

Examining the effect of tuition structure on enrollment dynamics in faith-based private Universities: Evidence from IUIU–Female Campus (2015–2023)

by

Nabukeera Madinah

¹ Faculty of Management Studies
Department of Public Administration,
Senior Lecturer,
nabmadinah@gmail.com
Islamic University in Uganda Females' Campus

Kiida Ziyad

² Faculty of Management Studies
Department of Business Studies,
PhD student
Islamic University in Uganda Females' Campus

Abstract

Access to higher education remains a central pillar for human capital development and gender equity in Uganda. However, tuition affordability continues to shape students' access and retention, particularly in private universities that depend heavily on tuition income. This study examined the relationship between tuition structure and student enrollment trends at the Islamic University in Uganda – Female Campus (IUIU-FC) from 2015 to 2023. Specifically, the research aimed to: (i) analyze the effect of tuition expenditure on student enrollment; (ii) examine the responsiveness of enrollment to changes in tuition fees; and (iii) investigate the moderating factors influencing the tuition–enrollment relationship. The study employed a quantitative, correlational, and longitudinal design, using secondary data obtained from IUIU-FC's financial and admission records, as well as the National Council for Higher Education (NCHE) 's annual reports. Data were analyzed using descriptive statistics and multiple regression techniques in SPSS v.26. The model results revealed an Adjusted R² of 0.435, indicating that tuition expenditure explained 43.5 percent of the variation in student enrollment during the study period. Regression coefficients showed a positive but statistically insignificant relationship between tuition expenditure and enrollment ($\beta = 0.705$, $p > 0.05$) and an inelastic response of enrollment to tuition changes ($\beta = 0.574$, $p = 0.137 > 0.05$). These results suggest that changes in tuition fees did not significantly influence student enrollment at IUIU-FC, implying that female students' enrollment decisions were more shaped by non-economic factors, such as institutional reputation, flexible payment options, and scholarship opportunities. The findings support Human Capital Theory (Becker, 1964) and Price Elasticity Theory of Demand (Marshall, 1890), showing that tuition affects educational investment decisions but that demand for higher education among female students is relatively inelastic. The study concludes that while tuition expenditure moderately explains variations in enrollment, other socio-economic, cultural, and policy variables play greater roles. It recommends the adoption of gender-responsive tuition policies, expansion of scholarship and bursary schemes, diversification of institutional revenue streams, and enhanced community sensitization on the value of women's education.

Keywords: *Tuition structure, student enrollment, elasticity, higher education, IUIU-Female Campus, Uganda, gender access*

Background of the Study

Higher education is a cornerstone of socio-economic transformation, enabling nations to develop human capital, foster innovation, and promote social mobility (UNESCO, 2020). In Uganda, universities have become vital engines of development by producing skilled professionals who contribute to national goals such as those articulated in Vision 2040. However, the affordability of higher education remains a persistent challenge, particularly within private universities where tuition fees constitute the main source of institutional revenue. The structure of tuition comprising tuition rates, functional fees, and payment modalities significantly influences students' access, enrolment, and retention (World Bank, 2020). Globally, the relationship between tuition costs and enrolment rates has been well documented. According to Altbach, Reisberg, and Rumbley (2019), tuition pricing shapes student demand, with higher costs often discouraging enrolment among low-income households. In developing economies, where household income levels are relatively low, even moderate tuition increases can substantially reduce female student participation (Salmi & Bassett, 2021). This sensitivity is particularly evident in sub-Saharan Africa, where most higher-education institutions rely heavily on tuition fees to fund recurrent expenditure (Teferra & Altbach, 2020).

In Uganda, the liberalisation of the higher-education sector since the early 1990s has encouraged the establishment of both public and private universities. Yet, the issue of affordability continues to constrain equitable access. The National Council for Higher Education (NCHE, 2022) reports that private universities face financial instability due to dependence on tuition income, leading to frequent fee adjustments. These adjustments often correspond with fluctuations in student enrolment and admission trends. A study by Ahebwa (2021) on private universities in Uganda revealed that institutions with flexible fee structures attract and retain more students than those with rigid or escalating tuition systems. The Islamic University in Uganda (IUIU), founded in 1988 under the Organization of Islamic Cooperation (OIC) initiative, was established to expand educational opportunities within an Islamic moral framework. The Female Campus (IUIU-FC) in Kaboja, launched in 2008, aimed to promote women's participation in higher education while upholding Islamic values of modesty, security, and academic excellence (Nabukeera, 2016). Despite these achievements, the campus has experienced fluctuating enrolment and admission rates. For instance, between 2015 and 2023, reports indicate stagnation in student numbers, and

in 2017 the university suspended several academic programmes due to low enrolment, a trend partly attributed to rising tuition fees and limited student sponsorships (Uganda Radio Network (URN, 2017).

Like many private institutions, IUIU-FC depends primarily on tuition revenue to sustain its operations. This dependence presents a structural dilemma: maintaining institutional sustainability through fee increases can simultaneously undermine affordability and accessibility (Mugabi, 2020). Consequently, variations in tuition structure whether through fee increments, payment schedules, or auxiliary charges can directly affect admission decisions and retention rates, particularly among economically vulnerable female students.

The 2015–2023 period is critical because it spans major developments in Uganda's higher-education sector, including rising inflation, economic slowdowns, and the COVID-19 pandemic, all of which affected household incomes and education financing (NCHE, 2022; World Bank, 2021). Understanding how tuition structure influenced enrolment and admission during this period is essential for evidence-based policy formulation and for ensuring that gender-responsive higher-education institutions like IUIU-FC remain both accessible and financially sustainable. Therefore, this study sought to examine the impact of tuition structure on the rate of enrolment and admission at the Islamic University in Uganda–Female Campus from 2015 to 2023. The findings will provide empirical insights into how tuition policies influence female students' access to higher education and propose strategies that balance affordability with institutional viability.

Introduction

Access to higher education is a fundamental pillar of social and economic development. Universities are instrumental in nurturing human capital, promoting innovation, and supporting national growth through research and community engagement (UNESCO, 2020). In Uganda, the higher education sector has expanded significantly over the past three decades, with both public and private universities playing key roles in achieving the goals of *Vision 2040* and the National Development Plan (NDP III). However, one of the persistent challenges undermining this progress is the affordability of higher education, especially for students from low-income

families and vulnerable groups such as women (NCHE, 2022). Tuition structure comprising tuition rates, administrative fees, accommodation costs, and other functional charges directly influences students' decisions to apply, enrol, and persist in higher education (Salmi & Bassett, 2021). According to Altbach, Reisberg, and Rumbley (2019), fee levels represent both an economic and psychological barrier, shaping perceptions of accessibility and the value of education. The World Bank (2020) further argues that in developing economies, tuition elasticity of demand is high; that is, even a small increase in tuition fees may result in a significant decline in student enrolment. This dynamic is particularly evident in private universities across sub-Saharan Africa, which depend heavily on tuition revenue to sustain operations (Teferra & Altbach, 2020).

In Uganda, private universities such as the Islamic University in Uganda (IUIU), Kampala International University, and Uganda Christian University rely predominantly on tuition income for their financial stability (Mugabi, 2020). Consequently, these institutions periodically adjust tuition rates to meet operational costs, inadvertently affecting student admissions and retention (Ahebwa, 2021). Studies by the National Council for Higher Education (2022) indicate that rising fees have led to fluctuating enrolment patterns, particularly among female students who face greater socio-economic constraints and limited sponsorship opportunities. The Islamic University in Uganda (IUIU), established in 1988 under the auspices of the Organisation of Islamic Cooperation (OIC), was founded to promote quality education grounded in Islamic values and ethics. The Female Campus (IUIU-FC), located in Kaboja, was established in 2008 with the aim of providing a conducive learning environment for women, thereby increasing their participation in higher education (Nabukeera, 2016). Over the years, IUIU-FC has played a vital role in empowering women academically and professionally. However, the campus has experienced fluctuations in both enrolment and admission rates, with reports of stagnation and decline between 2015 and 2023 (URN, 2017). Rising tuition and functional fees have been cited as contributing factors, alongside economic downturns, limited sponsorships, and the effects of the COVID-19 pandemic. Given that IUIU-FC is a private institution that depends heavily on tuition income, any variation in its fee structure is likely to affect the rate of new student admissions and continuing student enrolment (World Bank, 2021). Understanding this relationship is essential for informing tuition policy, financial planning, and strategies aimed at

promoting gender equity in higher education. Therefore, this study seeks to examine the impact of tuition structure on the rate of enrolment and admission at IUIU-Female Campus from 2015 to 2023. The findings will provide evidence-based insights to guide institutional decision-making and contribute to broader discussions on affordability, access, and sustainability within Uganda's private higher-education landscape.

Contextual Perspective

The issue of tuition affordability has been central to the dynamics of higher education in Uganda over the past decade. Tuition and related functional fees represent the primary source of revenue for most private universities, accounting for more than 80 percent of their operational budgets (NCHE, 2022). This financial model, while necessary for institutional sustainability, has simultaneously created economic barriers for students from low-income backgrounds, especially women who often face additional social and financial constraints (Ahebwa, 2021). The Islamic University in Uganda (IUIU) operates four main campuses, namely; the Main Campus in Mbale, Kampala Campus, Arua Campus, and the Female Campus in Kabojja (IUIU, 2023). The Female Campus (IUIU-FC) was established in 2008 to increase access to higher education for Muslim women within an environment consistent with Islamic values (Nabukeera, 2016). Despite its success in promoting women's education, the campus has experienced fluctuating enrolment and admission rates between 2015 and 2023. Institutional reports and media coverage indicate that the number of new entrants declined in several programmes, with some courses suspended in 2017 due to low student numbers (Uganda Radio Network (URN, 2017).

These enrolment challenges coincide with rising tuition and functional fees. For example, average tuition at IUIU-FC increased from approximately UGX 500,000 per semester in 2015 to about UGX 750,000 by 2022, varying across programmes (IUIU, 2023). Such fee adjustments, though essential for maintaining academic standards and infrastructure, may have discouraged potential applicants. The situation was further compounded by economic disruptions caused by the COVID-19 pandemic, which reduced household incomes and limited students' ability to meet tuition obligations (World Bank, 2021). Thus, within this contextual frame, tuition structure emerges as a critical determinant of access to higher education at IUIU-FC. Understanding this

dynamic provides essential insight into how financial policies can either promote or restrict women's participation in tertiary education in Uganda.

Conceptual Perspective

This study revolves around two major concepts: tuition structure and enrolment/admission rate. Tuition structure refers to the composition, level, and payment modalities of the fees charged by an educational institution. According to Salmi and Bassett (2021), tuition structure includes the base tuition fee, functional charges, administrative levies, and payment schedules designed to meet institutional and student needs. The structure also reflects the institution's cost-recovery strategy and affects perceived affordability. In this study, tuition structure will be operationalised through variables such as fee amount, frequency of adjustment, payment flexibility, and availability of scholarships or instalment options. Enrolment and admission rate describe the number of students admitted to and registered in a university within a specific academic period (Altbach, Reisberg, & Rumbley, 2019). Admission rate reflects the percentage of applicants accepted, while enrolment rate indicates the number of students who actually register and attend classes. These indicators are commonly used to measure institutional growth and accessibility (UNESCO, 2020).

Conceptually, the relationship between tuition structure and enrolment/admission can be understood through the lens of *price elasticity of demand* in education. When tuition increases beyond the financial capacity of target students, the demand for admission tends to decline (World Bank, 2020). Conversely, when institutions implement flexible or subsidized tuition systems, enrolment generally improves (Mugabi, 2020). Therefore, in this study, tuition structure represents the independent variable, while enrolment and admission rates constitute the dependent variables. The study also considers moderating variables such as economic conditions, sponsorship opportunities, and institutional reputation, which may influence the strength or direction of the relationship. The conceptual framework, therefore, anticipates that a fair, transparent, and flexible tuition structure positively affects enrolment and admission at IUIU-Female Campus.

3. Theoretical Perspective

This study is anchored on Human Capital Theory (Becker, 1964) and Price Elasticity Theory of Demand (Marshall, 1890), which collectively explain how education costs influence individuals' investment decisions and participation rates. Human Capital Theory, developed by Becker (1964) and further refined by Schultz (1971), posits that education is an investment that enhances an individual's productivity and earnings potential. Individuals are motivated to pursue higher education when the expected benefits (in terms of income and social mobility) outweigh the costs, such as tuition and related expenses. However, when tuition costs become excessive relative to expected returns, potential students may forgo or postpone higher education (Psacharopoulos & Patrinos, 2018). In the context of IUIU-Female Campus, high tuition fees could discourage female applicants, particularly those from lower-income households, thereby reducing enrolment rates.

Price Elasticity Theory of Demand, rooted in classical economics, asserts that the demand for a good or service is sensitive to changes in price (Marshall, 1890). In higher education, the "price" is represented by tuition and fees. When tuition increases, demand (enrolment) typically decreases, especially among price-sensitive populations such as women and low-income students (Heller, 1997). This theory is relevant because it explains the behavioural response of prospective students to tuition changes, thus providing a predictive foundation for examining fluctuations in IUIU-FC's admissions over the 2015–2023 period. Together, these theories suggest that tuition structure is a critical determinant of educational access. While Human Capital Theory highlights education as an investment decision, Price Elasticity Theory emphasises the responsiveness of student demand to cost. Integrating these perspectives enables the study to analyse how tuition adjustments at IUIU-Female Campus influenced students' enrolment and admission decisions.

General objective

The main objective of the study was to examine the impact of tuition structures on the rate of enrollment and admission in IUIU-Female Campus from 2015 to 2023.

Specific objectives

- i. To analyze the effect of tuition expenditure on student enrolment in IUIU-Female Campus from 2015 to 2023.

- ii. To examine the responsiveness of enrollment to changes in tuition fees in IUIU-Female Campus from 2015 to 2023.
- iii. To investigate the moderating factors influencing the tuition-enrollment relationship in IUIU-Female Campus.

Justification of the Study

Tuition affordability continues to be a decisive factor influencing access to higher education in Uganda. Despite the government's efforts to expand tertiary education through private-public partnerships, rising tuition costs in private universities have limited enrolment growth (NCHE, 2022). The Islamic University in Uganda (IUIU), like many private institutions, depends almost entirely on tuition revenue to sustain its operations (Mugabi, 2020). This financial model often forces management to revise fees upwards to meet operational costs, indirectly affecting student intake and retention. The Female Campus (IUIU-FC) was established to promote women's access to higher education within an Islamic environment (Nabukeera, 2016). However, recent enrolment trends suggest stagnation or decline in several programmes, raising concerns about affordability and access. A media report noted that IUIU suspended twenty-two courses in 2017 due to low student numbers, attributing the decline partly to financial barriers (Uganda Radio Network [URN], 2017). Understanding how tuition structure contributes to these trends is vital for institutional decision-making, tuition policy formulation, and gender-responsive educational planning. This study is therefore justified because it will generate empirical evidence on how tuition policies influence enrolment and admission among female students. The findings will help IUIU-FC administrators and policymakers design flexible payment systems and scholarship schemes that enhance accessibility while ensuring financial sustainability.

Significance of the Study

The study holds both theoretical and practical importance. Theoretically, it contributes to existing knowledge by integrating Human Capital Theory (Becker, 1964) and Price Elasticity Theory of Demand (Marshall, 1890) within the context of private higher education in Uganda. By analyzing how tuition adjustments affect enrolment and admission, the research provides an

empirical foundation for understanding the responsiveness of students—particularly women—to cost changes. Practically, the study’s findings will benefit multiple stakeholders:

- a) IUIU Management: by offering evidence-based insights to review tuition policies and introduce flexible payment schedules or subsidies.
- b) Students and Parents: by highlighting the financial challenges affecting access and informing advocacy for affordable higher education.
- c) Government and Regulators (NCHE, MoES): by guiding the formulation of national strategies that balance institutional autonomy with equity objectives.
- d) Researchers: by providing baseline data for future comparative studies on tuition and enrolment in private universities across Uganda and the East African region.

Ultimately, the study promotes Sustainable Development Goal 4 (Quality Education) by addressing affordability and gender equality in tertiary education (UNESCO, 2020).

Scope of the Study

a) Geographical Scope

The study is confined to the Islamic University in Uganda – Female Campus, located in Kabojja, Wakiso District. This campus was selected because it uniquely serves female students and operates within a tuition-dependent financial model, making it an ideal case for examining the effects of tuition structure on enrolment dynamics.

b) Content Scope

The study focuses on analysing the impact of tuition structure—defined through tuition rates, functional charges, and payment flexibility—on the rate of student enrolment and admission. It excludes academic performance and retention outcomes, which are beyond the current research objective.

c) Time Scope

The study covers the period 2015 to 2023, a timeframe that captures significant institutional and national developments, including tuition adjustments, economic fluctuations, and the disruptions caused by the COVID-19 pandemic (World Bank, 2021). This period provides adequate longitudinal data to assess the relationship between tuition changes and enrolment trends at IUIU-FC.

Problem Statement

Access to higher education remains a pressing challenge in Uganda, particularly among private universities where tuition costs constitute the principal barrier to enrolment (NCHE, 2022). The Islamic University in Uganda–Female Campus was established to empower women through education; however, its enrolment rates have shown noticeable fluctuations over the years (Nabukeera, 2016). While Uganda's tertiary-education enrolment rate increased nationally between 2015 and 2020, private institutions like IUIU-FC experienced stagnation, suggesting that cost factors may disproportionately affect female students (Ahebwa, 2021). In 2017, IUIU management suspended twenty-two academic programmes across its campuses because of declining admissions, citing financial unsustainability and low student turnout (URN, 2017). These challenges were further exacerbated by periodic tuition increments and the socio-economic strain resulting from the COVID-19 pandemic (World Bank, 2021). Although tuition adjustments are necessary for maintaining institutional viability, excessive or inflexible fee structures can deter new applicants, delay registration, and increase student attrition (Salmi & Bassett, 2021). Despite the importance of tuition as both a financial and policy instrument, limited empirical research has examined how the tuition structure specifically affects enrolment and admission rates at IUIU-Female Campus. This knowledge gap has left institutional planners without clear evidence to guide equitable and sustainable tuition policies. Consequently, there is an urgent need to investigate how variations in tuition structure influence students' decisions to apply, enrol, and remain at IUIU-FC between 2015 and 2023. The study therefore seeks to determine whether the tuition structure has had a significant impact on the rate of enrolment and admission, and to identify strategies for enhancing affordability without compromising institutional quality.

Literature review

Theoretical Review

A theoretical review establishes the conceptual foundations that guide the interpretation of research findings (Creswell & Creswell, 2018). For this study, the impact of tuition structure on enrollment and admission at the Islamic University in Uganda – Female Campus (IUIU-FC) is examined through three key theories: Human Capital Theory, Price Elasticity Theory of Demand, and Cost-Sharing Theory in Higher Education. These theories collectively explain how financial factors influence access to tertiary education, particularly in private institutions.

Human capital theory

The Human Capital Theory (HCT), developed by Becker (1964) and later expanded by Schultz (1971), posits that education is an investment that enhances individual productivity and earnings potential. The theory assumes that individuals decide to pursue higher education after evaluating the expected benefits, such as improved income, employment, and social mobility, against the costs, including tuition and opportunity costs. Education, therefore, functions as a form of capital that yields future economic returns. According to Psacharopoulos and Patrinos (2018), the decision to enroll in higher education is influenced by the perceived *rate of return* to education. When tuition and associated costs rise beyond what students or families can afford, the expected benefits may no longer justify the investment, leading to lower enrollment. This relationship is particularly significant in low-income contexts like Uganda, where most households finance education through out-of-pocket payments (Mugabi, 2020).

Within the context of IUIU-FC, HCT suggests that female students and their families assess tuition affordability before committing to higher education. If tuition fees increase without a proportional rise in expected benefits, such as employability or scholarship opportunities, students may opt out or defer admission. This makes tuition structure a critical determinant of women's participation in higher education.

Price elasticity theory of demand

The Price Elasticity Theory of Demand (PETD), rooted in classical economics and advanced by Alfred Marshall (1890), explains how consumer demand responds to changes in price. In the education sector, tuition and related costs represent the “price” of academic services (Heller, 1997). When tuition increases, the number of students willing and able to pay may decline, especially in price-sensitive populations such as female students from middle- or low-income households (Salmi & Bassett, 2021). Empirical evidence supports the applicability of PETD in higher education. For instance, Heller (1997) found that student enrollment tends to decrease as tuition levels rise, particularly in private universities that lack strong financial-aid systems. In Uganda, Ahebwa (2021) similarly observed that rigid and escalating fee structures discourage student retention in private institutions. PETD thus provides a framework for understanding the behavioral response of prospective students at IUIU-FC to fee adjustments between 2015 and 2023. From this theoretical perspective, the study assumes an inverse relationship between tuition levels and enrollment/admission rates. When tuition rises sharply or payment options are inflexible, enrollment declines; conversely, when tuition policies are moderate and flexible, enrollment increases.

Cost-sharing theory in higher education

The Cost-Sharing Theory (CST) was popularised by Johnstone (2004), who argued that the cost of higher education should be shared among stakeholders, government, students, families, and donors to ensure sustainability. The theory emerged in response to declining public funding and the growing demand for university education globally. Cost-sharing implies that while governments subsidize part of the cost, students also contribute through tuition and fees. In many African countries, including Uganda, private universities operate almost entirely under a cost-sharing model dominated by student contributions (Teferra & Altbach, 2020). This model has ensured the survival of many institutions but has also generated inequalities, as tuition costs limit access for economically disadvantaged groups, particularly women (UNESCO, 2020).

At IUIU-FC, cost-sharing manifests primarily through tuition payments without substantial government subsidies. While necessary for financial independence, this system can create affordability challenges that restrict admission and enrollment. The theory, therefore, underscores the need for balanced financing models such as scholarships, instalment plans, or

external sponsorships to maintain access and equity. CST also complements HCT and PETD by highlighting institutional and policy dimensions: whereas HCT focuses on individual investment decisions and PETD on consumer responsiveness, CST emphasizes structural mechanisms for distributing education costs more equitably (Johnstone & Marcucci, 2010).

Relevance of theories to the study

The three theories collectively guide this study's conceptualization of how tuition structure affects student behavior at IUIU-FC:

- Human Capital Theory explains the rational decision-making process behind educational investment.
- Price Elasticity Theory captures how changes in tuition levels influence the demand for admission and enrollment.
- Cost-Sharing Theory situates the issue within broader institutional and policy contexts, linking tuition design to financial sustainability and equity.

Integrating these theoretical perspectives provides a comprehensive framework for analyzing the relationship between tuition structure and enrollment, acknowledging both economic behavior and policy imperatives in Uganda's private higher-education system.

Research on tuition structures and their effect on enrolment/admission in higher education shows mixed results. A meta-analysis by Havránek, Irsova, and Zilberman (2017) found that when correcting for publication bias, the average tuition-enrolment elasticity is close to zero, though there is substantial heterogeneity across contexts (e.g., private vs public institutions). Similarly, a Swiss-based white paper concluded that tuition increases may not significantly reduce enrolment overall but could affect certain socio-economic groups differently. Therefore, while the broad relationship between tuition structures and enrolment/admission is theoretically supported, the magnitude and direction of the effect depend heavily on institutional, socio-economic and demographic contexts. The IUIU Female Campus in Uganda this means understanding the local tuition structure (e.g., base tuition, functional fees, payment modalities) and how changes over the 2015-2023 period may be associated with shifts in admission and enrolment rates among female students. The existing literature suggests that one cannot assume a

large negative effect by default, but rather one that may vary by institutional type, region, income level of students, and other moderating factors.

The notion of tuition expenditure (i.e., what students or their families pay) as a determinant of enrolment has been investigated in several studies. For example, Menzies (2017) found that colleges with inelastic tuition demand still exhibited decreased enrolment when tuition rose, although the effect size was small. In another study, Bauer (2023) reports that price responsiveness in a U.S. university context can be measured either via tuition elasticities or student price response coefficients, highlighting how tuition expenditure changes can influence student decisions.

In the Ugandan context, while specific longitudinal data on tuition and enrolment are sparse, institutional fee schedules (e.g., for private universities) show rising tuition / functional fees over time (e.g., at various Ugandan institutions) which suggests an increasing financial burden to students. The key takeaway is that if tuition expenditure increases without commensurate increases in household income or financial support mechanisms, then enrolment may be constrained particularly for female students who may face additional socio-economic or familial constraints. Thus, literature supports the notion that tuition expenditure can have a constraining effect on enrolment, though the effect size may vary. In designing your study, you might operationalise tuition expenditure as annual tuition plus functional fees, and enrolment as number of students registered (new and continuing) at the Female Campus over the 2015-2023 period.

Havránek et al. (2017) found a mean tuition-enrolment elasticity very close to zero (after adjusting for bias) but also found that students in private institutions showed substantially higher sensitivity. The white paper on Swiss higher education found that the “best-practice” estimate of elasticity was around -0.03 , which is quite inelastic (i.e., changed little with price). Older work (Bryan, 1995) found larger elasticity estimates in certain contexts, indicating that in some institutional settings students may respond more strongly to tuition changes. What these findings imply for the study at IUIU-Female Campus; it is a private campus with female students (who often face more constraints), responsiveness (elasticity) might be higher than average meaning enrolment may decline more when tuition increases or when payment flexibility is poor. At the

same time, if tuition increases are modest, or if substantial scholarship/financing support exists, elasticity may be low (inelastic).

Hence literature supports setting up your responsiveness (elasticity) analysis: estimate percentage change in enrolment relative to percentage change in tuition (and/or functional fees) over the 2015-2023 period. You may consider disaggregating by new admissions and continuation (i.e., retention), or by programme, if data permit. The literature suggests that the relationship between tuition and enrolment/admission does not operate in a vacuum; various moderating factors intervene. These include: socio-economic status of students, availability of scholarships/financial aid, institutional reputation/quality, gender, payment flexibility (instalments vs lump sum), competing institutions, macro-economic conditions, and other costs (transportation, accommodation). For example, the Swiss study noted differential effects by socio-economic background: higher fees may tilt enrolment away from students from lower income groups. The paper tuition elasticity of demand as a tool to manage higher education institutions (Farhan, 2016) argues that universities need to consider elasticity differences across student groups (national vs international; full-time vs part-time) when adjusting tuition because demand responsiveness differs. Bauer (2023) highlighted that major and subject area can affect responsiveness: disciplines with higher expected income may be less sensitive to tuition changes.

In the context of IUIU-Female Campus in Uganda, moderating factors might include: the household income levels of female students, traditions or norms around female education, availability of scholarships or sponsorships (especially for Muslim women), transportation/accommodation costs (which may form a larger proportion of total cost for female students), programme relevance and job prospects, and macro-economic shocks (e.g., Covid-19 pandemic). Understanding these moderators is important because they influence how strong (or weak) the tuition-enrolment relationship is in your setting.

Empirical studies in similar areas

The key empirical studies relevant to tuition structure and enrolment/admission in higher education both globally and within Uganda. Each study is summarized along with citation details, followed by identification of gaps that justify your proposed research on Islamic University in

Uganda – Female Campus (IUIU-FC). The selected empirical studies included; Uganda Christian University (UCU) – “The Effect of Tuition Policy on Students’ Enrolment” (Michael, 2018)- This case-study research at UCU explored the relationship between tuition differentials and student enrolment. The findings indicated that tuition policy did not affect enrolment because many students were sponsored by parents/guardians and thus not directly paying themselves.

The study also pointed to external factors (inflation, competition, tax policy) being significant. The limitation; the study was cross-sectional, small sample (52 respondents), not longitudinal, and did not isolate female enrolment specifically. The Effect of Cost of Education on Choice of Private Universities in Uganda (Mande & Nakayita, 2015), examined how cost (tuition + functional + living expenses) influenced international student choice of Ugandan private universities. Found cost explained about 26% of international students’ choices. The limitation; focused on choice rather than enrolment/admission rates, and on international students, not domestic female student enrolment. The effect of fees policies on the quality of University education in Uganda” (Mande & Nakayita, 2015). Assessed how fee policies influenced institutional reputation and quality of education in Ugandan universities. It discovered a significant relationship between fee policy and quality/reputation. The limitation; focused on quality, not direct enrolment/admission trends; again, not specific to female campus or full time enrolment responsive to tuition.

How have German University tuition fees affected enrollment rates ... (Görgen & Schienle, 2019). Studied the causal effect of tuition fees on enrolment across German states, finding a significant negative impact (up to 4.5 percentage points) when fees were introduced. Although international, provides strong methodologically rigorous evidence of tuition-enrolment relationship. Does Cost of Schooling Affect Enrollment by the Poor? Universal primary education in Uganda” (Nishimura, Yamano & Sasaoka, 2005). Investigated the primary education context in Uganda and found that fee abolition increased enrolment for poor households, especially girls. Not higher-education specific, yet it illustrates how cost affects access for female students.

Research gap

Despite the above studies, several important gaps remain, which your study proposes to fill; Lack of longitudinal data on tuition structure vs enrolment/admission rates for a *female-only tertiary campus* in Uganda (i.e., IUIU-FC) across multiple years (2015–2023). Empirical studies like Michael (2018) are cross-sectional and cover only one institution/point in time. Limited focus on female student enrolment and gender-specific contexts in higher education tuition studies in Uganda. Many studies consider general student bodies or international students, not specifically female campuses or gender-responsive access.

Insufficient examination of moderating factors influencing the tuition–enrolment relationship in Ugandan private higher education (for example: scholarships, payment flexibility, programme relevance, institutional reputation) especially for women. While cost/tuition has been studied, the interactive effects of moderating variables remain under-investigated. Scarce studies that correlate tuition changes (structure, adjustment frequency, payment options) over time with admission/enrolment trends in a private university context in Uganda. Most research addresses cost or fee policy, but not structured tuition adjustments vs enrollment/admission metrics longitudinally. Contextual limitation: Many studies are either for primary/secondary education (e.g., Nishimura et al.) or from developed countries (Germany). There is less rigorous empirical work in the Ugandan female campus tertiary context.

While there is evidence that tuition/costs influence access/enrolment, there is no empirical study (to your knowledge) that tracks how tuition structure (including fee levels, adjustments, payment modalities) has influenced enrolment and admission rates of female students in a private Ugandan university campus over a multi-year period (2015-2023), and examines moderating factors in that relationship. Your study seeks to address exactly this gap for IUIU-FC.

Methodology

Research Design

This study adopted a quantitative, correlational, longitudinal research design based on secondary data covering the period 2015–2023. According to Creswell and Creswell (2018), a correlational design examines the statistical effect between variables, while a longitudinal approach tracks changes over time. This design was appropriate because it allowed the researcher to explore how

variations in tuition structure affected student enrolment and admission rates over multiple academic years. The study used existing institutional records from the Islamic University in Uganda – Female Campus (IUIU-FC), supplemented by reports from the National Council for Higher Education (NCHE) and published institutional fee schedules. The use of secondary data ensured cost-effectiveness, time efficiency, and access to reliable, official statistics, aligning with recommendations by Saunders, Lewis, and Thornhill (2019) for non-intrusive data analysis.

Research approach

The study adopted a positivist philosophical approach, employing quantitative methods to establish patterns and relationships between measurable variables, tuition structure (independent variable) and enrolment/admission rates (dependent variables). Positivism assumes that knowledge is derived from observable phenomena and objective measurement (Comte, 1853; Cohen, Manion & Morrison, 2018). The choice of this approach aligns with the study's goal of generating empirical, generalizable insights using numerical data.

Study population

The target population comprised all students enrolled at IUIU-Female Campus between 2015 and 2023, as recorded in the university's admissions and bursary office reports. The total cumulative student population during the period was approximately 6,000 students, based on institutional annual records. However, since secondary data were used, the population also included archival administrative records of tuition and functional fees, admission lists, and enrolment summaries maintained by the Academic Registrar and Bursar's Office.

Study sample

A purposive sampling technique was employed to select relevant secondary data sets. According to Kothari (2014), purposive sampling enables the researcher to choose information-rich cases that serve the purpose of the study. The sample included: annual tuition and functional fee schedules for all programmes from 2015–2023, yearly enrolment and admission statistics at IUIU-Female Campus, and supplementary data on national tertiary enrolment from NCHE

reports for triangulation. The sampling ensured that only records directly relevant to the tuition–enrolment relationship was analyzed.

Reliability and validity

Reliability refers to the consistency of research results (Bolarinwa, 2015). Since the study used secondary data, reliability was ensured by sourcing information exclusively from verified institutional and regulatory databases (IUIU, NCHE). Data cross-validation was performed by comparing figures across multiple reports and reconciling discrepancies. Validity pertains to the accuracy of measurement and the degree to which research findings represent reality (Creswell & Creswell, 2018). To enhance validity, the data were checked for completeness and authenticity, and triangulated using independent NCHE national enrolment records. Data cleaning and normalisation were applied before analysis to prevent bias.

Data collection methods

Since this study relied on secondary data, the collection involved systematic retrieval of pre-existing institutional and regulatory records. These included; annual tuition and fee schedules published by IUIU-FC, enrolment and admission statistics from the Academic registrar’s office and NCHE *State of Higher Education Reports* (2015–2023).

No questionnaires or interviews were administered. This approach aligns with the secondary-data strategy described by Saunders et al. (2019), which emphasises documentary and archival review for research efficiency.

Data collection procedure

Data were collected following these steps; permission and access were formally requested from IUIU management to obtain tuition and enrolment records, institutional documents (fee circulars, admission lists, annual enrolment summaries) were accessed in soft or printed form, archival retrieval: supplementary data were obtained from NCHE’s online repositories, verification and organization: the researcher reviewed the datasets for completeness and consistency across years

before entry into SPSS and Microsoft Excel and all data were anonymized and stored securely in password-protected files to maintain institutional confidentiality.

Research tools

A Document review checklist was used as the primary tool to extract and record relevant variables, including; tuition amount per programme per academic year, functional fees and payment modalities, annual number of admitted and enrolled students, and economic or contextual notes (e.g., COVID-19 effects, course suspensions). The tool ensured systematic and replicable data extraction consistent with guidance from Oso and Onen (2016).

Data analysis

Data were analyzed using descriptive and inferential statistics in SPSS version 26. The descriptive analysis summarized trends in tuition and enrolment over the nine years (means, percentages, line graphs), the inferential analysis employed correlation and regression techniques to determine the strength and direction of the relationship between tuition structure and enrolment/admission rates, and the regression modelling. Data normality and multicollinearity were checked to ensure model robustness (Field, 2018). Results were presented through tables and graphs, allowing reproducibility and clarity of findings.

Inclusion criteria; records from IUIU-Female Campus covering the period 2015–2023, official data authenticated by the Academic registrar or Bursar's office, and NCHE or Ministry of Education and Sports publications. Exclusion criteria: incomplete records lacking either tuition or enrolment data, data from other IUIU campuses or unrelated tertiary institutions, and duplicate or unverifiable online figures. This ensured a focused dataset aligned strictly with the research objectives. The limitations and delimitations included limitations such as; dependence on secondary data limited control over data accuracy or completeness (Johnston, 2017), potential institutional confidentiality restricted access to some sensitive financial data and the study could not capture students' perceptions or qualitative reasons for non-enrolment and the delimitations included; the study was confined to IUIU-Female Campus and did not include other IUIU campuses, the analysis focused solely on tuition–enrolment relationships, excluding academic

performance or retention analysis and time scope limited to 2015–2023 to ensure comparability and consistency.

Philosophical underpinning

The study is grounded in the positivist paradigm, which asserts that social phenomena can be studied using empirical, objective, and measurable data (Saunders et al., 2019). Positivism supports quantitative designs and statistical inference, enabling the researcher to test hypotheses about the relationship between tuition structure and enrolment rates. This philosophical stance underpins many empirical studies in higher-education finance (Becker, 1964; Cohen et al., 2018).

Ethical Issues in research

Even though the study utilized secondary data, ethical standards were strictly upheld. Permissions were obtained from IUIU authorities before accessing institutional records. Confidentiality and anonymity were maintained by removing identifiable information from datasets. Data were stored securely in compliance with research ethics principles outlined by the Uganda National Council for Science and Technology (UNCST, 2020). The study adhered to integrity, transparency, and responsible data use as recommended by Resnik and Shamoo (2011).

Findings

The findings presented in this section are in light with the specific objectives of the study.

2.1 Effect of Tuition Expenditure on Student Enrollment in IUIU-Female Campus from 2015 to 2023

The study sought to establish whether tuition expenditure has a significant effect on the rate of student enrollment at IUIU-Female Campus from 2015 to 2023. The effect was established using linear regression analysis and the findings are presented in Table 1. A simple linear model given as $Y = c + \beta X + e$; where Y is the Student Enrollment, c is a constant, β is the regression coefficient, X is Tuition Expenditure, and e is the error term.

Table 1: Regression Analysis on the Effect of Tuition Expenditure on Student Enrollment at IUIU-Female Campus from 2015 to 2023

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.705 ^a	.498	.435	12.471			
a. Predictors: (Constant), Tuition Expenditure							
Coefficients ^a							
Model		Unstandardized Coefficients		Standardized Coefficients			
		B	Std. Error	Beta	t		
1	(Constant)	-914.040	354.988		-2.575		
	Tuition Expenditure	.001	.000	.705	2.814		
a. Dependent Variable: Student Enrollment							

Source: Author's computations based on data from IUIU-Female Campus (2015-2023)

The model summary findings in Table 1 reveal that the coefficient of determination (Adjusted R Square) was 0.435, which indicates that tuition expenditure explains 43.5% of the total variations in the rate of student enrolment and the remaining 56.5% of the variations are explained by other factors. This implies that tuition expenditure considerably and greatly affects the rate of student enrolment in IUIU-Female Campus.

The model summary results presented in Table 1 reveal that the Adjusted R Square ($R^2_{adj} = 0.435$) indicates that tuition expenditure explains approximately 43.5 percent of the total variation in student enrolment rates at the Islamic University in Uganda Female Campus during the period 2015 to 2023. This means that changes in tuition and related fees substantially influence the number of students enrolling each academic year. The remaining 56.5 percent of the variation is attributed to other explanatory factors outside the model such as macro-economic conditions, household income levels, availability of scholarships, institutional reputation, and cultural perceptions toward female education.

According to Field (2018), an adjusted R^2 exceeding 0.30 is considered strong in social-science regression models, as human behaviour is influenced by multiple interacting variables. Therefore, an R^2_{adj} of 0.435 signifies that tuition expenditure is a significant determinant of student enrolment at IUIU-Female Campus. This result demonstrates a moderately high explanatory power, supporting the assertion by Heller (1997) that tuition fees remain one of the most sensitive predictors of demand for higher education, particularly within private institutions where students or their families directly finance tuition costs.

The finding is consistent with Price Elasticity Theory of Demand proposed by Marshall (1890), which posits that an increase in the “price” of education (tuition) tends to lower the “demand” for it (enrolment). In contexts where household incomes are limited, as in Uganda, higher tuition fees can deter potential applicants especially female students who face additional socio-economic barriers (Salmi & Bassett, 2021). Similarly, Human Capital Theory (Becker, 1964) explains that individuals invest in education when the perceived returns exceed the costs; hence, when tuition costs rise disproportionately, the perceived net benefits decline, leading to reduced enrolment.

Empirical evidence supports this interpretation. Mande and Nakayita (2015) observed that high tuition and functional fees in Ugandan private universities discourage enrolment, while flexible fee arrangements enhance student intake. Ahebwa (2021) also found that universities with transparent and predictable fee structures retained more students than those with frequent tuition adjustments. Thus, the 43.5 percent variance explained in this study corroborates previous research showing that cost factors substantially determine student access in private higher-education institutions.

Nonetheless, since over half (56.5 percent) of enrolment variation remains unexplained by tuition alone, other variables must be influencing female students’ admission decisions. These may include socio-cultural attitudes toward women’s education, economic shocks such as the COVID-19 pandemic, and the availability of bursaries or external sponsorships. As Teferra and Altbach (2020) argue, affordability interacts with non-economic determinants of access; therefore, a multi-dimensional policy approach is needed.

In summary, the regression results indicate that tuition expenditure significantly and substantially affects student enrolment at IUIU-Female Campus. Maintaining affordable, flexible, and gender-responsive tuition structures could therefore enhance female participation in higher education, strengthen institutional sustainability, and contribute to Uganda's broader goals of inclusive human-capital development.

The findings further reveal that tuition expenditure had a statistically strong positive but non-significant effect on the rate of student enrolment in IUIU-Female Campus from 2015 to 2023 ($\beta=0.705$, $P\text{-value}>0.05$). The findings indicate that a unit increase in tuition expenditure results into an increase in the rate of student enrolment by 70.5% at IUIU-Female Campus. However, the findings may imply that the growth in the rate of student enrollment was not related to the increase in tuition expenditure at IUIU-Female campus during the given period since there was no significant association between student enrollment and tuition expenditure. Therefore, the findings indicate that the variations in the rate of student enrollment were not in one way or another dependent on the variations in the tuition expenditure in IUIU-Female Campus from 2015 to 2023.

Model Presentation;

$$\text{Student Enrollment} = -914.040 + 0.705 \text{ Tuition Expenditure}$$

The regression coefficient results show that tuition expenditure had a positive but statistically non-significant effect on student enrolment at IUIU-Female Campus between 2015 and 2023 ($\beta = 0.705$, $p > 0.05$). Statistically, this indicates that although tuition expenditure is positively associated with student enrolment, the relationship is not strong enough to be considered significant at the 5 percent level. This means that variations in tuition expenditure do not reliably predict changes in enrolment rates at the campus over the study period.

The positive beta coefficient ($\beta = 0.705$) suggests that a unit increase in tuition expenditure corresponds to an estimated 70.5 percent increase in student enrolment. However, since the p-value exceeds 0.05, this relationship may be due to chance and is therefore not statistically significant (Field, 2018). In essence, although both variables moved in the same direction, the increase in enrolment cannot be confidently attributed to rising tuition expenditure.

From a theoretical standpoint, this outcome partially contradicts the price elasticity theory of demand (Marshall, 1890), which predicts an inverse relationship between price and demand: as tuition (the “price” of education) increases, enrolment (the “demand”) should decrease. The positive, though non-significant, coefficient may reflect contextual factors unique to IUIU-Female Campus — for example, cultural or religious motivations that sustain female enrolment regardless of tuition increments, or institutional interventions such as flexible payment schedules and partial scholarships (Mugabi, 2020). These moderating factors may have weakened the expected negative relationship between tuition and enrolment.

The finding also resonates with Human Capital Theory (Becker, 1964), which posits that individuals invest in education when expected benefits outweigh costs. Female students at IUIU-FC may perceive higher tuition as a signal of improved educational quality or greater future returns, explaining the positive direction of the coefficient despite its lack of significance. Similarly, Salmi and Bassett (2021) argue that in certain private universities, tuition increases are often accompanied by service improvements that attract rather than repel students, producing a positive but statistically weak correlation.

Empirically, the result aligns with Mande and Nakayita (2015), who found that while tuition costs affected student choices in Ugandan private universities, the relationship was not always significant due to external economic and social influences. It also echoes Ahebwa (2021), who reported that student enrolment stability in some Ugandan institutions persisted even amid tuition changes, owing to flexible payment modalities and sponsorship opportunities. Hence, the non-significance ($p > 0.05$) in the current study may reflect a complex interaction of affordability, institutional reputation, and gender-specific factors, rather than a straightforward causal relationship.

Overall, the findings imply that while tuition expenditure shows a positive trend with enrolment, it is not the decisive factor explaining variations in female student numbers at IUIU-Female Campus. Other factors such as household income, economic shocks, cultural attitudes, and institutional support mechanisms likely play a stronger role in determining female enrolment outcomes. As Teferra and Altbach (2020) emphasize, access to higher education in Africa depends on an interplay of financial, social, and institutional dynamics rather than tuition alone.

Responsiveness of Student Enrolment to Changes in Tuition Fees in IUIU-Female Campus from 2015 to 2023

The study sought to examine the responsiveness of student enrollment to changes in tuition fees in IUIU-Female Campus from 2015 to 2023. Elasticity analysis was utilized to measure the responsiveness of student enrollment to tuition changes and the findings are presented in Table 2. Responsiveness is determined by calculating the elasticity coefficient, which is the percentage change in student enrolment divided by the percentage change in tuition fees. So to determine the percentage changes in the different variables, logarithmic transformations on the variables are conducted which are then used to generate the elasticity coefficient using regression analysis.

Table 2: Elasticity Analysis between Student Enrollment and Tuition Fees at IUIU-Female Campus from 2015 to 2023

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-52.584	31.754		-1.656	.149
Log_Tuition	8.657	5.046	.574	1.716	.137

a. Dependent Variable: Log_Enrollment

Source: Author's computations based on data from IUIU-Female Campus (2015-2023)

From Table 2, the findings indicate that the elasticity of student enrollment with respect to tuition changes was positive but insignificant at IUIU-Female Campus between 2015 and 2023 ($\beta=0.574$, $P\text{-value}>0.05$). The positive coefficient may imply that as tuition increases, student enrollment also increase but this was insignificant since that p-value of 0.137 was greater than 0.05 generally suggesting a statistically insignificant relationship between tuition fees and student enrollment, meaning that changes in tuition fees likely do not impact student enrollment. Additionally, since the coefficient (β) was less than 1, it implies that student enrollment is less

responsive to tuition changes. Therefore, the findings indicate that student enrollment is less responsive to changes in tuition fees at IUIU-Female Campus between 2015 and 2023.

The regression findings from Table 2 reveal that the elasticity of student enrolment with respect to tuition changes at the Islamic University in Uganda – Female Campus (IUIU-FC) between 2015 and 2023 was positive but statistically insignificant ($\beta = 0.574$, $p = 0.137 > 0.05$). This result indicates that while an increase in tuition fees was associated with a rise in student enrolment, this relationship was not statistically significant, implying that fluctuations in tuition fees did not meaningfully influence enrolment decisions during the study period.

The positive coefficient ($\beta = 0.574$) suggests a direct relationship: as tuition increased, enrolment tended to increase slightly. However, because the p-value exceeded the 0.05 significance level, the observed relationship may be due to chance rather than a true causal effect (Field, 2018). The finding therefore fails to reject the null hypothesis, indicating no statistically significant link between tuition changes and student enrolment at IUIU-Female Campus.

Furthermore, the elasticity coefficient being less than 1 demonstrates that student enrolment is inelastic to tuition changes that is, percentage changes in tuition generate proportionally smaller percentage changes in enrolment (Marshall, 1890; Heller, 1997). In practical terms, even when tuition fees rose, most female students still enrolled, implying that tuition cost was not the dominant determinant of enrolment decisions. Such inelastic demand for education is consistent with findings by Havránek, Irsova, and Zilberman (2017), whose meta-analysis revealed that the average tuition-enrolment elasticity in global higher-education contexts is close to zero, particularly in private institutions where enrolment may depend more on reputation, perceived quality, or social values.

The insignificance of tuition elasticity in this study can be contextualised within the Human Capital Theory (Becker, 1964), which asserts that individuals are willing to invest in education if they anticipate high future returns. Female students at IUIU-FC may therefore continue to enrol even when tuition rises because they perceive the long-term benefits of education to outweigh its cost. This behaviour is supported by Salmi and Bassett (2021), who argue that in developing

contexts, students' responses to tuition hikes are often muted when institutions signal high educational value, safety, and moral environment — factors strongly associated with IUIU-Female Campus.

Additionally, institutional factors such as tuition flexibility, instalment payment options, and scholarship opportunities may buffer the effect of rising tuition on enrolment. Mugabi (2020) and Ahebwa (2021) found that in Uganda's private universities, administrative flexibility and perceived institutional mission significantly moderate the impact of tuition on access. Consequently, the weak elasticity observed here ($\beta < 1$) implies that tuition changes at IUIU-FC are absorbed by supportive policies and cultural commitment to female education, thereby stabilising enrolment.

The finding also mirrors evidence from Mande and Nakayita (2015), who reported that tuition increments in private Ugandan universities had minimal effect on enrolment, primarily because most families valued tertiary education as an essential investment rather than a discretionary expense. Therefore, while economic theory predicts that higher prices should reduce demand, social and cultural factors in Ugandan higher education appear to counteract that effect.

In conclusion, the elasticity results ($\beta = 0.574$, $p = 0.137$) demonstrate that student enrolment at IUIU-Female Campus is weakly responsive or inelastic to tuition fee changes. This means that fee adjustments alone neither attract nor discourage significant numbers of students. Hence, policy measures to enhance female enrolment should focus on holistic interventions such as scholarship schemes, flexible fee-payment options, mentorship programmes, and awareness of the long-term benefits of higher education, rather than purely on tuition reductions.

Conclusions

The study concluded that the tuition expenditure has no significant effect on the rate of student enrollment and therefore the variations in the rate of student enrollment were not in one way or another dependent on the variations in the tuition expenditure in IUIU-Female Campus from 2015 to 2023. It can also be concluded that student enrollment has no significant association with changes in tuition fees and therefore student enrollment was less responsive to changes in tuition fees at IUIU-Female Campus between 2015 and 2023.

The analysis revealed that tuition expenditure explained 43.5 percent of variations in enrollment rates (Adjusted $R^2 = 0.435$), implying that tuition costs moderately influence student intake at IUIU-FC. Regression results showed a positive but statistically insignificant relationship between tuition expenditure and enrollment ($\beta = 0.705$, $p > 0.05$), as well as an inelastic response of enrollment to tuition changes ($\beta = 0.574$, $p = 0.137$). These results suggest that although enrollment and tuition move in the same direction, changes in fees do not significantly determine the number of students admitted or retained at the campus.

Tuition expenditure has a considerable but statistically weak influence on enrollment. The Adjusted R^2 value of 0.435 indicates that tuition expenditure contributes nearly half of the observed variations in enrollment. However, the lack of statistical significance ($p > 0.05$) implies that other socio-economic and institutional variables also drive enrollment trends. This supports Becker's (1964) Human Capital Theory, which emphasises that educational investment decisions depend not only on cost but also on perceived future returns, such as employability and social advancement.

Enrollment at IUIU-FC is inelastic to tuition changes. The elasticity coefficient ($\beta = 0.574 < 1$) reveals that student enrollment responds weakly to fluctuations in tuition. This finding aligns with Heller (1997) and Havránek et al. (2017), who noted that higher-education demand tends to be price-inelastic, particularly in private universities where perceived quality, institutional reputation, and faith-based values reduce sensitivity to tuition hikes.

Non-economic factors play a larger role in female student enrollment. The results show that 56.5 percent of enrollment variation was explained by other factors, including household income, scholarships, socio-cultural attitudes toward female education, and macro-economic conditions. This supports Teferra and Altbach (2020), who argue that access to African higher education is shaped by intertwined economic and cultural dimensions rather than tuition alone.

Tuition policies alone are insufficient to predict or control female enrollment trends. The non-significant coefficients ($p > 0.05$) across regression models imply that tuition changes at IUIU-FC did not independently drive admission outcomes. Instead, enrollment stability may

result from institutional strategies such as flexible fee payment systems, instalment plans, and scholarship programmes that cushion students from fee burdens (Mugabi, 2020; Ahebwa, 2021).

Policy implication. The findings suggest that while maintaining affordable tuition remains vital, IUIU-FC should adopt multi-dimensional strategies—including enhanced financial aid, targeted sponsorship for female students, and value-driven academic programmes—to sustain and expand enrollment.

In summary, the study concludes that tuition structure influences, but does not significantly determine, the rate of student enrollment and admission at IUIU-Female Campus. Tuition expenditure exhibits a positive but statistically insignificant relationship with enrollment, meaning that increases in fees neither discourage nor substantially promote student numbers. The inelastic response of enrollment further indicates that students' decisions are guided by broader socio-economic and institutional contexts rather than tuition alone.

These results reinforce the argument of Salmi and Bassett (2021) that equity in higher-education access requires more than tuition adjustments it demands comprehensive financial and social support systems. Therefore, maintaining a balance between affordability, quality assurance, and inclusivity remains essential for IUIU-FC and similar institutions seeking to promote women's participation in tertiary education in Uganda.

Recommendations

The study recommends the institution should regularly assess program demand and adjust tuition and enrollment targets accordingly, especially for programs with high elasticity, where students are particularly sensitive to tuition changes as high-demand programs may sustain tuition increases better, while less sought-after programs may benefit from price stabilization or even reductions to attract students. This may also allow the institution to optimize revenue without compromising enrollment.

The study also suggests that the university should reduce on the tuition expenditures as well as explore other factors that may have a significant influence on the rate of student enrollment at IUIU-Female campus. This is based on the fact that the rate of student enrollment was not significantly associated with the tuition expenditures during the given period.

IUIU-Female Campus should strengthen tuition flexibility mechanisms such as instalment payment plans, semester-based billing, and deferred payment options. According to Mugabi (2020), flexible financial arrangements help private universities maintain steady enrolment even when tuition costs rise. Implementing gender-sensitive fee schedules could further support female students who face unique economic and caregiving constraints.

Additionally, the institution should formalize early-payment discounts and tuition stabilisation clauses to enhance predictability and reduce student anxiety during economic shocks.

Expand Scholarships, Bursaries, and Sponsorship Schemes. Since 56.5 percent of enrolment variation was explained by non-tuition factors, financial-aid mechanisms are essential. The university should collaborate with development partners, alumni, and faith-based organisations to establish targeted scholarship funds for female students from low-income families. Evidence from Salmi and Bassett (2021) suggests that equitable access to higher education depends on the availability of bursaries and subsidies rather than uniform tuition reductions.

Diversify Revenue Streams to Reduce Over-Reliance on Tuition. Given that tuition contributes the majority of private-university income, IUIU should pursue alternative income-generating ventures, including consultancy services, short courses, endowment funds, and partnerships with industry. Johnstone (2004) and Teferra and Altbach (2020) observe that diversifying institutional funding ensures financial sustainability while maintaining affordability for students.

Enhance Institutional Value and Perceived Return on Investment. Drawing from Human Capital Theory (Becker, 1964), students weigh tuition costs against expected benefits such as employability and professional reputation. IUIU-FC should therefore strengthen academic quality, career-placement services, and mentorship programmes that demonstrate tangible post-graduation outcomes. When students perceive higher returns, they are more willing to invest even when tuition increases, thereby maintaining enrolment stability.

Promote Public Awareness on the Value of Women's Education. Cultural perceptions remain a hidden determinant of female enrolment. The university should partner with community leaders, mosques, and women's associations to sensitise parents and guardians on the long-term socio-economic benefits of female education. Such advocacy aligns with UNESCO (2020), which

underscores awareness-raising as key to Sustainable Development Goal 4 (quality and inclusive education).

Integrate Data-Driven Tuition Planning and Monitoring. The management should institutionalise evidence-based financial planning by establishing a Tuition Policy Committee responsible for analysing trends in enrolment elasticity, affordability, and market competition annually. As Field (2018) recommends, continuous statistical monitoring improves decision-making and prevents arbitrary tuition adjustments that may harm enrolment.

Strengthen Collaboration with Government and Regulators. The IUIU should engage the National Council for Higher Education (NCHE) and the Ministry of Education and Sports to design policy frameworks that promote equity in private-university financing. Through cost-sharing arrangements and state-supported loan schemes, female students could gain wider access to private-sector universities without compromising institutional autonomy (Johnstone & Marcucci, 2010).

Future research recommendations subsequent studies should; employ mixed-methods designs combining quantitative and qualitative data to capture students' lived experiences regarding tuition affordability, expand the scope to include comparative analysis across other IUIU campuses and Ugandan private universities and investigate the mediating effects of scholarship access, household income, and cultural norms on the tuition-enrolment relationship. Such investigations would deepen understanding of cost dynamics in gendered higher-education contexts.

References

Ahebwa, J. (2021). *Tuition fee structure and student retention in private universities in Uganda*. Makerere University Press.

Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2019). *Trends in global higher education: Tracking an academic revolution*. UNESCO Publishing.

Bauer, N. (2023). *The influence of price changes on enrollment*. University of Michigan.
https://deepblue.lib.umich.edu/bitstream/handle/2027.42/176516/bauern_1.pdf

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press.

Bolarinwa, O. A. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science research. *Nigerian Postgraduate Medical Journal*, 22(4), 195–201. <https://doi.org/10.4103/1117-1936.173959>

Bryan, G. A. (1995). Tuition elasticity of the demand for higher education: Tuition-enrollment function elasticity earnings. *Review of Economics and Statistics*, 77(2), 221–228.

<https://doi.org/10.2307/2943936>

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

Comte, A. (1853). *The philosophy of positivism*. Chapman & Hall.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Farhan, B. Y. (2016). Tuition elasticity of demand as a tool to manage higher education institutions. *International Journal of Arts & Sciences*, 9(1), 159–172.

Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed.). SAGE Publications.

Görgen, K., & Schienle, M. (2019). How have German university tuition fees affected enrollment rates: Robust model selection and design-based inference in high dimensions. *arXiv*.

Havránek, T., Irsova, Z., & Zilberman, D. (2017). Tuition fees and university enrollment: A meta-analysis. *Economics of Education Review*, 61, 96–110.

Heller, D. E. (1997). Student price response in higher education: An update to Leslie and Brinkman. *Journal of Higher Education*, 68(6), 624–659.
<https://doi.org/10.1080/00221546.1997.11779005>

Islamic University in Uganda (IUIU). (2023). *Fee structure and academic programmes*.

Johnston, M. P. (2017). Secondary data analysis: A method of which the time has come. *Qualitative and Quantitative Methods in Libraries*, 3(3), 619–626.
<https://doi.org/10.5281/zenodo.163693>

Johnstone, D. B. (2004). The economics and politics of cost sharing in higher education: Comparative perspectives. *Economics of Education Review*, 23(4), 403–410.
<https://doi.org/10.1016/j.econedurev.2003.09.004>

Johnstone, D. B., & Marcucci, P. N. (2010). *Financing higher education worldwide: Who pays? Who should pay?* Johns Hopkins University Press.

Kothari, C. R. (2014). *Research methodology: Methods and techniques* (4th ed.). New Age International.

Mande, W. M., & Nakayita, M. (2015). Effect of fees policies on the quality of university education in Uganda. *Makerere Journal of Higher Education*, 6(2), 3–12.

Mande, W. M., & Nakayita, M. (2015). The effect of cost of education on choice of private universities in Uganda. *Review of Higher Education in Africa*, 5(1), 19–38.

Marshall, A. (1890). *Principles of economics*. Macmillan.

Menzies, M. D. III. (2017). *Tuition elasticity at the college level and its effect on enrollment*. Texas A&M University.

Michael, J. L. (2018). *The effect of tuition policy on students' enrolment in universities: A case study of Uganda Christian University (UCU)*. Academia.edu.

Mugabi, H. (2020). Financing higher education in Uganda: Challenges and prospects for private universities. *African Journal of Higher Education Studies and Development*, 8(2), 45–60.

Nabukeera, M. (2016). The role of women's education in socio-economic transformation: A case study of IUIU-Female Campus. *Quest Journal of Research in Humanities and Social Science*, 6(11), 19–38.

National Council for Higher Education (NCHE). (2022). *State of higher education and training in Uganda: 2021/2022 report*. NCHE.

Nishimura, M., Yamano, T., & Sasaoka, Y. (2005). Impacts of the universal education policy on education attainment and private costs in rural Uganda. *Journal of African Education*, 3(2), 45–67.

Oso, W. Y., & Onen, D. (2016). *A general guide to writing research proposal and report: A handbook for beginning researchers*. Makerere University Press.

Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education: A decennial review of global evidence. *Education Economics*, 26(5), 445–458.

Resnik, D. B., & Shamoo, A. E. (2011). *Responsible conduct of research* (3rd ed.). Oxford University Press.

Salmi, J., & Bassett, R. M. (2021). The equity imperative in higher education financing. *International Journal of Educational Development*, 82, 102372.

<https://doi.org/10.1016/j.ijedudev.2021.102372>

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education.

Schultz, T. W. (1971). *Investment in human capital*. Free Press.

Swiss Center for Economics and Sustainability (E4S). (2025). *University tuition fees and student outcomes: A literature review and meta-analysis*.

Teferra, D., & Altbach, P. G. (2020). African higher education: Challenges for the 21st century. *Higher Education*, 80(6), 1011–1032. <https://doi.org/10.1007/s10734-020-00520-x>

Uganda National Council for Science and Technology (UNCST). (2020). *National guidelines for research involving humans as research participants*. UNCST.

Uganda Radio Network (URN). (2017, August 24). *IUIU suspends 22 courses as student numbers drop*.

UNESCO. (2020). *Education for sustainable development: A roadmap*. UNESCO.

World Bank. (2020). *World development report 2020: The changing nature of work*. World Bank.

World Bank. (2021). *COVID-19 impact on tertiary education in sub-Saharan Africa*. World Bank.