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RESOURCE REALLOCATION AND SUSTAINABILITY OF PUBLIC UNIVERSITIES IN KENYA

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ABSTRACT

The operational environment for Kenyan universities has become increasingly competitive and volatile. To remain viable, public universities must address resource reallocation. This study investigated how resource reallocations affect the sustainability of public universities in Kenya. The study was guided by the Triple Bottom Line model and adopted a positivist philosophy, employing a descriptive cross-sectional design. Data was collected from 154 senior administrators (79 Deputy Vice-Chancellors and 75 Registrars) across all 35 chartered public universities in Kenya using structured questionnaires. Descriptive statistics, Pearson correlation, and multiple regression analyses were used to test hypotheses. Key findings revealed significant positive relationships between Resource reallocation and sustainability of public universities in Kenya. The study concluded that universities must prioritize optimizing resource allocation. The study recommended that leaders should learn new techniques on how to remain agile even in changing environments to achieve sustainability of the institutions. These findings underscored the critical synergy between resource reallocation and ensuring the long-term sustainability of Kenya's public universities.

Key Words: *Redistribute resources, Redesign systems, Mobility in internal resources, Resource deployment*

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INTRODUCTION

Struggle for sustainability is not limited to in developed nations but also developing countries. In Africa, public universities were established with the primary goal of enabling these institutions to lead efforts in tackling poverty, social instability, low productivity, unemployment, food insecurity, illiteracy, and disease. Following independence, underdevelopment emerged as a pervasive issue across the continent, prompting governments to establish public universities. However, beyond competition, African institutions face additional challenges—including political, demographic, economic, and financial constraints—alongside infrastructural deficiencies. These limitations persistently threaten their long-term viability (Association of African Universities, 2025; Ezaki & Ogawa, 2024; Sifuna, 2023). For instance, Jacob (2020) highlighted the unsustainable state of Nigerian argued public universities due to numerous challenges, such as inadequate funding, a shortage of academic staff, insufficient infrastructure, corruption, frequent strikes, poor data planning, political interference, weak governance, and insecurity.

In Kenya, public universities face growing survival challenges due to uncertainties in their operating environment. The unprecedented hindrances such as ineffective internal processes leading to a decreased number of self-sponsored students enrolment who form a significant portion of students in the Kenyan public universities, low worldwide ranking of public universities due to less research uptake, weak university collaborations due to closed system nature of public universities, and low capitation from the government slow pace for income generating activities have continued to impact university sustainability over time bringing the university leadership back to the drawing boards (Kariuki et al., 2021; Kimathi & Irungu, 2024). These persistent challenges threaten long-term sustainability, compelling university leadership to reconsider their strategies. This raises the question of how strategic agility could help address these issues and improve sustainability in an increasingly volatile higher education landscape.

Rotich and Okello (2019) found that resource fluidity encompassing factors such as personnel mobility and flexible budgeting plays a critical role in fostering strategic agility within Kenyan public universities. Musyoka (2023) assert that embracing innovation, both technological and organizational, significantly contributes to improved institutional performance and long-term sustainability. These findings underscore the growing importance of strategic agility as a mechanism through which public universities in Kenya can navigate uncertainty and achieve sustainable success.

Resource Reallocation refers to the organization's capacity to redistribute and optimize its human, financial, and technical resources to meet shifting priorities (Red-Well et al., 2021). It involves continuously aligning resources with strategic goals, often in collaboration with partners or networks. Rapid and cost-effective redeployment of resources is key to pursuing new opportunities and sustaining innovation (Shi & Shi, 2022). It can be also referred to as an organization being able to cooperate with clients and business partners' network fast and continuously reconfiguration of the mixture of capabilities to form an innovative movement with relative facility. The speed and cost of resource redeployment are the rational parameters utilized to select between strategic opportunities. The ability to allocate and reallocate resources is fundamental to firms' initiatives toward new developments and offerings (Shi & Shi, 2022). Organizational resources significantly impact an organization's success and ability to thrive in a dynamic environment. These comprise flexibility, adaptability, and responsiveness among the workforce enabling them to sail through the challenges and effectively grab opportunities. The study focused on market innovation, market perception, change management, and resource reallocation as strategic agility metrics.

Kharlamova and Shvartsman (2019); Grunert (2021); Mendels (2020) and the World Commission on Environment and Development (1987) have described sustainability as the capacity of a system, process, or entity to persist and endure for an extended period, while concurrently minimizing negative impacts on the environment, society, and the economy, heightened rivalry for student enrollment, diminishing rates of enrollment, and changes in the demographic composition of students. Additionally, it encompasses the

conscientious utilization of resources to ensure the enduring sustainability of economic, social, and environmental dimensions.

According to Chikafalimani et al. (2021), historical records indicates that upon attaining independence, a significant number of African nations actively endeavored to establish at least one national public university. Chikafalimani et al. (2021) states that a public higher education opportunity and fostering intellectual exploration. The institution grants academic degrees in many disciplines and is either state-owned or receives significant government funding.

According to the data provided by the Commission for University Education (CUE) in 2023, Kenya has 78 universities that are chartered. There are 35 public chartered universities, 25 private chartered universities, 6 public university constituent colleges, 8 institutions with letters of temporary authority, 3 private university constituent colleges, and 2 public specialized degree-awarding universities. In Kenya, the responsibility for the administration and supervision of public universities lies with the Commission for University Education (CUE) and the Ministry of Education. The Higher Education Loans Board (HELB) aims to offer financial aid to students in the form of loans and bursaries, particularly those hailing from underprivileged homes (CUE, 2022; Government of Kenya, 2014; 2019; CUE, 2021; Ministry of Education, 2020). The necessity for strategic agility arises from the confluence of policy changes, shifts in the operating environment, and the various challenges encountered by public universities.

Statement of the Problem

According to a study from the Kenya National Bureau of Statistics (KNBS) in 2021, state universities had debts of more than Ksh 56.2 billion (about \$450 million) due to a decrease in government funding hence, fewer students were enrolled under the new funding scheme. According to research published in the African Journal of Education and Practice (2023), financial instability at universities is associated with diminishing educational quality, with many institutions failing to recruit enough teachers or maintain infrastructure.

According to the Auditor-General's Report (2020/2021), some institutions, notably the University of Nairobi (UoN) and Kenyatta University (KU), were experiencing financial difficulties as a result of unpaid statutory deductions, outstanding invoices, and wage arrears.

Research published in the International Journal of Education and Research (2022) highlighted that government funding for public colleges fell by more than 30% in real terms between 2016 and 2021, requiring schools to rely primarily on parallel degree programs (Module II) and commercial initiatives. According to the World Bank's Kenya Economic Update (2023), decreasing state financing has resulted in staff layoffs, infrastructure project delays, and increasing pressure on university administration to seek alternate revenue streams.

Therefore, the current study determined the influence of resource reallocation on the sustainability of public universities in Kenya. The findings of this study would offer valuable insights for policymakers, university administrators, and scholars in designing adaptive strategies to promote the long-term sustainability of higher education institutions.

Objective of the Study

This study examined the effect of resource reallocation on the sustainability of public universities in Kenya. The study was guided by the following hypothesis;

- **H₀:** There is no significant effect of resource reallocation on the sustainability of public universities in Kenya.

Theoretical Framework

The Triple Bottom Line (TBL) Model

This model suggests that a company should be concerned with more than just its economic performance and should give equal attention to its environmental and social impacts. The TBL Model encourages organizations to consider the long-term consequences of their decisions and to strive for a balance between economic growth, environmental protection, and social responsibility. The TBL Model is often seen as a way for businesses to demonstrate their commitment to sustainability and to build trust with their stakeholders. It is used to measure the sustainability of a company's operations, and it is increasingly being used to evaluate the performance of organizations (Hidalgo, 2018).

The concept of TBL as a way of measuring organizational performance in terms of economic, environmental, and social factors ensures a more balanced approach to their operations and can better assess their overall impact on society (Lim, 2019). This concept has been implemented by many companies worldwide and has grown in popularity as an alternative to traditional corporate financial analysis. The TBL framework enables organizations to make decisions that are environmentally, financially, and socially sustainable. This includes making investments in green technologies, implementing ethical labor practices, and developing partnerships with local communities.

This concept also supports the idea of corporate social responsibility, as it encourages companies to consider their effects on the environment and society, as well as their financial performance (Zubeltzu-Jaka et al., 2024).

The Triple Bottom Line (TBL) model is a sustainability framework that evaluates a company's commitment to social, environmental, and economic responsibilities. Social responsibility emphasizes the organization's impact on all university stakeholders, including employees, students, suppliers, and the community in which it operates. It involves ensuring fair labor practices, promoting health and safety, and contributing positively to societal well-being.

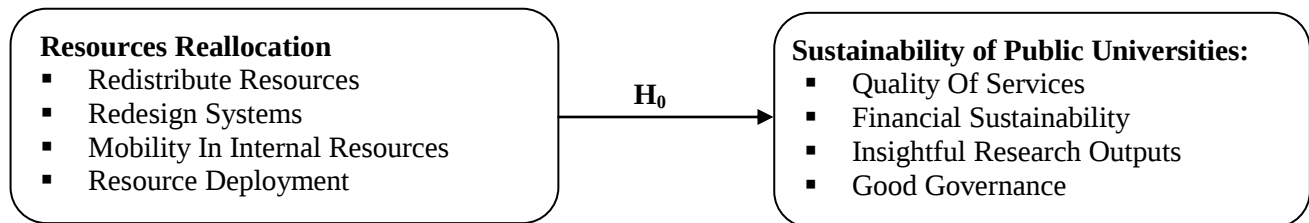
The TBL model posits that institutions can achieve sustainable success by balancing three key dimensions: economic, social, and environmental. This holistic approach encourages institutions to look beyond short-term financial gains and consider the long-term impacts of their operations on society and the environment. Adoption of the TBL framework can enhance brand reputation, strengthen stakeholder relationships, and contribute to long-term profitability. However, the model is not without its limitations. One of the primary criticisms lies in its difficulty to quantify social and environmental impacts alongside economic performance, largely due to the absence of standardized metrics and the inherently subjective nature of such assessments. This disparity complicates efforts to develop a unified reporting system that accurately reflects an organization's overall sustainability performance (Alowais, 2024; Srivastava et al., 2022).

Moreover, the TBL model lacks clarity in defining and integrating its three components. The overlapping and occasionally ambiguous boundaries between the social, environmental, and economic dimensions can result in confusion and inconsistent implementation of the framework. These critiques highlight the need for more robust, clearly defined, and transformative frameworks to effectively drive and measure sustainability (Lopes, 2025).

The TBL Model was used to measure the sustainability of universities by assessing their economic, environmental, and social sustainability. Economic sustainability was measured by assessing the university's financial health and its ability to generate sufficient revenue to cover its expenses. Environmental sustainability was assessed by measuring the university's commitment to sustainability initiatives such as renewable energy use, waste management, and water conservation.

Moreover, social sustainability was evaluated by examining the university's commitment to diversity and inclusion in its student body, faculty, and staff. Additionally, the university's commitment to providing a safe and supportive learning environment was assessed. By assessing universities against the three pillars of the TBL Model, it is expected to measure their sustainability and determine the areas where improvements can be made.

Conceptual Framework



Independent Variables

Dependent Variable

Figure 1: Conceptual framework (Author, 2025)

This study tested the following hypotheses, as outlined in the conceptual framework.

H₀: There is a significant relationship between of resource reallocation and the sustainability of public universities in Kenya.

LITERATURE REVIEW

Empirical Review of Literature

Resource Reallocation and Sustainability of Organizations

Resource reallocation refers to the deliberate re-distribution of resources such as; assets, personnel, and finances amongst others within an organization to better align with current business objectives and market demands. This process involves analyzing resource utilization, identifying inefficiencies, and adjusting resource deployment to optimize performance and sustainability. Effective resource reallocation ensures that an organization can adapt to changes in the business environment, seize new opportunities, and maintain a competitive advantage (Morandi et al., 2020).

Chang (2023) examined various funding schemes within Taiwan's Higher Education Sprout Project (HESP) to identify key factors that influence funding distribution for teaching, research, and the transformation of public goods. The author studied the influence of policy initiatives on the transformation of public goods in the direction of sustainable development. Data was obtained from the Ministry of Education and Scopus databases. A regression analysis was first conducted to determine the key factors influencing funding allocations in academic institutions. Next, logistic regression was used to assess the effects of the system and sector on the funding outcomes. The study then employed partial least squares structural equation modeling (PLS-SEM) to determine the causal effects among the study variables, followed by the bootstrap method to validate the model's robustness. The results showed that private technology groups received less HESP funding, with diversity being a significant factor. However, the study revealed that funding allocations did not affect teaching and research activities based on sector or system. In contrast, the study highlighted that the transformation of public goods through special funding initiatives plays a crucial role in advancing sustainable development in higher education. The study has a contextual gap since it majorly focused on Taiwan's higher education system, which may limit the generalizability of findings to institutions in different cultural or national contexts such as Kenya's higher education system.

A study by Xu (2024) investigated explore universities allocation of financial resources in response to external expectations, focusing on administrators' perspectives. The study consisted of two parts with separate samples of mid-level administrators in China's public universities. In Study 1, a sample of 63 participants was used to adapt a survey designed to measure perceptions of administrators on university budget. Study two confirmed the four-factor structure of the scale, updated the literature on present allocation of resource allocation in Chinese public universities, and investigated the associations between allocation of internal resource and government functions. The findings indicated that administrators perceived some aspects of institutional resource allocation to have stronger associations with government regulation and funding opportunities than others. These results suggested that the adapted survey was a reliable tool for investigating personnel in Chinese universities. Additionally, the study provided evidence supporting a strategic balance approach to resource allocation in China's public universities. While the study examined financial allocation strategies, it does not directly assess how these strategies affect academic quality, research output, or student success which reflects the sustainability of the higher education institutions in Kenya.

Rotich and Okello (2019) investigated how resource reallocation impacted agility among universities in Kenya. The target population comprised 70 officers, with 69 of them providing responses. The respondents included the University's DVCs, Heads of Department (CODs and HODs), School Deans and Directors of Academic Programs, Registrars, Medical Department staff, Procurement Department staff, and the Director of Planning. The study used structured questionnaires as the primary research tool, and the data were analyzed using descriptive statistics. The findings of the study indicated that agility was significantly associated with resource fluidity. The study reveals a conceptual gap to determine the effect of resource reallocation on university sustainability in Kenya.

An empirical study by Kitur and Kinyua (2020) aimed to establish the relationship between resource reallocation and the firm performance of tours and travel companies in Kenya. A descriptive research design was adopted in the study. The target population consisted of management staff across four levels in tours and travel companies in Kenya: senior management, middle management, functional management, and technical staff. A proportionate stratified sampling technique was employed to select a sample size of 176 from the target population of 586 units. Data was collected using a questionnaire and analyzed using simple linear regression models. The study concluded that there was a statistically significant relationship between resource fluidity and firm performance amongst tours and travel firms in Kenya. The study conveys a conceptual gap in investigating the relationship between resource reallocation and the sustainability of public universities in Kenya.

In a study by Cheruiyot (2022), the influence of strategic agility factors on the survival of hotel businesses in Kenya was examined, with a particular focus on the role of resource reallocation. The research adopted a descriptive research design and employed quantitative techniques to assess the association between strategic agility and hotel survival. The targeted 83 star-rated hotels in Nairobi City County, with a census sampling method used to select all senior managers, including managing directors and those in charge of strategy or operations. Data were collected through structured questionnaires. The findings revealed that resource reallocation had a significant positive effect on the survival of star-rated hotels in Kenya, highlighting the critical role of strategic agility in the hospitality industry's resilience. However, due to differences in the way of operation between the food industry and the education industry, the findings cannot be applicable to the sustainability of public universities in Kenya.

Red-Well et al. (2021) conducted a study to assess the influence of resource reallocation on the competitiveness of aluminum manufacturing firms in Nigeria. The research utilized an analytic ex post facto survey design. The target population consisted of 56 managers and directors from the head offices of seven major aluminum manufacturing firms, and the study employed a census approach without any sampling technique. Primary data was collected through structured questionnaires. Descriptive and inferential statistics,

including mean, standard deviation, and regression techniques, were adopted for data exploration and test of hypotheses. The study found that resource reallocation had a significant and strong influence on the competitiveness of the aluminum manufacturing firms in Nigeria. The study conveys a conceptual gap in investigating the relationship between resource reallocation and the sustainability of public universities in Kenya.

Nwachukwu and Chladkova (2019) conducted a study to explore how organizational structure moderates the link between firm resources, the ability to conduct strategic analysis, and strategic performance. The study adopted a survey method to gather data from 105 managerial personnel across four multinational organizations in Nigeria's mobile telecommunication sector. To analyze the data, correlation and multiple regression analysis were used to assess the relationships between the variables. Furthermore, hierarchical regression analysis was conducted to evaluate the moderating effect of organizational structure on the relationships between human resources, financial resources, strategic analysis capability, and strategic performance. The findings of the study revealed that human resources, financial resources, and strategic analysis capability all had a positive and significant relationship with strategic performance. Additionally, the study found that organizational structure moderated the relationship between these resources and strategic performance, suggesting that the structure of an organization plays a crucial role in optimizing the effectiveness of its resources and capabilities to drive its performance. Nevertheless, the study has conceptual gap since it focused on the performance of the organization leaving out other measures such as; the sustainability of the organization.

Efeomo et al. (2022) examined the impact of resource reallocation on organizational performance within Nigeria's manufacturing sector. The study employed a mono-method approach using a descriptive survey design. Data was obtained from 96 questionnaires distributed to employees across selected manufacturing firms, with 161 valid responses received. The data was analyzed using Structural Equation Modeling (SEM-PLS). The findings of the study showed that resource reallocation had a positive and significant effect on a firm's performance in the Nigerian manufacturing industry. This indicates that strategic reallocation of resources plays a crucial role in improving the overall performance of firms within this sector. However, the findings cannot be generated for higher learning institutions due to differences in management, funding, and the way of operation.

Ali et al. (2022) examined the impact of resource allocation on the performance of cement manufacturing firms in Kenya. The study focused on 209 employees from five prominent cement manufacturing companies in the country. A stratified random sampling technique was used to select 137 participants. Data was collected using questionnaires and analyzed through both descriptive and correlation analysis. The findings revealed that resource allocation had a positive and significant effect on the organizational performance of cement manufacturing firms in Kenya. The study reveals a conceptual gap in determining resource reallocation influence on the sustainability of the organization. Further, the findings are limited to manufacturing firms and cannot be applied to public universities.

Obado et al. (2023) investigated the impact of planning strategy on the performance of county governments in Kenya, focusing on identifying key performance indicators for effective resource allocation and service delivery. The study was grounded in the Resource-Based Theory and the McKinsey 7s Framework. It was conducted in Migori County, with the unit of analysis comprising 102 county government employees, including chief officers, directors, and heads of departments involved in the formulation, implementation, monitoring, and evaluation of resource allocation strategies. The study used a census survey and a descriptive research design, with data collected via questionnaires. The findings concluded that performance targets, setting time frames, and optimizing resource utilization were crucial for enhancing service delivery in county governments. Both county governments and public universities are state-owned institutions, Nevertheless, the

findings cannot be applied to public universities because of variations in institutional operations and senior management.

Micheni et al. (2025) sought to determine the influence of resource mobilization on the sustainability of donor-funded projects in the health sector in Kenya. This study adopted the positivism research philosophy and an explanatory research approach to identify the precursors of sustainability of donor-funded programs in Kenya's health sector. The unit of analysis for the study was eight non-profit making health service provider entities in the health sector in Kenya. The unit of observation included 652 employees working in the health sector. A sample size of 248 was used. Findings: The findings revealed that changes in resource mobilization accounted for 35.5% of the variance in the sustainability of donor-funded projects within Kenya's health sector. Additionally, a positive and statistically significant relationship was established between resource mobilization and the sustainability of these projects. However, findings in the health sector are not applicable to the education sector attributed to contextual differences.

An empirical study by Ingosi et al. (2024) examined the impact of financial resources on the performance of public universities in Kenya. Using a correlational research design, the study targeted a population of 160 respondents, with a sample size of 114 determined using Yamane's formula. Both descriptive and inferential statistics were used for data analysis. The findings revealed a strong positive relationship between financial resources and university performance. The study contributes to the existing literature by emphasizing the crucial role that financial resources play in improving the performance of public universities. However, the study was limited since it focused on financial resources leaving out other organizational resources such as workforce, equipment, and technological resources among other resources that may affect the performance of the education institutions.

A study by Chumba (2023) explored how financial resource mobilization strategies influence the fiscal sustainability of Kenyan universities. The study assessed the influence of five core strategies: fee collection, donor funding, investment, consultancy funding, and partnerships and linkages. Employing a quantitative, cross-sectional correlational research design, the study analyzed quantitative data using statistical software, presenting results through bar charts, frequencies, and percentages, while qualitative data were analyzed narratively. A census approach was adopted, targeting all 71 universities in Kenya as of December 31, 2018. Data collection involved structured questionnaires for primary data and data-collection sheets for secondary data. Findings from simple and multiple linear regression analyses demonstrated that each of the five strategies significantly and positively influenced the financial sustainability of the universities. However, the study covered all the universities of Kenya making it difficult to apply the findings to specific types of the university. This portrays research gaps in conducting studies on each type of the university. The current study fills the gap by focusing on public universities only.

Gupta (2023) examined the optimal allocation of resources across various stores within a retail chain to enhance sustainable efficiency. The study contributed to the existing body of knowledge in three key ways: first, by proposing resource reallocation models based on data envelopment analysis (DEA) that integrate sustainability into the efficiency measurement process; second, by incorporating both centralized and decentralized reallocation decisions based on input-output characteristics; and third, by exploring different scenarios, such as maintaining or reducing total resources through reallocations in line with management objectives. The findings highlighted the significant role of business in achieving sustainability goals while also capitalizing on unique growth opportunities. In addition, the research emphasized the important contribution of retail to Sustainable Development Goals (SDGs) such as; improved well-being, decent working conditions, and responsible consumption. The study's models may not fully account for the rapid changing market dynamics, such as; shifts in consumer behavior and economic fluctuations. The current study addressed the gap by including the market dynamics like customer perceptions, customer needs, and industry changes.

METHODOLOGY

This study was grounded on positivism research philosophy. The adoption of this research philosophy facilitated a well-rounded and thorough investigation of the research inquiries, hence enabling the incorporation of various data sources and viewpoints. The study employed a cross-sectional research design, deemed appropriate for enabling the collection of primary data from a sizeable population, thereby enhancing the accuracy and generalizability of the study findings. The study comprised various universities located in different counties across Kenya. This study was undertaken in all 35 public universities in Kenya which were located across Kenya. The study's target population comprised of 154 senior managers including Deputy Vice Chancellors (DVCs) and the registrars at 35 public universities in Kenya. The study was confined to senior managers since they were charged with the role of continually making decisions in the face of economic turmoil and business competition challenge and can therefore offer relevant information for this study. They were the officers who advise such institutions on how to develop quality products and services that can ensure sustainability.

The study adopted a census approach in obtaining data from all the public universities in Kenya since the population was not large. The sample consisted of 154 participants consisting of 79 DVCs and 75 registrars.

This study used primary data since strategic agility was an element of management practice, it was more accurate to measure it using primary data as opposed to a proxy based on secondary data. A structured questionnaire was employed to gather information from the respondents. Questionnaires were useful since they gather data that cannot be seen directly and draw from the opinions, experiences, and successes of specific research participants (Pandey & Pandey, 2021).

FINDINGS

Response Rate

Response rate refers to the proportion of completed surveys returned by eligible participants in an empirical study. This study conducted a census survey involving of 35 public universities in Kenya. A total of 154 questionnaires were distributed electronically via Google Forms to all public universities. To enhance the response rate, follow-up phone calls were made and reminder emails were sent to the targeted participants. Out of 154 questionnaires administered, only 108 responses were obtained. This constituted 70% of the questionnaire response rate. For completeness, online data collection collected tools were checked.

Descriptive Statistics

Descriptive statistics was done on resource reallocation and university sustainability. Descriptive statistics are important since they condense raw data into simple summaries that are clear, easy to understand as well as the spread of the data collected.

Resource Reallocation

Resource reallocation was used as an independent variable in this study. The variable was measured using four indicators, namely: redistribute resources, resource deployment, mobility in internal resources, and redesign systems. A total of 8 statements were used to operationalize resource reallocation. The opinions of the respondents about the statement were rated using a 5-point Likert scale ranging from 1 "Strongly Disagree" to 5 "Strongly Agree". Descriptive statistics such as mean and standard deviation were computed.

Table 1: Resource Reallocation

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
a. Our university efficiently redistributes resources	3.7	16.7	28.7	38.9	12.0	3.39	1.022
b. Our university uses resource redistribution as a fundamental tactic.	4.6	12.0	27.8	44.4	11.1	3.45	0.999
c. Our university's outcomes are greatly improved by the judicious redistribution of resources.	0	3.7	44.4	38.0	13.9	3.62	0.770
d. Our university embraces internal resource mobility.	3.7	3.7	32.4	47.2	13.0	3.62	0.894
e. At our university, redesigning systems to take matters of concerns into account is standard procedure.	8.3	3.7	20.4	51.9	15.7	3.63	1.054
f. At our university, there is mobility of people and knowledge, institutionalized rotation of jobs and management that embraces knowledge sharing	3.7	7.4	20.4	48.1	20.4	3.74	0.989
g. Our university embraces flexible budgeting and continuous change in environmental dynamics	8.3	3.7	15.7	59.3	13.0	3.65	1.035
h. The university embraces resource reallocation and utilization of its capital resources	3.7	7.4	12.0	45.4	31.5	3.94	1.035
Aggregate						3.63	0.975

Source: Research Findings (2025)

The aggregate mean and standard deviation of items of resources reallocation were 3.63 and 0.975 respectively. This suggests a moderately positive perception of the management of university resources. The respondents highly rated the statement that the university embraces resource reallocation and utilization of its capital resources (Mean = 3.94, SD = 0.975). This indicates a strong belief in the utilization of resources in an efficient way.

However, the moderate standard deviation reflects the diverse opinions among the respondents. Respondents were in agreement with university practices such as mobility of people and knowledge, rotation of jobs within the institution, and embracing knowledge sharing (Mean = 3.74, SD = 0.989). The moderate standard deviation translates to a significant number of respondents disagreeing possibly due to inconsistency in implementation. The responses also reflected positive sentiments towards the university embracing flexibility in budget and continuous change in environmental dynamics (Mean = 3.65, SD = 1.035). However, the high standard deviation suggests mixed opinions on budget control experiences across departments within the institution. Respondents moderately agree on university redesigning systems to take matters of concern (Mean = 3.63, SD = 1.054), but a higher standard deviation reflects varied opinions among the respondents. Respondents generally agreed that judicious redistribution of resources leads to improved outcomes (Mean = 3.62, SD = 0.770). The low standard deviation indicates consistent agreement on the positive impact of resource redistribution on university outcomes. The respondents showed agreement with the university embracing internal resource mobility (Mean = 3.62, SD = 0.894).

This indicates that resources such as staff, funds, and equipment can move flexibly across the institution. About 20.4% of respondents disagreed with the statement that the university efficiently distributes resources (Mean = 3.39, SD = 1.022). This shows a notable dissatisfaction by some respondents on adequate retribution of resources. The moderate standard deviation denotes the spread of opinions on respondents' experiences. The score of the university using resource redistribution as a fundamental tactic was slightly higher compared to the previous statement with about 16.6% of respondents in disagreement (Mean = 3.45, SD = 0.999) indicating a more positive perception of redistribution as an astatic approach. The moderate standard deviation reflects fairly consistent opinions, though with slight variation.

Sustainability of Public Universities

Sustainability of public universities was used as study's dependent variable. It was measured using five indicators, namely: quality of services, research output, education and learning, governance, and operations. A total of 8 statements were used to operationalize university sustainability. The opinions of the respondents about the statement were rated using a 5-point Likert scale ranging from 1 "Strongly Disagree" to 5 "Strongly Agree". Descriptive statistics such as mean and standard deviation were also discussed.

Table 2: Sustainability of Public Universities

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
a. The university gives students the necessary assistance to finish their degree programs on schedule.	12.0	0	8.3	54.6	25.0	3.81	1.180
b. After completing their studies, graduates of this university have promising career possibilities.	3.7	4.6	7.4	49.1	35.2	4.07	0.974
c. The university publishes a sizeable number of influential research articles.	3.7	4.6	15.7	50.9	25.0	3.89	0.960
d. The infrastructure and facilities at the university were created with sustainability in mind.	0	15.7	39.8	32.4	12.0	3.41	0.897
e. The university is ranked top in academic affairs	0	4.6	36.1	23.1	36.1	3.91	0.952
f. The university makes a conscious effort to minimize its carbon footprint.	3.7	12.0	3.7	37.0	43.5	4.05	1.139
g. The various income generating activities and investments undertaken in our institution ensure financial sustainability	0	0	20.4	55.6	24.1	4.04	0.669
h. Timely and accurate reports are produced which enable proper decision making.	3.7	0	20.4	47.2	28.7	3.97	0.912
Aggregate						3.89	0.96

Source: Research Findings (2025)

The participants agreed with the statements of university sustainability with an aggregate average of 3.89 and a standard deviation of 0.96. Among the items of university sustainability, participants highly rated the statement that after completion of studies, graduates have promising career possibilities (Mean = 4.07, SD = 0.974). The lower standard deviation represents relatively consistent views with only 3.7 % of respondents strongly disagreeing. Respondents also agreed on university eco-friendly measures of university efforts to minimize carbon footprint (Mean = 4.05, SD = 1.139). However, the high standard deviation indicates some variation in how the respondents perceive how these efforts are effectively implemented. This is represented by 3.7 % of respondents strongly disagreeing with this statement. Respondents were in agreement on various income generating activities and investments undertaken to ensure financial sustainability (Mean = 4.04, SD = 0.669). The low standard deviation indicates high agreement and consistency in perception among the respondents. The lack of disagreement suggests extensive confidence in university strategies for financial stability. There was a general agreement of respondents on timely and accurate reports produced to facilitate decision-making within the institution (Mean = 3.97, SD = 0.912). The moderate standard deviation suggests some respondents (3.7%) strongly disagree, thus confidence in the university reporting processes. The respondents agreed on the top ranking of the university in academic affairs (Mean = 3.91, SD = 0.952), the moderate standard deviation indicates consistency in views among respondents. However, the 36.1% of undecided respondents may suggest some lack of clear information about the university's academic standing. The respondents overall agreed with a sizeable number of influential articles published by the university (Mean = 3.89, SD = 0.960).

However, the 15.7 % neutral responses and 3.7% strongly disagree may suggest that while some respondents have positive perceptions of research output, there may be concern about its impact or consistency across disciplines. The results showed most respondents agreed that the university provides adequate support for timely completion of degree programs (Mean = 3.81, SD = 1.180). The high standard deviation indicates a significant spread in opinions resources where some students may experience gaps in guidance or resources possibly in specific programs or departments. However, the results showed that infrastructure facilities in the universities had the lowest score (Mean = 3.41, SD = 0.897). This indicated that public universities face infrastructural challenges as most respondents (39.8%) were undecided on whether the university infrastructure was created with a sustainability mind. Additionally, 15.7 % disagreed which could point out visible gaps in infrastructure in supporting sustainability efforts.

Correlation Analysis

The study sought to establish the level of association between variables. To achieve this, Pearson correlation analysis was adopted. The Pearson type of correlation coefficient was adopted to investigate the link between university sustainability and resource reallocation of government universities in Kenya. The correlation matrix for the variables was presented in Table 3 below.

Table 3: Correlation matrix

Variable	University Sustainability	Resource Reallocation
University Sustainability	1	
Resource Reallocation	0.389**	1

Source: Research Findings (2025)

The correlation matrix shows significant correlations among the variables. Resource reallocation was strongly and significantly positively correlated with sustainability. The correlation coefficients of above 0.7 among the paired independent variables were confirmed using VIF values to ensure no presence of multicollinearity among the variables.

Hypothesis Testing

Resource Reallocation and Sustainability of Public Universities

The objective was to determine the influence of resource reallocation on university sustainability. Resource reallocation composite score was obtained by aggregating the individual scores of the items of resource reallocation. The OLS with robust standard errors was adopted as a principal estimation for assessing market innovation and university sustainability relationships. The following null hypothesis tested the relationship outlined by the fourth objective;

H_0 : There is no significant influence of resource reallocation on the sustainability of public universities in Kenya.

For the purpose of estimation, a simple regression model specified as follows was adopted.

$$US = \beta_0 + \beta_1 RA + \varepsilon_1$$

Where:

US = university sustainability,

RA = resource reallocation,

β_0, β_1 are regression coefficients

ε_1 is the error term

Table 4: Resource reallocation and sustainability of public universities

US	B	SE	T	P	LLCI	ULCI
Constant	2.4696	0.3351	7.369	0.000	1.805	3.133
RA	0.3920	0.0902	4.346	0.000	0.2132	0.5708
R ²	0.1513					
Adj. R ²	0.1432					
F (1, 106)	18.89					
Prob > F	0.000					
N	108					

Source: Research Findings (2025)

The study findings in Table 4 revealed that the regression model was significant as conveyed by the adjusted $R^2 = 0.1432$, $F(1,106) = 18.89$, $p < 0.05$. The findings implied that resource reallocation explained 14.32% of the variance in sustainability when other predictors are excluded from the empirical model. The coefficients of regression ($\beta = 0.3920$, $t = 4.346$, $p < 0.05$) show that resource reallocation was a significant positive predictor of sustainability of public universities. The significant positive relationship between resource reallocation and sustainability resulted in the rejection of the null hypothesis four (H_{04}). The study findings imply that resource reallocation impacts the sustainability of public universities in Kenya by up to 39.2% holding other predictors constant. Therefore, an increase in resource reallocation enhances the sustainability of public universities in Kenya. The results of the study provides empirically supported perspective on the internal factors influencing sustainability, emphasizing the strategic importance of resource reallocation in shaping institutional outcomes.

The study findings converge with the findings of Rotich and Okello (2019) who established increase in resource reallocation leads to sustainability among universities in Kenya. The findings of the study are in line with those of Heaton and Agronin (2023) who concluded that public universities that reallocate resources are more likely to control larger budget surpluses hence boosting university performance. The estimation results also support the empirical investigation by Ongeti and Machuki (2018) who found that organization resources such as tangible, human, and intangible resources significantly influenced the organizational performance of state corporations in Kenya.

Analogous findings reported by Cheruiyot (2022) indicated that resource reallocation had a positive and significant effect on the survival of star-rated hotels in Kenya. The results of the current study reflected the findings of Efeomo et al. (2022) who suggested resource reallocation to positively and significantly influence the performance of manufacturing firms in Nigeria. Similar findings were reported by Kitur and Kinyua (2020) who concluded that the relationship between resource reallocation and firm performance amongst tours and travel companies was statically significant. Contrary to the findings, Khraim (2022) established the relationship between resource reallocation and firm performance in the IT sector is statistically insignificant.

The new regression equation following the results above was;

$$US = 2.4696 + 0.3920RA$$

CONCLUSION AND RECOMMENDATIONS

An increase in resource reallocation enhances the sustainability of public universities in Kenya. The results of the study provides empirically supported perspective on the internal factors influencing sustainability, emphasizing the strategic importance of resource reallocation in shaping institutional outcomes.

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The current study established a positive and significant linkage between resource reallocation and university sustainability. This suggests that optimal use of the resource reallocated promotes the environmental, financial, and social sustainability of public universities.

The current study recommends that public universities should adopt the various strategies. The study found that resource reallocation was associated with sustainability. It therefore recommended that the leaders and managers of the university should be retrained through seminars and conferences, where they will learn new techniques on how to remain agile even in changing environments to achieve sustainability of the institutions.

Contribution of Study Knowledge

The empirical investigation findings make significant contributions to the management practice. The results provide guidance to university management concerning the benefits of embracing resource allocation as a dynamic capacity that strengthens and improves their university sustainability. The study provides evidence that university sustainability is based on contented and thriving stakeholders namely; the community, students, employees, environment, suppliers, and investors who are key stakeholders for university sustainability. Understanding specific strategic agility components in decision-making has a noted impact on university sustainability.

Areas for Further Studies

Future empirical investigations should consider incorporating a variety of other control variables to moderate and mediate strategic agility and university sustainability relationships. Adding more control variables to the model results in a multi-moderated mediation model which improves the methodological precision.

Most of the prior empirical research including the current study have utilized the cross-sectional datasets to assess the relationship of study variables in varied contexts. Future research should consider the possibilities of exploring longitudinal datasets in evaluating the relationship of study variables. Longitudinal studies allow the researcher to examine the relationship between strategic agility, environmental factors, and university sustainability over a certain period by capturing the temporal changes rather than assessing the correlation among study variables. In addition, the integration of panel data which include both cross-sectional and time series data of the topic of interest. Under this estimation approach data is obtained from individual units observed over a specified period. This enables the researcher to manage heterogeneity across individual subjects used in the empirical model.

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