavour to overcome financial odds that their schools encounter. The study's findings should be of interest to academics, postgraduate students, and educational researchers since they provide new insights into the field and serve as a foundation for future research.

1.6 Scope of the Study

This study focused on the Influence of budget deficits on educational service delivery in the 105 public secondary schools situated in Nyandarua County, Kenya over the period 2022-2023. The scope was limited to public secondary schools because they rely heavily on government funding and are therefore more susceptible to budget deficits,. By concentrating on public schools, the study aimed to understand how financial constraints directly impact participation levels in co-curricular activities, the hiring and maintenance of qualified staff under BoM's terms, and the procurement and supply of essential goods and equipment, which are critical components of educational service delivery. The target population for this study

included the County Director of Education and the principals of every public secondary school in Nyandarua County.

1.7 Limitations of the Study

The results of the study focused on the Influences of budget deficits on education service delivery in public secondary schools in Nyandarua County, Kenya. The results of the study should therefore be generalized with caution to secondary schools in other counties since these schools could have different environment and therefore issues affecting them including their mode and source of financing could be different. Moreover, private schools are not covered by the Government policy of providing subsidies to students in the schools. The results of the study should be generalized to public day secondary schools in other counties in the country though with caution since the fiscal conditions in these other counties may not be the same as those in Nyandarua County.

1.8 Assumptions of the Study

The research was conducted under the assumptions that

- i. The respondents would willingly provide honest information sought by the study.
- ii. The respondents were well versed with the information sought by the study.
- iii. There would be no incidents in schools that could inhibit the process of data collection.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature on budgeting, budget deficits on staffing, extracurricular activities, and school supply management has been reviewed in this chapter. It also highlights the difficulties secondary schools have with financial planning. The chapter opens with a synopsis of the financial evolution of secondary education in Kenya across time, presents empirical research, and concludes with the study's theoretical and conceptual framework.

2.1 Financing of Education in Secondary Schools

In the majority of nations, citizens are legally obligated to complete a specific basic level of education and see access to basic education as the State's responsibility (Westheimer, 2024). The study reviewed literature on cost sharing and state's role in secondary education funding approaches as below.

2.1.1 Context of Funding Secondary School Education

Public school funding in the United States is derived from multiple sources, including federal, state, and local taxation (Owings & Kaplan, 2019). It can also be through provision of Government grants and bursaries. In the United States of America, state and municipal governments are primarily in charge of education. America's system of financing education reflects the roles played by State and local actors, which include both public and private entities. Non-federal sources provide 92% of the money for elementary and secondary education (Fossum, 2022).

In order to help the states to create effective educational systems, the first Department of Education in the United States was founded in 1867 with the intention of compiling information about education and educational institutions. The department has changed over its 130-year history to address new challenges in education around the nation. The Elementary and Secondary Education Act of 1965 introduced a wide range of initiatives, one of which was the Title I programme, which provides federal assistance to underprivileged students in order to solve the issues facing impoverished urban and rural communities (Fossum, 2022). Conversely, since 1990, the primary focus of funding has been on whether a State is giving local districts adequate money and resources to ensure that every kid receives a basic education. (Engel,

Jacob, Claessens and Erickson (2021) have outlined the components of an adequate education as comprising specialized teachers, full-day kindergarten, core class sizes of 15 for classes K–3 and 25 for grades 4–6. However, funding is required for special needs kids as well as students from underprivileged backgrounds to receive an education (Meijer & Watkins, 2019). In Canada, the education sector includes programmes and services that support elementary and secondary education from junior kindergarten through Grade 12 (Elnagar & Young, 2021). The British North American Act of 1867 served as the foundational law that delineated the respective purviews of the federal and local governments and granted the provinces authority over the management and financing of educational institutions (Phillips, Girard, & Brown, R. B, 2022). In Ontario, the public education system has been a vital component of the province's public service since its founding in the middle of the 19th century.

In the United Kingdom, there are two types of schools: independent schools that charge parents for their children's education, or state schools run by the local government that are free for all students (Gorard, 2019). In the past, the report of the Committee of Council on Education for the allocation of funding for public education was accepted in 1839. But the nation has had to deal with some significant debate over financing for education, particularly when it comes to the funding of religious schools as provided for by Acts of 1870 and 1902. State funding for denominational schools was opposed by dissenters and sceptics (Mallon, 2019).

The debate in Australia over financing, religion, and education has two sides. First, government support of private schools is problematic because these institutions are almost exclusively run by or affiliated with religious organizations. The link between religion, education, and the state has been a topic of dispute since states began enforcing mandatory public education in the second half of the 1800s. By 1880, all colonies had stopped receiving state funding for religious schools, and public school systems had been formed without the involvement of churches (Vaughan, 2022). Regarding economic reform, since 1994, there has been a discernible increase in education spending in South Africa as a result of the national budget being reallocated from social services to security. One specific tool among several that were employed to attain fiscal fairness was the Norms and Standards for School Financing. One such solution designated pro-poor school financing as a resource that needed extra care (Mestry, 2020).

Prior to Kenya's independence, secondary schooling had little bearing on Kenyan Africans. However, there were three types of secondary schools in Kenya during the first few years after independence: government-funded, "*harambee*," and private (Charton, 2021). The 'harambee' basically was where parents bore the burdens of building the schools and maintaining them. Nonetheless, the government introduced Free Day Secondary Education (FDSE) in 2008 to address low completion rates at the secondary level, poor quality of education, high educational costs, and little community involvement (Momanyi & Muchimuti, 2020).

One of the primary arguments for the funding of education by a State (tax resources) is that it is an economic investment that would generate returns in terms of the economic growth of the country that makes that investment. According to a study on the return on investment of funding education, basic education continues to have the greatest priority for funding in poor countries, returns decline with increasing levels of schooling and per capita income. The public financing of higher education is regressive; returns in the competitive private sector of the economy are higher than those in the public sector (Nixon, 2020); and investing in women's education generally generates higher returns than investing in men's education (Gunderson & Oreopolous, 2020).

The reviewed literature has revealed that different funding methods are used throughout the world for secondary education, such as public-private partnerships, government budgets, foreign aid, and creative financing like education bonds. In order to alleviate imbalances, several nations seek equitable allocation. Kenya uses a combination of capitation grants, government financing, and assistance from foreign donors to pay for secondary education. When the Free Day Secondary Education (FDSE) program was introduced in 2008, tuition costs were paid for, greatly increasing access. But problems like insufficient money, slow pay-outs, and inefficient resource distribution continue. For Kenya to improve the quality and accessibility of education, financial methods must be strengthened.

2.2 Overview of Secondary School Funding in Kenya

In Kenya, funding of secondary school education is through cost sharing between the government and the parents through school fees. In 1988, the cost-sharing strategy was implemented as a way to modernize the education system and keep costs under control without compromising the delivery of other essential social services. It also aimed to limit government

spending by engaging the support of development partners, such as donors, non-governmental organizations, and the business sector (Lewis, Kanji, & Themudo, 2020). The government pays for professional services and educational administration, while communities, parents, and sponsors provide the physical facilities, books and other reading materials, stationery, and other consumables (Sifuna, 2019).

The self-help (or "harambee") movement in Kenya demonstrates that cost-sharing is not a new idea (Ogawa, Dynamics for Establishing Secondary Schools, 2020). As a result of government policy detailed in Sessional Paper No. 1 of 1986, which addressed the amount of government spending on education and provided mechanisms for rationalization, cost-sharing was first introduced in Kenyan education in 1989. The intention was to raise cost-sharing to 30% of ongoing expenses in order to subsidize education and training (Johnstone, 2020). Kenyan parents and local communities were required to share a portion of the cost of education by the mid-1980s due to the government's massive increase in spending on education since the country's independence. This cost-sharing was imposed on them without considering their financial situation.

A research by Shibairo (2023) backed the cost-sharing programme as a means of raising extra money for education and reducing the government's financial burden. Therefore, by doing this, the government would be able to release some of the monies that previously prevented it from providing sufficient financing to other sectors (Shibairo, 2023). In order to maintain high investment in education and training in the face of economic and demographic constraints, Kenya adopted cost-sharing arrangements appropriate for every educational level, all the while trying to improve internal efficiency and education management.

According to Wakhisi, (2020) parents are required by the cost-sharing policy to construct and equip classrooms, workshops, and laboratories because these spaces are important for increasing productivity. Okelele (2021) examined factors influencing financial control practices in public secondary school in Kibra sub county in Nairobi county, Kenya and discovered that secondary school finances are mismanaged and that a large percentage of secondary school expenditure is borne by Kenyan parents. The author further claims that uniform costs, incidental expenses, development money, and tuition and board account for the majority of the parents' contribution.

Secondary schools in Kenya have the option to raise money through income-generating activities (IGA) in addition to the monies that are provided by the government through the Ministry of Education, Science, and Technology. IGA's goal is to close the funding gap in education between what the government and other stakeholders give and what the school actually requires (Rono, 2020). Lucretia, Evans and Eugene (2022) assessed the impetus of school-based income-generating activities on students' entrepreneurship skills among public secondary schools in Kilimanjaro Region-Tanzania. Authors discussed the importance of having the appropriate people in the right positions on multiple occasions. This demonstrated that institutions that typically fill their classes were the ones that would probably succeed in producing revenue.

Additional funding for secondary school education may come from outside contributors like non-governmental organizations. An analysis of the role of non-governmental organizations (NGOs) in education provision across Africa showed that NGOs are becoming more involved in the delivery of educational services, have an impact on education policy, and are included by donors and the government in various facets of the educational system (Adu-Baffoe & Bonney, 2021). On the other hand, a study on the effect of IGAs on the financial performance of Kenyan schools have revealed that they have higher asset ownership ratio than those without (Daniel, Oseno, & Rutto, 2023). In the same light, a 2.2-fold decrease in the likelihood of liability exceeding the median level for schools that had IGA has been reported. The analysis indicated that schools with IGAs were around 2.1 times more likely than non-IGA schools to be operating above the median threshold in terms of net worth. This suggests that IGA schools are wealthier than non-IGA schools. But according to a study on IGAs in Murang'a South Sub County, issues including insufficient land meant that the sub-county's schools saw little to no benefit from IGAs (Kigotho, Githogori, & Muondwe, 2019).

Any organization's ability to succeed or fail depends on its ability to plan its financial operations. Budgeting refers to the financial planning process. A budget may be in surplus or deficit. When an organization's expenses surpass its revenue, a budget imbalance arises. Planning starts to be beneficial to the company when actual spending matches projected spending. On the other hand, a budget deficit—the inability of an organization to raise the necessary funds—often results in a decline in the calibre and ability of the organization to carry out its goals and mission (Paul, 2021).

School budget deficits affects both developed and developing countries. A \$1 billion deficit forced Chicago, USA, to close 54 schools in 2012, forcing 30,000 students—the majority of whom were black—to transfer to other schools on the South and West sides of the city (Gutierrez, 2022). According to a research conducted in the United Kingdom (UK) revealed that schools in Salford City grappled with deficits exceeding one million pounds. School heads and governors throughout the United Kingdom expressed increasing uneasiness as they struggled to understand the budgets for their school over some years (Sir & Brighouse, 2022). School leaders said they were compelled to cut expenses to the absolute minimum, while unions issued warnings about the predicted widespread loss of jobs. This suggested that they would need to make some financial sacrifices.

Schools have autonomy over how they use their funds, and school heads and governors should decide how to achieve greater value for their money at the school level, according to the UK's Departmental guidelines for maintained schools and local authorities. A large portion of this autonomy is found in the budgets that schools must follow in order to fulfil their mandate to educate students (Hashim, Torres, & Kumar, 2023). According to Ahmad (2021) schools with budgetary control are better equipped to maintain school development initiatives because they may allocate funds to support high-priority objectives and initiatives.

In order to invest in teaching and learning, all schools should be trying to save money, spending it wisely, and maximizing what they can get. An examination of the effectiveness of the school system in the United Kingdom reveals some traits shared by many of the more effective schools and suggests several steps that stakeholders, the government, and schools may take to encourage increased school efficiency (Hashim, Torres, & Kumar, 2023).

However, funding education is a major problem that affects the entire world and frequently results in financial deficits in schools. In the past decade, the global gross enrolment ratio (GER) for lower secondary education climbed from 72% to 80%, with considerable gains in the Arab States and sub-Saharan Africa (Lebeau & Oanda, 2020). Yet even with these advancements, only 43% of Africans participate in this level of education, which is still extremely low. Furthermore, one-third of children worldwide still reside in nations where obtaining a lower secondary education is legally required but is not followed through on. Particularly in South and West Asia, this is true (Rowell, 2020).

In Kenya, the ideal state has not been attained as a result of late and inadequate disbursement of resources for financing education. According to a research by Abagi and Wasunna (2000) on cost sharing in Kenyan health and education, low enrolment, low retention, low transition rates, and poor-quality education have put the education subsector at a crossroads. The study found that there are significant differences in the expenses that schools in the region have to pay for their operations due to the absence of Ministry of Education policy guidelines for cost sharing in education. According to the report, the ministry's dispersed fund figures to schools were deemed arbitrary, unrealistic, and insensitive to the unique needs and circumstances of each school.

In Kenya abolition of school fees and replacing it with Government funding is not a panacea to financial constraints that schools face. Cost is a significant deterrent to enrolment, but data from Kenyan experiences indicates that other aspects must be taken into consideration if educational advancements are to be maintained and expanded upon (Asante, 2024). The government does not decide the demand for education on its own. These variables range from concerns about quality to particular steps taken to guarantee that the most disadvantaged groups gain from this change in policy. Financial, managerial, and logistical challenges, policy discussions, negotiations, and trade-offs involving all parties—from the local to the national level, from the community to the school, and incorporating both domestic and foreign development partners—are some of the related worries. Numerous of these issues might be linked to the way schools' budget, which mostly relies on the government to meet financial obligations.

The fundamental tenet of international human rights legislation is universal access to free and compulsory education; nevertheless, this ideal does not inform global educational policies. The ability to pay has historically defined the distinction between private and public education. In underdeveloped nations, private education funding accounts for 35% of total costs; in developed nations, this percentage is 8% (Alam, Forhad, & Ismail, 2020) suggesting that there are budget deficits that secondary education faces in many parts of the world.

2.3 Sources of Budget Deficits in Public Secondary Schools

A Budget is basically a plan of how an institution's money will flow in and how it will flow out. If the demand for outflow exceeds cash inflow, the institution experiences a budget deficit.

Budget deficit for schools can arise due to limited or delayed disbursement of required funding, reluctance of parents to pay school fees, increased cost of school's inputs, accumulation of debts, high overdraft interest rates, insufficient free public secondary education funds or emergencies and unplanned expenses (Allen, Betley, Renteria, & Singh, 2020)

According to "Ghana Vision 2020," the Ghanaian government places a high priority on expanding adult and secondary education access, attaining universal adult literacy and basic education, and improving labour force skills (Boadu, 2023). To achieve this, the Ghanaian Government set ambitious plans for education that included building 200 senior schools by 2017. However, budget deficit on the national budget are a threat to these goals. This study looked at the Influence of budget deficit in Nyandarua County in Kenya which presented a contextual gap.

Furthermore, Wakhisi, (2020) demonstrated a high correlation between anticipated and actual spending in Public Day Secondary Schools (PDSS) in Mumias East and Mumias West Sub-Counties, Kakamega County. Due to the false belief that the government should cover all of the costs associated with education, the trajectory of income sources indicates a slow growth in government payments and a decline in parent contributions. Massive budget shortfalls in the majority of the nation's public day secondary schools are largely attributable to this. In order to relieve parents of their financial strain and supplement the cash from the government budget, the schools have not also come up with more sustainable ways to raise money through income-generating projects. This study looked at the situation in public secondary schools in Nyandarua counties through surveys thus presenting a methodological and contextual gap.

Literature reviewed reveals that FDSS are often more dependent on the Government's allocations to meet their budgetary needs. This, together with a lack of clear policy guidelines and untimely release of funds from the Government means that budget deficits are a major challenge facing FDSS. This study sought to identify the challenges the free day secondary schools in Nyandarua County face in their fiscal planning activities.

2.4. Influence of Budget Deficits on Supply of Essential Goods and Services

Budgeting is a crucial tool for planning and evaluating in a school setting. It serves as a means of converting financial resource plans into educational goals and activities. Realistically, allocating funds for the budget should be closely related to creating an instructional plan that

satisfies the performance goals of the school. Effective budgeting requires a connection between financial planning and instructional goals because it improves the assessment of financial and educational accountability (Allen, Betley, Renteria, & Singh, 2020).

The academic performance of pupils at a school is negatively impacted when the institution cannot provide adequate facilities for teaching and learning (Barrett, Treves, Shmis, & Ambasz, 2019). A budget deficit can result in a school being unable to mobilize the teaching and non-teaching materials necessary to provide its users that includes teachers and students with the requirements needed to achieve their various objectives. Obadara and Alaka, (2019) in a Nigerian study, there is a substantial association ($r = .6$) at the 05 level between the allocation of resources and secondary school student outcomes. The findings suggested that allocating financial resources to purchase necessary school supplies has a big impact on students' academic achievement. This study looked at the Influence of budget deficit on school supplies.

Resource mobilization is a challenge for secondary schools in Kenya. As Wanyama (2020) study on the difficulties facing secondary school administrators in Emuhaya and Vihiga Sub Counties, many schools lack physical amenities like labs and libraries. The primary explanation put forth by the majority of principals was insufficient funding as a result of the government's ban on fundraising events, or "Harambees." Furthermore, Jeruto and Okirima (2020) in a study on free instructional resources provision on equity in access to education in schools in Marakwet Sub-county, Kenya, found that PTA funding was insufficient to maintain the provision of instructional resources in schools. However, this study was carried out before the implementation of the free secondary education programme, which allowed the government to somewhat relieve the financial strain on public secondary schools by providing funds for the acquisition of certain instructional and learning materials. This was a contextual gap that this study aimed at filling. This is because, even with the advent of FDSE, it is evident that the resource mobilization challenges that public day secondary schools faced prior to FDSE, continue to remain a problem for FDSS.

Furthermore, it is not only in mobilizing resources directly used for learning that resource challenges can affect learning outcomes. Nzoka and Orodho (2019), found that most schools lacked the funding to offer health facilities for their students while in school, which caused absenteeism as they sought care outside the school grounds and may have contributed to the

students' subpar academic performance. This study sought to understand how budget deficits as a result of intermittent disbursement of FDSE funds has affected the capacity of schools in Nyandarua County to provide adequate supply of educational goods and services.

From the foregoing, it can be concluded that budget deficits undermine the capacity of schools to ensure that students have all the necessary resources and services they need for their academic pursuit. The literature reviewed shows that this often manifests in lack of facilities such as libraries, textbooks, laboratory equipment and access to health services (Nzoka & Orodho, 2019). The absence of these materials and services in the learning process leads to limitations in the schools' capacity to provide quality services.

2.5 Influence of Budget Deficits on Staffing in Public Secondary Schools

Provision of resources to hire and retain a sufficient number of highly qualified staff (both teaching and non-teaching) is one of the most important aspects of ensuring that students receive quality education. According to Van Dijk, van Tartwijk, van der, and Kluijtmans, (2020) excellent teachers possess expertise in evaluation and assessment techniques as well as instructional methodologies, which enable them to determine the unique needs of each student. In Guinea and India, McCallum (2021) observed that teachers lacked adequate training in evaluation methods, and that actual practices differed greatly from those advocated by government initiatives. In addition, support staff are important in the day-to-day running of schools and to achieving good learning outcomes for students.

Furthermore, when a school or the surrounding community is unable to provide support structures such as housing and security, it can present a challenge to the staffing in the school. Zhao, Liu and Su (2021) show that whether a teacher employs traditional or more modern teaching approaches, making good use of class time has a significant impact on students' learning. The first step is represented by the teachers' presence in the classroom. The authors claim that a lot of teachers have housing and transportation issues that make it difficult for them to come to school on time and stay until after school hours.

In Nigeria, an investigation carried out in Benue State's Zone A Senatorial District revealed that prompt payment of employee salaries and benefits had a significant Influence on secondary school administration. The study examined the influence of financial management on secondary school administration. It also demonstrated how the supply of educational resources

in secondary schools was greatly impacted by school fees and other earnings Terhile and Ibh, (2019). Findings of this study demonstrated the importance of having sufficient funds to meet staffing requirements and to motivate them. Even though it was estimated that Nigeria's economy is expanding the education sector has continuously received relatively little funding. Despite this, the surge in enrolment in Nigerian secondary schools brought about by the flood of students demanded that the government take fast action to find alternative funding sources for education (Austin, 2020).

Furthermore, Wachira (2019) observed that the majority of the instructors, who were teaching in boarding schools for boys and girls, expressed that their dissatisfaction with the teaching profession was mostly caused by inadequate pay in a study on the work satisfaction of science teachers in Murang'a County. The majority of head teachers stated that because of the low remuneration from BoM, science teachers left the classroom in search of better opportunities. When asked why they continued in the teaching profession, every responder, according to Wachira, said that science teachers continued because they saw it as a way to make money.

Literature review has shown that budget deficits could lead to staffing problems for the affected schools. Where schools are unable to acquire the necessary number of qualified teachers through facilities such as the FDSE programme, they often turn to alternatives such as hiring BoM teachers. These teachers are often less qualified, less paid and therefore less motivated compared to their TSC counterparts. In addition, budget deficits can cause resource shortages thus meaning it is harder for teachers to perform optimally in class.

This study therefore sought to examine the extent to which budget deficits affects the capacity of the schools in Nyandarua County to attract and retain sufficient numbers of properly trained staff. It looked at whether or not the schools are able to get the requisite numbers of properly trained teaching and non-teaching staff and the subsequent Influence on the schools' capacity to offer quality services.

2.6. Influence of Budget Deficits on Participation in Co-curricular Activities

In addition to academic activities, delays and shortages in mobilizing of resources identified in a school, budget deficit can have negative influence on co-curricular activities. The type and amount of funding for extracurricular activities varies from school to school, as noted by Heath, Anderson, Turner and Payne (2022). Extracurricular activities are funded by the government

for a number of reasons, including maintaining public order, safeguarding students' physical health and fitness, advancing prestige and power in secondary education, fostering a sense of identity, belonging, and unity among students, upholding government-aligned values in a community or society, and fostering economic development in that community or society. As a result, presenting oneself as physically fit or as someone who excels in sports and games has become crucial to how schools are seen.

O'Brien, et al., (2020) observe that financial limitations affect physical education (PE) throughout Europe. These include the incapacity to construct, repair, replace, maintain, or offer new facilities; a lack of equipment; the employment of teachers who are less trained or paid less; the departure of physical educators for positions with higher compensation; and a reduction in the quantity and duration of physical education sessions. Moreover Yauma, (2024) assert that many students are prevented from engaging in extracurricular activities due to a lack of sporting goods. If the government is unable to provide the necessary materials, the responsibility is passed to the parents, who may not have the money. This shows that budget constraints may have an impact on extracurricular activities, which frequently leads to a restricted range of activities available to students in the impacted schools. Furthermore, even the activities that are covered frequently lack sufficient funding or have deteriorating supporting infrastructure.

The purpose of this study was to determine how Nyandarua County public schools' ability to fully engage in extracurricular activities is impacted by budget deficits. Past reports show that only highly resourced schools in the county are represented in national events where team games are played. For example, Nyahururu Boys High school represented the County at national Kenya Science and Engineering Fair in 2015 (Ngatia, 2019). However, other public secondary schools that are poorly endowed with resources have participated in games where individuals participate such as athletics (Mukamba, 2022). Such sporting activities do not require a lot of funding compared to team games. This suggests that there is a relationship between scarce resources and capacity of schools to participate in co – curricular activities.

2.7 Possible Remedies to Address Challenges of Fiscal Planning in Public Secondary Schools

Inadequate funding, delayed fund disbursement, and inefficient resource allocation are just a few of the many issues facing fiscal planning in public secondary schools. Resolving these problems is essential to raising educational standards and guaranteeing fair access. Increasing collaborations between the public and private sectors is one possible solution. This strategy can help with infrastructure construction, learning material provision, and teaching staff training by mobilizing resources to supplement government funding (Ngware, 2020).

Increasing accountability and openness in school financial management is another solution. Adoption of digital financial management systems and routine audits can improve decision-making, decrease financial mismanagement, and increase transparency (Kipkemoi & Korir, 2021). Effective fiscal oversight is also made possible by programs that increase school administrators' proficiency in financial reporting, auditing, and budgeting. Furthermore, it is essential that government money be disbursed on time. Disbursement delays affect schools' capacity to carry out scheduled activities, which disrupts instruction. These obstacles can be addressed through policy changes intended to simplify resource distribution (Kimathi, Mwangi, & Wairimu, 2021). Last but not least, involving the community in financial planning could improve monitoring, promote local support for school initiatives, and provide a sense of ownership (Wekesa & Njeru, 2022). A stable financial environment that supports learning in Kenya's public secondary schools can be established through better fiscal planning techniques, more accountability, timely budget disbursement, and community involvement.

2.7 Theoretical Framework

The present study was underpinned by two theories: the Human Capital Theory by Gary S. Becker (1964) and the Capital Theory of School Effectiveness and Improvement by Hargreave (2001). The theories are discussed in the subsections hereunder.

2.7.2 Human Capital Theory

This study was based on the Human Capital Theory (HCT) by Gary S. Becker (1964). Understanding how education and other investments in human skills, and knowledge contribute to economic productivity and personal development is the main focus of HCT (Hanushek & Woessmann, 2020). According to HCT, training and education are investments in human

capital that increase production, much like investments in tangible capital. Education improves a person's abilities, competencies, and knowledge, increasing their productivity and, thus, their market value (Becker, 2019). According to the notion, economic growth depends on investments in human capital, which includes education, and training. A workforce with higher levels of education and skill is better able to innovate, boost output, and propel economic growth. Because they are more productive, those with more education or skills typically make more money. These people are frequently better able to support an organization or the economy. It also asserts that, in addition to financial gains, investing in human capital can boost social mobility, improve health outcomes, and allow people to make constructive contributions to society.

This theory, which presents education as an investment in the development of skills, knowledge, and talents that contribute to economic output and individual progress, is appropriate for a study on the impact of budget shortfalls on the delivery of education services. HCT provides an explanation of how financial limitations may restrict the resources available for high-quality teaching staff, infrastructure, and instructional materials in the context of public secondary schools in Nyandarua County, Kenya. This could have an effect on the general quality of education and future societal benefits. Human capital is created through education investment, producing more qualified people who can advance society and the economy. Budget shortfalls that limit these expenditures reduce the potential for the accumulation of human capital, which could impede progress for both individuals and communities. Because of this, HCT is perfect for analyzing how financial constraints impact the provision of educational services, which is essential for creating productive citizens.

2.7.1 Capital Theory of School Effectiveness and Improvement

The four theoretical pillars of Hargreaves (2001) theory are results, leverage, intellectual capital, and social capital (Daly, Liou, & Der-Martirosian, 2021). These pillars are connected to the intended learning outcomes and an educational institution's funding tactics. In this context, leverage measures the link between teacher input and educational output, whereas outcomes are metrics that reflect moral and cognitive qualities (Kraft, 2019). Therefore, Hargreaves contends in his conceptualization of intellectual capital that good schools focus on effective tactics that allow a substantial impact to arise from relatively minimal effort (that is, working smarter not harder), as opposed to instructors exerting excessive effort and producing

little fruit. High leverage tactics are combined in exceptional schools. High leverage works have an impact on a school's capacity for effectiveness.

The degree to which education's explicit aims are met as well as any unforeseen effects of the procedures used are both represented in the programme's results. Hargreaves (2001), taking Aristotle as his mentor, distinguishes between two types of excellences: moral excellences like courage, justice, and self-control leverage, and intellectual excellences like science, art, and practical wisdom. According to Hargreaves, outcomes can be greatly impacted by relatively low levels of teacher effort. He goes on to say that there are two parts to outcomes: evidence-based practice and innovation.

According to Hargreaves (2001) theory, the generation of new information and the ability to transfer knowledge between contexts and individuals are two significant processes that contribute to the growth of "intellectual capital". The social capital needed to produce and sustain this intellectual capital is made up of both structural and cultural elements. The cultural element mostly consists of adult-to-adult trust as well as the development of reciprocity and teamwork. Networks and cooperative relationships among stakeholders apart from students are the structural component.

According to the theory, education is a service that instructors provide to students with the help of other stakeholders (Penuel, Riedy, Barber, Peurach, LeBouef, & Clark, 2020). When talking about leverage, Hargreaves leaves out a significant factor, that is, if learners want to learn because they regard themselves as citizens, rather than tourists, in the classroom, some barriers to education can be removed. One major barrier is funds from the stakeholders. In the context of this study, Hargreaves theory informs the role of stakeholders that include the Government and parents whose failure to collaborate through funding would compromise the capacity of the school to provide quality education services as would be evidence through outcome. However, though in discussing trust, Tsang (2010) invites us to think about the potential trust that students may have in their institutions. This analysis was skewed toward maintaining schools' ability to provide high-quality education service. There was a need to take into account a second theory, the Social Network Theory of Social Capital, because the first theory did not address how schools might create or maintain this.

2.8 Conceptual Framework

A conceptual framework is a diagram that illustrates how a study's variables relate to one another (Varpio, Paradis, Uijtdehaage, & Young, 2020). The foundation of this study was the idea that school budget deficits would probably have a detrimental influence on the delivery of high-quality educational services, such as hiring staff, providing necessary supplies and services, and encouraging students to participate in extracurricular activities. The study further postulated that the relationship between the effects of budgetary deficits on provision of quality educational services in schools could be influenced by other extraneous factors which included alternative sources of revenue generation. These alternative sources include fundraising, donor funding, income generation projects as well as endowment funds. The study hypothesized that the relationship between budget deficit and provision of quality educational sources is influenced by extraneous factors. The inter-relationship among the variables subsumed in the study is illustrated in Figure 1:

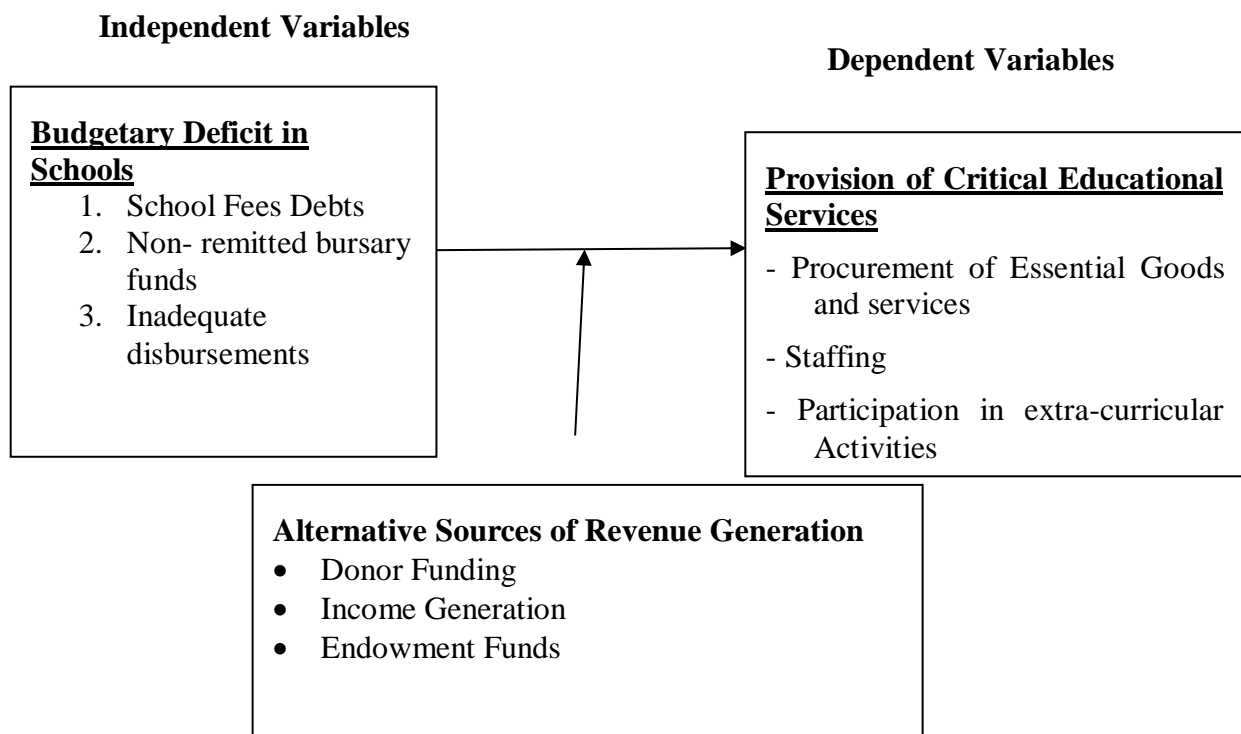


Figure 2:1 Relationship Among Variables Subsumed in The Study

Extraneous Variables

In Figure 2:1 the quality of critical educational services provided in schools is conceptualized as being affected by school budgetary deficits, with the relationship between the two being

influenced by the identified extraneous variables. The extraneous variables were controlled through random selection of the public day secondary schools that took part in the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter's primary focus is the study's methodology. This section covers the following topics: research tools, validity and reliability of the instruments, target population, study location, sample size and sampling strategy, data collection procedures, data processing techniques, and ethical considerations.

3.2 Research Design

A research design is the overall strategy a researcher employs to make sure the many study components are integrated logically and persuasively in order to successfully address the research issue (Merriam & Grenier, 2019). It serves as the guide for gathering, measuring, and analysing data. This study used the descriptive research design. Descriptive research's primary goal is to characterize the current state of affairs (Doyle, McCabe, Keogh, Brady, & McCann, 2020). According to Kothari the goal of descriptive research is to generate ideas and insights by allowing the study to be sufficiently flexible to allow for the consideration of various facets of the subject being studied. This approach is used to gather information from a certain population or a sample of that population, and the survey instrument of choice is usually a questionnaire or an interview schedule.

A descriptive research design was employed. The design allowed for the analysis of relationships between variables (procurement of key educational supplies, staffing and participation in co-curricular activities), helping to examine how budget shortfalls impacted essential education services through the responses gathered from head teachers. Principals and bursars, responsible for the schools' financial operations, completed questionnaires to provide data. This study examined how the budget shortfall affected the delivery of essential education services in public secondary schools in Nyandarua County by analysing the questionnaire responses from head teachers.

3.3 Study Area

The study was conducted in public secondary schools situated in Nyandarua County. Nyandarua County is situated in the central Kenya region and to the eastern flank of the Great Rift Valley. The County had 105 public secondary schools as in 2022. The County was selected as the study locale due to its vulnerability and exposure with regard to the fact that any failure to remit FDSE could have huge significant impact on provision of quality secondary education in the County. This is because parents in Nyandarua County have a common assumption that the government will cover all of the costs of schooling through FDSE (Odhiambo, 2020). Many of the county's schools appear to operate on shorter periods than those published in the gazette, claiming shortages of food and other necessities. Furthermore, the money source trajectory shows a progressive increase in government payments and a decrease in parent contributions, which has had a substantial impact on the enormous budget deficits of the County's public secondary schools. Furthermore, the schools have failed to devise more practical means of supplementing government budget financing and relieving parents of their financial burden via programmes that generate revenue (Mestry, 2020).

In addition, past reports show that only highly resourced schools in the County are represented at national events where team games are played. For example, Nyahururu Boys High school represented the county at the national Kenya Science and Engineering Fair in 2018 (Ngatia, 2019). On the other hand, public secondary schools that are poorly endowed with resources have competed well in games such as athletics where individuals participate (Mukamba, 2022). This shows that the ability of schools to engage in extracurricular activities and the availability of resources may be related. Therefore, the study's main focus was on how budget deficits affected the delivery of essential educational services in Nyandarua County's public secondary schools. A map of the study area is shown in Appendix C.

3.4 Target Population

The County Director of Education and the principals of every public secondary school in Nyandarua County were the study's target audience. As of 2023, Nyandarua County had one County Director of Education in addition to 105 principals (Softkenya, 2023) . The County Director of Education has all the information regarding the financing of all the schools in the research, but the principals of the public schools in the county are the chief executive officers in charge of carrying out school budgets. For this reason, the study focused on them.

3.5 Sample Size and Sampling Procedure

To get the total sample size, the study employed two stages of basic random sampling and geographic clustered sampling. "Cluster sampling" is a sample technique that has the following qualities: The population is divided into n groupings, or clusters, and n clusters are randomly selected by the researcher to be included in the sample. Every cluster's number of observations, $M_{(i)}$, is known, and the overall sample, M , is defined as $M = M_1 + M_2 + M_3 + \dots + M_{N-1} + M_N$. Every component of the population was allocated to a single cluster. A subset of components inside particular clusters are chosen at random to be included in the sample in two stages of sampling (Rahman, Tabash, Salamzadeh, Abduli, & Rahaman, 2022).

The county schools were divided into seven groups for the first step of the clustered sampling based on the administrative Sub-counties. The seven Sub-counties are Kipipiri South Kinangop, Nyandarua North, , Mirangine, North Kinangop, Nyandarua West and Nyandarua South. According to Softkenya (2023), the number of secondary schools in each Sub county as at 2016 was as shown in Table 3.1 of which 17 were boarding and 89 were day schools.

Table 3:1 Schools in Nyandarua County according to Sub counties as in 2014

Sub-county (Cluster)	Boarding	Day schools	N (total)
Nyandarua West	2	17	19
Nyandarua North	2	15	17
North Kinangop	3	9	12
South Kinangop	2	11	13
Kipipiri	2	19	21
Nyandarua south	3	9	11
Mirangine	3	9	12
Total	17	89	105

When using basic random sampling, there are N objects in the target population and n objects in the sample, meaning that there is an equal chance of n samples of n objects occurring. After clustering schools according to Sub-counties where they are situated, the public schools in each of the Sub-counties were sampled through simple random sampling. The sample frame was the list of all public secondary schools in each Sub-county provided by the County Director of Education.

The sample size was determined using the Table for determining sample sizes from a given population by Krejcie and Morgan (1970) as presented by Chuan (2006) where the school constituted the sampling unit. According to the Table, 82 cases should be sampled when the population comprises 105 cases. The sample was as shown in Table 3:2:

Table 3:2 Sample Size of Schools for the Study

Sub-county (Cluster)	Boarding	Day	N	Sample (n)
Nyandarua West	1	14	19	15
Nyandarua North	1	12	17	13
North Kinangop	2	7	12	9
South Kinangop	1	9	13	10
Kipipiri	1	16	21	17
Nyandarua south	2	7	11	9
Mirangine	2	7	12	9
Total	10	72	105	82

Therefore, a total of 82 schools were sampled from which the Principals that participated in the study were derived.

3.6 Data Collection Instruments

The study used semi-structured questionnaire and an interview schedule to gather quantitative and qualitative primary data from the respondents in the study. A semi-structured questionnaire allows the researcher to ask a few predetermined questions while the rest of the questions are not planned in advance. Kothari (2004) asserts that a questionnaire's greatest asset as a primary data collection method is its adaptability. Furthermore, because questionnaires are more generic than in-person interviews, they reduce the potential for prejudice. There was enough time for the participants to finish the surveys. Structured questionnaires have the benefit of being readily coded and subjected to quantitative analysis through the use of statistical techniques (Harris & Brown, 2019). The researcher distributed the questionnaire then collected

them later. Self-administered questionnaires were preferred because they have high return rates. The questionnaire was segmented into multiple sections and comprised closed items to collect demographic and general data. Part A captured the background of the respondents and the sources of school funding. Part B captured responses on the influence of budget deficits on supplies of essential goods and services, part C on procurement of supplies and part D on staffing. It also had Part E that captured data on challenges facing fiscal planning in the examined schools and possible remedies to the identified challenges.

Qualitative data from key informants was collected through face to face interviews using key informant interview schedule. The questions were organized along the objectives of the study and sought to elucidate broad responses from the key informants. Qualitative data was used in supplementing the interpretation of quantitative data collected using the questionnaire. Interview schedule targeted the CDE and was conducted by the researcher. After being recorded, the answers were later transcribed so they could be examined.

3.6.1 Validity of the Instruments

Validity of a research instrument is the indicator whether the instrument is measuring what it is intended to measure (Clark & Watson, 2019). It speaks to the sufficiency of assertions made regarding a measurement procedure and result. It is focused on the accuracy and reliability of the measuring tools. Validation is the process of proving a measurement device is valid (Clark & Watson, 2019). Experts from the Department of Curriculum and Education Management examined the research tools used in this study, as per the researcher's request. This resulted in revisions that ensured that the questionnaire and the interview schedule are suitable in terms of face, content and construct validity.

3.6.2 Reliability of the Instruments

According to Clark & Watson (2019), reliability of research instrument is the extent to which an instrument produces the same results on repeated trials. Stated differently, it refers to the consistency or stability of an instrument over a period of time or among raters. In a pilot study, the reliability coefficient of the questionnaire was calculated using Cronbach's coefficient alpha to evaluate the instruments' reliability. A threshold of .70 or higher was acceptable. This pilot project, which was conducted in 15 County secondary schools, served as a small-scale test run for all the methods that were going to be used in the larger study. The 15 participating schools,

however, were left out of the main research. A pilot study involving approximately 10% of the main study's sample size is recommended to assess the feasibility, reliability, and validity of research instruments before full-scale implementation. This sample size is often considered adequate because it provides a preliminary estimate of the main study's likely results without exhausting resources (Isaac, Michael, & Sheperis, 2021). The results were likewise not included in the main report but they were used to alter the research tools. To ensure external consistency the questionnaire was administered to the similar group of respondents after two weeks. This allowed comparison of responses across over the period using a test-retest reliability test technique. This aimed at establishing whether the questionnaire consistently measured the same constructs under varying conditions.

Cronbach's alpha is a metric used to evaluate a scale or test item set's internal consistency or reliability. It was calculated by first comparing the variance for all individual item scores using the formula, and then linking the score for each scale item with the overall score for each observation (typically individual survey respondents or test participants):

$$\alpha = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum_{i=1}^k \sigma_{y_i}^2}{\sigma_x^2} \right)$$

where: k refers to the number of scale items

$\sigma^2_{y_i}$ refers to the variance associated with item,

σ^2_x refers to the variance associated with the observed total scores

Cronbach alpha for measurement (questionnaire) was computed using the Statistical Package Computer Software (SPSS), version 24.0. The analysis obtained a Cronbach coefficient of 0.81 which was above the set coefficient

3.7 Data Collection Procedure

In order to conduct the research, the researcher sought an introductory letter from the Graduate School, Laikipia University, and after the document had been subjected to the institutional review and ethics committee. The National Commission for Science, Technology, and Innovation (NACOSTI) granted the researcher a permit, and through the Nyandarua County Director of Education, the Ministry of Education granted additional authorization. During a

scouting visit to the selected schools, the researcher gave the data collection tools and asked that the questionnaire be completed within a week. The researcher then gathered the completed questionnaires. The questionnaire's items could be answered by the respondents on their own.

3.8 Data Analysis

To find emergent patterns in data, data analysis involves organizing, processing, and synthesizing data in a methodical manner (Salmona & Kaczynski, 2024). Statistical Package for Social Sciences (SPSS) version 24.0 was used to code and key the data gathered for the study into a computer for analysis. After interpreting the data in the context of the research questions, the researcher conducted a qualitative analysis thematically to ascertain whether the findings were in line with the goals of the study. Interpretation of qualitative data after analysis was done to supplement interpretation of quantitative data. The study's results were displayed in tables with percentages and frequencies. The goals of the study were followed when conducting the interpretations. The correlation between the independent and dependent variables was determined by the study using both basic and multivariate regression analysis. Regression was determined to be the finest statistical analysis method because it characterizes the ability of each explanatory variable to explain variance in the response variable and establishes causal relationships (Kline, 2023).

The general model for simple regression applied in this study is:

$$y_i = b_0 + b_1x$$

Where y_i =dependent variable, that is provision of critical educational services that includes

x = Budget deficit

b_0 = Constant of regression and

b_i = Coefficient of regression of the respective independent variable

In comparing the relative influence of budget deficit on the provision of quality educational services jointly that is procurement of essential goods and services, staffing and participation in co-curricular activities, multiple regression analysis was used. The model was as follows:

$$X = b_0 + b_1y_1 + b_2y_2 + b_3y_3 + \varepsilon_i \text{ where;}$$

X=the budget deficits

b_0 = constant

b_1 = Coefficient of respective explanatory variables

y_1 =Procurement of essential goods and services

y_2 =Staffing

y_3 =Participation in co-curricular activities

The summary of data analysis with respect to test of hypothesis is presented in the data matrix illustrated in Table 3.

Table 3:3 Data Analysis Matrix

Hypothesis	Independent Variable	Dependent Variable	Technique of Statistical Analysis
H₀₁: Budget deficits do not have a significant influence on the supply of essential goods and services in public secondary schools in Nyandarua County, Kenya.	Budget deficits	Supply of essential goods and services	Simple regression
H₀₂: Budget deficits do not have a significant influence on staffing in public secondary schools in Nyandarua County, Kenya.	Budget Deficits	Hiring and maintenance of staff	Simple regression
H₀₃: Budget deficits do not have a significant influence on participation in co-curricular activities in public secondary schools in Nyandarua County, Kenya.	Budget deficits	Participation in co-curricular activities	Simple regression
H₀₄: There is no significant difference in the influence of budgetary deficits on procurement of essential goods and services, staffing, and participation in co-curricular activities in Secondary Schools in Nyandarua County, Kenya.	Budget deficits	- Supply of essential goods and services - Hiring and maintenance of staff -Participation in co-curricular activities	Multiple regression

3.9 Ethical Consideration

The fundamental principles of ethics provide researchers with direction as they do their job in a morally and responsibly manner. Ensuring the rights and dignity of research participants, fostering trust in the research process, and upholding the scientific community's reputation all depend on these rules. A few crucial ethical factors are getting informed consent, protecting privacy and confidentiality, avoiding plagiarism, and getting the required permissions from the appropriate authorities. Following these ethical criteria is necessary to protect the integrity of the study and its findings. Several ethical guidelines were closely followed when performing the research on how budget shortfalls affect the provision of educational services in public secondary schools in Nyandarua County, Kenya.

A letter of introduction was required by the researcher from Laikipia University's Graduate School. Subsequently, this letter was utilized to request a research permit from the National Commission for Science, Innovation, and Technology (NACOSTI). The study permission, in large part, made it possible to obtain authorization from the State Department of Education in Nyandarua County, which was necessary in order to conduct the research legally and with institutional backing. This action ensured that the study complies with all relevant laws and regulations. The researcher assured the interviewees that whatever information they disclosed about their personal or private lives would remain private. This commitment to confidentiality significantly improved the respondents' privacy and prevented the exposure of their personal information without consent. By ensuring the confidentiality of the participants' responses, the researcher fostered a climate of trust that promoted honest and open communication.

Before distributing questionnaires, the researcher got each respondent's informed consent. Throughout this process, the goals of the study, its methodology, and any potential benefits or drawbacks were all made apparent. By gaining informed consent, the researcher ensured that participants were fully aware about the goal of the study and readily agreed to participate. This conduct was necessary to respect the respondents' autonomy and rights. The researcher gave credit to each and every literary source that was used in the investigation. Appropriate reference rules were followed in order to preserve academic integrity and safeguard intellectual property rights. In order to uphold the ethical standards of scholarly work, the researcher avoided plagiarism, ensured that all cited work was properly acknowledged, and improved the reliability and validity of the research findings.

In order to apply for and get a research permission from the National Commission for Science, Innovation, and Technology (NACOSTI), the researcher requested an introductory letter from the Graduate School of Laikipia University. Additionally, the permit was utilized to secure permission to carry out the research from Nyandarua County's state department of education. The researcher guaranteed the respondents secrecy and agreed to keep whatever information they provided that touched on their personal or private lives private. Before the questionnaires were distributed, the respondents' informed consent was obtained. To prevent instances of plagiarism, the researcher has recognized all literature cited in the investigation..

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This study examined the impact of budget deficits on the delivery of educational services in schools. This section presents the results of analysis on demographic characteristics of the respondents as well as data obtained about the specific objectives of the study. The link between the independent and dependent variables was ascertained through the application of both simple and multiple regression analysis. The findings and analysis are presented in this chapter.

4.2 Instruments Response Rate

A total of 82 questionnaires were served to the respondents in public schools in Nyandarua County. Respondents who completed the questionnaires were 79 (Boarding schools 8, day schools 71) which translated to 95.12% response rate, which is over the generally accepted criterion of 70% for social science research and represents a good response rate. The high response rate could be attribute to adequate data collection time that was given to data collection process as well as persistent follow-up of the respondents through phone calls.

4.3 Demographic Characteristics of the Respondents

The goal of the study was to determine the respondents' demographic features. In order to comprehend the sample's characteristics and investigate the potential influences of age, gender, education, and socioeconomic status on replies, it was imperative that demographic data be collected for this study. The accuracy and application of the study was improved by demographic insights, which made it possible to compare subgroups, spot trends, and guarantee that the results are pertinent and generalizable across a range of populations. The findings are as presented in table 4

4.3.1 Age of the Respondents

In order to determine the age distribution of respondents, data on the age of was obtained and presented in Table 4.1

. Table 4:1 Age of the Respondents

Respondents Age Category	Frequency	Percentage
Below 30 years	3	3.8
30-40 years	10	12.8
41-50 years	33	42.3
Above 51 years	32	41.0
Total	78	100.0

The researcher sought to establish the age of the respondents since the findings would assist categorize the respondents based on their age. Findings are presented in Table 4:1. The data in Table 4.1 indicate that 42.3% of the respondents who took part in the survey were between the ages of 41 and 50, while 41.0% were 51 years of age and older, and 12.8% were in the 30-to 40-year age range. Respondents of age 30 years and below were the least at 3.8%. Generally, over 80% of the respondents were aged 41 years and above implying majority could have had substantial managerial and administrative experience in education and thus a likelihood of providing reliable responses. This data revealed that most principals in the county are in mid-life.

4.3.2. Gender of the Respondents

Data on the Gender of respondents was obtained and presented in Table 4.2.

Table 4:2 Gender of the Respondents

Gender	Frequency	Percentage
Male	53	67.9
Female	25	32.1
Total	78	100.0

The gender parity could impact on a study that might seek to compare gender performance between principals with regard to fiscal planning and delivery of services in schools. In order to classify the respondents based on gender, the researcher attempted to determine the gender of the respondents. According to the data, men made up the bulk of respondents (67.9%), followed by women (32.1%). Similar findings were found in Musee's (2017) study on public day secondary schools in Mwingi East Sub-County, where 75% of the principals are men. The majority of responses were male, which was taken to indicate that in public secondary schools in Nyandarua County, where two thirds of the gender rule has not been observed, women are not active in management in comparison to their male counterparts. Kenya's 2010 Constitution, Article 27 (8), mandates affirmative action, requiring the State to pass legislation and take other measures to ensure that no more than two-thirds of members of appointed or elective bodies be of the same gender. However, it seemed improbable that the respondents' gender would make a significant difference in their answers.

4.3.3 Education of the Respondents

The study's goal was to determine the respondents' educational attainment, which is shown in Table 4.3.

Table 4.3 Education of the Respondents

Education levels	Frequency	Percentage
Diploma	32	41.0
Bachelors' Degree	39	50.0
Masters' Degree	7	9.0
Total	78	100.0

The majority of respondents (50.0%) had a Bachelor's degree, followed by those with a Diploma in Education (41.0%), which accounted for 41.0% of all respondents, and 9% had a Master's degree, according to the results of the data analysis. This distribution demonstrates that the study's participants were competent and, as a result, able to provide pertinent information about the topic.

4.3.4. Period Served as a Principal

The study sought to establish the length of stay of the respondents in terms of years in the particular institutions the study was conducted. Data findings were presented in Table 4:4.

Table 4.4 Period as a Principal

Period	Frequency	Percentage
Less than 3 years	4	5.1
3-6 years	46	59.0
7-9 years	25	32.1
10-12 years	1	1.3
More than 12 years	2	2.6

This was necessary in order to establish whether the principals had requisite experience to deal with school budgetary processes. After the responses were analysed, it was found that 32.1 percent of the respondents had served for a duration ranging from 7 to 9 years, and 59% of the respondents had been in their respective station for 3 to 6 years. Of the responders, 5.1% had only been at their current station for three years, and less than 4% had worked there for more than ten years. According to analysis, 94.9% of respondents said they have been employed by the station for longer than three years. This duration of service could be seen as an indication that the study participants were reliable sources of information.

4.3.5 Source of Funding

The researcher set out to identify the financing sources for the educational institutions. The findings are presented in Table 4:5.

Table 4.5 Source of Funding

Sources	Frequency	Percentage
1. Government	2. 100	100
3. Parents	4. 100	100
5. Donors	6. 35	65.4
7. Fundraising	8. 34	66.7
9. Income Generating Projects	10. 37	62.8

The findings as presented in Table 4.5 show that all (100%) of the sampled schools received funding from government and parents implying that these two sources of funding are the major links to budget deficits. Donors as sources of financing was reported in 65.4% of the cases and 66.7% agreed that fundraising was also a source of funds. The case is not different with income generating where only 62.8% reported that income generating project was also a source of funds. This implies that most schools only depend on parents and government as a source of the funds for running various school activities. The corporate sector, communities, non-governmental organizations, religious institutions, and development partners were among the additional funding sources. About 5% of secondary school market share is owned by the private sector, which charges market prices for its secondary education services.

4.4 Influence of Budget Deficits on Supply of Essential Goods and Services

The study's primary goal was to find out how budget deficits affected the supply of essential goods and services. The results are presented in Table 4:6.

Table 4.6 Status of Procurement of Supplies

Key

SA= Strongly agree A= Agree NS= Not sure D= Disagree SD= Strongly Disagree

Statement	SA%	A%	NS%	D%	SD%
1. My school struggles to plan for servicing debts owed to suppliers because of deficits in the budget	48.7	32.1	5.1	6.4	7.7
2. Deficits in the budget makes it difficult to plan for timely acquisition of supplies in the school	37.2	37.2	10.3	7.7	7.7
3. Deficits in the budget means that the school is forced to rely on batch purchases	44.9	33.3	7.7	7.7	6.4
4. Budget deficits means the school sometimes has to go without key or inadequate supplies such as chalks and exercise books	35.9	48.7	2.6	10.3	2.6

The respondents were asked to rate their agreement with statements indicating several factors influencing school supply purchases. As shown in table 4.6, the ratings were converted to percentages. From Table 4.6 it is clear that majority of the respondents, equivalent to a total of 80.8% agreed that the school struggles to plan for servicing debts owed to suppliers due to deficits in the budget compared to a mere 5.1% of the total respondents who were not sure and 14.1% who disagreed with the fact that school struggles to plan for servicing debts owed to suppliers due to deficits in the budget. This suggests that a budget deficit has a negative impact on debt servicing. According to key informant number one (K01), insufficient funding is the reason behind the debt problems that the majority of public secondary schools face. A study that looked at how schools responded when faced with financial strain found that more than half of head teachers who replied to the poll said that "financial pressures" was their top issue for the current and next year (Ofsted, 2020).

Table 4.6 also makes it evident that a larger proportion of respondents—74.4%—agreed that budget shortages make it challenging to plan ahead for the timely purchasing of supplies for the school, with 10.3% of respondents expressing no opinion. A total of 15.4% disagreed that deficits in the budget makes it difficult to plan for timely acquisition of supplies in the school. This means that budget deficit negatively affects schools' capacity to acquire supplies. In a Nigerian study on the impact of resource allocation on secondary school students' outcomes, Obadara and Alaka (2010) found a correlation coefficient (r) of.6, which was significant at the.05 level. The findings showed that allocating funds for necessary school supplies has a big impact on how well schools' function.

From Table 4.6, a total of 78.2% of the respondents agreed that deficits in the budget means that the school is forced to rely on batch purchases, 7.7% of the respondents took a neutral position and a total of 14.1% disagreed that deficits in the budget means that the school is forced to rely on batch purchases. This implies that batch purchases is a common consequence of budget deficit. Further, it can be observed from Table 4.6 that a higher percentage equivalent to 84.6% of the respondents agreed that budget deficits mean the school sometimes has to go without key or inadequate supplies such as chalks and exercise books due to budget deficit. A smaller percentage of 2.6% had a neutral opinion and a total of 12.9% disagreed that budget deficits means the school sometimes has to go without key or inadequate supplies such as chalks and exercise books. The findings imply that budget deficit commonly leads to inability of schools to get adequate supplies of teaching aids such as chalks and exercise books. This corroborates Kithinji (2013) in a research where principals agreed that low funding prevented the schools from buying resources for instruction and learning, which in turn caused students' academic performance to suffer. According to KIO2 inconsistent supplies of necessities have resulted from budget shortages. Government funding delays and resource constraints frequently lead to textbook, lab equipment, and other basic material shortages, which impair teaching quality and learning opportunities as schools fight to keep enough supplies on hand all year long.

4.5 Influence of Budget Deficits on the Supply of School Items

The study sought to investigate the influence of budget deficit on the supply of foodstuffs, stationery, laboratories chemicals and equipment, sports equipment and information and Communication Technology. The results are as displayed in Table 4.7.

Table 4:7 Influence of Budget Deficits on the Supply of School Items

Key: LaE= Large Extent ME=Moderate Extent LE=Low Extent NE= No Extent

Items	Sub-items	LaE %	ME%	LE %	NE%
1. Foodstuffs	Cereals	43.6	39.7	10.3	6.4
	Meat	26.9	52.6	15.4	5.1
	Milk	39.7	39.7	10.3	10.3
	Vegetables	28.2	46.2	14.1	11.5
2. Stationery	Chalks	19.2	21.4	50.0	6.4
	Exercise books	15.4	28.2	50.0	6.4
	Pens	20.5	14.1	60.3	5.1
	Textbooks	20.5	46.2	26.9	6.4
3. Laboratory	Reagents	38.5	39.7	14.1	7.7
4. Chemical	Detergents	51.3	35.9	7.7	5.1
5. And	Measuring equipment	14.1	21.8	52.6	11.5
6. Equipment	Heating Equipment	14.1	29.5	47.4	9.0
	Dissection Equipment	16.7	61.5	12.8	9.0
7. Sports	Balls	19.2	60.3	15.4	5.1
8. Equipment	Rackets and sticks	9.0	60.3	19.2	11.5
	Nets	10.3	65.4	14.1	10.3
	1 st Aid Kits	14.1	28.2	39.7	17.9
	Costumes	20.5	59.0	10.3	10.3
	Firefighting equipment	25.6	55.1	12.8	6.4
9. Information and Communication Technology	Computers	53.8	26.9	10.3	9.0
	New programmes	38.5	41.0	12.8	7.7
	Mathematical equipment	20.5	59.0	15.4	5.1
	Data storage devices	20.5	43.6	32.1	3.8

From Table 4.7, majority (43.6%) of the respondents agreed that supply of cereals is affected by budget deficit to a larger extent, followed by 39.7% who expressed it affects supply of cereals to a moderate extent. Findings suggest that 83.3% of the respondents agreed that budget deficit influenced supply of grains at either moderate or to a larger extent. Furthermore, the

majority of respondents (52.6%) stated that a budget deficit has a slight impact on the availability of meat, while 26.9% indicated that it has a significant impact.

In general, 79.5% of those surveyed believed that the availability of meat was either greatly or somewhat impacted. The findings also revealed that 39.7% of respondents agreed that the budget deficit had a moderate impact on the supply of milk, which was identical to the 39.7% of respondents who said it has a strong impact. The research further found out that 46.2% of the respondents indicated that supply of vegetables was affected by budget deficit to a moderate extent, followed by 28.2% who revealed it affects supply of vegetables by high extent. This shows that the influence of budget deficit affects supply of vegetables.

Table 4:7 further shows that majority 50.0% of the respondents agreed that budget deficit affects supply of writing materials to a low extent, followed by 21.4% who expressed it affects supply of chalks to a moderate extent. Overall, the research revealed that the influence of budget deficit on the supply of chalks is low. Furthermore, majority 50.0% of the respondents agreed that budget deficit affects supply of exercise books to a low extent, while 28.2% expressed it is to a moderate extent. This finding means that the influence of budget deficit on supply of exercise books is not a major issue in schools under study. On supply of pens, the researcher found out that 60.3% of the respondents indicated that it is affected by budget deficits to a lower extent while 20.5% expressed it is to a high extent. On textbooks, the research found out that majority 46.2% of the respondents accepted that budget deficits affected its supply to a moderate extent followed by 26.9% who revealed it was affected to a low extent. Overall, study showed low influence of budget deficit on supply of textbooks but this is explained by the fact that the Government directly supplies textbooks to schools, a view supported by the KI01. Budget deficit influence on chalks, exercise books, pens and text books in sampled schools is low

On reagents, the research found out that the highest 39.7% number of the respondents revealed budget deficits moderately affects their supply followed closely at 38.5% by those who agreed it is affected to a higher extent. This means that majority 78.2% of respondents expressed that the supply of reagents was affected from high to a higher extent. On chemical reagents, majority 51.3% agreed budget deficit affected its supply to a high extent, followed by 35.9% that indicated it was affected to a moderate extent. The researcher also found out that 52.6% of the respondents agreed that the supply of measuring equipment is affected by the budget

deficits to a low extent, followed by 21.8% who expressed it affected to a moderate extent. On heating equipment 47.4% of the respondents agreed that its supply is influenced by the budget deficits to low extent followed by 29.5% who agreed it is to a moderate extent. In addition, majority (61.5%) of the respondents agreed that budget deficit affects supply of dissection equipment to a higher extent followed by 16.7% who agreed it is affected to a high extent. The research showed that influence on budget deficit from laboratory items such as reagents, chemicals, measuring equipment, heating equipment and dissection equipment is between moderate and high.

On balls the research found out that majority 60.3% of the respondents indicated that it is affected by budget deficit to a moderate extent while 19.2% were of the views that it is affected to a high extent. On supply of rackets and sticks the research found out that majority 60.3% agreed it is affected by budget deficit to a moderate extent followed by 19.2% who were of the views that it is affected to a low extent. On game nets the research majority 65.4% expressed that it was affected by budget deficits to a moderate extent followed by 14.1% who revealed it was to a low extent. Thus, the influence of budget deficit on game items and equipment (balls, rackets, sticks and nets) is moderate to high.

Furthermore, a majority of 39.7% stated that the budget deficit had a minimal impact on the availability of first aid kits, while 28.2% indicated that it had a substantial impact. In general, there is no impact of budget deficit on first aid kit availability. The majority of respondents—59.0%—agreed that the budget deficit has a slight impact on the availability of costumes, with 20.5% indicating that the impact is greater. The overall impact of the budget shortfall on the availability of costumes was mild. Regarding firefighting apparatus, the majority of respondents—55.1%—stated that the budget deficit has a slight impact on the supply of such apparatus, while 25.6% said that the impact is greater. Merely 6.4% said that it had no impact. The study thus demonstrated that the budget deficit had a low to moderate impact on the availability of various commodities, such as first aid kits, costumes, and firefighting equipment.

The study further showed that majority 53.8% of the respondents agreed that supply of Computers is affected by budget deficits to a higher extent, followed by 26.9% who expressed it is affected to a moderate extent. In addition, majority 41.0% revealed that budget deficit affects supply of programmes to a moderate extent followed 38.5% who agreed that supply of new programmes is affected by budget deficits to a higher extent. Table 4:7 further shows that

majority 59.0% of the respondents expressed that budget deficit affected supply of mathematical equipment to a moderate extent followed by 20.5% who revealed it was affected to a higher extent. Furthermore, most 43.6% expressed that the supply of storage devices is affected by budget deficit to a moderate while 32.1% agreed it is to a low extent. This implies that availability of computers, programmes, mathematical equipment and storage devices is affected by budget deficit to between moderate to high extent.

According to a study by Anuna (2023) titled Teaching and Learning Resource Availability and Teachers, dustbins, chalk, blackboards, chairs, and space for students to sit were all satisfactorily available despite budgetary constraints, with a mean range of 2.51 to 3.25. With mean scores ranging from 1.76 to 2.50, text books, maps, and atlas were ranked as insufficient, while instructors' tables, electrical outlets, seats, wall charts, globes, soft boards frames, wall pictures, diagrams, and drawings were ranked as unavailable, with means ranging from 1.00 to 1.75. According to the data, the average mean was 1.97, which falls between 1.76 and 2.50 on the Likert scale, indicating that there is not enough resources available in the classroom. This result suggests that the majority of secondary schools that faced a scarcity of essential teaching and learning resources were unable to provide effective instruction because of a budget deficit. This is founded on the discovery made by Orodho et al. (2019) that educational materials, such text books, help students comprehend lessons by allowing them to follow the teacher's presenting sequence (Bizimana and Orodho 2019).

The study further indicate that the average mean was 1.76 which means that the level of laboratory resources is insufficient thus affected by budget deficits in the school, since this mean ranges between 1.76 and 2.50 on the Likert Scale. The implication of this finding is that teaching science subject in most secondary schools under study was being done theoretically without any practical exposure. This, again, is contrary to what the orodho (2019) study recommended, that effective teaching should be more learner-cantered with learners exposed to adequate practical work in the subject being taught. KI01 proffered that the situation due to delayed government funding disbursement disrupts operations and makes it more difficult to get necessary supplies on time. This impairs the quality of instruction and hinders schools' capacity to plan for the upcoming school year. Furthermore, schools frequently encounter difficulties in producing additional funding because of a lack of options and limited

participation in revenue-generating activities, particularly in rural areas with less economic chances.

4.6 Influence of Budget Deficits on Staffing

The study sought information on the Influence of budget deficit on staffing. The results are presented in Table 4:8.

Table 4.8 Influence of Budget Deficits on Staffing

Statement	SA (%)	A(%)	NS(%)	D(%)	SD(%)
1. Staff members hired by BoM in this school have to deal with delayed salaries as a result of insufficient funds in the school	35.9	41.0	3.8	12.8	6.4
2. The school has had to retrench members of the staff employed by the BoM as a result of insufficient funds in the school	0	7.7	29.5	46.2	16.2
3. The school hires lowly qualified staff such as form four leavers and certificate holders due to lack of sufficient funds	2.6	9.0	5.1	53.8	29.5
4. Salary increment for staff under BoM has been negatively affected due to lack of sufficient funds	48.7	35.9	5.1	5.1	5.1
5. Staff morale in this school has declined because of the effects of insufficient funds to provide incentives	28.2	42.3	11.5	6.4	11.5
6. Budget deficits in the schools often creates situations where staff have to undertake tasks outside their normal job descriptions	12.8	12.8	24.4	39.7	10.3
7. TSC staff in the school often find themselves assigns positions that they are not suited for because the school cannot hire the needed employees due to lack of finances	6.4	15.4	17.9	48.7	11.5
8. Some tasks in the school for example grounds work maintenance, repairs and others are left unattended for long time because the school cannot hire the needed employees due to lack of finances	12.8	17.9	55.1	12.8	1.3
9. Staff development programmes like seminars and workshops is affected negatively due to lack of finances in the school	30.8	47.4	3.8	10.3	7.7
10. School staff motivation schemes such as giving of awards to best performing staff are hindered due to budget deficit in the school	24.4	44.9	16.7	7.7	6.7

The research asked respondents to indicate the extent to which they agreed with the statements that various aspects affected staffing in their schools. The responses were scored using; Strongly Agree=5, Agree=4, Neutral=3, Disagree=2 and Strongly Disagree=1. The mean for each aspect was computed and the results were presented in Table 4.8. Based on Table 4.8's

data, it is evident that 76.9% of respondents agreed that staff workers hired by BoM in their schools have to deal with delayed salaries since there aren't enough money in the school, while 19.2% disagreed. This suggests that employing BoM staff members is negatively impacted by budget deficits. Ajowi (2020) in a study established that among majority support staff, delayed salary was a major problem as noted by most (84%) of the support staff, but to head teachers, it was a minor challenge. Another matter of major concern was failure to pay yearly increment and failure to get salary imprest when in financial need.

The research found out that majority 62.4% of the respondents disagreed that the school has had to retrench members of the staff employed by the BoM as a result of insufficient funds in their schools while 29.5% of them were not sure. This implies that however much the school is in financial crisis, most do not retrench their workers under BoM. The research also found out that majority (83.3%) of the respondent disagreed that the school hires lowly qualified staff such as form four graduates and certificate holders due to insufficient funds while 11.6% agreed that the school hires lowly qualified staff.

From Table 4.8, majority 84.6% of the respondent's agreed that salary increment for staff under BOM had been negatively affected due to insufficient funds. On the other hand 10.2% disagreed. This implies that budget deficit has a negative Influence on salary increment for staff hired by the BOM. The study also found out that majority 70.5% of the respondents agreed that staff morale in their schools had declined because of insufficient funds to provide incentives, while 17.9% disagreed. This implies that budget deficit has a negative Influence on staff morale. The study also found out that 50% of the respondents disagreed that budget deficits in their schools often creates situations where staff have to undertake tasks outside their normal job descriptions compared to a total of 25.6% who agreed. The findings suggest that outcome of budget deficits could lead to staff looking for jobs elsewhere.

Findings in Table 4.8 reveals that majority 60.2% disagreed that TSC staff in the school often find themselves assigned positions that they are not suited for because the school cannot hire the needed employees due to lack of finances while 21.8% agreed. This implies that even where the school is financially constrained, most of the schools are keen not to deploy staff into areas they are not trained for.

The results also showed that, while 30.7% of respondents agreed, the majority of respondents—55.1%—were undecided about whether certain jobs in schools are neglected for extended periods of time because hiring the necessary staff is financially impossible. This implies that despite a lack of funds due to budget shortfalls, menial duties are regularly accomplished in the majority of the study's schools. However, Key Informant 1 (KI01) claims that informal laborers occasionally double up on several duties due to budget problems. For example, in some establishments, the watchman may simultaneously work as the student food waiter or the gardener.

Table 4.8 further shows that majority 71.1% of the respondents agreed that staff development programmes like seminars and workshops is affected negatively due to lack of finances in the school, while 18% disagreed. This means that budget deficit has a negative Influence on staffs' seminars and workshops and thus curtails human resource development.

On school staff motivation schemes such as giving of awards to best performing staff, the study found out that majority 69.3% of respondents agreed it is affected by budget deficits, while 16.7% were neutral. This implies that motivation awards as a way of boosting performance is negatively affected by budget deficits. This agrees with a study with a study by Jeruto and Okirima (2020) revealed that majority of teachers and support-staff were moderately motivated and a few were highly motivated. Moderate motivation was linked to lack of resources and training.

4.7 Budget Deficits Deficit

The study obtained data on sources of budget deficit then presented in Table 4.9 and it in the section hereunder.

Table 4.9 The Influence of Budget Deficits on Supply of Essential Goods and Services

Statement	High Extent%	Moderate extent%	Low extent%	No extent%
Delayed disbursement of development funds by the government	51.3	41.0	7.7	0
Unforeseen increased costs of commodities	26.9	53.8	10.3	9.0
Failure by parents to pay school fees	37.2	41.0	12.8	9.0
Too high interest rates by banks especially on overdrafts	10.3	23.1	56.4	10.3
Insufficiency of funds remitted by the government for free day secondary education	30.8	51.3	17.9	0
Emergencies or unplanned expense	14.1	43.6	42.3	0
Interferences by stakeholders due to vested interest that are not in agreement with those of the school	7.7	26.9	47.4	17.9
Unexpected increase in school's enrolment	21.8	50.0	21.8	6.4
Bad debts school owes suppliers	12.8	55.1	24.4	7.7
Failed income generating activities	37.2	42.3	14.1	6.4

From Table 4.9, majority of the respondents, equivalent to 51.3% of the total respondents agreed to a high extent that delayed disbursement of development funds by the government contributes to the budget deficit, followed by 41% who moderately agreed and a mere 7.7% agreed to a low extent. None of the respondents expressed that delayed disbursement of development funds by the government does not contribute to the budget deficit. This implies that delay of the government funding, which is a major source of funds, would lead to significant budget deficit. Qualitative responses from Key Informant one (KI01) on the state of funding of Free Secondary Education in the County and its Influence on secondary schools in Nyandarua County showed that it is a fact that it is usual for schools to receive funds way into the financial year due to financial processes in the Government. The budgets of schools, where some are unable to pay their bills on time, will probably be impacted by this delay. The source also mentioned a scenario in which new enrolment under FSE does not correspond with funding distribution, forcing principals to come up with other plans while funds for the new students are being received by their particular schools. This strains the finances of public schools.

Elsewhere, 71% of schools either never received the proper amount of capitation grants allocated to each student or the funds were frequently late, according to a study by Ngowi (2019) that looked at the effect of unreliable government disbursement of capitation grants on academic performance in public secondary schools. These two challenges negatively affect completion of school programmes, purchasing of teaching and learning resources and construction projects. On unforeseen increased costs of commodities, majority (53.8%) of the respondents were of the opinion that this is a source of budget deficit to a moderate extent, 26.9% agreed to the high extent, 10.3% to a low extent and 9.0% did not agree that unforeseen increased costs of commodities contribute to budget deficit.

A higher cumulative percentage of respondents, equivalent to 78.2% agreed to a higher extent that failure by parents to pay school fees is a major source of budget deficit while a mere 12.8% agreed to low extent and 9.05% did not agree. This implies that parents play a critical role as far as the budget deficit is concerned and failure to pay school fees in time will have negative implications on school budget. Most respondents equivalent to 56.4% agreed to a low extent that too high interest rates by banks especially on overdrafts contributes to budget deficits. On the other hand, 10.3% and 23.1% agreed to a high and moderate extent respectively that too high interest rates by banks especially on overdrafts contribute to budget deficits. However, 10.3% of the respondents did not agree that high interest rates by banks especially on overdrafts contribute to budget deficits. This could be due to the fact most schools could be having other alternative arrangements to correct the budget deficits of which bank overdraft is the last option. According to a study by Morogo, Kiprop, and Too (2018), parents' failure to pay school levies has a negative influence on secondary school programmes and projects in Kenya's Ainabkoi Sub-county. This is because non-payment of school levies hinders the execution of school projects. This corroborates UNESCO's (2019) findings that, a shortage of funding prevented facilities from being expanded, which in turn caused academic achievement to decline. Furthermore, 51.3% of respondents agreed that budget deficits are caused by insufficient government funding for free day secondary education, 30.8% agreed that it is caused by a high degree, and 17.9% agreed that it is caused to a low degree. This implies that insufficient funds remitted by the government for free secondary education has an implication on budget deficit. On emergencies and unplanned expenses, most respondents, equivalent to 43.6% agreed to a moderate extent that emergencies contribute to budget deficit, while 42.3%

of the respondents agreed to a lower extent. Only 14.1% of the respondents agreed to high extent that unplanned expenses contribute to budget deficit.

It is evident from Table 4.9 that 47.4% of the total respondents agreed to a low extent that interferences by stakeholders due to vested interest that are not in agreement with those of the school contributes to budget deficit, while 26.9% agreed to the moderate extent, 17.9% did not agree and only 7.7% disagreed to a high extent. This implies that most of the sampled schools experienced management and administrative independence, thus little interference and as such, this factor did not significantly contribute to budget deficit.

The findings also showed that 50% of respondents agreed to a moderate degree that an unanticipated rise in student enrolment adds to the budget deficit, and 21.8% of respondents agreed to a high degree, which is comparable to those who agreed to a low degree. Only 6.4% of the respondents were of the contrary opinion that the unexpected increase in schools' enrolment contributes towards budget deficit. Most respondents, equivalent to 55.1% agreed that bad debts school owed suppliers affected budget deficit moderately, 24.4% agreed to low extent while 12.8% of the total respondents agreed to a high extent. On the other hand, 7.7% disagreed that bad debts school owes suppliers affected budget deficit. This implies that, schools owing suppliers could lead to a budget deficit, and thus settling of suppliers' dues is an important component in the budgeting process for schools.

From the Table 4:9, it can also be observed that majority of the respondents, equivalent to 42.3% agreed moderately that income generating projects is a source of budget deficits to their schools. This was followed by 37.2% of the respondents who agreed to a high extent that failed income generating projects is a source of budget deficits. On the other hand, 14.1% agreed to a minimal extent that failed income generating projects is a source of budget deficits. Only 6.4% of all respondents did not agree that unsuccessful income generating activities is a source of budget deficit. Overall, the findings implied that failed income generating activities lead to budget deficit. According to a study by Othoo, et al. (2019), a lack of funding and available land are two obstacles that keep schools from implementing IGAs. This exacerbates the already severe lack of funding in schools. As a result, most schools' financial shortfalls are caused by inadequate IGAs. In the same light KI02, stated that the absence of financial management-trained staff is a major issue, which causes inefficiencies in the accounting, auditing, and budgeting procedures. Due to their common lack of specialized expertise in fiscal management, school administrators may misallocate funds and exhibit poor accountability. Additionally, the

county's high parent poverty rates make it difficult for students to pay fees, which lowers the financial foundation and operating capacity of schools.

4.8 Influence of Budget Deficit on Participation in Co-curricular Activities

The study sought to investigate the influences of budget deficits on school participation in co-curricular activities. Obtained data is presented in Table 4:10.

Table 4.10 Influence of Budget Deficit on Participation in Co-Curricular Activities

STATEMENT	SA%	A%	NS%	D%	SD%
1. Insufficient funds make it difficult for the school to plan for purchase of equipment for sports	48.7	23.1	0	15.4	12.8
2. Due to insufficient funds students in this school have to forego some co-curricular activities	46.2	38.5	10.3	2.6	2.6
3. Due to insufficient funds students in this school often have to forego attending some interschool competitions	30.8	51.3	3.8	5.1	9.0
4. Insufficient funds make it difficult for the school to plan for external coaches to support co-curricular activities	42.3	41.0	9.0	5.1	2.6
5. Insufficient funds mean that students lack motivation to perform at their best in co-curricular activities	14.1	46.2	19.2	12.8	7.7
6. Insufficient funds mean that students are not able to compete on a level ground with other schools in co-curricular activities	42.3	29.5	6.4	11.5	10.3
7. Due to insufficient funds the school game equipment is never repaired in time	26.9	44.9	10.3	6.4	11.5
8. Insufficient funds limit the capacity of the school to offer appropriate meals to competing students during games time	19.2	59.0	11.5	7.7	2.6
9. Lack of funds limits the capacity to maintain the sporting grounds	39.7	37.2	6.4	11.5	5.1
10. Due to limited finances the school is not represented in local sport associations such as Nyandarua County Secondary Sports Association	38.5	39.7	9.0	7.7	5.1

Respondents were asked to indicate the extent to which they agreed with the statement that various aspects of budgetary deficit affected participation in co-curricular activities in their schools. The responses were scored using the scale; SA=5,A=4,NS=3,D=2 SD=1.The mean for each aspect was computed and results presented in the Table 4.9. From Table 4.9, majority 71.8% of the respondents agreed that insufficient funds make it difficult for schools to plan for

purchase of sports equipment while 28.2% disagreed. This finding implies that budget deficit has a negative influence on the schools' planning ability to purchase sports equipment. In addition, majority 84.7% of the total respondents agreed that due to insufficient funds students in schools have to forego some co-curricular activities, while 10.3% of had a neutral opinion. This finding suggests that insufficient funds affect the student's participation in co-curricular activities negatively. This is supported by views from KI01 who said that budget deficits have significantly impacted funding for extracurricular activities in secondary schools. Limited financial resources prioritize academic needs, often leaving sports, arts, and club activities underfunded or cancelled. This restriction reduces students' opportunities for holistic development and engagement beyond the classroom environment.

The results also showed that, although 14.1% of respondents disagreed, the majority of respondents—82.1%—agreed that pupils frequently have to forfeit interschool tournaments because of a lack of funding. This indicates that interschool competitions would suffer from a funding shortfall. The results indicate that a substantial majority of respondents—83.3%—agreed that schools find it challenging to recruit outside coaches to support extracurricular activities due to a lack of funding, with 9% expressing uncertainty. This implies that in order to improve their performance in games, schools would be unable to recruit outside coaches due to funding deficits. Additionally, the survey found that a majority of respondents—60.3%—agreed that inadequate funding discourages students from giving their best effort in extracurricular activities, with 20.5% disagreeing. This suggests that students' motivation to engage in extracurricular activities is significantly impacted by budget deficits.

The study's results also showed that a sizable majority of respondents—71.8%—agreed that a lack of funding prevented students from participating in extracurricular activities on an even playing field with other schools, while 21.8% disagreed. This indicates that the ability of schools to compete with other schools on an equal footing is negatively impacted by financial deficits. The study further found out that majority 71.8% of respondents agreed that due to insufficient funds the school game equipment is never repaired in time, while 17.9% disagreed. This finding implies that budget deficit has a negative influence on the repair-status of game equipment. Furthermore, the study revealed that majority 59% of respondents agreed that insufficient funds limits the capacity of the school to offer appropriate meals to competing students during games time while 19.2% strongly agreed. Cumulatively 70.5% of respondents

agreed that budget deficit curtails school's ability to provide meals to its students during competitions.

On whether lack of funds limits the school's capacity to maintain the sporting grounds, the study found out that majority 76.9% of respondents agreed, while 16.6% disagreed. These findings suggest that budget deficit has a negative influence on schools' ability to maintain sporting grounds. The study further revealed that 39.7% of respondents agreed that limited finances did not allow most of the school to be represented in local sports meetings such as Nyandarua County Secondary Sports Associations while 38.5% strongly agreed. Cumulatively, 78.2% were in agreement which means that limited finances is an impediment to schools representation in local sport meetings. The findings suggest that budget deficit has a negative influence on school's representation in the local sport association and which could negatively affect development of sporting activities in the sampled schools within the area of study.

A study by Khaleel, Alhosani and Duyar, (2021) have shown that principals agreed that in their school, participation in athletics was effective in terms of resource (rooms, fields, equipment) allocation and physical participation both at school level and externally. Majority of teachers and students felt that participation in athletics was not effective due to resources allocation. According to a Dimbie, Kafui and Eduam (2021) research, the majority of teachers did not think that co-curricular activities received enough money. The majority of the teachers also mentioned that the delivery of necessary sporting facilities was delayed due to a lack of funding.

4.8 Results on Tests of Hypotheses on the Influence of Budgetary Deficits of Delivery of Essential School's Services

This study status adopted a reverse regression analysis to test three hypotheses with regard to whether Budget deficits have a statistically significant influence on the supply of essential goods and services, staffing and participation in co-curricular activities in public secondary schools in Nyandarua County. Reverse regression analysis tool is used in specific contexts where understanding the influence of an outcome on various predictors is more insightful or necessary for the research objectives. However, Reverse regression does not imply causality (Draper & Smith, 1998)

The model is : $x_i = \alpha_0 + \alpha_1 y + v$ for each x_i variable

This means it was an analysis of the influence of the dependent variable Y on multiple independent variables x_1, x_2 and x_3 , with an aim of establishing where there is a statistically significant difference in the influence of budget deficits on the procurement of essential goods and services, staffing and participation in co-curricular activities in public secondary schools in Nyandarua County, Kenya

4.8.1 Correlation among Variables of the Study

A correlation analysis was conducted to determine the strength of the relationship between the research variables and to test it. The result was Pearson's coefficient correlation coefficient, or r. By establishing a correlation between the sources of budget deficit and various variables such as staffing, participation in extracurricular activities, and procurement of essential goods and services, the research was able to ascertain the relationships between each independent variable and the dependent variable. Table 4:11 displays the outcomes.

Table 4:11 Variables Correlation

		Correlation			
		Sources of deficit	Procurement of supplies of Essential goods and services	Staffing	Participation in co-curricular activities
Sources of deficit	Pearson Correlation	1	.071	.074	-.29
	Sig. (2-tailed)		.339**	.522	.073*
	N	78	78	78	78
Procurement of supplies of Essential goods and services	Pearson Correlation	.071	1	.383**	.108
	Sig. (2-tailed)	.339**		.001	.344
	N	78	78	78	78
Staffing	Pearson Correlation	.074	.383**	1	.260*
	Sig. (2-tailed)	.522	.001		.021
	N	78	78	78	78
Participation in co-curricular activities	Pearson Correlation	-0.29	.108	.260*	1
	Sig. (2-tailed)	.073*	.344	.021	
	N	78	78	78	78

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

* . Correlation is significant at the 0.05 level (2-tailed).

The study results revealed a weak, positive and statistically significant ($r=0.071$; $p<0.05$) relationship between budget deficits and procurement of supplies of essential goods and services. The analysis implied that budget deficits does influence supplies of essential goods and services in public secondary schools to a very low positive extent. The results further showed a weak, positive and statistically insignificant ($r=0.074$; $p>0.05$) relationship between budget deficits and staffing. According to the analysis, there is a very slight but positive correlation between the causes of budget deficits and staffing levels at public secondary schools within the study area. Additionally, the data demonstrated a statistically significant ($r=-0.29$; $p<0.05$) and relatively substantial negative link between budget deficits and co-curricular activity participation. The analysis suggested that co-curricular activity participation in the study area's public secondary schools is significantly impacted by the causes of budget shortages.

4.8.2 Reverse Regression Analysis of the Variables

In order to determine the statistical significance and the nature of the relationships of study variables based on the proposed model (that is $= x_i = \alpha_0 + \alpha_1 y + v$ where; X =the budget deficits, and where α_0 , are constants and a intercept and α_1 slope of the equation for the study variables and v (ν) represents the error term or residual. The coefficients described the inferential relationship between each independent (in these case y_1 , y_2 and y_3) variable and the dependent variable (in the model this was X). The model allowed to predict the unknown value of variable y when value of variable X is known.

4.8.2.1 Influence of Budget Deficit on Supply of Essential Goods and Services

An reverse inferential statistical examination of the impact of the budget deficit on the supply of necessities was conducted by the study and results presented in Table 4:12.

Table 4.12 Model on Supply of Essential Goods and Services

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.071 ^a	.005	-.008	.32750

a. Predictors: (Constant), Budget deficit

The model presents the analysis's findings and debates, which are also included in the section that follows.

The correlation between the expected and actual values of Y in the model below is denoted by R. The computed R value in this instance is 0.071. The budget deficit can account for 0.5% (Weak) of the variance in the supply of necessities goods and services, according to the R square value of 0.05.

4.8.2.2 ANOVA for Budget Deficit and Supply of Essential Goods and Services

The analysis of variance results are presented in Table 4:13,

Table 4.13 Analysis of Variance (ANOVA) for Supply of Essential Goods and Services

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	.041	1	.041	.380	.539 ^b
1	Residual	8.151	76	.107		
	Total	8.192	77			

a. Dependent Variable: supplies of essential goods and services

b. Predictors: (Constant), budget deficit

Table 4:12 shows results of standard multiple regression model. The F-value was 3.80 with p-value of 0.539. This indicates that the overall model was insignificant in predicting supply of essential goods and services within examined schools in Nyandarua County, Kenya. Hence the study accepts the null hypothesis that Budget deficits have no statistically significant influence on the supply of essential goods and services in public secondary schools in Nyandarua County, Kenya.

4.8.2.3 Reverse Regression Model Coefficients for Budget Deficit and Supply of Essential Goods and Services

Analysis of reverse regression model coefficients for budget deficit and supplies of essential goods and services was carried out and the results are shown in Table 4:14.

Table 4.14 Regression Model Coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.907	.335		5.686	.039
Sources of deficit	.144	.233	.071	.617	.539

a. Dependent Variable: Procurement of Essential goods and Services

The table shows that there is a positive beta coefficient of 0.144 as indicated in the coefficient's matrix with a p-value= 0.039 and a constant of 1.907 with a p-value of 0.039. Hence, both variables under consideration contribute significantly to the model. The model can provide information needed to predict procurement of essential goods and services from budget deficit. The regression equation is presented as; Procurement of Essential Supply of goods and Services = 1.907 +0.144 (budget deficit).

4.8.3 Influence of Budget Deficits on Staffing

The study did an reverse inferential statistical analysis on Influence of Budget Deficit on staffing. The results and discussions on the analysis are presented in the undersection below.

4.8.3.1 The Model of Budget Deficit and Staffing

The study obtained the model between budget deficit and staffing then presented the results in Table 4:16.

Table 4.15 Model on Influence of Budget Deficit on Staffing

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.074 ^a	.005	.008	.44121

a. Predictors: (Constant), Budget deficit

Table 4:14 shows R, the correlation between the predicted values and the observed values of Y. In this case calculated R value is 0.074. The R square was equal to 0.05 which means 0.5% (Weak) of the corresponding variation in staffing can be explained by sources of deficit.

4.8.3.2 ANOVA for Staffing and Budget Deficit

The analysis of variance results in Table 4:16 shows results of standard multiple regression model.

Table 4.16 Analysis of Variance (ANOVA) on the Influence of Budget Deficit on Staffing

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	.081	1	.081	.414	.047 ^b
1	Residual	14.794	76	.195		
	Total	14.875	77			

a. Dependent Variable: Staffing

b. Predictors: (Constant), Sources of deficit

The F-value was 4.15 with p-value of 0.042. This indicates that the overall model was significant in predicting staffing within examined schools in Nyandarua County, Kenya. Hence the study rejects the null hypothesis that Budget deficits have no statistically significant influence on staffing in public secondary schools in Nyandarua County, Kenya. The research concludes that budget deficits have a significant influence on the number of teachers in the county's public schools.

4.8.3.3 Regression Model Coefficients for Budget Deficit and Staffing

Analysis of regression model coefficients was done and the results are shown in table 4:17.

Table 4.17 Regression Model Coefficients for Staffing and Budget Deficit

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.062	.452		4.565	.000
Sources of deficit	.202	.314	.074	.643	.049

a. Dependent Variable: Staffing

Table 4:17 shows that there is a positive beta coefficient of 0.202 as indicated in the coefficient's matrix with a p-value= 0.049 and a constant of 2.062 with a p-value of 0.000. Hence, both the constant and source of deficit contribute significantly to the model. The model can provide information needed to predict staffing from sources of deficit.

The regression equation is presented as;

$$y_1 = 2.062 + 0.202x$$

where

$$y_1 = \text{Staffing}$$

$$x = (\text{Budget Deficit}).$$

4.8.4 Influence of Budget Deficit on Participation in Co-curricular Activities

The study did a reverse statistical analysis on the influence of budget deficit on participation of schools in co-curricular activities. A model summary that displayed the simple relationship as well as the analysis of means and regression were applied. The results and discussions on the analysis are presented in the section hereunder.

4.8.4.1 The Model for Influence of Budget Deficit on Participation in Co-Curricular Activities

The study obtained the model between budget deficit and participation in co-curricular activities and presented the results in Table 4:18.

Table 4.:18 Model on the Influence of Budget Deficit on Participation in Co-curricular Activities

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.040 ^a	.08	-.022	.39219

a. Predictors: (Constant), sources of deficit

Table 4:18 represents the model equation. The correlation between the expected and observed values of Y in the model is denoted by R. The computed R value in this instance is 0.040. The R square was equal to 0.08, meaning that sources of shortfall can account for 8% (low) of the relevant variation in engaging in extracurricular activities.

4.8.4.2 ANOVA for Influence of Budget Deficit on Participation in Co-curricular Activities

The analysis of variance was done and results presented in table 4:19.

Table 4.19 Analysis of Variance (ANOVA) on the Influence of Participation in Co-curricular Activities

ANOVA ^a					
Model 1	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.019	1	.019	.121	.046 ^b
Residual	11.690	76	.154		
Total	11.708	77			

a. Dependent Variable: Participation in co-curricular Activities

b. Predictors: (Constant), sources of deficit

The results show a standard multiple regression model. The F-value was .1.21 with p-value of 0.046. This indicates that the overall model was significant in prediction of participation in co-curricular activities within examined schools in Nyandarua County, Kenya. Hence the study rejects the null hypothesis that Budget deficits have no statistically significant influence on the participation in co-curricular activities in public secondary schools in Nyandarua County, Kenya.

4.8.4.3 Regression Coefficient for Relationship Between Budget Deficit on Participation in Co-curricular Activities

The findings of the analysis of the regression model coefficients are displayed in Table 4:19.

Table 4.20 Regression Model Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.978	.402		4.925	.000
	Sources of deficit	-.097	.279	.040	.348	.039

a. Dependent Variable: Participation in co-curricular Activities

Table 4:20 demonstrates that there is a constant of 1.978 with a p-value of 0.000 and a negative beta coefficient of 0.097, as seen in the coefficient's matrix with a p-value of 0.00. Therefore, the model is greatly influenced by both the constant and the cause of the deficiency. The model can give the necessary information from Sources of Deficit to forecast involvement in extracurricular activities. The regression equation appears as follows:

$$y_2 = 1.978 - 0.097 x$$

where

y_2 = Co-curricular activity participation

x = budget deficit.

4.9 Comparative Analysis between Budget Deficit and Delivery of Education Services

The study carried out a comparative analysis on the relative influence of budget deficits on supply of essential goods and services, staffing and participation in co-curricular activities in public secondary schools in Nyandarua County, Kenya. The results are as shown in Table 4:21.

Table 4.21 Comparative Analysis for Budget Deficit and Delivery of Education Services

Statistical Test	Variable	Values
Correlation	procurement of supplies of essential goods and services	r=0.071; p<0.05
	participation in co-curricular activities	r=-0.29; p<0.05
R-square	Staffing supplies of essential goods and services	r=0.074; p>0.05 0.5%
	Staffing participation in co-curricular activities	0.5% 8%
ANOVA	supplies of essential goods and services	F-value 3.80, p-value of 0.539
	Staffing	(F-value ,4.14, p-value of 0.042
	participation in co-curricular activities	F-value,1.21 p-value of 0.046
regression model	supplies of essential goods and services	= 1.907 +0.144 (budget deficit).
	Staffing	= 2.062 +0.202 (Budget Deficit).
	participation in co-curricular activities	= 1.978 -0.097 (budget deficit)

Correlation analysis results in Table 4:21 revealed a weak, positive and statistically significant (r=0.071; p<0.05) relationship between budget deficits and procurement of essential goods and services. Similarly, a comparatively strong, negative and statistically significant (r=-0.29; p<0.05) relationship between budget deficits and participation in co-curricular activities was revealed. However, there was a weak, positive and statistically insignificant (r=0.074; p>0.05) relationship between budget deficits and staffing. This means there was a positive correlation between budget deficit and both supply of essential goods and services and staffing and a negative relationship between budget deficit and participation in co-curricular activities.

The R-square (0.05 that is 0.5%) of the corresponding variation in supply of essential goods and services that could be explained by budget deficit showed a weak relationship. This compares with R-square of 0.05 (0.5%) of the corresponding variation in staffing explained by sources of deficit. Contrastingly, R-square of 0.08 (8%) of the corresponding variation in participation in co-curricular activities could be explained by sources of deficit which means that it was low but it was higher than that of the other two by 3 points. This suggests that

involvement in extracurricular activities and budget deficit are significantly more correlated than personnel and the acquisition of necessary products and services.

ANOVA model that could be used to predict the influence of budget deficit on supply of essential goods and services was statistically insignificant (F-value 3.80, p-value of 0.539) thus the respective null hypothesis was accepted. This means that the influence of budget deficit on supply of essential goods and services is not statistically significant. On the other hand, ANOVA model to predict the budget deficits on staffing was significant in predicting staffing within studied schools was significant (F-value ,4.14, p-value of 0.042). Consequently, the study disproved the corresponding null hypothesis, which suggests that staffing is highly impacted by budget deficit. Conversely, the ANOVA model was shown to be significant (F-value, 1.21 p-value of 0.046) in predicting the budget deficits related to co-curricular activity participation within the analysed schools in Nyandarua County, Kenya. Thus, the matching null hypothesis was disproved. This indicates that the budget deficit and involvement in extracurricular activities have a statistically significant link. Therefore, there is a statistically significant impact of budget deficit on staffing and co-curricular activity participation, but not on the supply of necessities like products and services.

The regression model that provided predictive information needed on procurement of essential goods and services from budget deficit revealed that:

$$y_1 = 1.907 + 0.144x$$

Where y_1 = Procurement of Essential Supplies and Services

x = budget deficit

Lastly, the regression model that provided predictive information needed to predict participation in co-curricular activities from budget deficit showed that participation in co-curricular activities showed that

$$y_2 = 1.978 - 0.097x$$

where

y_2 = participation in co-curricular activities

x= Budget deficit

This means that budget deficit has a very weak positive influence on procurement of essential goods and services, low positive influence on staffing but a weak negative influence on co-curricular activities.

In summary the study revealed the following:

- i. Procurement of Essential Supplies and Services =1.907 +0.144 (budget deficit)
- ii. Staffing=2.062 +0.202 (Budget Deficit)
- iii. Participation in co-curricular activities = 1.978 -0.097(Budget deficit)

4.10 Challenges Facing Fiscal Planning in Public Secondary Schools

Qualitative responses from principals reported challenges to fiscal planning in their schools. The results analysed along themes are presented in Table 4:22.

Table 4.22 Delivery of Education Services

Theme	Issues	Frequency	Percentage
Causes of budget deficit	Delay in the disbursement of government funding	79	100
	Inability of parents to pay school fees	71	89.8
	Failed income generation activities	58	73.4
Challenges	Implementing school projects,	69	87.3
	Expanding facilities.	62	78.4
	Reduced achievement of aspirations	52	65.8
	Difficult servicing of debts	54	68.4
	Delayed acquisition of supplies in the school	65	82.2
	Batch purchases	25	31.6
Essential supplies challenges	Minimal supply challenges for teaching aids (chalks, exercise books and mathematical equipment)	55	69.6
	Moderate challenge in procuring measuring equipment, fire extinguishers and chemical reagents.	45	57
	Considerable challenges in procuring cereals, meat, milk, vegetables, dissection equipment, computers and software.	57	72.2
staffing challenges	Delayed salaries	59	74.6
	Inability to increase their salaries	52	65.8
	Failure to provide imprest	45	57
	Staffs looking job elsewhere	25	31.6
	Job doubling casual labourers tend to be allocated more than one job).	55	69.6

	Staffs' seminars and workshops not provided	25	31.6
Co-curricular activities	Delayed procurement or repair of game equipment (balls, racket, sticks, nets and costumes)	65	82.3
	Limiting their students' access to sports equipment	35	44.3
	Students are participating less in co-curricular activities	45	56.9
	Inability to hire external coaches	49	62
	Inability to provide meals to students during competitions.	29	36.7
	Reduced students' motivation to participate in co-curricular activities	23	29.1
	Schools' poor representation in local sport associations	45	57

Responses from the principals showed that public secondary schools in the study area face budget deficits. A primary cause is the delay in the disbursement of government funding, which affects 100% of schools surveyed. This delay creates cash flow problems, making it difficult for schools to manage their finances efficiently. Another major factor is the inability of parents to pay school fees, affecting 89.8% of schools. This inability exacerbates the schools' financial strain, as schools rely heavily on these fees for their operations. Additionally, 73.4% of schools have reported that their income generation activities have failed, further contributing to budgetary shortfalls.

The budgetary constraints faced by public secondary schools translate into various operational challenges. Implementing school projects is a significant issue for 87.3% of schools, making it difficult to undertake and complete developmental initiatives. Furthermore, expanding facilities to accommodate growing student populations or to improve learning conditions is a challenge faced by 78.4% of schools. The reduced achievement of aspirations, affecting 65.8% of schools, indicates that budget deficits limit schools' ability to fulfill their educational goals and objectives. Additionally, 68.4% of schools face difficulties in servicing debts, which further hampers financial stability. The delay in acquiring necessary supplies, a challenge for 82.2% of schools, disrupts day-to-day operations, and while batch purchases are a less frequent issue, they still affect 31.6% of schools.

The procurement of essential supplies presents considerable difficulties for public secondary schools. Although minimal challenges are reported in obtaining teaching aids such as chalks, exercise books, and mathematical equipment by 69.6% of schools, there are moderate challenges in procuring measuring equipment, fire extinguishers, and chemical reagents, affecting 57% of schools. The most significant difficulties are faced in procuring cereals, meat, milk, vegetables, dissection equipment, computers, and software, with 72.2% of schools reporting these as considerable challenges. These procurement issues impact the quality of education and the ability to maintain school operations effectively.

Staffing challenges also plague public secondary schools. A majority of schools (74.6%) experience delays in the payment of salaries, which affects staff morale and retention. Moreover, 65.8% of schools report an inability to increase staff salaries, leading to dissatisfaction and potential attrition. The failure to provide imprest for staff expenses is an issue for 57% of schools, complicating the management of small operational costs. This

financial strain causes 31.6% of staff to seek employment elsewhere, while 69.6% of schools report job doubling, where casual laborers are assigned multiple roles. Furthermore, the lack of provision for staff seminars and workshops affects 31.6% of schools, impacting professional development opportunities.

Budget deficits also hinder the development and participation in co-curricular activities. Schools face delays in the procurement or repair of game equipment, with 82.3% of schools affected. This delay limits students' access to sports equipment, as reported by 44.3% of schools, and reduces their participation in co-curricular activities, affecting 56.9% of schools. The inability to hire external coaches, a problem for 62% of schools, and the lack of provision for meals during competitions, impacting 36.7% of schools, further reduce students' motivation to engage in these activities. Consequently, 57% of schools report poor representation in local sport associations, indicating that financial constraints affect not only the availability of resources but also the broader competitive participation and recognition of students in sports and other co-curricular domains.

4.11 Possible Remedy to Address Challenges of Fiscal Planning

The study obtained data from the principals and key informant on possible remedy that can overcome the challenge of fiscal planning. The key themes that emerged are presented hereunder Table 4:23.

Table 4.23 Themes on Possible Remedies to Address Challenges of Fiscal Planning

Theme	Frequency	Percentage
Ensure Timely and Adequate Disbursement of Funds	76	97.44
Increase allocation to Free Secondary Education	69	87.3
Provide Equalization funds	52	65.8
Planning for Unforeseen Increased Costs of Commodities	63	80.77
Moderation of High Interest Rates by Banks on Overdrafts	47	60.26
Putting a Tab on Emergencies and/or Unplanned Expense	56	71.79
Managing Interferences from Stakeholders	29	37.18

These themes are discussed in the subsection hereunder.

Enhanced Timely and Adequate Disbursement of Funds

Responses from the key informant interview and principals revealed that prompt disbursement of the government funding and parents' payment of fees are the most significant solutions to fiscal planning challenges. This was through qualitative responses where a huge majority (97.44%) showed that timely and adequate disbursement and fees payment is necessary in order to resolve budget deficits. In addition, fresh enrolment under FSE should be done to does not rhyme with funds disbursement. Strategies should be put in place to encourage parents to pay fees in time and whereby policy and public announcements pronouncements by the Government, as K01 observed should be geared towards encouraging parents to pay monies due to them such as lunch money. This means that the government need to look at ways of tapering public statements as a way of ensuring that this does not discourage parents from meeting their obligations. Qualitative responses (87.3%) also showed that increasing funds

remitted by the government for free secondary education could improve on budget deficit. They (65.8%) further opined that the government should consider increasing allocations for students in public day schools in form of equalization funds to encourage favourable grounds against well established and usually boarding schools.

Qualitative responses showed that 80.77% of principals expressed that budget should always plan and provide for unforeseen costs of commodities. In most sampled public schools, sudden changes in market price of commodities was cited as a contributor to budget deficit. Public schools in the area need to provide for un-anticipated increase in costs of supplies and commodities. There is need for budgetary processes that provide for unforeseen increased costs by providing for it in the budget by a given percentage as a matter of policy.

Responses showed that 60.26% of principals expressed that interest rates on bank overdrafts should be moderated as a way of controlling bank deficits. Banks may offer a solution to schools when they face sudden financial stress. However, discussions from K01 revealed that this comes as a matter of last resort especially due to high interest rates. Since schools are not profit-making entities there is need for the government and stakeholders to look at how this facility can be enhanced to cushion schools.

Responses showed that 71.79% of principals would consider putting a tab of emergencies and unplanned expenses as a way of controlling effects of budget deficit. Qualitative responses showed that sampled schools in the study area do experience emergencies which sometimes call for more funds to cater for these unplanned expenses and this ends up leading to budget deficit. This means there is need for schools' administrators to put a tab on the likely emergency issues as a way of pre-empting uncalled for expenses.

Qualitative responses revealed that external interferences from stakeholders was present to a significant extent. Study revealed that 37.18% of principals suggested that managing of this interference could lead to condition against budget deficit. Sustained independence of school managers and administration is a positive step that should be emphasized by schools as a way of managing fiscal planning.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The main conclusions of this study on how budget shortages influence the provision of educational services in public secondary schools in Nyandarua County are outlined in this chapter. It explains how the provision of educational services—which includes the of supply of essential goods and services, sufficient staffing, and productive involvement in extracurricular activities—is influenced by budget deficits. Based on the study's findings, the chapter ties theories to findings, draws inferences, and offers ideas and recommendations for additional research.

5.2 Summary of Key Findings

The sub-section hereunder presents the summary of key findings.

5.2.1 The Influence of Budget Deficits on Study Variables

Regarding the government's distribution of development money, the majority of respondents reported receiving funding after delays, and none reported receiving funds on schedule. In 100% of the cases, respondents reported receiving funding from the government or parents, suggesting that these two entities are the primary sources of funding and that the majority of schools rely on them to pay a variety of school-related activities. Most respondents, had moderate unforeseen increased costs of commodities. Budget deficits were linked to parents not paying school fees on time and had a detrimental impact on the availability of necessities. The majority of respondents believed that the budget deficit was caused by stakeholders' meddling because of vested interests and high interest rates charged by banks, particularly on overdrafts. However, insufficient funds remitted by the government for free day secondary education and emergencies or unplanned expense were associated with budget deficits and thus affecting supply of essential goods and services. Unexpected increase in school's enrolment moderately brought about budget deficits as well as bad debts schools owe suppliers and failed income generating activities which thus affected the supply of essential goods and services.

The findings indicate that many schools face difficulties in managing debt payments to suppliers due to budget deficits. This financial strain impacts their ability to plan for and acquire necessary supplies, often forcing them to rely on batch purchases. Consequently, schools

frequently experience shortages or inadequate supplies of essential items like chalk, exercise books, cereals, milk, meat, and vegetables. Stationery supplies such as chinks, exercise books, and pens are significantly affected, while textbook supplies are moderately impacted. Laboratory chemicals, detergents, and equipment are heavily affected, whereas reagents and dissection equipment are moderately impacted. Sports equipment, fire-fighting equipment, and mathematical tools face moderate supply issues, while computer supplies are severely affected. The supply of first aid kits is minimally impacted, and there are moderate Influences on information and communication technologies.

The study examined the impact of budget deficits on staffing in schools. It found that many staff members hired by Boards of Management (BoM) experience delayed salaries due to insufficient funds. Despite this, schools generally do not lay off BoM-employed staff or hire less qualified personnel because of budget constraints. However, salary increases for BoM staff are adversely affected. Staff morale suffers due to a lack of incentives, and staff often have to perform tasks outside their normal job descriptions. Teachers Service Commission (TSC) staff are frequently assigned to teach subjects they are not trained for because the school cannot afford to hire additional employees. Maintenance and repair tasks are often neglected due to a lack of funds for hiring the necessary workforce. Budget deficits also negatively impact staff development programs, such as seminars and workshops, and staff motivation schemes, like awarding the best-performing staff.

The study investigated the impact of budget deficits on school participation in co-curricular activities. It found that insufficient funds make it challenging for schools to purchase sports equipment and plan for external coaches. As a result, students often have to skip some co-curricular activities and interschool competitions. The lack of funds also demotivates students from performing their best in these activities and prevents them from competing equally with other schools. Additionally, school sports equipment is not repaired promptly, and schools struggle to provide appropriate meals for students during competitions. Budget deficits also hinder the maintenance of sporting grounds and representation in local sports meetings.

5.2.2 Findings on Relative Influence of Budget Deficits on Education Service Delivery

Regression analysis revealed that:

Procurement of Essential goods and Services = 1.907 +0.144 (Budget Deficit):

Staffing from budget deficit revealed that staffing = 2.062 +0.202 (Budget Deficit).

Participation in co-curricular activities = 1.978 -0.097 (Budget Deficit).

A somewhat stronger but negative association was found between the budget deficit and involvement in extracurricular activities, while a positive weak correlation was found between the budget deficit and personnel as well as the supply of necessities. The budget deficit and co-curricular activity participation are significantly more correlated, according to R²-values, than are the staffing and the acquisition of necessary products and services.

5.3 Conclusions

Based on quantitative data the study concludes that:

Budget deficit do influence supplies of essential goods and services in most schools evidenced through failure to plan for acquisition of supplies, struggling to service debts and forced batch purchases. Affected supplies due to budget deficit included stationeries, food stuffs, measuring and heating equipment and first aid kits, sports equipment, costumes, fire-fighting equipment mathematical equipment, and information and communication technologies. Supplies largely affected included laboratory chemical and equipment, detergents and computer supply.

Budget deficits influenced BOM staff through delayed salaries, denied annual salary increments resulting to lack of incentives and low staff morale. Staff development programmes like seminars, workshops and motivation schemes were either cancelled or minimised. Budget deficit influenced participation in co-curricular activities by making it difficult for schools to plan for and purchase sports equipment, forced to forego some co-curricular activities and denied interschool competitions. Hiring external coaches to provide motivation to students to perform to their best in co-curricular activities is made difficult due to budget deficit. Due to budget deficit, students are not able to compete on a level ground with other schools in co-curricular activities, school game equipment are never repaired in time, competing students are not given adequate meals during games time, maintenance of sporting grounds is compromised and school's representation in local sport sports associations such as Nyandarua County Secondary Sport Association is not possible.

Fiscal planning challenges that face public secondary schools are attributed to delay in the government funding and delay or failure by parents to pay school fees. Others are attributable to failed income generating activities.

Statistical analysis results make the study conclude that, Budget deficit (x) had mixed correlations with study variables y1, y2 and y3). It had statistically significant influence on staffing (y2) and participation in co-curricular activities (y3). However, its influence on supplies of essential goods and services (y1) is not significant.

5.4 Recommendations

Based on the findings, the study makes the following recommendations:

- i. Government and parents should ensure timely and adequate disbursement of funds to reduce budget deficit, while the Government should provide appropriate public guidelines that encourage parents to pay fees in time.
- ii. National government through the Ministry of Education should cushion schools during students' enrolment to mitigate budget deficit as well as set apart equalization fund that enables public day schools to compete with other well-established schools.
- iii. To control and manage bad debts owed to suppliers, school administrators should put a tab on emergencies and/or unplanned expense and should ensure unforeseen increase in commodity prices are catered for through appropriate percentage allocation at budgeting
- iv. Prioritization during procurement of supplies should always consider items such as food stuff, and learning materials/ aids while ensuring there is no negative interferences from stakeholders
- v. School administrators should start sustainable and viable income generating activities as a way of supplementing the schools' budget. These activities could encompass various ventures such as establishing school-run businesses, leasing school property for commercial purposes, or implementing programmes that generate revenue while also benefiting the school community.

- vi. To cushion the Influence on co-curricular activity the Government may consider providing a special account to public day schools to support games and sports. This account could provide additional funding specifically allocated for the procurement of sports equipment, maintenance of sports facilities, and organization of sports events and competitions.
- vii. Banks and financial institutions that provide banking services to schools should consider moderation of high interest rates on overdrafts. By offering more favorable terms and conditions, such as lower interest rates or flexible repayment options, banks can support schools in managing their financial obligations more effectively and sustainably.

5.5 Areas for Further Research

. The study recommends the following topics as areas of possible further research:

- i. A study to investigate the relationship between budgeting process and access to primary education in Kenya
- ii. A study to investigate challenges facing budget -funding for co-curricular activities in higher learning institutions
- iii. A study to investigate the role of income generating activities on budgeting for secondary school education in Kenya.

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APPENDICES

APPENDIX A: PRINCIPALS' QUESTIONNAIRE

Section A: Background Questions

Consider the questions in the following section and tick [] the box which applies to you

1. What is your age?
Below 30 years old [] 30-40 years old [] 41-50 years old []
Above 50 years old []
2. What is your gender?
Male [] Female []
3. What is your highest level of education?
Diploma [] Bachelors' Degree [] Masters' Degree []
Other [] please specify
4. For how many years have you served in your current position in this school?
Less than 3 years [] 3-6 years [] 7-9 years []
10-12 years [] more than 12 years []
5. Total school enrolment

Sources of School funding

Indicate the source (s) of funds applicable to your school

Source	Percentage (%)
Government (Capitation)	
Parents (in form of fees)	
Donors	
Harambee/Fundraising	
Income Generating Project	
Others (specify)	

Section B: Effects of Budget Deficit on Procurement of Supplies

Budget deficit occurs when actual expenses exceed planned expenses. Consider the statements below regarding the extent to which the indicated aspects contribute to budget deficits and tick

the box which best applies to your school. Consider the statements that follow regarding the effects of budget deficits on supplies in your school and tick the box which best depicts the situation in your school:

KEY: SA= Strongly Agree, A= Agree, NS= Not Sure, D= Disagree, SD= Strongly Disagree

STATEMENT	SA	A	NS	D	SD
My school is able to service debts owed to suppliers by end of the school calendar year.					
My school is able to plan for timely acquisition of supplies.					
My school purchases goods in bulk as opposed to batch quantities.					
My school has adequate supply of key supplies such as chalk and exercise books throughout the year.					

Rate the level of satisfaction with the school budget in meeting the following school expenditures.

Category	Specific items	Low	Moderate	High	No Effect
Foodstuffs	Cereals				
	Meat				
	Milk				
	Vegetables				
Stationery	Chalk				
	Exercise books				
	Pens				
	textbooks				
Laboratory Chemicals and Equipment	Reagents				
	Detergents				
	Measuring equipment				

	Heating equipment				
	Dissection Equipment				
Sports Equipment's	Balls				
	Rackets and sticks				
	Nets				
	1st Aid kits				
	Costumes				
	Firefighting equipment				
Information and Communication Technology	Computers				
	New programmes				
	Mathematical equipment				
	Data storage devices (e.g. CDS, Tapes, flask disks)				

Section C: Effects of Budget Deficit on Staffing

Please consider the statements that follow regarding the effect of budget deficits on staffing in your school and tick the box which indicates the extent to which they apply in your school.

KEY: SA= Strongly Agree, A= Agree, NS= Not Sure, D= Disagree, SD= Strongly Disagree

STATEMENT	SA	A	NS	D	SD
The school is able to pay salaries of teachers hired by BoM.					
The school has had to retrench members of staff employed by BOM as a result of insufficient funds in the school					
The school is able to hire the required number of BoM teachers.					
The school gives salary increments for the staff under BoM Every year.					

The school is able to provide teachers with incentives to boost their morale.					
Budget deficits in the school often create situations where staff have to undertake tasks outside their normal job description; for example, watchman asked to serve foods to students					
TSC Staff in this school are assigned positions that they are not designated for because of inadequate staff.					
Some tasks in the school for example grounds work maintenance, repairs and others are sometimes left unattended for long because of shortage of non- teaching staff.					
Staff development programmes like seminars and workshops are negatively affected due to lack of finances in the school					
School staff motivation schemes such as giving of awards to best performing staff are hindered due to budget deficit in the school					

Section D: Effects of Budget Deficit on School Participation in co-curricular Activities

Consider the statements that follow regarding the effect of budget deficit on participation in co-curricular activities in your school and tick the box which best describes your school

KEY: SA= Strongly Agree, A= Agree, NS= Not Sure, D= Disagree, SD= Strongly Disagree

STATEMENT	SA	A	NS	D	SD
Insufficient funds make it difficult for the school to plan for purchase of equipment for sports					
Due to insufficient funds students in this school have to forego some co-curricular activities					
Due to insufficient funds students in this school often have to forgo attending some interschool competitions					
Insufficient funds make it difficult for the school to plan for external trainers/coaches to support co-curricular activities					
Insufficient funds mean that students lack motivation to perform at their best in co-curricular activities					

Insufficient funds mean that students are not able to compete on a level ground with other schools in extra-curricular activities					
Due insufficient funds the school game equipment is never repaired in time					
Insufficient funds limit the capacity of the school to offer appropriate meals to competing students during games time					
Lack of funds limits the capacity of the school to maintain sporting grounds					
Due to limited finances the school is not represented in local sport associations such as Nyandarua County Secondary Sports' Association					

Section E: challenges and possible remedies

Please list the challenges you encounter when doing fiscal planning for your school

Suggest possible remedies that could address challenges of fiscal planning in your school

SECTION E: Sources of Budget Deficits

KEY: 1= High Extent, 2= Moderate Extent, 3= Low Extent, 4= No Extent

Source of Budget Deficit	High Extent	Moderate Extent	Low Extent	No Extent
Delayed disbursement of development funds by the government				
Unforeseen increased costs of commodities				

Failure by parents to pay school fees				
High interest rates by banks especially on overdrafts				
Insufficiency of funds remitted by the Government for free day secondary education				
Emergencies or the unplanned expenses				
Interference by stakeholders due to vested interest that are not in agreement with those of the school				
Unexpected Increase in school's enrolment				
Bad debts owed to suppliers by the school				
Failed income generating activities				

6. What is the estimated percentage budget deficit in your school?

APPENDIX B: INTERVIEW SCHEDULE FOR THE COUNTY
DIRECTOR OF EDUCATION

The information sought by this study will be valuable to the planners and policy makers in the Education and Finance Ministries, as it will provide them with insight on the challenges that public secondary schools face in providing educational services, without charging school fees

1. Please comment on the state of funding of Free Secondary Education in the county and its effect on Secondary schools in Nyandarua County.

2. How would you describe the status of the following issues in day secondary schools in Nyandarua County?
 - (i) Supplies of essential goods

 - (ii) BOM'S staffing

 - (iii) Funding of extra-curricular activities

3. In your opinion are there challenges that face fiscal planning in Secondary Schools in Nyandarua County?

4. How would you describe the effect of budget deficit on the following in the public day schools in Nyandarua County?
 10. Supplies of essential goods
 11. BOM'S staffing
 12. Funding of extra-curricular activities

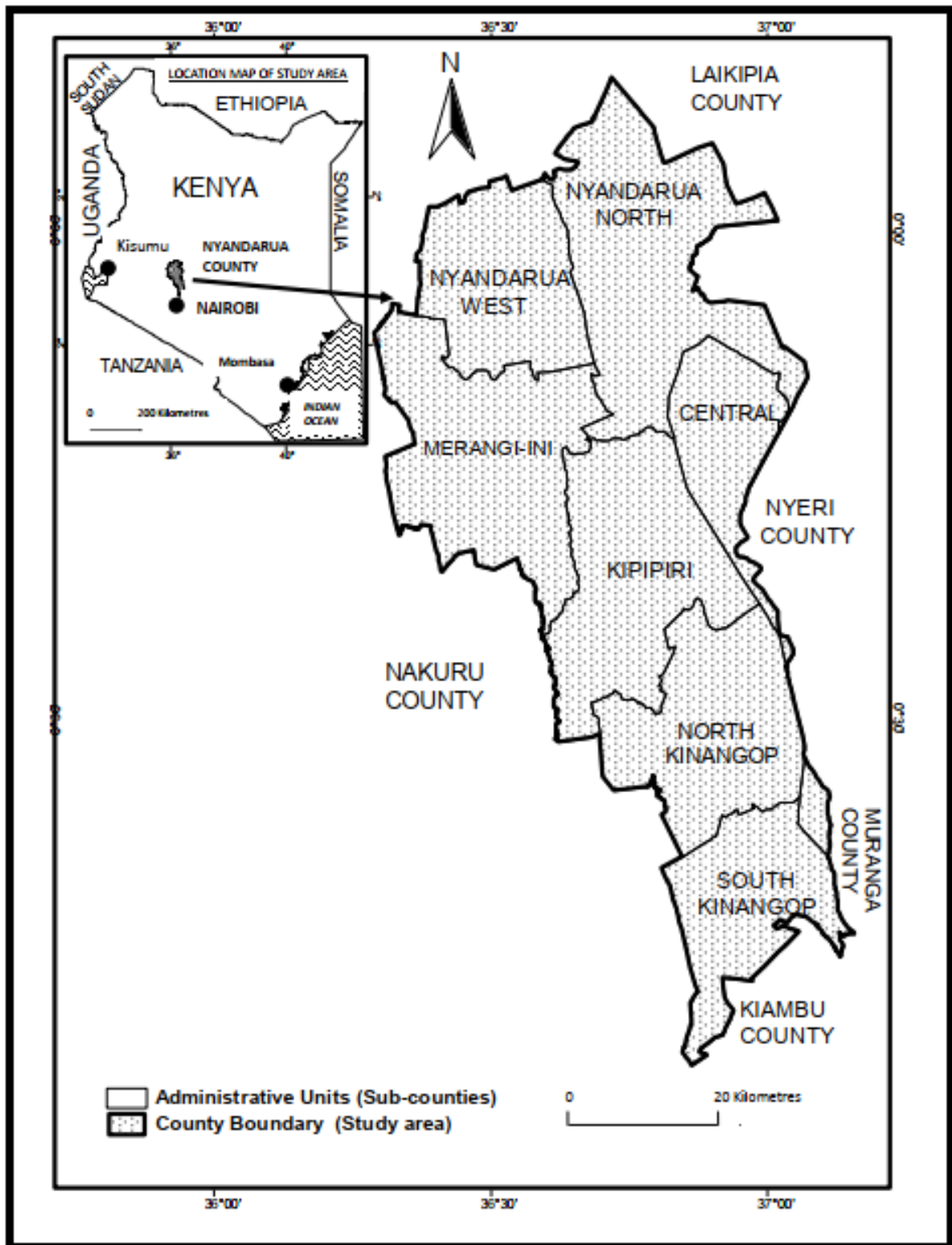
5. What do you suggest should be done to improve financial situation in secondary Schools in Nyandarua County?

APPENDIX C: KREJCIE AND MORGAN'S SAMPLE SIZE TABLE


<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Source: (Chuan, 2006)

APPENDIX D: MAP OF THE STUDY AREA




APPENDIX D: RESEARCH PERMIT


REPUBLIC OF KENYA

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RESEARCH LICENSE




This is to Certify that Mr. Samuel Njama Waweru of Laikipia University, has been licensed to conduct research in Nyandarua on the topic: EFFECTS OF BUDGET DEFICITS ON EDUCATION SERVICE DELIVERY IN PUBLIC SECONDARY SCHOOLS IN NYANDARUA COUNTY, KENYA for the period ending : 15/May/2021.

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**APPENDIX E: AUTHORIZATION FROM THE COUNTY DIRECTOR
OF EDUCATION**

**MINISTRY OF EDUCATION
State Department of Early Learning and Basic Education**

Email: cdenyandcounty@yahoo.com

Cell phone: 0718798460
When replying please quote



COUNTY DIRECTOR OF EDUCATION,
NYANDARUA COUNTY,
P.O. BOX 197 - 20303
OL KALOU.

REPUBLIC OF KENYA

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19th May, 2020

**SAMUEL NJAMA WAWERU
LAIKIPIA UNIVERSITY
P.O. Box 1100-20300
NYAHURURU**

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on **"IMPACT OF BUDGET DEFICITS ON EDUCATION SERVICE DELIVERY IN PUBLIC SECONDARY SCHOOLS IN NYANDARUA COUNTY, KENYA"**.

Am pleased to inform you that you are hereby granted permission to carry out the exercise for the period ending **August, 2020**.

You are advised to report to **ALL** Sub County Directors of Education, Nyandarua County before commencing on the research project.
We wish you all the best.

After completion of your project, you will be required to remit a copy of your findings to this office.

We wish you all the best.

Handwritten signature in blue ink.

**SIFUNA N. M
COUNTY DIRECTOR OF EDUCATION
NYANDARUA**

**COUNTY DIRECTOR OF EDUCATION
NYANDARUA
P. O. Box 197 - 20303.
OL-KALOU**