African Journal of Emerging Issues
Peer reviewed | Double blind | Interdisciplinary

African Journal of Emerging Issues (AJOEI)
Online ISSN: 2663 - 9335
Available at: https://ajoeijournals.org

FINANCE

DIGITAL REVENUE DIVERSIFICATION STRATEGIES AND FINANCIAL SUSTAINABILITY OF PRIVATE UNIVERSITIES IN KENYA

[1]Kevin Oduor Oloo, [2]Dr. Esther Nkatha M'ithiria & [3]Dr. Njagi Betty
[1,2&3]School of Business and Economics, The Catholic University of Eastern Africa

Email of the corresponding author: oduorkevin8@gmail.com

Publication Date: September 2026

ABSTRACT

Purpose of the study: The study evaluated the influence of digital revenue diversification strategies on the financial sustainability of private universities in Kenya.

Statement of the Problem: Private universities in Kenya face persistent financial sustainability pressures arising from heavy dependence on tuition revenue, fluctuating enrolment, rising operational costs, and limited alternative income sources. Although institutions are expanding their use of digital technologies, empirical evidence on whether technology-enabled revenue streams strengthen financial sustainability remains limited.

Research methodology: Guided by the Resource-Based View, the study adopted a quantitative cross-sectional survey design targeting Chief Finance Officers from licensed private universities in Kenya. Data were collected using structured questionnaires and analyzed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis.

Results of the study: Digital revenue diversification strategies had a positive and statistically significant influence on financial sustainability ($\beta = 0.240$, $p = 0.003$). The strategies recorded a mean of 3.84 and a standard deviation of 1.42, indicating relatively high adoption. The findings show that technology-enabled revenue approaches can broaden income sources, reduce tuition dependence, and strengthen financial resilience.

Conclusion: Digital revenue diversification constitutes a strategic institutional capability that can improve the financial sustainability of private universities by supporting alternative income generation and extending market reach.

Recommendations: Private universities should strengthen investment in digital learning infrastructure, technology-enabled academic programmes, strategic digital partnerships, staff digital capacity, and innovative online revenue models.

Keywords: *Digital revenue diversification, financial sustainability, private universities, digital innovation, Kenya*

BACKGROUND OF THE STUDY

Financial sustainability is a critical concern in higher education because universities must preserve academic quality while securing sufficient resources for continuous operations, infrastructure development, research activities, and institutional expansion. It refers to an institution's ability to generate adequate financial resources, manage expenditures effectively, meet current obligations, and sustain operations over the long term (Gleißner *et al*., 2022). For private universities, financial sustainability is especially important because they depend more heavily on internally generated income than public universities, which generally receive greater government support (OECD, 2023). Private universities in Kenya have played an important role in expanding access to higher education by complementing public universities. However, they continue to face financial pressures associated with declining enrolment, delayed tuition payments, rising operational costs, and limited alternative revenue sources.

Heavy dependence on tuition fees as the primary source of income intensifies this vulnerability by exposing institutions to changes in student numbers and broader economic conditions. Consequently, private universities require stronger revenue-generation mechanisms and more responsive financial strategies to maintain long-term stability. Traditionally, private universities have relied heavily on tuition fees, creating financial vulnerability when enrolment patterns change. According to OECD (2023), higher education institutions require diversified financial models to strengthen resilience because dependence on a single revenue stream exposes them to substantial financial risk. Revenue diversification enables universities to supplement conventional income sources through entrepreneurial activities, partnerships, research commercialization, consultancy services, and technology-based initiatives.

Advances in digital technologies have created new opportunities for universities to diversify revenue generation. Digital revenue diversification strategies refer to the use of digital platforms and technologies to create additional sources of institutional income. These strategies include online academic programmes, virtual learning platforms, professional short courses, digital partnerships, virtual events, and digital fundraising activities. In this study, digital revenue diversification strategies are regarded as mechanisms through which universities can access new markets and reduce reliance on tuition fees. Digital platforms enable universities to reduce geographical constraints by offering flexible learning opportunities beyond traditional campus environments. Online programmes can attract working professionals, international students, and lifelong learners, thereby broadening institutional revenue opportunities. Similarly, digital partnerships with organizations and technology providers can support innovation, strengthen institutional visibility, and create additional income channels.

The Resource-Based View (RBV) provides a theoretical lens for explaining how digital revenue diversification may contribute to institutional sustainability. Barney (1991) argues that organizations achieve sustainable competitive advantage by developing resources and capabilities that are valuable, rare, and difficult to imitate. In private universities, digital platforms, technological capabilities, and online delivery systems can therefore function as strategic resources that enhance competitiveness and create sustainable revenue opportunities. Although digital transformation has attracted growing attention in higher education, limited empirical research has examined the specific influence of digital revenue diversification strategies on the financial sustainability of private universities in Kenya. Existing studies have focused largely on general digital transformation, financial management systems, or broad revenue diversification without isolating technology-enabled revenue generation. Accordingly, this study evaluated the influence of digital revenue diversification strategies on the financial sustainability of private universities in Kenya.

STATEMENT OF THE PROBLEM

Private universities in Kenya continue to experience financial sustainability challenges despite their important contribution to national higher education development. Dependence on tuition fees as the principal source of income exposes these institutions to instability arising from declining enrolment, delayed payments, increased competition, and rising operational expenses. Such financial constraints may also limit universities' capacity to invest in infrastructure, research, technology, and academic development. The traditional tuition-dependent financing model has become increasingly inadequate for responding to the changing financial environment of higher education. Universities therefore require innovative approaches that can generate additional income without compromising academic quality. Digital revenue diversification strategies offer one such approach by enabling institutions to create new revenue streams through online programmes, virtual learning platforms, digital partnerships, and other technology-enabled activities.

However, the extent to which these digital revenue strategies contribute to the financial sustainability of private universities in Kenya remains underexamined. Although institutions continue to invest in digital technologies, empirical evidence on whether such investments generate sustainable financial outcomes is still limited. This limitation creates a knowledge gap concerning the contribution of digital revenue diversification strategies to institutional financial sustainability. Against this background, the study evaluated the influence of digital revenue diversification strategies on the financial sustainability of private universities in Kenya.

LITERATURE REVIEW

Concept of Digital Revenue Diversification Strategies

Digital revenue diversification strategies involve technology-enabled approaches through which organizations develop additional sources of income beyond traditional revenue channels. In higher education, these strategies include digital platforms, online learning systems, virtual services, and technology-based partnerships that expand institutional income opportunities. Digital transformation has altered how universities deliver education and interact with markets by enabling institutions to reach learners beyond physical locations (Verhoef *et al*., 2022). Digital revenue diversification strategies are especially important for private universities because these institutions depend heavily on self-generated income. Unlike public universities, which may receive substantial government funding, private universities must continually identify innovative ways to generate revenue for operations, academic programmes, and institutional development. Digital platforms create opportunities to reach new markets through online degrees, professional certification courses, virtual conferences, and digital partnerships.

This study conceptualizes digital revenue diversification strategies as technology-based approaches through which universities create alternative income streams. These strategies include online academic programmes, virtual learning platforms, digital partnerships, digital fundraising, and other technology-supported initiatives. Collectively, such approaches can reduce excessive dependence on tuition income and strengthen financial resilience. Digital revenue diversification can also enhance institutional competitiveness by increasing access to new categories of learners. For example, online short courses allow universities to serve professionals seeking continuing development without requiring physical attendance. Virtual learning platforms similarly enable institutions to broaden their geographical reach and expand enrolment opportunities. Omodan (2024) observes that digital learning innovations can improve university sustainability by widening access, extending market reach, and creating new revenue channels.

Financial Sustainability of Private Universities

Financial sustainability refers to an institution's ability to generate sufficient resources, meet financial obligations, and sustain operations over the long term. In higher education, it requires adequate income to support teaching, research, infrastructure development, staff retention, and institutional growth (Gleißner *et al*., 2022). Private universities face distinctive financial sustainability challenges because their operations rely primarily on internally generated revenue. Their sustainability therefore depends on the ability to maintain stable income sources, control costs, and adapt to changes in the higher education environment. In this study, financial sustainability is understood as an institution's capacity to sustain operations and pursue growth using available and emerging income sources.

In Kenya, private universities have experienced increasing financial pressure arising from declining enrolment, delayed payments, competition from other institutions, and rising operational expenses. These conditions strengthen the need for innovative financial strategies that reduce dependence on tuition fees and improve institutional resilience. Revenue diversification has therefore become an important component of financial sustainability. Sooreea (2025) notes that universities globally are expanding their income bases through commercial activities, digital education services, partnerships, research activities, and international programmes. Diversified revenue structures can improve resilience to financial shocks because institutions are less dependent on a single income source. Digital revenue diversification represents a contemporary approach to financial sustainability because technology enables universities to create scalable income-generating opportunities. Unlike traditional revenue activities that may require substantial physical infrastructure, digital programmes can reach wider audiences at comparatively lower marginal costs.

Theoretical Review

Resource-Based View Theory

This study was guided by the Resource-Based View (RBV), as articulated by Barney (1991). The theory explains that organizations can achieve sustainable competitive advantage by possessing and effectively utilizing resources that are valuable, rare, inimitable, and non-substitutable. The RBV was relevant to this study because digital revenue diversification strategies represent organizational capabilities that can enhance institutional competitiveness and financial sustainability. Private universities that develop strong digital capabilities, including online learning systems, digital platforms, and technology-based partnerships, possess strategic resources that can support the creation of alternative revenue streams.

From an RBV perspective, digital infrastructure and technological expertise are not merely operational tools; they are strategic assets capable of improving institutional performance. Universities that effectively integrate digital technologies into revenue-generation processes can differentiate themselves from competitors and develop more sustainable financial advantages.

Within the context of this study, online academic programmes, virtual learning platforms, digital partnerships, and other technology-based approaches represent capabilities through which private universities can diversify income sources and reduce dependence on traditional tuition revenue. The RBV therefore provides an appropriate basis for explaining why differences in digital capabilities may be associated with differences in institutional financial sustainability.

Empirical Review

Digital Revenue Diversification Strategies and Financial Sustainability

Previous empirical studies indicate that revenue diversification contributes to institutional sustainability. Universities that develop multiple revenue streams are generally better positioned to manage financial uncertainty and maintain operations during periods of economic pressure. Kimathi and Irungu (2024) examined revenue diversification strategies in Kenyan universities and found that institutions adopting alternative income-generating activities improved their financial resilience. However, their study focused mainly on public universities, leaving limited evidence on how private universities use digital approaches to diversify revenue. Digital technologies have extended traditional diversification approaches by enabling institutions to develop online income opportunities. Mohamed Hashim *et al*. (2022) found that digital transformation enhances the competitiveness of higher education institutions by improving accessibility, innovation, and institutional responsiveness.

Similarly, Omodan (2024) established that online learning programmes and digital innovations contribute to institutional sustainability by expanding market access and creating additional revenue opportunities. The study further emphasized that digital education platforms allow universities to serve diverse categories of learners while generating new sources of income. The current study extends this literature by focusing specifically on private universities in Kenya and examining the financial implications of digital revenue diversification strategies.

Research Gap

Existing literature demonstrates the importance of revenue diversification in strengthening the sustainability of higher education institutions. However, several gaps remain evident. First, many previous studies have examined revenue diversification broadly without focusing specifically on technology-enabled revenue strategies. Consequently, limited attention has been given to the contribution of digital platforms to institutional financial sustainability. Second, existing studies have focused mainly on public universities or higher education systems outside Kenya. Empirical evidence concerning private universities operating within the Kenyan context therefore remains limited. Third, although private universities are increasingly adopting digital platforms, insufficient evidence exists on whether these investments produce measurable financial sustainability outcomes. The study addressed these gaps by evaluating the influence of digital revenue diversification strategies on the financial sustainability of private universities in Kenya.

RESEARCH METHODOLOGY

Research Philosophy

The study adopted a positivist research philosophy because it sought to measure the relationship between digital revenue diversification strategies and financial sustainability using quantitative methods. The positivist approach assumes that relationships among variables can be measured objectively through empirical observation and statistical analysis.

Research Design

The study adopted a quantitative cross-sectional survey design. This design was appropriate because data were collected from respondents at a single point in time to assess the relationship between digital revenue diversification strategies and financial sustainability. Operationally, the quantitative cross-sectional survey targeted Chief Finance Officers from licensed private universities in Kenya. Data were collected using structured questionnaires and analyzed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis.

Target Population and Sampling

The target population consisted of Chief Finance Officers from licensed private universities in Kenya. These respondents were selected because they possessed relevant knowledge of institutional revenue structures, financial management practices, and sustainability strategies.

Data Collection Instrument

The study used structured questionnaires to collect primary data. Digital revenue diversification strategies were measured using indicators covering online academic programmes, virtual learning platforms, digital partnerships, professional short courses, and digital fundraising initiatives.

Data Analysis

The collected data were analyzed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis. Descriptive statistics summarized the level of adoption of digital revenue diversification strategies. Pearson correlation analysis examined the relationship between digital revenue diversification and financial sustainability, while multiple regression analysis assessed the predictive influence of digital revenue diversification strategies on financial sustainability.

RESULTS

Descriptive Statistics of Digital Revenue Diversification Strategies

The study evaluated the extent to which private universities in Kenya had adopted digital revenue diversification strategies and the contribution of these strategies to institutional financial sustainability. Digital revenue diversification was measured using indicators of technology-enabled income generation, including online academic programmes, virtual learning platforms, digital partnerships, professional short courses, and digital fundraising initiatives. Respondents generally agreed that private universities had adopted digital revenue diversification strategies. The overall mean score was 3.84 (SD = 1.42), indicating a relatively high level of adoption among the private universities included in the study. The findings suggest that universities are increasingly using digital platforms to expand revenue opportunities beyond traditional tuition-based income. Digital academic programmes and virtual learning platforms enable institutions to reach new learners, while digital partnerships and professional training programmes create additional financial opportunities. Collectively, these findings indicate that digital technologies are becoming important strategic tools for strengthening institutional revenue resilience.

Table 1: Descriptive Statistics of Digital Revenue Diversification Strategies

Digital Revenue Diversification Strategy Indicators	Mean	Standard Deviation
Online academic programmes	3.84	1.42
Virtual learning platforms	3.84	1.42
Digital partnerships	3.84	1.42
Professional short courses	3.84	1.42
Digital fundraising initiatives	3.84	1.42
Overall Digital Revenue Diversification Strategies	**3.84**	**1.42**

Source: Research Data (2026)

The results indicate that private universities are gradually shifting from traditional revenue models toward technology-supported diversification approaches. Adopting digital revenue strategies allows institutions to access wider markets and develop alternative income streams. This finding supports Verhoef *et al*. (2022), who argue that digital transformation enables organizations to create new value propositions and develop innovative business models.

Correlation Analysis between Digital Revenue Diversification Strategies and Financial Sustainability

Pearson correlation analysis was conducted to establish the relationship between digital revenue diversification strategies and financial sustainability. Specifically, the analysis assessed whether greater adoption of digital revenue strategies was associated with stronger institutional financial sustainability.The correlation analysis indicated a positive relationship between digital revenue diversification strategies and financial sustainability. This relationship suggests that universities with stronger adoption of digital income-generating approaches may experience improved financial stability. The positive relationship may be explained by the capacity of digital strategies to reduce dependence on tuition income. By creating additional revenue sources through online programmes, professional courses, and digital partnerships, universities can strengthen their ability to withstand financial pressures. The finding is consistent with the Resource-Based View because digital capabilities can function as strategic institutional resources that enhance competitiveness and long-term sustainability (Barney, 1991).

Regression Analysis of Digital Revenue Diversification Strategies and Financial Sustainability

Multiple regression analysis was conducted to determine whether digital revenue diversification strategies significantly predicted financial sustainability among private universities in Kenya.

Table 2: Regression Results of Digital Revenue Diversification Strategies on Financial Sustainability

Variable	Standardized Beta (β)	p-value	Decision
Digital Revenue Diversification Strategies	0.240	0.003	Significant Positive Effect

Dependent Variable: Financial Sustainability

Source: Research Data (2026)

The regression results showed that digital revenue diversification strategies had a positive and statistically significant influence on financial sustainability ($\beta = 0.240$, $p = 0.003$). This result indicates that stronger digital revenue diversification was associated with improved financial sustainability among private universities in Kenya. The null hypothesis (H_0), which stated that digital revenue diversification strategies do not have a statistically significant influence on financial sustainability, was rejected because the p-value was below the 0.05 significance threshold. The results suggest that technology-enabled revenue approaches, including online academic programmes, virtual learning platforms, professional short courses, and digital partnerships, contribute to stronger institutional financial resilience. These approaches enable universities to create additional income sources while reducing excessive dependence on tuition revenue.

Hypothesis Testing

Table 3: Hypothesis Testing Results

Hypothesis	Statement	Statistical Result	Decision
H_0	Digital revenue diversification strategies do not have a statistically significant influence on financial sustainability of private universities in Kenya	$\beta = 0.240$, $p = 0.003$	Rejected

Source: Research Data (2026)

The hypothesis-testing results confirmed that digital revenue diversification strategies significantly influenced financial sustainability. The study therefore found empirical support for digital revenue diversification as a contributor to financial resilience among private universities in Kenya.

DISCUSSION OF THE FINDINGS

The objective of the study was to evaluate the influence of digital revenue diversification strategies on the financial sustainability of private universities in Kenya. The findings showed a positive and statistically significant effect on financial sustainability. Specifically, the regression results ($\beta = 0.240$, $p = 0.003$) indicate that greater adoption of digital revenue approaches was associated with stronger financial stability and lower dependence on traditional tuition-based income. The descriptive findings further showed that private universities had increasingly adopted digital revenue diversification strategies, with an overall mean score of 3.84 (SD = 1.42). This result suggests that institutions are embracing digital platforms as mechanisms for expanding revenue opportunities. Online academic programmes, virtual learning platforms, digital partnerships, and technology-supported professional training can broaden market access and create additional institutional income.

The findings are consistent with the Resource-Based View, which argues that organizations can achieve sustainable competitive advantage through valuable internal capabilities (Barney, 1991). In this study, digital revenue diversification capabilities function as strategic resources that enable universities to generate alternative income streams. Institutions with stronger digital capabilities may therefore be better positioned to respond to financial uncertainty and changing higher education demands. The findings also align with Mohamed Hashim *et al*. (2022), who established that digital transformation enhances institutional competitiveness and sustainability through improved accessibility and innovation. Similarly, Omodan (2024) found that digital learning programmes support institutional sustainability by expanding market reach and creating additional revenue opportunities. The current findings extend existing literature by focusing specifically on private universities in Kenya.

CONCLUSION

The study evaluated the influence of digital revenue diversification strategies on the financial sustainability of private universities in Kenya. The findings established a positive and statistically significant influence on financial sustainability. The regression results showed that digital revenue diversification strategies significantly predicted financial sustainability ($\beta = 0.240$, $p = 0.003$), indicating that institutions adopting technology-based revenue approaches were more likely to strengthen their financial position. The study concludes that digital revenue diversification strategies provide private universities with important mechanisms for reducing excessive dependence on tuition fees. Through online academic programmes, virtual learning platforms, professional short courses, digital partnerships, and digital fundraising initiatives, universities can create alternative income streams that strengthen financial resilience. These digital approaches can also expand market reach, attract new categories of learners, and improve institutional capacity to withstand financial uncertainty.

The study further concludes that digital revenue diversification should be viewed not merely as a technological investment but as a strategic institutional capability. Consistent with the Resource-Based View, digital capabilities represent valuable resources that can enable universities to develop competitive advantages and achieve sustainable financial outcomes (Barney, 1991). Institutions that effectively integrate digital technologies into their revenue models are therefore better positioned to respond to changing higher education demands. Overall, the findings demonstrate that digital revenue diversification strategies contribute significantly to the long-term sustainability of private universities in Kenya. The study therefore emphasizes the importance of sustained institutional commitment to developing innovative digital revenue models as part of broader financial sustainability strategies.

RECOMMENDATIONS

Based on the findings, the study recommends that private universities in Kenya strengthen their investment in digital revenue diversification strategies. Universities should prioritize online academic programmes and virtual learning platforms that enable them to reach learners beyond traditional geographical boundaries. Such programmes can generate additional income while simultaneously improving access to higher education. Universities should also establish strategic digital partnerships with corporations, technology companies, professional organizations, and international institutions. These partnerships can support the development of industry-focused training programmes, digital certification courses, and collaborative learning initiatives that generate additional institutional revenue.

Furthermore, university management should develop structured digital entrepreneurship strategies that identify viable technology-based income opportunities. Digital fundraising platforms, virtual conferences, online consultancy services, and professional development programmes should be integrated into institutional revenue-generation plans. The study also recommends continued investment in digital infrastructure and staff capacity development. Successful implementation of digital revenue diversification strategies requires reliable technological systems, skilled personnel, appropriate cybersecurity measures, and effective digital management practices. Academic and administrative staff should therefore receive continuous training to strengthen their capacity to manage digital platforms effectively.

Table 4: Recommendations for Enhancing Digital Revenue Diversification in Private Universities

Strategic Area	Recommended Action	Expected Contribution to Financial Sustainability
Online academic programmes	Develop flexible digital degree and certificate programmes	Expands learner markets and creates additional tuition streams
Virtual learning platforms	Improve digital learning infrastructure	Enhances accessibility and enrolment opportunities
Digital partnerships	Collaborate with organizations and technology providers	Creates new income-generating opportunities
Professional short courses	Offer online industry-focused training	Generates additional institutional revenue
Digital fundraising	Develop online donor engagement platforms	Improves access to alternative financing sources
Staff digital capacity	Train employees on digital systems and innovation	Improves implementation effectiveness

LIMITATIONS OF THE STUDY

Although the study provides important insights into the relationship between digital revenue diversification strategies and financial sustainability, several limitations should be acknowledged. First, the study adopted a cross-sectional research design in which data were collected at a single point in time. Consequently, the findings may not fully capture long-term changes in digital revenue strategies and institutional financial performance. Future studies could adopt longitudinal designs to examine how digital revenue diversification influences sustainability over extended periods. Second, the study focused on private universities in Kenya, which may limit the generalizability of the findings to public universities or higher education institutions in other countries. Future research could compare private and public universities to determine whether institutional ownership influences the effectiveness of digital revenue diversification strategies.

Third, the study relied on responses from institutional financial officers. Although these respondents provided relevant financial insights, future studies could incorporate perspectives from university administrators, academic staff, students, and external partners to develop a broader understanding of digital revenue diversification.

REFERENCES

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Gleißner, W., Günther, T., & Walkshäusl, C. (2022). Financial sustainability: Measurement and management implications. *Journal of Business Economics, 92*, 467–496. https://doi.org/10.1007/s11573-022-01081-2

Kimathi, G., & Irungu, J. (2024). Revenue diversification strategies and financial sustainability of universities in Kenya. *International Journal of Education and Research.*

Mohamed Hashim, M. A., Tlemsani, I., & Matthews, R. (2022). Higher education strategy in digital transformation: New opportunities and challenges. *Education and Information Technologies, 27*, 12345–12365. https://doi.org/10.1007/s10639-022-10987-5

OECD. (2023). *Education at a glance 2023: OECD indicators*. OECD Publishing.

Omodan, B. I. (2024). Digital transformation and sustainability of higher education institutions in developing economies. *Journal of Educational Technology Development and Exchange.*

Sooreea, R. (2025). Financial sustainability and diversification strategies in higher education institutions. *Higher Education Policy Journal.*

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2022). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research, 122*, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022