FACTORS THAT DETERMINE PRICING OF SECONDARY SCHOOLS IN UGANDA: AN ECONOMETRIC ANALYSIS USING UNHS 2023/24 DATA

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A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF BACHELOR OF SCIENCE IN ECONOMICS AND STATISTICS OF UGANDA CHRISTIAN UNIVERSITY

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UGANDA CHRISTIAN UNIVERSITY

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1 DECLARATION

I Kaheeru Victor, hereby declare that this dissertation "Factors that Determine Pricing of Secondary Schools in Uganda" is based on my own knowledge and the information presented is original and all the references have been well acknowledged. This report has not been submitted for any other academic or professional purpose.

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SIGNATURE: .....

DATE: 14 April 2026.

APPROVAL

This Dissertation titled: "Factors That Determine Pricing of Secondary Schools in Uganda: An Econometric Analysis Using UNHS 2023/24 Data" has been submitted for examination with the approval of my supervisor.

Signed:  Date: Tue, 14 April 2026

Mukisa Simon Peter

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4 ABSTRACT

This study examined the," Factors that Determine Pricing of Secondary Schools in Uganda and the main aim was to examine the factors that determine pricing of secondary schools in Uganda**.** This study concentrated on specifically secondary schools within different regions of Uganda such as Buganda, Teso, Karamoja, and Lango. The study adopted a quantitative research approach with a descriptive, analytical research design. Data was extracted from the UNHS 2023/2024 report and it was analyzed using descriptive methods such as mean and percentages and also analyzed statistically with methods like correlation and regression under STATA. The study findings revealed that the quality of school infrastructure and facilities is a key factor in determining how much tuition secondary schools charge. It further revealed that the geographical location of secondary schools positively determines the level of tuition fees at a insignificant level. Finally, the study found that Operational cost to be an insignificant factor that positively determines tuition fees in secondary schools after controlling for other variables. According to the study findings, it is recommended that schools should invest in affordable but modernized infrastructure to improve quality without excessively increasing tuition. Additionally, Parents should seek schools that balance affordability with quality rather than basing decisions solely on location or prestige. The government should also come in and strengthen regulatory frameworks to ensure that tuition increases are justified and within reasonable limits. Finally, Researchers should conduct secondary data analysis to measure the exact statistical strength of the relationships observed. The results in this dissertation are expected to help parents make informed decisions while making choice of secondary schools for their children by understanding factors affecting school fees. It is also expected to guide school owners on sustainable and competitive fee setting strategies. It is also anticipated to provide evidence to policy makers while coming up with fair and transparent tuition fee policies.

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6 ABBREVATIONS

COICOP	Classification of Individual Consumption by Purpose
FSD	Financial Sector Deepening
ICT	Information and Communication Technology
IIED	International Institute for Environment and Development
MoES	Ministry of Education and Sports
TNR	Times New Roman
UBOS	Uganda Bureau of Statistics
UCU	Uganda Christian University
UGX	Uganda Shillings
UNEB	Uganda National Examinations Board
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHS	Uganda National Household Survey
USE	Universal Secondary Education
WB	World Bank

1 CHAPTER ONE

1 INTRODUCTION

Introduction

This chapter introduces the research on factors that determine pricing of secondary schools in Uganda by providing the background of the study, statement of the Problem and outlining the purpose, Scope of the Study, objectives and research questions that guide the investigation. Additionally, it discovers the scope, justification, significance together with theoretical and Conceptual Framework.

1.1 Background of the Study

Secondary education plays a serious role in national development by equipping learners with academic knowledge, practical skills, and competencies required for higher education, vocational training, and participation in the labor market. Worldwide, the importance of secondary education has grown because of the increased demand for skilled labor and the need for human capital development in changing economy. As a result, many countries, particularly in developing regions, have expanded access to secondary schooling.

In Sub-Saharan Africa, the increasing growth in secondary school enrolment has put considerable financial pressure on both governments and households. Although government investment in education has grown high, government funding is still limited to fully cover the operational costs of secondary schools. Many schools rely on tuition fees and other charges to meet expenses related to infrastructure development, teacher remuneration, instructional materials, utilities, and maintenance. Studies in the region indicate that differences in school fees are largely driven by disparities in school facilities, location, and operational costs, with urban and well-resourced schools charging higher fees than rural schools (UNESCO, 2022).

Secondary education in Uganda is delivered through government aided and privately managed schools. The introduction of Universal Secondary Education (USE) has increased access to secondary schooling, particularly for learners from poor households. Despite this intervention, many secondary schools still charge tuition fees and additional charges to supplement government funding or fully finance school operations for private institutions. Education is still one of the major household expenditure (UNHS) 2023/24), which indicates that families are continuing to bear a big portion of education costs, even when there is existence of government support.The UNHS 2023/24 reports household consumption expenditure using the Classification of Individual Consumption by Purpose (COICOP) framework, under which education is categorized as a key nonfood expenditure alongside housing, transport, and health. Education-related spending captured in the survey includes tuition fees, uniforms, learning materials, and other school-related costs.

Secondary School pricing in this study refers to the tuition fees and related levies charged by secondary schools to cover the costs of providing education services. The pricing of secondary schools is determined by many factors. School infrastructure, such as classrooms, laboratories, libraries, and boarding facilities, increases both the quality of education given and the cost of provision. School location also plays an important role, where by urban schools face higher land, utility, and labor costs but benefit from stronger demand and higher household incomes. In addition, operational costs including teacher salaries, administrative expenses, utilities, and maintenance directly affect fee levels, as schools must recover these costs to remain financially stable.

This study is guided by Cost-Plus Pricing Theory and Demand and Supply Theory. Cost-Plus Pricing Theory explains how schools determine fees by adding a profit to the cost of providing education services, while Demand and Supply Theory explains how household income, location, and preferences influence enrolment demand and pricing decisions. Despite the growing importance of secondary education in Uganda, there is limited empirical research that systematically examines the determinants of secondary school pricing using nationally representative secondary data. Most studies have focused on analyzing accessibility and enrolment in secondary schools putting less emphasis on the factors that determine pricing of these secondary schools such as location, infrastructure and facilities and operational costs.

1.2 Statement of the problem

Ideally, school fees should be charged in a clear and defensible way that reflects the actual operation cost but at the same time to be affordable by the households representing diverse income groups (UBOS, 2025). The fees must be fairly related to determinants like school facilities, accessibility of learning facilities, teacher degrees and location of school, so as to enhance fair access to quality secondary education and support national education objectives (World Bank, 2023).

But the real world scenario does not put exactly as it was, in this ideal picture. The school fees in the Uganda secondary education are very diverse and even within the campuses that offer the same curriculum, facilities and level of teaching. In urban schools, particularly where schools are boarded and have more favorable infrastructure, day schools and rural schools are often pricier but the variations are not necessarily well correlated with easily quantifiable sets of costs. Parents and guardians in most instances do not have sufficient information on the ways that fees are set and it is very hard to determine whether fees charged are reasonable or affordable. It is not something to dismiss the effects of this gap. Parents have more financial strains, students at risk of not attending quality secondary schools and school administrators are compelled to make difficult decisions on how to charge fees that are able to meet and also maintain a level of social inclusivity. Conversely, policymakers do not have sufficient empirical evidence to regulate efficiently the prices of secondary schools and develop a policy that compensates the recovery and affordability and equity (IIED, 2024).

So, the issue of missing systematic knowledge on the causes that affect the secondary school fees and this weakens the decision making using empirical evidence is the real problem. The paper aims at examining these aspects, giving recommendations on how to enhance transparency, school fees policies as well as ensuring equal opportunity to a good education.

1.3 Purpose of the study

To examine the factors that determine the tuition prices of secondary schools in Uganda.

1.4 Objectives of the study

To examine the effect of school infrastructure and facilities on the pricing of secondary schools in Uganda

To examine how school location affects pricing in secondary schools.

To examine how operational costs influence the tuition fees of secondary schools.

1.5 Research questions

What is the effect of school infrastructure and facilities on the pricing of secondary schools?

How does school location influence tuition pricing in secondary schools?

How does operational costs influence the tuition fees of secondary schools?

1.6 Hypotheses

1.6.1 Hypothesis 1

School infrastructure and facilities determine the tuition fees of secondary schools in Uganda.

1.6.2 Hypothesis 2

School location determines the tuition fees of secondary schools in Uganda.

1.6.3 Hypothesis 3

Operational costs determine the tuition fees of secondary schools in Uganda.

1.6.4 Scope of the study

The scope of the study will cover three dimensions that is; content, geographical and time and these are discussed in detail below.

1.6.5 Content scope

The study focuses on the factors that determine the pricing of secondary schools in Uganda. Specifically, it examines three key areas: school infrastructure and facilities, school location, and

operational costs. The research analyzes how these factors influence tuition fees, which is the dependent variable.

1.6.6 Geographical scope

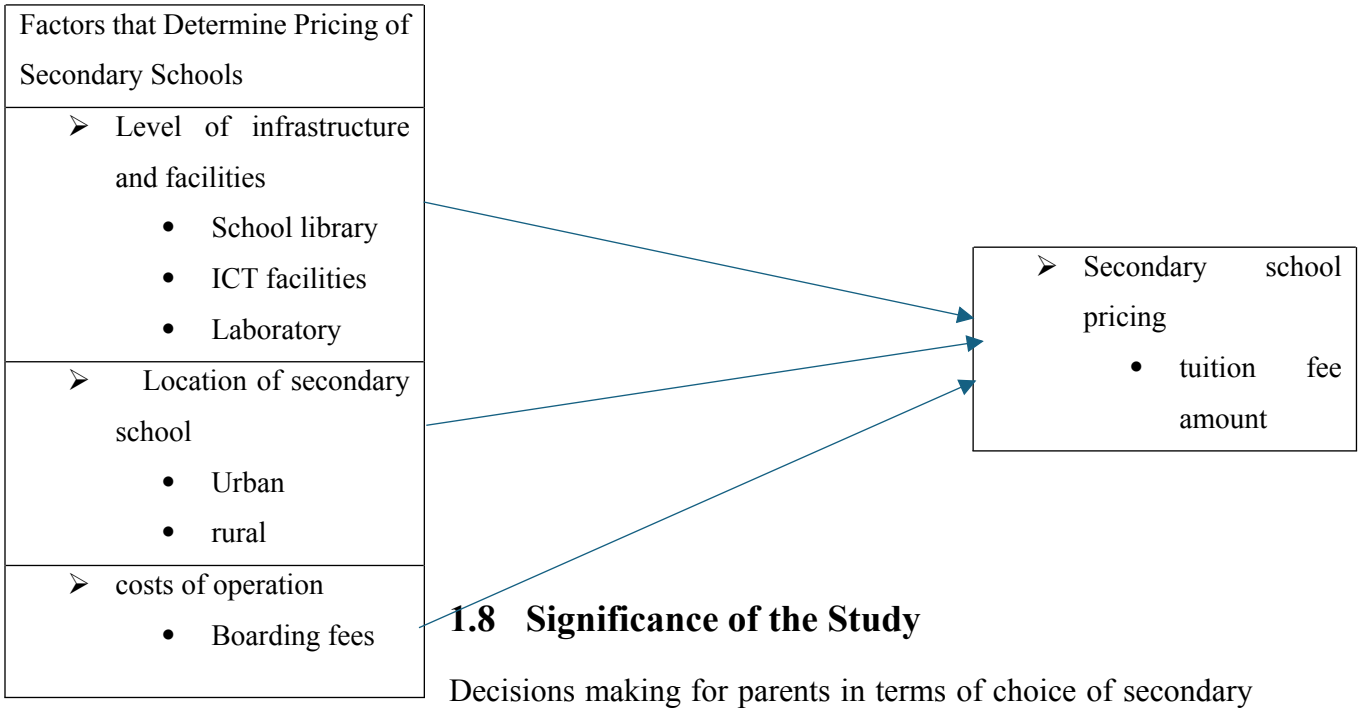
This study focused specifically on secondary schools located in rural, urban and peri-urban areas. The research targeted schools in regions with a high concentration of secondary institutions, such as Kampala, teso, lango, and karamoja, where tuition fees vary widely and the demand for quality education is high.

1.6.7 Time scope

This study covers a period from 2020 to 2025, focusing on the tuition fees and operational practices of secondary schools during these years.

1.7 Conceptual framework

Independent variable **Dependent variable**



1.8 Significance of the Study

Decisions making for parents in terms of choice of secondary school will be made easier for most parents since they will have a clear understanding of the real factors that determine tuition of these schools.

School owners will be guided on sustainable and competitive fee setting strategies for their secondary schools while putting into consideration of the key factors to determine pricing.

Policy makers will be guided the best key variables to analyze while coming up with clear, fair and transparent policies for regulating pricing of secondary schools in the country.

1.9 Limitations of the study

The limited data and access to resources such as analysis software made in depth analysis hard since the sample was limited.

Secondary data was used so there is a possibility some of this information was biased due to social desire and other reasons.

The next chapter presents an extensive review of the theoretical and empirical literature relevant to the current study which seeks to understand the factors that determine pricing of secondary school schools in Uganda. It puts the research in context to the already existing strands of economic theory and prior studies, therefore, providing the conceptual and analytical foundations that guides the choice of variables, hypotheses, and the general structure of the study.

2 CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter consists of critical review of earlier studies and analysis of survey data related to the factors that determine tuition pricing of secondary schools in Uganda. This critical literature review focused on the three main objectives that were earlier listed in chapter one of this same

study which were School infrastructure and facilities, School operational cost and school location. The above variables were assessed using various evidence such as the national household survey report (UNHS 2023/24) and other academic websites to provide a conceptual and empirical basis for the study.

2.2 Theoretical Review

2.2.1 Cost based Pricing model.

This model explains how different organizations determine prices of the services that they offer. The model explains that firms and other organizations mostly private ones determine prices by topping up a certain profit margin to the total operational costs to make sure that there is growth and sustainable provision of the service that they render. (Horngren, Datar, Rajan, & Wynder, 2020). Higher on highly skilled labor, infrastructure and facilities and feeding by shool administrators drives tuition fees of secondary schools high, this is the opposite with those that spend less while providing the secondary school education service that may charge lower tuition. The third objective which is operational cost effect on tuition fees of secondary schools directly associates with this model as it explains how different costs of operation in a school are likely to influence charging of fees.

2.2.2 The theory of Demand and Supply

This theory explains the how possible the two market forces of Demand and Supply can possibly affect pricing of provision of different services as It gives deep insight on availability of services and the willingness or ability of consumers to pay c (Samuelson & Nordhaus, 2021). In line with secondary education, parental willingness to pay a certain amount of fees for a given school, the level of competition among schools and the location itself determine how different secondary schools charge tuition. In Uganda, urban households spend about 10.3% of their monthly earnings on education, while rural households spend only about 6.8% of their budget on education (UBOS, 2025). The statistics show the difference in spending between rural and urban parents being driven by the difference in the pricing of schools in the two areas respectively.

2.2.3 The demand context of Secondary school Education in Uganda.

The role of Secondary education in human capital development, economic growth and development in Uganda cannot be underrated. Most parents in Uganda have increasingly invested in private secondary education even with the presence of the universal secondary education (USE) with hope for better teaching resources, and higher academic standards yet government has fully funded the universal secondary education. The private secondary schools are believed to offer better and standard education services for better and higher learning outcomes.

There are various factors that shape the demand of secondary school education in Uganda and these may include, household income, quality of the services rendered in that particular secondary school, and parental willingness to pay for a particular secondary school fee. In Uganda, children with age between 13 and 18 (28%), miss out on attending secondary education due to high tuition costs charged (UNHS) 2023/24. Location wise, rural households spend about 7% of the total budgets whereas the urban households spend about 11% of their total expenditures indicating the disparities in charging of tuition between rural secondary schools and urban secondary schools (UBOS, 2025).

2.3 Literature review of variables under study

2.3.1 How School Infrastructure and Facilities determine the Pricing of secondary Schools

School infrastructure and facilities highly determine how different secondary schools come up with fee charging criteria in Uganda. These facilities and infrastructure are both physical and nonphysical and these may include dormitories, sports facilities, ICT facilities, quality teaching and learning, well refurbished class rooms, organized libraries, well-structured school compound, laboratories, nice paved lanes, well organized medical facilities and standby electricity and also internet connectivity (MOES, 2022). The high changes in the academic demands in the secondary school curriculum necessitate the presence of high quality of quality of these facilities and thus are very essential when it comes to specialization in specific subjects, and preparation for national examinations administered by the Uganda National Examinations Board (UNEB, 2023).

Investment in quality and sustainable infrastructure and facilities requires a lot of money. This is directly related to the earlier cost based model which suggested that schools are likely to charge tuition following the costs in providing a service, school administrators add all the total costs of providing these quality infrastructure and facilities there after they add up a give profit margin to come up with the price of their secondary schools (Horngren et al., 2020). Secondary school administrators often recover the costs spent of infrastructure and facilities development through tuition fees that are high. Secondary schools that are equipped with well-developed infrastructure and facilities ask for high amount of tuition more than the schools that have less developed infrastructure and facilities so as they are able to recover such costs and also maintain their standards (Samuelson & Nordhaus, 2021).

There are many secondary schools in Uganda and these have very high variations in the level of development of infrastructure and facilities and is most common in terms of location. Secondary schools located in the rural areas have like Karamoja have less developed classrooms, dormitories, primary electricity services, poor network connectivity and poor sanitation service like toilets and latrines (UBOS, 2025). The secondary schools in urban areas like the Buganda region have high developed infrastructure and facilities such as dormitories, sanitation services that is to say flush toilets, well-constructed class rooms and libraries, and also good network connectivity (UBOS, 2025). Parents in urban areas are willing to pay higher tuition fees because Secondary schools in urban areas offer advanced infrastructural facilities that enable learners to attain better learning outcomes and this is not the case with parents in rural areas who are willing to pay for very cheap schools to reduce on their level of expenditure (UNHS) 2023/24.

Additionally, sustaining and maintaining the infrastructure and facilities in the secondary schools require high financial investment leading to the continued high expenditure and thus affecting the tuition. The modern toilets need regular fixing and replacing, libraries have to be updated with better books, laboratories have to be updated with the chemicals and stuff required, daily loading of internet and electricity, all these influence the tuition fees charged by these schools (MOES, 2022). These costs also vary from one type of school to the other that is to say boarding vs day secondary schools. Boarding schools spend more money on supervising, accommodating and feeding since learners are fully at school compared to day schools where learners are at school during the day (UNHS, 2023/24).

2.3.2 School Location and Tuition Pricing in Secondary Schools

Location itself does not determine the tuition of secondary schools but rather escalates the effect of the market forces of demand and supply. Tuition charging by secondary schools greatly vary by location that is to say rural, peri urban and urban. Those located in urban areas generally charge higher fees as they have a lot of competition and also the high willingness to pay by the high income earners that are concentrated within these areas. Secondary schools that are located in rural areas have less demand, parents have low will to pay school fees, and also most households are characterized by low income, this makes charging of tuition low by these schools since they opt to offer less advanced services that are less costly. According to UNHS 2023/24, urban households spend about 10.3% of what they earn while the households in rural areas spend about 6.8% of their monthly earnings.

Furthermore, location of a secondary school has an impact on the costs of operation that indirectly influences the pricing of these schools. Schools in the urban areas are faced with limited resources such as food since there is no practice of agriculture in these places, they are also faced with high costs of living for example security and high rents on accommodation, these directly affect the tuition prices as school administrators want to sustain and cover these costs. Rural secondary schools are also impacted in a way that they find it expansive to maintain the life of some skilled labor that higher form the urban areas, poor transport facilities and development of some infrastructure like electricity that is not there in some of these areas. These show how much location impacts the nature of the costs of operation.

Some schools in Africa set tuition fees putting into consideration the socio and economic characteristics of the communities they are living in. schools that are located in areas that are highly populated are most likely to have a very high demand offering very high quality services like advanced class rooms and thus charge high tuition using location as a setting strategy. Those that are located in areas with a very low population likely face low demand and thus charge lower tuition and offer very poor services such as unqualified staff to fit in the competition of the schools that are available in that particular area (Gölpek, 2012).

Perception on the quality of secondary schools is influenced by their location. This indirectly impacts the pricing of secondary school in a way that schools located in urban areas are socially

perceived to offer better and standard services for better student performance and this gives them a higher advantage to set higher fees as they have a higher demand from the parents willing to pay more. However schools in rural areas are socially perceived to offer very poor services such as unqualified staff, this reduces on their demand and thus charge lower tuition so as they are able to get some customers. The association between parent perception, demand, and affordability makes location a factor that is not worth underrating in determining pricing of secondary schools.

2.3.3 How operational costs determine the tuition fees of secondary schools.

Operational costs refer to these costs that crucial in the day-to-day operation of schools and these include security, salaries, electricity, rent, labor and supervision and these are key in determining how much secondary schools charge in terms of tuition. Schools use the cost-based model to add up these costs to a certain profit margin to come up with the total fees charge to ensure sustainability and maintenance of whatever they provide education (Horngren, Datar, Rajan, & Wynder, 2020). Schools that incur high costs in terms of operation always charge high tuition fees so as they are able to recover their moneys invested.

Operational costs have an indirect impact on household education spending, according to data from the Uganda National Household Survey (UNHS) 2023/2024. According to the poll, parents' willingness to pay is directly related to how well they believe the school is doing, which is frequently reflected in the facilities, the credentials of the teachers, and the learning materials that are accessible (UBOS, 2025). Higher tuition rates are a result of the greater maintenance and staffing expenses that higher quality schools must bear. In metropolitan regions, where operational costs are typically greater due to increased teacher compensation, power costs, and facility upkeep, this is especially noticeable. Electricity, water, internet access, stationery, and cleaning services are some of the other operational costs that secondary schools incur. Secondary Schools spend a lot of money to cover and maintain these facilities and this directly influences the level of tuition fees set.

In sub-Saharan Africa, differences in operational costs among secondary schools fully affect the tuition fees in secondary schools yet giving the same curriculum (Gölpek, 2012). Institutions that offer advanced services such as advanced facilities, and learning materials charge very high tuition fees to sustain these expenditures whereas schools that offer less advanced services such as poor

infrastructural facilities charge less tuition since there is less pressures on tuition and more so there is need to create a sense of affordability to bring in more students (Gölpek, 2012).

2.4 Gaps in the Literature

One of the major gaps from the literature review above, there are very limited studies that analyze the impact of infrastructure and facilities, location and operation costs on the pricing of secondary schools in Uganda (UBOS, 2025; Fin Scope Uganda, 2023). Previous research studies have also always linked infrastructure to quality not necessarily studying its impact on tuition of secondary schools (Fin Scope Uganda, 2023). There is also limited data to study how much location directly affects pricing of tuition fees of secondary schools in Uganda.

The next chapter introduces the research methodology that will be used to carry out an empirical study of this study. It is the combination of the theoretical and empirical conclusions made above in discussing the research design, data sources, variable construction, and the econometric methods used to test the relationship

3 CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology which was used to examine the factors that determine tuition fees of secondary schools in Uganda. It describes the research design, data sources, sampling procedures, data collection methods, and analysis techniques. This study relied entirely on secondary data obtained from the Uganda National Household Survey (UNHS) 2023/24 and

emphasis was placed on how these data were accessed, extracted, and analyzed to achieve the study objectives.

3.2 Research Design

A descriptive and correlational research design was used under this study. Understanding existing patterns and relationships amongst the key variables which were school infrastructure, school location, operational costs, and tuition fees was easier with this research design without manipulating the data. With the help of statistical analysis it was easy to identify existing trends in the education sector and also establish relationships among the study variables.

3.3 Study Population

A population which consisted of all secondary schools and households with children going to school in Uganda was used as represented in the UNHS 2023/24 report. The report provided a national representative sample of households and institutions of all urban and rural areas, therefore understanding the determinants of tuition pricing in secondary schools was made smooth.

3.4 Data Sources

Secondary data which was from credible national databases was used to build this study that is to say Uganda National Household Survey (UNHS) 2023/24, which was published by the Uganda Bureau of Statistics (UBOS). Data on household expenditure on education, location, and socio-economic characteristics was extracted from this report.

3.5 Data Collection and Extraction Procedures

Extraction and coding of important variables was done from the UNHS report 2023/2024. Data such as education expenditure data was a proxy for tuition fees, whereas data on location, income, and household was used to infer factors that determine tuition pricing of secondary schools in Uganda. Data on homesteads with children attending secondary schools was analyzed to ensure accuracy and relevance to the study's focus.

3.6 Data Analysis Techniques

Quantitative data analysis using descriptive and inferential statistical methods was adopted.

Descriptive statistics methods were used to summarize the data and describe the general trends in tuition fees and related variables that is to say means, percentages, and frequency distributions. Correlation and Regression analyses were used to determine the strength and direction of the relationship between the independent variables and the dependent variable (tuition_fees=β0+β1(infras_facilities) +β2(location)+β3(operational_cost) +ε).

3.7 Validity and Reliability of the Data

Validity and reliability were ensured through the credibility of the UNHS 2023 report since secondary data was used. UNHS is an official, nationally recognized surveys conducted by a competent institution that is to say UBOS by use of rigorous sampling and data collection procedures. Their datasets are commonly used by policymakers, researchers, and international organizations, which reinforced the reliability of the data for this study.

3.8 Ethical Considerations

The data was used mainly used for the study purposes considering respect of identifiable personal information, ensuring participant anonymity and confidentiality. UBOS and UCU study guidelines were put into consideration while carrying out the study.

4 CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION OF FINDINGS

4.1 Introduction

Chapter 4 of this study presents descriptive and inferential analysis, and interpretation of findings of the topic Factors that Determine Pricing of Secondary schools in Uganda. This study critically analyzed secondary data from Uganda National Household Survey (UNHS) report to test the significance and relationship of the independent variables.

4.2 Descriptive Analysis of Study Objectives

4.3 Infrastructural facilities and tuition fees.

Infrastructure and facilities need high financial expenditure to improve and sustain its quality in secondary schools. A constructed table was extracted from the UNHS 2023/2024 report indicating the difference in tuition paid by residence in line with level of quality infrastructure and facilities.

4.3.1 Summary statistics: mean median min max sd by(location) location: Rural

	Mean	Median	Min	Max	SD
tuition fees	1319670.6	1047400	100000.000	4500000	902246.24
infras facilities	193326.92	100000	10000.000	800000	185324.08
Urban					
tuition fees	1900248.9	1410000	30000.000	12656250	1823071.5
infras facilities	185104.17	120000	14000.000	1650000	213739.21

Source: Authors Computations (UNHS 2023/2024)

The summary statistics indicate a definite disparity in tuition fees and the infrastructure facilities/facilities in the rural and urban locations. The cost of education in urban settings is more expensive based on the fact that on average, schools used higher tuition fees (mean = 1,900,249 UGX) than schools in rural areas (mean = 1,319,671 UGX). This is also reinforced by the median values with the urban tuition standing at (1,410,000 UGX) and that of rural areas being (1,047,400 UGX) indicating that, on average, urban students are paying more. Also, the urban areas would have a much broader and greater variability of tuition fees, ranging between 30,000 UGX and up to 12,656,250 UGX with a large standard deviation, which means that there is a high degree of variability and asymmetry in the fee design. Conversely, the tuition fee is relatively more concentrated in the rural areas with a smaller standard deviation and a limited range. As to infrastructure and facilities, there is not much difference between locations, but the rural ones (mean 193,327 UGX) are a bit higher than urban ones (mean 185,104 UGX).

4.4 School Location and Tuition Fees

Rural and urban Households generally spend differently on secondary education. This is due to a number of factors such as the difference in the standard of living, cost of living, difference in the level of demand and also level of income. Therefore, schools in urban areas or highly developed regions charge more tuition fees compared to those in rural or low developed areas due to said factors and it's supported by the UNHS 2023/2024 report.

4.4.1 Table Summary statistics showing Tuition Differences by Location: mean median min max Sd by (location)

location	Mean	Median	Min	Max	SD
Rural	1319670.6	1047400	100000.000	4500000	902246.24
Urban	1900248.9	1410000	30000.000	12656250	1823071.5

Source: Authors Computations (UNHS 2023/2024)

The analysis of the summary statistics shows that tuition fee in urban areas is significantly higher than in rural areas with the mean value of tuition fee being about 1,900,249 UGX in urban schools against 1,319,671 UGX in rural schools. The same trend is observable in the median values, which show a higher amount of urban fees (1,410, 000 UGX) than rural fees (1,047, 400 UGX), which reflects that the average student in the urban setting pays a higher amount of fees. Further, urban locations have a far broader distribution of tuition fees with a range of 30,000 UGX to 12,656,250 UGX and a much larger standard deviation implying high levels of variability and disparity in tuition structures. Conversely, the rural tuition fee is less scattered and more concentrated on a smaller range with a smaller standard deviation meaning there is a higher degree of consistency. The findings in general indicate that education in urban settings is more expensive, but also unequally so, as compared to rural areas.

4.5 Operational Costs and Tuition Fees

Operational costs are a key factor play determining tuition fees charged by various secondary schools in Uganda. Some of these costs include teacher salaries, food, electricity, accommodation and supervision. These are key in the day today running of every institution.

4.5.1 Table: Summary statistics: mean median min max sd by(location) location: Rural

	Mean	Median	Min	Max	SD
tuition fees	1319670.6	1047400	100000.000	4500000	902246.24
operational cost	3789.323	0	0.000	750000	47066.913
Urban					
tuition fees	1900248.9	1410000	30000.000	12656250	1823071.5
operational cost	4036.335	0	0.000	600000	47362.59

Source**:** Author's Computations (UNHS 2023/24).

The summary statistics demonstrate the definite variation in tuition fees and moderate variation in operational costs between the rural and urban sites. The average tuition fees are higher in urban schools (mean 1,900,249 UGX) than in rural schools (mean 1,319,671 UGX) and supported with higher median values, which mean that the average student in urban schools pays more. The variation in urban tuition fees also exhibits a higher level of variation, in that there are higher standard deviation and wider range, indicating that there exist very big differences in fee structures across urban schools, compared to relatively more uniform rural fees. However, in comparison, operational expenses are not very different across the two locations and the means difference is negligible (urban ≈ 4,036 UGX and rural ≈ 3,789 UGX). Nonetheless, the median operational cost is equal to zero in both instances, meaning that the considerable proportion of schools report no or minimal operational costs, whereas the significant high values of the maximum and the big standard deviation mean the existence of extreme outliers. On the whole, the results indicate that place has a very powerful impact on the tuition fees and little effect on the operational costs, which is very unevenly distributed in rural and urban areas.

4.6 Inferential analysis of study variables

4.7 Regression Analysis of the Study Variables

Linear regression

tuition_fees	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
infras_facilities	4.623	.409	11.31	0	3.818	5.429	***
location	817330.52	161939.42	5.05	0	497963.12	1136697.9	***
operational_cost	.571	.66	0.87	.388	-.73	1.873	
Constant	597948.14	139405.56	4.29	0	323020.7	872875.58	***

Mean dependent var	1881950.500	SD dependent var	1510548.617
R-squared	0.435	Number of obs	200
F-test	50.355	Prob > F	0.000
Akaike crit. (AIC)	6151.488	Bayesian crit. (BIC)	6164.681

*** p<.01, ** p<.05, * p<.1

Source**:** Author's Computations (UNHS 2023/24).

Tuition_fees=597,948.14+4.623(infras_facilities)+817,330.52(location)+0.571(operational_cost)

P (F=0.000<0.05), the model is statistically significant at the 5% level. The independent variables infrastructure and facilities, location and operational cost have a significant effect on tuition fees.

The model explains 43.5% of the variation in tuition fees, with R-squared = 0.435 and Adjusted R-squared = 0.565, indicating that approximately 43.5% of the variation in tuition fees is explained after accounting for the number of predictors.

The constant term P (F= 0.000) is significant at the 5% level. The coefficient 597948.14 is the average tuition per learner when all the independent variables are equal to zero.

Infrastructure and facilities (p = 0.000), is significant at the 5% level. The coefficient 4.623 indicates that improvements in infrastructure and facilities such as laboratories and ICT services are associated with 0.046 percentage increase in average tuition fees per learner.

Location is a dummy variable coded 1 for urban and 0 for rural. Averagely, schools in urban cost UGX 817330.52 higher in tuition fees than schools in rural and this effect is statistically significant p (F = 0.000), this indicates that after controlling for other independent variables, location has a very significant influence on tuition fees.

Operational costs p (F= 0.388) is not statistically significant at the 5% level. This implies that operational costs has no detectable effect given the data and model.

4.8 Correlation Analysis of the Study Variables

4.8.1 Matrix of correlations

Matrix of correlations

Variables	(1)	(2)	(3)	(4)
(1) tuition_fees	1.000			
(2) infras_facilit~s	0.600	1.000		
(3) location	0.258	-0.021	1.000	
(4) operational_cost	-0.002	-0.075	-0.012	1.000

Source**:** Author's Computations (UNHS 2023/24).

The correlation matrix shows that tuition fees have a moderately strong positive relationship with infrastructure and facilities (r = 0.600), suggesting that schools with better infrastructure tend to charge higher fees. The relationship between tuition fees and location is weakly positive (r = 0.258), indicating that being in an urban area is associated with slightly higher tuition fees, although the effect is not very strong. Infrastructure and facilities have almost no relationship with location (r = -0.021), implying that infrastructure levels do not differ significantly between rural and urban schools in a linear sense. Similarly, operational cost shows virtually no correlation with tuition fees (r = -0.002), infrastructure (r = -0.075), or location (r = -0.012), suggesting that it does not have a meaningful linear relationship with these variables. Overall, the results indicate that infrastructure is the most important factor associated with tuition fees, while location has a minor influence and operational cost appears largely unrelated.

4.4.2. **Variance inflation factor**

	VIF	1/VIF
infras facilities	1.006	.994
operational cost	1.006	.994
location	1.001	.999
Mean VIF	1.004	.

Source**:** Author's Computations (UNHS 2023/24).

According to the results of the Variance Inflation Factor (VIF) it shows that multicollinearity does not exist between the independent variables in the model. The VIFs are very close to 1(infrastructure = 1.006, operational cost = 1.006 and location = 1.001), and the average value is 1.004. The implication of this is that the explanatory variables do not have high correlation with one another and each variable offers a distinct information in the explanation of tuition fees. Thus, the issue of multicollinearity does not exist in this regression model and the estimated coefficients may be regarded as reliable and stable**.**

5 CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of the study findings in relation to the research objectives, conclusions drawn from the findings and offers practical recommendations for improving pricing practices in secondary schools. The study examined three major factors influencing tuition fees of school infrastructure, school location, and operational costs, using patterns derived from UNHS 2023/24 data.

5.2 Discussion of Findings

5.2.1 School Infrastructure and Tuition Fees

Hypothesis 1 was "infrastructure and facilities determine tuition fees of secondary schools". The study found that the quality of school infrastructure is a key factor in determining how much tuition secondary schools charge. Schools with modern facilities such as well constructed classrooms, computer laboratories, libraries, and secure playgrounds tended to set higher fees than schools with more basic structures. This pattern aligns with the idea that parents associate better infrastructure with better learning outcomes, and are therefore more willing to pay higher tuition when the school environment appears safe, organized, and conducive to learning.

Findings from the UNHS 2023/24, survey also support this interpretation, showing that households spend more on education when schools offer improved physical facilities. This suggests that infrastructure is not just a cost item for schools but also a value signal to parents. Schools that invest more in buildings and equipment must recover these costs, which naturally raises tuition. At the same time, parents view improved infrastructure as an investment in their children's future, making them more likely to enroll in such institutions even at a higher price point

5.2.2 School Location and Tuition Fees

Hypothesis 2 was "school location determines tuition of secondary schools". The findings revealed that the geographical location of secondary schools positively and significantly determines the

level of tuition fees. Schools situated in urban centers, particularly in districts such as Kampala, Wakiso, and Mukono, tend to charge higher fees compared to those in rural or peri-urban areas. This difference is largely driven by higher living costs, increased demand for quality education, and parents' greater willingness to pay for schools offering premium facilities.

This aligns with earlier studies such as UNHS 2023/24 and Gölpek, 2012 which show that urban households spend more than twice as much on education as rural households, reflecting both higher income levels and the higher costs associated with urban schools (UBOS, 2024). This is possible because urban schools attract highly qualified staff, offer premium services that are highly expensive to facilitate thus charging higher tuition.

5.2.3 Operational Costs and Tuition Fees

Hypothesis 3 was "Operational costs determine tuition fees of secondary schools". The analysis found Operational cost an insignificant factor that positively determines tuition fees in secondary schools after controlling for other variables. Though at an insignificant level, this aligns with earlier studies such as (Horngren, Datar, Rajan, & Wynder, 2020) and the descriptive analysis that suggest that Schools with higher operational expenditures, such as those paying competitive teacher salaries or maintaining well equipped facilities, naturally charge higher tuition fees to cover these costs. The analysis also found operational costs to have a negative relationship with tuition fees implying that as the operational costs increase tuition tends to fall. This is possible because higher operational costs indicate provision of advanced services that attract very many learners. The costs are spread over to the many learners and also possible economies of scale where average cost per learner declines even with the rise in the total cost.

5.3 Conclusions

Based on the analysis of UNHS 2023/24 data, this study set out to examine the determinants of tuition fees in secondary schools in Uganda, focusing on school infrastructure, school location, and operational costs.

The results of the correlation and regression analysis reveal uniformly that infrastructure and facilities are one of the determinants of the tuition fees. The correlation analysis shows that there is a moderately strong positive correlation between tuition fees and infrastructure ($r = 0.600$), which means that higher fees are paid in the schools, which have better facilities. The regression

results also support this relationship as infrastructure has a positive and significant impact on tuition fees ($p < 0.000$). This means that there is a significant relation between changes in school infrastructure together with a significant rise in tuition, which explains why physical resources are important in the cost of education determination.

The research also concludes that location has a significant role to play in the explanation of variation in tuition fees. The correlation between location and tuition fees is however weak ($r = 0.258$) though the regression outcomes indicate that location has a strong statistically significant influence on tuition fees ($p < 0.000$). Particularly, the schools in urban regions are likely to have much higher prices than those in rural ones, despite taking into account other aspects. That implies that place also embodies other factors of demand of education, cost of living, and access to services that cannot be solely explained by a factor of infrastructure.

In the study, operational cost, however, does not seem to have a serious impact on tuition fee. The correlation analysis outcomes demonstrate that there is virtually no correlation between the tuition fees and operational cost, and the regression analysis proves that its impact is statistically non-significant ($p > 0.38$). This implies that changes in the costs of operation do not effectively translate into the tuition fee differentials in the schools.

It can be concluded that rtuition fee setting is highly dependent on structural and locational-related factors as compared to day-to-day operational costs. Schools that have higher infrastructure and those are in urban areas have much higher fees, which is the value placed on the improved learning facilities as well as the demand and cost conditions in urban environments. The fact that multicollinearity is absent, as well as the fact that the explanatory power of the model itself is rather high ($R 2 = 0.435$), makes such results even more reliable. Thus, policy-seeking solutions to control or appreciate tuition fees must be sensitive to inequity in infrastructure formation, and regional diversity, since these two are the main factors that lead to variance in fees across schools.

5.4 Recommendations

5.4.1 To School Administrators

School administrators ought to use transparent pricing methods that are clear and easy to understand by parents reflecting the factors determined to arrive at a certain amount charged.

Secondary school administrators should also concentrate on provision and investment in sustainable and affordable infrastructure to avoid necessarily increasing tuition to survive.

5.4.2 To Parents

Parents should clearly analyze all various factors available as they make choices of secondary schools for their children and avoid necessarily choosing luxury. This will ensure that they pay for the best and quality education for their children.

5.4.3 To Government

The Government of Uganda should offer subsidies and donations secondary schools to reduce on the level of operational cost so as to avoid the unnecessary tuition increases by administrators as they try to cover the high costs.to reduce operational costs and stabilize tuition.

It should also come up with Strong regulatory strategies that are meant to protect both parents and secondary school administrators to ensure smooth cooperation between parents and school owners.

5.4.4 To Researchers

Researchers should specifically conduct primary data collection and analysis to determine the exact accurate statistical relationship of the variables studied in this research. Research could also explore the factors that determine pricing of private primary and secondary schools.

REFERENCES

Horngren, C. T., Datar, S. M., Rajan, M. V., & Wynder, M. (2020). Cost accounting: A managerial emphasis (16th ed.). Pearson.

Samuelson, P. A., & Nordhaus, W. D. (2021). Economics (22nd ed.). McGraw-Hill Education.

Dholakia, U. M. (2018, July 12). When cost-plus pricing is a good idea. Harvard Business Review. https://hbr.org/2018/07/when-cost-plus-pricing-is-a-good-idea

Pricefx. (2024, September 12). Cost-plus pricing: Everything you need to know. https://www.pricefx.com/learning-center/cost-plus-pricing-everything-you-need-to-know

Investopedia. (n.d.). Law of supply and demand. https://www.investopedia.com/terms/l/law-of-supply-demand.asp

EdChoice. (2025, April 17). The supply side of school choice: What happens to private school tuition when demand grows? https://www.edchoice.org/the-supply-side-of-school-choice-what-happens-to-private-school-tuition-when-demand-grows/

Gölpek, F. (2012). Price of higher education and individual demand. Procedia - Social and Behavioral Sciences, 46, 5096–5100. https://doi.org/10.1016/j.sbspro.2012.06.392

Panitchpakdi, S. (1977). Demand and supply elements in educational planning. International Review of Education, 23(1), 1–11. https://doi.org/10.1007/BF02096319

Business Initiative. (2024, May 28). Cost-plus pricing strategy | Examples of companies using cost-plus pricing. https://www.businessinitiative.org/pricing-strategy/cost-plus-pricing/

Pricefx. (2024, September 12). Cost-plus pricing: Everything you need to know. https://www.pricefx.com/learning-center/cost-plus-pricing-everything-you-need-to-know

Becker, G. S. (1964). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. University of Chicago Press.

FinScope Uganda. (2023). FinScope Uganda Survey 2023 – Key Findings. Kampala: Financial Sector Deepening Uganda (FSD Uganda).

Gölpek, F. (2012). The Impact of Private School Characteristics on Tuition Fees: Evidence from Sub-Saharan Africa. International Journal of Education Economics and Development, 3(2), 120–135.

Horngren, C. T., Datar, S. M., Rajan, M. V., & Wynder, M. (2020). Cost Accounting: A Managerial Emphasis (6th ed.). Pearson Australia.

amuelson, P. A., & Nordhaus, W. D. (2021). Economics (20th ed.). McGraw-Hill Education.

Uganda Bureau of Statistics (UBOS). (2025). Uganda National Household Survey (UNHS) 2023/24 – Main Report. Kampala: Uganda Bureau of Statistics.

World Bank. (2023). Education Finance and Quality in Uganda: Policy and Expenditure Review. Washington, DC: The World Bank.

Ministry of Education and Sports (MoES). (2024). Education and Sports Sector Annual Performance Report (FY 2023/24). Kampala: Government of Uganda.

UNESCO Institute for Statistics. (2023). Education Data and Indicators for Uganda. Paris: UNESCO.