Effect of Internally Generated Income and Government Subvention on the Financial Sustainability in State Universities in Cameroon

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Research Article

Abstract

This paper investigates the effects of Internally Generated Income (IGI) and government subsidies on the financial sustainability of state universities in Cameroon. The study adopted a mixed research design. The study employed a quantitative research design, utilizing survey data collected through a structured questionnaire. The target population comprised representatives of schools and faculties in state universities. A random sampling technique was adopted to ensure that every school or faculty had an equal chance of being selected, thereby enhancing the representativeness of the sample. The sample size was conveniently determined based on the number of institutions to ensure statistical reliability and validity. The collected data was analyzed using both descriptive and inferential statistics.

Findings from ordinary least squares revealed a significant role of government subvention in promoting the university's financial sustainability, as evidenced by the positive significant relationship and government funding in this model. Conversely, Internally Generated Income (IGI) showed a statistically insignificant and negative relationship with financial sustainability. From a policy perspective, given the significant impact of government subsidies on financial sustainability, the university should prioritize advocacy efforts to secure stable and predictable government funding. The insignificant role of IGI in the current model suggested the need for a reassessment of income-generating activities. Universities should diversify their IGI sources by exploring innovative revenue streams such as short-term certificate programs, research commercialization, partnerships with industry, and leasing university assets.

Keywords: Internally Generated Income, Government Subventions, Financial Sustainability, State Universities, Cameroon

1. Introduction

Globally, the financial sustainability of higher education institutions has become increasingly complex as universities face mounting financial pressures. The rising operational costs and fluctuating government support have necessitated a greater emphasis on Internally Generated Income, such as tuition fees, research grants, and private donations (Breneman, 2008). Internally Generated Income offers universities a measure of financial autonomy and resilience against the unpredictability of government funding (Tremblay, 2012). However, the extent to which these funds can cover financial needs varies significantly across institutions and regions, reflecting economic conditions and funding model disparities (Johnstone, 2006). The interplay between Internally Generated Income and government subsidies thus plays a critical role in shaping universities' financial stability and long-term viability worldwide.

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In today's competitive educational environment with constant changes in business operations, the success of publicly funded universities can be ensured by securing and managing their financial sustainability. This also requires such institutions to strategically direct their affairs to generate funds and get support from the government in the form of subvention (Mrutu & Mganga, 2016). This is because institutions' success highly depends on their financial sustainability from the funds they access internally and externally (Adu-Gyamfi, 2014). According to Karpavicius and Yu (2017), financial sustainability is the constant provision of funds for a particular activity or endeavor by the government to state institutions to improve their financial performance.

Wachira (2017) also described financial sustainability as the tendency of organizations to meet their financial goals through their IGIs and other grants from the government. According to Leon and Charl (2016), financial sustainability is an important pursuit for educational institutions that seek to create and provide value to their students and other stakeholders and enhance their survival. Watchira (2017) pointed out that universities are operating in an extremely volatile environment and have now realized that sustaining themselves financially is essential. Badu (2007) and Ajmal (2018) posited that universities could gain a competitive advantage through Internally Generated Income (IGI) and government subventions.

In Africa, the financial sustainability of state universities is particularly challenged by fluctuating government subventions and limited Internally Generated Income. Many African universities rely heavily on government funding, which is often inconsistent and insufficient to meet the growing demands of higher education (Zeleza, 2012). Internally Generated Income in African institutions typically comes from student fees and local partnerships, but these are often inadequate due to high poverty rates and economic instability (Altbach & Salmi, 2011). The reliance on government support, coupled with limited alternative revenue streams, exacerbates financial instability, affecting the quality of education and institutional development (Oanda, 2015). Addressing these challenges requires a strategic approach to managing internal and external financial resources to ensure sustainable operations and growth.

Furthermore, the role of Internally Generated Income is critically examined in the context of African universities. While universities are encouraged to enhance their revenue through means such as increased tuition fees, research commercialization, and alumni contributions, these strategies are not always feasible due to socioeconomic factors (Kivunja, 2013). The high cost of education relative to the average income of students in many African countries limits the ability of universities to substantially increase tuition fees without risking lower enrollment rates (Nyerere & Mjimba, 2016). Additionally, the potential for generating income through research and development is often hampered by a lack of infrastructure and support systems needed to drive successful commercialization efforts (Mouton & Blanckenberg, 2016). Consequently, the financial sustainability of African universities is heavily reliant on the effective management and allocation of internal and external resources.

The economic and policy environments also play a significant role in shaping the financial stability of African universities. Government policies that influence higher education funding are often subject to political and economic fluctuations, which can create uncertainty and impact long-term planning (Mamdani, 2007). The introduction of cost-sharing mechanisms and partnerships with private sector entities has been proposed as a solution to mitigate funding gaps. Nevertheless, these strategies face implementation challenges due to regulatory barriers and limited private sector engagement (Mugisha, 2018). In many cases, the effectiveness of these strategies is contingent upon creating a more predictable and supportive policy environment that encourages sustainable financial practices and fosters collaboration between public and private stakeholders (Morsy, 2015). For African universities to achieve financial sustainability, a multifaceted approach that integrates internal revenue enhancement and strategic external support is essential.

In Cameroon, state universities face significant financial challenges due to the dependence on government subventions and the limited capacity to generate internal revenue. Government subventions in Cameroon

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are often inadequate and subject to delays, which impacts the universities' ability to maintain and develop their infrastructure and academic programs (Nguefack, 2016). Internally Generated Income, primarily from student fees and occasional donor contributions, is insufficient to compensate for the shortfall in government funding (Fokou, 2019). The financial sustainability of Cameroonian universities is further hindered by bureaucratic inefficiencies and economic constraints that limit their ability to attract and retain resources (Tchakounté, 2021).

Government funding for these institutions is often characterized by delays and insufficiencies, impacting their ability to meet operational and developmental needs (Foko, 2017). The financial stability of Cameroonian universities is further compromised by their limited capacity to generate substantial internal revenue, primarily due to economic constraints and low student fee structures (Matsibek, 2018). Additionally, bureaucratic inefficiencies and inadequate revenue collection infrastructure hinder the effective utilization of Internally Generated Income (Nana, 2019).

Internally Generated Income in Cameroonian state universities is primarily derived from student fees, which are relatively low compared to the actual cost of education. This revenue stream is limited by the socioeconomic conditions of the students, many of whom come from low-income backgrounds and are unable to afford higher fees (Ngwane, 2019). Additionally, the lack of a robust alumni network and limited partnerships with the private sector further restricts the universities' ability to generate significant internal revenue. This financial strain exacerbates the dependency on government subventions and highlights the need for universities to develop alternative funding mechanisms (Mbaku, 2020). Without a significant increase in internal revenue and a more consistent government support system, universities face an uphill battle in achieving financial sustainability.

Despite the availability of government subventions and the efforts of universities to raise internal funds, many public universities in Cameroon, such as the University of Buea and the University of Douala, continue to struggle with financial sustainability. These institutions' financial difficulties manifest in various ways, including infrastructure decay, inadequate research funding, and low faculty salaries. To this end, the researcher seeks to:

- Determine the effect of internally generated income on financial sustainability in State Universities in Cameroon
- Investigate the effect of government subvention on financial sustainability in State Universities in Cameroon

2. Literature Review

Literature review is organized into two sections: the theoretical literature review and empirical literature review.

2.1 Theoretical Review

2.1.1 Stakeholder theory

According to the stakeholder theory, government initiatives should focus on the growth of important stakeholders, including universities (Freeman, 1984). The idea was put out that the government oversees several stakeholders at once. It is stated that the government may assist institutions in accessing assistance through a grant via their subventions, strengthening their financial foundation. According to the stakeholder hypothesis, additional interested parties with a strong interest in government choices should be included in its tasks (Freeman, 1984). The idea also exhorts the government to consider how its actions may affect universities interested in its initiatives (Freeman, 1984). The practical way that most governments have employed to either minimize or eliminate the negative effects of their decisions on stakeholders is through their subventions and empowering them to IGI, which appears to have positive

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outcomes for these universities. Friedman (1970) argued that the government is responsible for providing public goods.

Stakeholder Theory provides a framework for understanding how various stakeholders influence and are influenced by an organization's decisions and actions, particularly in financial practices (Freeman, 1984). The primary objective of this theory is to recognize that organizations, including universities, operate within a network of relationships involving multiple stakeholders with varying interests and expectations. In the context of state universities, Stakeholder Theory helps analyze how financial decisions related to Internally Generated Income (IGI) and government subventions affect and are affected by different groups such as students, faculty, government bodies, and the local community. By considering these diverse interests, universities can aim to achieve a balance that supports their financial sustainability and aligns with the expectations of their stakeholders.

Stakeholder Theory is based on several key assumptions. Firstly, it assumes that organizations are embedded within a network of interdependent relationships where stakeholders have interconnected interests. For universities, this means that decisions regarding IGI and government subventions will directly and indirectly impact various stakeholders (Freeman, 1984). Secondly, the theory assumes that stakeholders have diverse and sometimes conflicting interests. This diversity requires universities to carefully navigate and balance these differing needs to maintain positive relationships and financial stability (Donaldson & Preston, 1995). Lastly, Stakeholder Theory posits that organizations have moral and ethical obligations to their stakeholders beyond legal and economic responsibilities. This assumption implies that universities should consider the ethical implications of their financial practices and strive to meet the expectations of all stakeholders in a fair and transparent manner (Freeman, 1984).

Despite its valuable insights, Stakeholder Theory has some limitations. One significant challenge is the complexity of balancing various stakeholders' often conflicting interests. Universities may find it difficult to address all stakeholders' diverse needs and expectations while maintaining financial stability (Mitchell, Agle, & Wood, 1997). Another limitation is the difficulty in measuring the influence and impact of different stakeholders. Quantifying how stakeholder interests affect financial practices and outcomes can be challenging, making it hard for universities to assess the effectiveness of their strategies (Frooman, 1999). Additionally, resource constraints can limit universities' ability to engage with and address the needs of all stakeholders fully, affecting their capacity to implement stakeholder-oriented financial practices effectively (Donaldson & Preston, 1995).

Despite these limitations, Stakeholder Theory offers several advantages. It provides a holistic perspective on organizational management by emphasizing the importance of considering all relevant stakeholders in decision-making processes. This comprehensive approach helps universities develop more inclusive financial strategies that align with the needs and expectations of various groups (Freeman, 1984). Moreover, integrating stakeholder interests into financial decision-making enhances accountability and transparency, leading to improved trust and support from stakeholders, which is crucial for financial sustainability (Mitchell, Agle, & Wood, 1997). Additionally, applying Stakeholder Theory fosters positive relationships between universities and their stakeholders. By actively engaging with stakeholders and addressing their concerns, universities can build stronger partnerships and networks that support their financial and strategic goals (Freeman, 1984; Donaldson & Preston, 1995).

2.1.2 Resource mobilization theory

The theory of resource mobilization (McCarthy & Zald, 2001) is a theory that came into existence in the 1970s. The tenet of the theory is about organizations or institutions mobilizing funds internally towards their sustainability (Kendell, 2006). The theory assumes that sufficient funding is needed for social growth. (Kendell, 2006). According to the resource mobilization hypothesis, IGI mobilization and utilization are essential for achieving the institution’s goals. Resources are essential for enhancing the institution’s financial performance (Axin, 1978). Governments have been advocated as crucial in

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mobilizing available funds to achieve a specified aim (Shrestha, 2009). Plans for raising money have reportedly been advised to include a purpose and long-term goal (Chawla & Berman, 1996). One of the main responsibilities of governmental entities is raising money. This is because resource mobilization helps state institutions thrive (Juul, 2006).

The core objective of Resource Mobilization Theory is to analyze how organizations acquire, manage, and allocate resources effectively to achieve their goals. It posits that organizations, including universities, rely on a variety of resources such as financial capital, human resources, and physical assets to function effectively and sustain their operations (Kendell, 2006). In the context of state universities in Cameroon, the theory helps understand how these institutions can strategically mobilize IGI and government subventions to support their educational missions and maintain financial stability. By applying this theory, universities can develop more effective strategies to manage and optimize their financial resources.

Resource Mobilization Theory is grounded in several key assumptions. Firstly, it assumes that organizations are inherently dependent on various resources to operate effectively. This dependence necessitates strategic efforts to mobilize and allocate these resources in alignment with organizational goals (McCarthy & Zald, 2001). Secondly, the theory emphasizes the need for strategic resource allocation, suggesting that organizations must prioritize their resource mobilization efforts in areas that directly contribute to their objectives. Additionally, it assumes that organizations must be adaptable, continuously adjusting their resource mobilization strategies in response to changing internal and external conditions (Kendell, 2006). For state universities, these assumptions highlight the importance of effective resource management and strategic planning in achieving financial sustainability.

Despite its advantages, Resource Mobilization Theory has some limitations. One notable limitation is its potential overemphasis on the acquisition of resources, sometimes neglecting the efficiency of resource utilization and internal organizational processes (McCarthy & Zald, 2001). Additionally, the theory may not fully account for the broader social and political contexts that influence resource mobilization, which can be particularly relevant for state universities in Cameroon facing complex external pressures (Kendell, 2006). Furthermore, evaluating the effectiveness of resource mobilization strategies can be challenging, as the theory does not always provide clear metrics for assessing the success of these efforts in achieving organizational goals (McCarthy & Zald, 2001).

In application, Resource Mobilization Theory offers valuable insights for state universities in Cameroon. It provides a framework for understanding how these institutions can optimize their internal and external resource flows to enhance financial sustainability. For example, universities can use the principles of this theory to develop comprehensive fundraising strategies that target various sources of funds, ensuring financial stability and reducing dependence on any single funding source (Kendell, 2006). Additionally, by implementing strategic resource allocation based on their goals and priorities, universities can ensure that resources are used effectively to support key areas such as research, infrastructure, and faculty development (McCarthy & Zald, 2001). Finally, the theory's emphasis on adaptability allows universities to remain flexible and responsive to changes in the external funding environment, helping them navigate financial challenges and adjust their strategies as needed (Kendell, 2006).

2.2. Empirical Literature

Adu-Gyamfi's (2014) study examined the impact of Internally Generated Income (IGI) on the financial sustainability of state universities in Ghana, specifically focusing on the University of Cape Coast. The primary objective was to assess how effectively IGI contributes to the institution's financial stability and operational efficiency. The research employed a mixed-methods approach, using both quantitative and qualitative data. A sample size of 200 respondents was selected from various departments within the university, including finance, administration, and academic staff. The study utilized a descriptive survey

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design, and data were collected through structured questionnaires and semi-structured interviews. Analysis techniques included statistical methods such as regression analysis for quantitative data and thematic analysis for qualitative data. The findings revealed a significant positive relationship between IGI and financial sustainability, with IGI contributing to the university's ability to meet its financial obligations and support its educational mission. However, the study faced limitations such as a potential response bias due to the reliance on self-reported data and the limited generalizability of findings beyond the University of Cape Coast. Recommendations included enhancing IGI strategies by diversifying income sources and improving financial management practices to strengthen the university's financial sustainability (Adu-Gyamfi, 2014).

Gyasi's 2017 study investigated the role of Internally Generated Income in the financial sustainability of public universities in Ghana, with a focus on the University of Ghana. The study aimed to evaluate the effectiveness of IGI in supporting the university's financial health and sustainability. The research utilized a quantitative research design, with a sample size of 150 respondents drawn from the university's financial and administrative departments. Data were collected through a structured questionnaire, and the analysis employed descriptive and inferential statistical techniques, including correlation and multiple regression analysis, to determine the relationship between IGI and financial sustainability. The study found a strong correlation between IGI and the university's financial stability, indicating that increased IGI significantly contributed to the university's financial health. Limitations included the exclusion of qualitative insights that could provide a deeper understanding of the challenges associated with IGI and the focus on a single institution, which may affect the generalizability of the results. Gyasi recommended that universities should enhance their IGI strategies by implementing robust financial planning and management systems and exploring innovative revenue-generating activities to improve financial sustainability (Gyasi, 2017).

Ajmal's 2018 study explored the impact of Internally Generated Income on the financial sustainability of state universities in Pakistan, particularly emphasizing the University of Punjab. The objective was to analyze the effectiveness of IGI in supporting the university’s financial stability and long-term sustainability. The study utilized a quantitative approach, employing a survey research design with a sample size of 180 respondents from the university’s finance and administration departments. Data were collected through structured questionnaires, and statistical analysis, including descriptive statistics and multiple regression, was used to assess the relationship between IGI and financial sustainability. The findings indicated that IGI positively influenced financial sustainability by providing additional revenue streams that reduced dependence on government funding. However, the study faced limitations such as potential response bias and the exclusion of qualitative data that could offer a more comprehensive understanding of the challenges related to IGI. Ajmal recommended improving IGI management practices by implementing better financial controls and exploring new revenue-generating opportunities to enhance financial sustainability (Ajmal, 2018).

Akinleye and Dadepo’s (2019) study examined the relationship between Internally Generated Income and financial sustainability in Nigerian state universities, focusing on the University of Ibadan. The study aimed to evaluate how IGI contributes to the institution's financial health and operational effectiveness. The research employed a mixed-methods design, including both quantitative and qualitative approaches. A sample of 220 respondents was selected from various university departments, and data were collected through structured questionnaires and in-depth interviews. Analysis techniques included descriptive statistics, correlation analysis, and thematic analysis. The study found a significant positive impact of IGI on financial sustainability, with IGI providing crucial support for university operations and reducing reliance on government funding. Limitations included a potential lack of response diversity and the challenge of generalizing findings across different institutions. The study recommended strengthening IGI strategies through improved management practices and exploring additional revenue sources to ensure long-term financial sustainability (Akinleye & Dadepo, 2019).

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Baraja and Yosya's (2019) study investigated the role of Internally Generated Income (IGI) in the financial sustainability of state universities in Kenya, focusing on Kenyatta University. The study's primary objective was to assess how IGI influences the financial stability and sustainability of the university, particularly in light of fluctuating government funding. The research utilized a mixed-methods approach, incorporating both quantitative and qualitative data. The sample comprised 250 respondents, including financial officers, department heads, and administrative staff from Kenyatta University. Data were collected through structured questionnaires and semi-structured interviews. Quantitative data were analyzed using descriptive statistics and multiple regression analysis, while qualitative data were examined through thematic analysis. The study found a significant positive effect of IGI on the university's financial sustainability, indicating that IGI helped reduce financial vulnerabilities and supported operational needs. However, the study's limitations included potential biases in self-reported data and the challenge of generalizing findings beyond Kenyatta University. Baraja and Yosya recommended enhancing IGI strategies by diversifying revenue streams and improving financial management systems to strengthen the university's financial sustainability and reduce dependence on government funding (Baraja & Yosya, 2019).

A comprehensive study by Oyedokun (2018) investigated the impact of government subventions on the financial sustainability of state universities in Nigeria. The primary objective of the research was to evaluate how government funding influences these institutions' financial stability and operational efficiency. Oyedokun employed a quantitative research design, utilizing a sample size of 30 state universities selected through stratified random sampling. The study utilized a cross-sectional survey approach, collecting data through structured questionnaires distributed to financial officers and university administrators. Data analysis was conducted using statistical techniques such as regression analysis and descriptive statistics to determine the correlation between government subventions and financial sustainability. The study found a significant positive relationship between government subventions and financial sustainability, indicating that higher levels of funding are associated with improved financial stability and operational efficiency. However, Oyedokun acknowledged several limitations, including the study's reliance on self-reported data, which could be biased, and the narrow focus on Nigerian state universities, limiting the generalizability of the findings. The study recommended enhancing transparency and accountability in the disbursement of government funds and suggested that universities diversify their funding sources to mitigate dependency on government subventions.

Another relevant study by Ahmed and Rahman (2020) explored the effects of government subventions on the financial sustainability of state universities in Bangladesh. The research aimed to understand how government financial support affects these institutions' long-term viability and ability to fulfill educational missions. Ahmed and Rahman employed a mixed-methods research design, combining quantitative data from a sample of 15 state universities with qualitative insights from interviews with key financial managers and policymakers. The quantitative component involved collecting secondary financial data from university reports and government documents, which was analysed using econometric models to assess the impact of subventions on financial health. The qualitative data were analysed thematically to capture the experiences and perceptions of stakeholders regarding government funding. The study revealed that while government subventions positively impacted financial stability, institutional management practices and external economic conditions moderated the extent of this impact. Limitations included the potential for incomplete or inconsistent financial data and the subjective nature of qualitative interviews. Ahmed and Rahman recommended that state universities strengthen financial management practices and advocate for more consistent and predictable government funding to enhance their financial sustainability.

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In a detailed study by Johnson and Smith (2019), the impact of government subventions on the financial sustainability of state universities in South Africa was examined. The study aimed to assess how government funding changes affect these universities' financial health and operational capabilities. Johnson and Smith utilized a longitudinal research design, analysing data from 20 state universities over a 10-year period. The research involved collecting financial performance data and government funding records from institutional reports and government publications. Analysis was performed using time-series analysis and panel data regression techniques to evaluate trends and impacts over time. The findings indicated that while government subventions significantly contributed to financial stability, their effectiveness was influenced by administrative inefficiencies and variations in funding levels. The study's limitations included the challenge of isolating the effects of government funding from other financial variables and the potential for data discrepancies across institutions. Johnson and Smith recommended enhancing the efficiency of fund utilization and implementing policies to ensure consistent and adequate government support to improve financial sustainability.

Research conducted by Zhao and Liu (2021) investigated the role of government subsidies in ensuring the financial sustainability of state universities in China. The study aimed to explore how government financial support influences these universities' long-term financial health and operational effectiveness. Zhao and Liu employed a mixed-methods approach, combining quantitative analysis of financial data from 25 state universities with qualitative interviews of university administrators and policymakers. The quantitative component involved analyzing financial statements and government funding records using statistical techniques such as multiple regression analysis to assess the impact of subventions on financial performance. The qualitative data were analyzed thematically to provide insights into stakeholder perspectives on government funding. The study found that government subsidies were crucial for maintaining financial stability but were often subject to bureaucratic delays and inconsistencies. Limitations included potential biases in self-reported data and the challenge of generalizing findings beyond the sampled universities. Zhao and Liu recommended improving the efficiency and reliability of government funding mechanisms and encouraging universities to explore alternative revenue sources to enhance financial resilience.

A notable study by Martins and Silva (2022) explored the influence of government subventions on the financial sustainability of state universities in Brazil. The research aimed to determine how government funding variations impact these institutions' financial stability and operational capacity. Martins and Silva employed a quantitative research design, analyzing data from 18 state universities over a period of 5 years. The study utilized a combination of secondary financial data from university financial reports and government budget allocations. Data analysis was performed using econometric techniques, including fixed-effects regression models, to assess the relationship between government subventions and various indicators of financial sustainability. The results indicated a positive correlation between government subventions and financial stability, but also highlighted that financial sustainability was significantly affected by management practices and institutional governance. Limitations of the study included the potential for data accuracy issues and the challenge of accounting for external economic factors influencing financial outcomes. Martins and Silva recommended that state universities focus on improving financial management practices and advocate for more stable and predictable government funding to support long-term financial sustainability.

3. Methodology

Cameroon is a Central African nation on the Gulf of Guinea. Bantu speakers were among the first groups to settle Cameroon, followed by the Muslim Fulani until German domination in 1884. After World War I, the French took over 80% of the area, and the British 20%. After World War II, self-government was granted, and in 1972, a unitary republic was formed out of East and West Cameroon. Until 1976, two separate education systems, French and English, did not merge seamlessly. English and French are now

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considered the primary languages of instruction, with English being more preferred. Local languages are generally not taught as there are too many, and choosing between them would raise further issues.

A causal research design focuses on cause-and-effect relationships. The causal research design was used to accomplish the research's objectives because it was thought to be ideal for identifying and reporting connections between various features of phenomena under examination (Sekaran & Bougie, 2016). The questionnaire was developed based on a thorough review of existing literature on public financial management, income generation, and financial sustainability in higher education institutions. Items were adapted from validated instruments in similar studies, and others were designed to align with the Cameroonian context. The instrument comprised demographic and Likert-scale sections covering internally generated income, government subvention, and financial sustainability. To ensure content validity, the questionnaire was reviewed by academic experts in finance and public administration. A pilot test was conducted with a small sample of university staff to identify ambiguities and ensure clarity. Reliability was assessed using Cronbach's alpha, with all key constructs scoring above the acceptable threshold of 0.70. Feedback from the pilot test informed minor revisions before final administration. A self-administered questionnaire was employed as the primary data collection tool, administered to representatives of state schools and faculties.

To analyze the effects of Internally Generated Income (IGI) and government subventions on the financial sustainability of state universities in Cameroon, a multiple regression model is specified. The model is designed to quantify the relationship between financial sustainability (dependent variable) and IGI, government subventions. The general form of the model is specified as follows:

$FS_i = \beta 0+\beta 1IGI_i+\beta 2GS_i+\epsilon i$

Where:

FS_i represents the financial sustainability of state schools and faculties.

IGI_i represents the internally generated income of state schools and faculties.

GSi represents the government subventions received by state schools and faculties.

$\beta 0$ is the intercept term.

$\beta 1$ and $\beta 2$ are the coefficients for the respective independent variables.

ϵ_i is the error term.

Model parameters were estimated using the Ordinary Least Squares method, which has been frequently utilized in the literature and has the best linear unbiased estimator (BLUE) characteristic. The calculated coefficients faithfully represent the population parameters, and the estimator is considered to be efficient since it has the lowest variance compared to alternative estimators. When the dependent variables take values between negative infinity and positive infinity, the OLS method of estimation is applied.

4. Results

The study conducted a pilot study to verify the precision of the research tools used to measure the independent and dependent variables. Cronbach's alpha was calculated for the explanatory variables, and the results are summarized in the table below. The result of the dependent variable, which happens to be workers' satisfaction, was also presented in the same table.

Table 1: Cronbach's Alpha Coefficient table for both dependent and independent variables

Variables	Number of items	Cronbach Alpha
Internally generated income indicators	8	0.7337
Government subvention indicators	9	0.8688
Financial sustainability indicators	7	0.8331

Source: Field Survey, (May 2024)

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The results in Table 1 show the reliability of three different scales or dimensions based on their Cronbach's alpha coefficient values. Cronbach's alpha measures the constructs' scaling, which indicates how well the items within each dimension or scale measure the same underlying construct. A higher Cronbach's alpha value indicates better scale and reliability.

The results suggest that the scales or dimensions are reliable measures for their intended constructs, and can be used with confidence in this research or practical applications. Generally speaking, a Cronbach's alpha of 0.7 or above is appropriate. While some writers claim that Cronbach's alpha values of 0.70 or above signify satisfactory dependability, others contend that this cutoff point is too low and claim that values of 0.80 or even 0.90 are necessary for high levels of internal consistency. Cronbach's alpha values between 0.70 and 0.90 are typically considered adequate for research purposes, according to DeVellis (2017), while the precise cutoff depends on the measurement context and goal. According to Streiner (2003), values of 0.70 to 0.80 for Cronbach's alpha are at the very least adequate for research purposes; however, values of 0.80 or higher are recommended.

Table 2: Summary of Descriptive Statistics

stats	Financial sustainability	Internally generated income	Government subvention
sum	28.31479	31.84535	18.6967
mean	.5445152	.6124105	.3595519
p50	.5235447	.6762573	.2332112
variance	.0597242	.0690264	.0964416
sd	.2443853	.2627288	.3105504
kurtosis	2.734973	2.955923	2.389284
skewness	-.1822681	-.9381522	.7930689

Source: Field Survey, (May 2024)

Starting with the sum, IGI has the highest total at 31.84535, followed by financial sustainability at 28.31479, and government subvention at 18.6967. This suggests that IGI may significantly contribute to the overall financial situation, potentially reflecting a heavier reliance on internally generated funds compared to government subventions, which might contribute less to the university's financial landscape.

The means, or averages, further support this trend. IGI has the highest mean at 0.612, indicating that, on average, IGI scores are higher than financial sustainability (0.545) and government subvention (0.360). These mean values suggest that, relative to subventions, financial sustainability and IGI scores tend to be stronger and perhaps more frequently prioritized in the university's financial strategy.

Median values, represented by p50, show a similar pattern. The median for IGI is the highest at 0.676, followed by financial sustainability at 0.524, and government subvention at 0.233. These results reinforce that IGI is generally higher and possibly more stable compared to the others, especially government subvention, which has the lowest median. A lower median for government subvention could suggest that it is less consistently available or more variable in amount compared to IGI and financial sustainability scores.

Variance and standard deviation measure the dispersion of values within each category. Government subvention has the highest variance (0.0964) and standard deviation (0.311). This indicates that government subvention values are more spread out from the mean, reflecting greater variability in the data. In contrast, financial sustainability has the lowest variance (0.0597) and standard deviation (0.244), suggesting relatively less fluctuation, which might imply more consistency or predictability in financial sustainability measures.

The skewness values reveal differences in data symmetry. Government subvention has a positive skewness of 0.793, suggesting that its distribution is right-skewed, with a tendency toward lower values and a few higher scores pushing the mean up. IGI, with a skewness of -0.938, is left-skewed, indicating a concentration of higher scores and fewer lower ones, which may reflect a more positive outlook or reliance on internally generated revenue. Financial sustainability has a slight negative skewness of -

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0.182, showing near-symmetrical distribution around the mean, which may indicate a more balanced assessment across high and low values.

Kurtosis values indicate the peakedness of each distribution. Government subvention has the lowest kurtosis at 2.389, suggesting a flatter distribution with lighter tails. Financial sustainability and IGI have kurtosis values around 2.73 and 2.96, respectively, indicating slightly more peaked distributions, with values clustering more closely around the mean and a few extremes.

Table 3: Pair-Wise Correlation Matrix

	Financial sustainability	Internally generated income	Government subvention
Financial sustainability	1.0000		
Internally generated income	0.3042	1.0000	
	0.0284		
Government subvention	0.7655	0.4177	1.0000
	0.0000	0.0021	

Source: Field Survey, (May 2024)

The pair-wise correlation matrix reveals relationships between financial sustainability, internally generated income (IGI), and government subvention, offering insight into how these variables might interact or support each other in the university's financial context.

The correlation between financial sustainability and IGI is positive at 0.3042, with a p-value of 0.0284, suggesting a moderate relationship. This indicates that as IGI levels increase, financial sustainability tends to improve, though the relationship is not particularly strong. This positive association implies that internally generated income can contribute positively to financial sustainability by providing consistent revenue streams. However, the moderate correlation coefficient suggests that other factors might also significantly influence financial sustainability.

The correlation between financial sustainability and government subvention is notably stronger, with a value of 0.7655 and a p-value of 0.0000, indicating a significant and positive relationship. This strong correlation suggests that government subvention is closely aligned with financial sustainability outcomes, implying that increases in government support could substantially enhance the university's financial stability. The high significance level indicates that government subvention might play a key role in bolstering financial sustainability, potentially serving as a critical foundation for long-term financial planning.

The correlation between IGI and government subvention is 0.4177 with a p-value of 0.0021, indicating a moderate and statistically significant positive relationship. This suggests that IGI levels also tend to increase when government subvention increases, albeit to a lesser extent. The connection between these two variables may indicate that a supportive environment, fostered through government funding, could enhance opportunities or capabilities for generating income internally. However, since the relationship is moderate, it is likely that IGI is somewhat independent of government subvention, relying on distinct mechanisms or strategies for revenue generation.

Table 4: Ordinary Least Squares

Variable	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Internally generated income	-.0175416	.0940666	-0.19	0.853	-.2065755	.1714924
Government subvention	.6086138	.0795813	7.65	0.000	.4486893	.7685384
_cons	.3364296	.0570524	5.90	0.000	.2217785	.4510807
		F(2, 49) = 34.72				
		Prob > F = 0.0000				
		R-squared = 0.5863				
		Adj R-squared = 0.5694				

Source: Field Survey, (May 2024)

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Starting with internally generated income, the coefficient is -0.0175, indicating a negative relationship with financial sustainability. The t-value is -0.19, and the p-value is 0.853, showing this relationship is statistically insignificant ($p > 0.05$). This suggests that variations in internally generated income do not meaningfully influence financial sustainability, and changes in internally generated income are unlikely to affect the university's financial stability substantially. This result diverges from past studies, where IGI was often shown to play a positive role. The discrepancy may stem from inefficiencies in revenue management or a lack of diversification in IGI sources, indicating that the university might benefit from revisiting its income-generating strategies.

Government subvention has a coefficient of 0.6086, indicating a positive relationship with financial sustainability. This coefficient implies that for each unit increase in government subvention, financial sustainability increases by approximately 0.61 units, assuming other variables remain constant. The t-value of 7.65 and the p-value of 0.000 indicate that this relationship is highly statistically significant at 1% ($p < 0.01$), demonstrating that government subvention is a major contributor to financial sustainability. This positive effect underscores the importance of government support for the university's long-term financial health.

The constant term (_cons), with a coefficient of 0.3364, represents the expected level of financial sustainability when both IGI and government subvention are zero. The significant t-value of 5.90 and p-value of 0.000 indicate that this baseline level of financial sustainability is meaningful. This constant suggests that some baseline sustainability exists independently of IGI and government subvention, perhaps due to other unmodeled factors.

Overall model fit statistics indicate that the model explains a substantial portion of the variance in financial sustainability. The F-statistic is 34.72, with a p-value of 0.0000, indicating that the model is statistically significant at 1% and therefore 99% reliable. The R-squared value of 0.5863 suggests that approximately 59% of the variation in financial sustainability is explained by IGI and government subvention, which demonstrates a relatively good fit for the model. The adjusted R-squared value of 0.5694 adjusts for the number of predictors. It shows that about 57% of the variance is explained, affirming that the model captures the relationship well without overfitting.

Table 5: Variance Inflation Factor (VIF) Test for Multicollinearity

Variable	VIF	1/VIF
Government subvention	1.21	0.825558
Internally generated income	1.21	0.825558
Mean VIF	1.21	

Source: Field Survey, (May 2024)

The result of the VIF indicates that there is no major problem of multicollinearity as the mean VIF does not exceed 2.5. In the context of OLS regression, several authors have justified the use of mean VIF as a criterion for assessing the severity of multicollinearity. O'Brien (2007) argues that a mean VIF of 2.5 or greater indicates the presence of moderate to severe multicollinearity. He notes that this threshold is consistent with the rule of thumb proposed by Neter *et al.* (1996) and corresponds to the point at which the R-squared value for a regression model begins to level off. Kutner *et al.* (2005) suggest that a mean VIF of 5 or greater is a sign of serious multicollinearity. They note that this threshold is based on simulation studies and empirical evidence and is also consistent with the rule of thumb proposed by Neter *et al.* (1996).

Table 6: Breusch-Pagan/Cook-Weisberg Test for Heteroskedastticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of nor_fs
chi2(1) = 0.38
Prob > chi2 = 0.5377

Source: Field Survey, (May 2024)

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Gujarati (2003) recommends using a mean VIF of 10 or greater to identify severe multicollinearity. He notes that this threshold is based on the results of simulation studies and is also consistent with the rule of thumb proposed by Neter *et al.* (1996).

Finally, the researcher concluded the section by checking for the existence of the issue of heteroskedasticity within our model. To achieve this, we employ the Breusch-Pagan and Cook-Weisberg test of heteroskedasticity. From the result presented above, the null hypothesis of constant variance is not rejected, showing that our estimated model suffers from a heteroscedasticity problem. Several authors have discussed using heteroscedasticity in Ordinary Least Squares (OLS) regression and suggested rejection thresholds for detecting heteroscedasticity. White (1980) proposes a test for heteroscedasticity and suggests a rejection threshold of 5%. Greene (2000) discussed the consequences of heteroscedasticity and suggested a rejection threshold of 10%. Kennedy (2003) discussed the various tests for heteroscedasticity and suggested a rejection threshold of 5%.

4.2 Discussion

The Internally Generated Income (IGI) coefficient is -0.0175, indicating a negative relationship with financial sustainability. This relationship is statistically insignificant with a t-value of -0.19 and a p-value of 0.853 ($p > 0.05$). This finding suggests that fluctuations in IGI are not substantially impacting the university's financial stability, contradicting the positive effects observed in prior studies. For example, Adu-Gyamfi (2014) and Gyasi (2017) found a significant positive impact of IGI on financial sustainability at universities in Ghana, where IGI contributed to operational stability and reduced reliance on government funding. Additionally, studies by Ajmal (2018) and Baraja & Yosya (2019) reported similar findings in Pakistan and Kenya, suggesting that IGI generally supports financial stability in these settings by diversifying revenue sources and lessening dependency on government subventions.

However, the insignificance of IGI in this model could imply contextual differences, possibly due to inefficiencies in IGI management or limitations in revenue-generating activities at the university in question. Akinleye and Dadepo (2019) highlighted that the effectiveness of IGI relies on efficient management practices, which may not be sufficiently developed in this case. The insignificant impact of IGI here might also reflect structural limitations, such as reliance on traditional revenue sources rather than more innovative income strategies, as recommended in several studies. These findings could imply that enhancing the effectiveness of IGI would require strategic improvements in financial management, diversification of revenue streams, and an emphasis on sustainable income-generating practices.

The coefficient for government subvention is 0.6086, indicating a strong positive relationship with financial sustainability. A t-value of 7.65 and a highly significant p-value of 0.000 ($p < 0.01$) further support this relationship, suggesting that government subvention is a major determinant of the university's financial health. This aligns with the findings of several empirical studies, including those by Oyedokun (2018) and Martins & Silva (2022), who observed that higher government funding correlated with improved financial stability and operational effectiveness. Similarly, Johnson and Smith (2019) in South Africa and Zhao and Liu (2021) in China noted that government subventions significantly contributed to financial sustainability. However, they cautioned that bureaucratic inefficiencies and unpredictable funding levels might compromise stability.

5. Conclusion and Policy Implications

This paper sought to investigate the effects of Internally Generated Income (IGI) and government subventions on the financial sustainability of state universities in Cameroon. The findings underscore the significant role of government subvention in promoting the university's financial sustainability, as

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evidenced by the positive relationship and government funding in this model. With a coefficient indicating that each unit increase in government subvention substantially improves financial sustainability, it is clear that consistent government support is vital for maintaining the university's financial health. Conversely, Internally Generated Income (IGI) showed a statistically insignificant and negative relationship with financial sustainability, suggesting that IGI, in its current form, does not meaningfully contribute to financial stability.

From a policy perspective, given the significant impact of government subventions on financial sustainability, the university should prioritize advocacy efforts to secure stable and predictable government funding. This could involve stronger engagement with policymakers to emphasize the importance of consistent financial support for educational institutions, particularly in maintaining high-quality education and operational efficiency. The insignificant role of IGI in the current model suggests the need for a reassessment of income-generating activities. The university should diversify its IGI sources by exploring innovative revenue streams such as short-term certificate programs, research commercialization, partnerships with industry, and leasing university assets. Additionally, implementing improved financial controls and transparent management practices can help maximize the efficiency of IGI contributions.

6. Limitations and Directions for Future Research

Despite the insights provided by this study on the influence of internally generated income and government subvention on financial sustainability in public universities in Cameroon, a few limitations should be acknowledged. First, the study adopted a cross-sectional design, which captures data at a single point in time. This approach does not account for income utilization patterns or financial sustainability changes over time. Future studies may consider longitudinal designs to observe trends and causality more effectively. Secondly, the data relied on self-reported responses from university staff, which are subject to social desirability and recall bias. Although steps were taken to ensure anonymity and reliability, future research could incorporate triangulated methods, including financial document analysis or interviews, to enhance data validity. Future research should consider tracking financial data over several academic years to capture trends, seasonality, and the long-term impact of income sources on financial sustainability.

Conflict of Interest: The author declares no conflict of interest.

REFERENCES

Adu-Gyamfi, K. (2014). Financial sustainability in higher education institutions: The role of Internally Generated Income. *Journal of Education and Practice, 5*(18), 112-120.

Ahmed, R., & Rahman, M. (2020). The effects of government subventions on the financial sustainability of state universities in Bangladesh. *Bangladesh Journal of Higher Education*, 14(2), 55-72.

Ajmal, M. (2018). Internally Generated Income and its effect on the financial sustainability of state universities in Pakistan: The case of the University of Punjab. *Asian Journal of Financial Studies*, 22(4), 89–105.

Akinleye, T., & Dadepo, S. (2019). The relationship between Internally Generated Income and financial sustainability in Nigerian state universities: A study of the University of Ibadan. *Nigerian Journal of Education Administration*, 17(3), 203-220.

Altbach, P. G., & Salmi, J. (2011). *The road to academic excellence: The making of world-class research universities*. World Bank.

Axin, R. (1978). Resource management in academic institutions: Strategies and outcomes. *Educational Management Review, 5*(3), 130–144.

Baraja, J., & Yosya, B. (2019). Assessing the role of Internally Generated Income in the financial sustainability of state universities in Kenya: The case of Kenyatta University. *East African Journal of Education Research*, 28(2), 115-130.

Breneman, D. W. (2008). Financing higher education: The role of Internally Generated Income. *Educational Policy Review, 20*(3), 55-72.

Chawla, M., & Berman, J. (1996). Strategies for resource mobilization in higher education: A case study approach. *Higher Education Review, 23*(4), 50–65.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review, 20*(1), 65–91.
Easterby-Smith, M. (2008). *Management and business research* (3rd ed.). Sage Publications.
Foko, L. (2017). Government funding and financial stability of state universities in Cameroon. *Cameroon Journal of Education, 12*(2), 89–104.
Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman Publishing Inc.
Friedman, M. (1970). The social responsibility of business is to increase its profits. *The New York Times Magazine*, September 13, 32–33, 122, 126.
Frooman, J. (1999). Stakeholder influence strategies. *Academy of Management Review, 24*(2), 191–205.
Gyasi, K. (2017). The role of government subvention in the financial sustainability of state universities: Evidence from Ghana. *Journal of Educational Finance and Policy, 11*(2), 98–115.
Johnson, A., & Smith, L. (2019). Government subventions and their impact on the financial sustainability of state universities in South Africa. *South African Journal of Education Policy*, 25(3), 145–162.
Johnstone, D. B. (2006). The financing of higher education: A global perspective. *Journal of Higher Education Policy and Management, 28*(2), 137–149.
Karpavicius, J., & Yu, D. (2017). Financial sustainability in higher education: An analysis of government subventions and Internally Generated Income. *Journal of Financial Education, 43*(1), 21-34.
Kendell, M. (2006). Resource mobilization and organizational growth: A study of university funding in the 21st century. *Journal of Higher Education Policy, 29*(2), 99–113.
Kivunja, C. (2013). Financial sustainability of higher education institutions in Africa: Challenges and solutions. *African Journal of Education and Development, 10*(1), 29–40.
Leon, J., & Charl, T. (2016). Financial sustainability in higher education: Theoretical and empirical perspectives. *Journal of Educational Finance, 41*(2), 45–60.
Mamdani, M. (2007). Higher education in Africa: Challenges and prospects. *African Studies Review*, 50(1), 1–28.
Martins, F., & Silva, J. (2022). The influence of government subventions on the financial sustainability of state universities in Brazil. *Brazilian Journal of University Management*, 16(2), 123-140.
McCarthy, J. D., & Zald, M. N. (2001). *The politics of social protest: Comparative studies of social movements*. University of Chicago Press.
Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review, 22*(4), 853–886.
Morsy, H. (2015). Policy and financial sustainability in higher education: An examination of governmental and institutional strategies. *Journal of Higher Education Policy, 38*(2), 145–160.
Mouton, J., & Blanckenberg, J. (2016). The role of research commercialization in the financial sustainability of African universities. *African Journal of Science and Technology, 17*(3), 89-102.
Mrutu, S., & Mganga, K. (2016). Revenue generation and financial sustainability in government institutions: Lessons from Kenyan universities. *Journal of Financial Sustainability, 9*(2), 91-105.
Mugisha, B. (2018). Government policies and private sector involvement in financing higher education in Africa. *International Journal of Educational Policy and Planning, 23*(2), 153–170.
Nguefack, J. (2016). An analysis of the impact of internal revenue generation on the financial health of Cameroonian universities. *Cameroon Journal of Economic Research, 10*(1), 45–62.
Ngwane, E. (2019). The impact of socioeconomic factors on Internally Generated Income in Cameroonian universities. *Journal of African Development Studies, 14*(2), 113–126.
Nyerere, J., & Mjimba, V. (2016). The role of tuition fees in the financial sustainability of higher education in Africa. *African Journal of Educational Research, 8*(2), 93-104.
Oanda, I. (2015). Financial management in African universities: The role of government support and internal revenue. *African Journal of Higher Education, 7*(3), 51–64.
Oyedokun, G. (2018). Government subventions and their impact on the financial sustainability of state universities in Nigeria. *Journal of Higher Education Finance*, 10(1), 101–118.
Saunders, M., Lewis, P., Thornhill, A., & Bristow, A. (2015). *Research methods for business students* (7th ed.). Pearson Education.
Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley.
Shrestha, B. (2009). Government's role in resource mobilization for educational institutions: A comparative study. *International Journal of Education Finance, 6*(1), 78–92.
Tchakounté, J. (2021). Financial management practices in state universities in Cameroon: Challenges and opportunities. *Journal of African Higher Education, 15*(2), 75-89.

Tremblay, C. (2012). The role of Internally Generated Income in higher education financial sustainability. *Journal of Higher Education Finance, 8*(1), 15–29.

Wachira, N. (2017). Financial sustainability and the role of government subventions in higher education institutions. *International Journal of Finance and Economics, 22*(4), 450–462.

Watchira, K. (2017). Financial sustainability of public universities in Kenya: A case study of government subventions. *Kenyan Journal of Education Administration, 9*(1), 70–85.

Zeleza, T. (2012). The financial challenges of higher education institutions in Africa: A critical review. *African Studies Quarterly, 14*(2), 33–47.

Zhao, X., & Liu, Y. (2021). Government subventions and the financial sustainability of state universities in China. *Chinese Journal of Education Finance*, 29(1), 88–104.

Appendices

Appendix 1: Variance Inflation Factor (VIF) Test for Multicollinearity

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
      nor_gs |      1.21    0.825558
     nor_igi |      1.21    0.825558
-------------+----------------------
    Mean VIF |      1.21
```

Appendix 2: Breusch-Pagan/Cook-Weisberg Test for Heteroskedastticity

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of nor_fs

         chi2(1)      =     0.38
         Prob > chi2  =   0.5377
```

Appendix 3: Research Instrument

Section B: Internally generated income (IGI)

Indicate your level of agreement with the following statements on IGI in your Institution. Rate your response by ticking using a scale of five units whereby 1=strongly disagree, 2=disagree, 3=moderately agree 4= 4=agree, and 5=strongly agree.

SN	Items	1	2	3	4	5
1.	The university generates internal income through residential, academic user facility fees paid by regular students					
2.	School or faculty generates income internally through the printing press and consultancy services					
3.	The sales of admission forms are also a source of the university's internally generated income					
4.	The university generates internal income through the issuance of transcripts, attestations, and souvenirs					
5.	Graduation fees are also one source of the university's internally generated income					
6.	Schools or faculties seek the ministry's assistance to access loans from commercial banks for internally generated income mobilization					

7.	School or faculty invests in fixed assets to raise resources (internally generated income)					
8.	The university generates internal income through resit fees paid by students.					
	Government Subvention					
1.	The School or faculty has a timely and efficient method of using government subvention for smooth financial operation.					
2.	The school or faculty uses the subvention efficiently and in a timely manner to settle the creditors and ensure smooth financial operation.					
3.	School or faculty uses the government subvention in financing administrative costs					
4.	The central administration of the university uses subvention for the payment of allowances and salaries					
5.	School or faculty effectively matches the subvention inflows and outflows of cash so as to maintain adequate cash.					
6.	The school or faculty reserves some of the subventions for forecasted or unexpected requirements					
7.	The school or faculty uses part of the subvention for infrastructure capital management					
8.	School or faculty effectively manages subvention by investing in short-term financial instruments					
9.	School or faculty has best practices to ensure government subvention accountability and continuous improvement of financial utilization processes					
	Financial Sustainability					
1.	The school or faculty sets an adequate allocation of financial resources for all planned activities					
2.	The school or faculty ensures that government subvention and internally generated income are available in time according to the planned budget and schedule					
3.	The school or faculty manages debt and ensures that the debts accrued are less than those of the previous year.					
4.	The school or faculty has diversified its income sources					
5.	The school or faculty has a monitoring and reporting system in place for government subvention					
6.	The school or faculty undertakes constant monitoring of the administrative cost ratio					
7.	The school or faculty often calculates the operating surplus ratio to measure the ability to generate income from ongoing operations over the long term.					

Section E: Challenges associated with Internally Generated Income and Government Subvention on Financial Sustainability

SN	**Items**	1	2	3	4	5
1.	Political influence hinders internally generated income initiatives and access to government subsidies					
2.	Absence of horizontal and vertical structural integration					
3.	Inefficient monitoring					
4.	There is inadequate management skill and limited qualified tax administrators within the university					
5.	There is a lack of understanding of the internally generated income and government subvention					
6.	There is a lack of proper bookkeeping of internally generated income and government subventions					

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