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INFLUENCE OF SOCIAL MEDIA MARKETING ON THE SUSTAINABILITY OF PUBLIC UNIVERSITIES IN KENYA

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Abstract:

Purpose of Study: This study examined the influence of social media marketing on the sustainability of public universities in Kenya. It sought to determine whether strategic use of social media platforms enhances institutional sustainability through improved visibility, stakeholder engagement, reputation building, and communication of sustainability initiatives within the changing higher education environment.

Methodology: The study adopted a positivist philosophy and ex post facto research design. A stratified sample of 307 senior administrative and academic staff from 35 public chartered universities in Kenya participated. Quantitative data were analyzed using descriptive statistics and binary logistic regression, while qualitative interview data were analyzed thematically to provide deeper insights.

Findings: The findings revealed that social media marketing significantly influences sustainability of public universities in Kenya. Universities with adequate social media marketing practices had higher likelihood of achieving sustainability outcomes compared to those with inadequate adoption (OR = 2.368, $p < .001$). Social media enhanced institutional visibility, stakeholder engagement, reputation development, and communication of sustainability actions. Descriptive results indicated moderate adoption of social media practices and sustainability initiatives among universities. Qualitative findings further showed that digital platforms support sustainability by enabling universities to showcase environmental activities, engage stakeholders, attract partnerships, and strengthen institutional legitimacy through transparent communication.

Conclusion: The study concludes that social media marketing is an important strategic tool for improving public university sustainability in Kenya. Effective digital communication, stakeholder interaction, and evidence-based sustainability messaging contribute to institutional resilience. Universities should integrate social media strategies into sustainability planning, marketing activities, and stakeholder engagement frameworks**.**

Keywords: *Social media marketing, sustainability, public universities, Kenya, stakeholder support, green marketing.*

1.0 INTRODUCTION

Sustainability is a serious problem at public universities in Kenya. Per the Commission for University Education (CUE, 2025), more than 65% of the public universities showed sharp drops in internally generated revenues, with about 23 out of the 35 public universities falling into technical insolvency. The growth rate in enrolments is now 5% a year, from the double digit levels achieved 10 years ago, and with staff growth at 2% a year. The total institutional debt in the sector has crossed Kshs 72 billion, which brings about recurring strikes of workers, statutory default and paralysis in operations (Kihaki, 2025). These trends all pose a danger to the future of tertiary education in Kenya.

In this context, social media marketing has become a game-changer for the communication, engagement, and promotion of sustainability of institutions around the world. Sustainability commitments can be effectively communicated via dynamic and interactive digital channels and to large audiences by universities, all at little or no cost (Schroeder, 2024; Lipschultz, 2023). As most of the University's stakeholders, including students and younger workforce, are actively using these platforms, making the best use of them can lead to better university uptake, better reputation and more access to sustainability-related funding.

Although the role of social media marketing in institutional sustainability has become evident in the rest of the world, the higher education institutional sector of Kenya is still under-explored in. Previous research in the field of green marketing in Kenya has mainly focused on manufacturing sector, the utilities sector and corporate arena. As such, there is a big empirical gap when it comes to understanding how green marketing strategies are applied to public universities in Kenya. To fill this gap, the study aims at examining specifically the influence of social media marketing on public Universities sustainability in Kenya.

Although there is wide documentation and evidence of sustainability problems in public universities in Kenya, the strategy of using social media marketing to correct problems has yet to be researched empirically. Similarly, while Kenyan universities are observed to be using social media to enhance their public relations, Chepkemoi (2021) found that more visibility and positive reputation of universities were gained. The study examined two universities and did not directly test social media marketing and sustainability outcomes. A multi-country analysis conducted by De Luca et al. (2022) concluded that the more institutions promote sustainability on social media, the more students they enroll and the more funding opportunities they secure. However, their study did not focus on the Kenyan context of universities. Hallar and Ali (2024), Hysa et al. (2021) and Kapoor et al. (2021) all validate the potential of social media as a means to promote environmental sustainability, but continue to be confined to corporate or international contexts. The gaps indicate that there has been no in-depth empirical research to understand the direct influence of social media marketing on sustainability outcomes in Kenyan public universities. This study directly contributes to addressing this knowledge gap, by providing evidence to draw from at the institutional level that can inform strategic/policy responses.

2.0 LITERATURE REVIEW

Green Marketing Theory

The theory of Green Marketing was developed by Peattie (1995) and Ottman (1993), and it state that adopting environmental responsibility in the marketing process gives an institution a competitive edge (Gulzar, 2023). The theory suggests that green marketing should be transparent, straightforward, and substantively related to measurable sustainability results, instead of being a simple marketing campaign (Duarte Santos, 2021; Lyulyov et al., 2024).

The major theoretical framework for this study is Green Marketing Theory. It views social media marketing as a strategic tool for universities to effectively engage and inform students, faculty members, alumni, government agencies, and the public on the reality of their commitment to sustainability. By using social media platforms like Facebook, Twitter, Instagram, and LinkedIn to post real-time evidence of their green efforts, universities can foster trust among stakeholders and enhance their credibility (Tomasella et al., 2024). This include posts such as implementing energy-efficient infrastructure, waste reduction initiatives, or research on environmental issues. In the context of a Singaporean university, Seow and Hussain (2024) substantiated that social media marketing in line with the principles of green marketing helps in increasing student loyalty and university reputation. The theory, thus, points towards the claim that strategic engagement of social media is a valid strategic force that can drive public university sustainability in Kenya.

Empirical Review

Social Media Marketing and University Sustainability

Evidence of the positive effect of social media marketing on institutional sustainability is growing worldwide. In a cross-country study of 3,045 social media posts from 173 different institutions using the CHAID technique, De Luca et al. (2022) found that those institutions that were active in communicating sustainability through social media had higher student enrollments, increased partnerships and better funding opportunities. In an empirical study of 174 respondents, Hallar and Ali (2024) found using regression analysis that social media campaigns increased the awareness of sustainability and affected their decision making. They further suggested that they should be further studied in educational settings. Hysa et al. (2021) conducted a survey-based study of 397 participants, and their findings revealed that younger generations, and in particular Generation Z, were highly sensitive to sustainability messaging via social media. This is particularly important as stakeholders within University are predominantly young.

In the hospitality industry, Kapoor et al. (2021) showed through experiments that authenticity, transparency and emotional engagement are key to effectiveness of sustainability campaigns on social media. A cross-sectional survey by Knupfer et al. (2023) of 16- to 25-year-old individuals in Germany revealed that young people who followed sustainability influencers were significantly more likely to engage in environmentally friendly actions. There was also an increase in their environmental knowledge positively moderating this relationship ($b = 0.07$, $p = .03$). Overall, this worldwide evidence proves that there exists a positive correlation between active social media marketing and improved sustainability results.

3.0 MATERIAL AND METHODS

Research Philosophy

In this study, positivistic research philosophy was utilized. Per positivism, reality is out there, not in the mind, and can be observed and measured in an empirical way, without the influence of personal interpretations, perceptions, or biases (Creswell, 2014). This is a philosophical perspective that is consistent with the quantitative-based approach used to evaluate the predicted relationship between social media marketing and university sustainability. It helps to apply statistical techniques such as binary logistic regression, to detect patterns and generate empirical findings that can be extrapolated to the population of public universities in Kenya.

Research Design

An ex post facto research design was used in the study. An ex post facto research is suitable for research that examines the influence of social media marketing practices on university sustainability because the researcher is not able to manipulate the factors studied in the study setting (Almalki, 2021; Ishtiaq, 2019). The design enables causal patterns among independent variable, social media marketing, and dependent variable, public university sustainability, to be explored with naturally occurring data.

Target Population

The target population were senior administrative and academic personnel of all 35 public chartered universities in Kenya. The study specifically addressed campus directors, academic registrars, deans, heads of departments, marketing officers and heads of finance, who are largely involved in the formulation of policies, operational management and implementing the sustainability and marketing strategies. 1,313 people were targeted, with distribution as follows:

Table 1: Population *Distribution*

Category	**Size**
Campus Directors	58
Academic Registrars	189
Deans	225
Heads of Departments	512
Marketing Officers	175
Heads of Finance	154
Total	**1313**

Source: (Commission for University Education (CUE), 2025)

Sampling Procedure

Stratified sampling was used in the study to have a proportional representation of all staff categories, thereby capturing the wide and diverse institutional perspectives on social media marketing and university sustainability. Simple random selection was used within each stratum to ensure equal chance of selection for each eligible participant.

The sample size was determined by applying Taro Yamane's sample size formula that is widely used in social science research:

$$n = \frac{N}{1 + N(e^2)}$$

Where n is the number of samples required, N is the population size (1,313), e is the margin of error (0.05 at the 95% confidence level). The sample size was calculated using formula and was 307 respondents. The sample was distributed proportionally among strata shown below:

Table 2: Sample Distribution

Category	Population Size	Sampling Ratio	Sample Size
Campus Directors	58	4.4%	14
Academic Registrars	189	14.4%	44
Deans	225	17.1%	52
Heads of Departments	512	39%	120
Marketing Officers	175	13.3%	41
Heads of Finance	154	11.7%	36
Total	**1313**	100%	**307**

Source: Author (2026)

Data Collection Instruments

A structured questionnaire was used to collect quantitative data. It comprised sections on demographic characteristics, social media marketing, stakeholder support, and university sustainability. Social media marketing was measured through active platform use, platform effectiveness, engagement tracking, institutional image building, external stakeholder engagement, and integration into the overall marketing strategy. Sustainability was assessed through academic program relevance, community impact, graduate contribution, internally generated revenue, income diversification, and staffing capacity. Construct items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Campus directors were also interviewed in a semi-structured manner to add depth and to corroborate quantitative data. Campus directors were selected as purposive sampling because they are strategically located in relation to decision making on green marketing and institutional management on sustainability. Themes that were relevant to social media marketing and sustainability were identified and a structured interview guide was developed and piloted before data collection. Interviews were held face-to-face or using virtual platforms (Zoom and Microsoft Teams) and were recorded with the consent of the interviewees, with a few notes made in the field.

Data Collection Procedures

Data were collected through physical questionnaires and secure Google Forms to reach respondents in geographically dispersed public universities. Participants received authorization and ethical information before providing informed consent. Systematic follow-up reminders and multiple communication channels supported completion while preserving voluntary participation, anonymity, and confidentiality.

Pilot Testing

A pilot test involving 30 participants from comparable staff categories assessed the clarity, relevance, and suitability of the questionnaire. Feedback was used to improve ambiguous wording and item order before the principal data collection exercise. Cronbach's alpha assessed internal consistency, with alpha score of 0.70+ adopted as the minimum acceptable threshold (Nunnally & Bernstein, 1994). Content validity was established through expert review, while construct validity was assessed using the Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity.

Data Analysis and Presentation

Means and standard deviations summarized the level of social media marketing and sustainability. Binary logistic regression was used because sustainability was categorized as sustainable (1) or non-sustainable (0). The analysis proceeded in three stages: bivariate regression tested the independent influence of social media marketing; multivariate regression estimated its adjusted influence alongside the other green marketing practices; and moderated regression assessed whether stakeholder support strengthened the social media marketing-sustainability relationship. Model interpretation used the Omnibus test, Hosmer-Lemeshow test, Nagelkerke R^2, classification accuracy, Wald statistics, odds ratios, and the significance of the interaction term at $p < .05$.

The bivariate model was specified as $P(Y=1) =1/ (1+\exp (-B_0+ (B_1X_1)))$, where Y represents university sustainability and X_1 represents social media marketing. Key informant interview transcripts were analyzed thematically through familiarization, coding, theme development, review, definition, and interpretation (Braun & Clarke, 2006). Recurring ideas concerning digital sustainability communication, institutional reputation, stakeholder interaction, and implementation were integrated with quantitative findings to provide explanatory depth and triangulation.

Ethical Considerations

The study was conducted ethically during the data collection process. Ethical clearance was obtained from NACOSTI (KeMU/ ISERC/BUS/96/2025) and NACOSTI license No: NACOSTI/P/25/4182139. Informed consent was obtained by briefing participants about the purpose, procedures, risks and benefits of the study. Data confidentiality was strictly respected by using anonymization of the responses and by storing the data in password protected files. Voluntary participation was assured where withdraw at any time without repercussions among participants. All of these measures provided for the rights, well-being and dignity of all the participants were respected and protected.

4.0 RESULTS

Reliability and Validity of Measures

The measures showed good internal consistency and construct validity. The Cronbach's alpha for social media marketing, stakeholder support, and sustainability of public universities was 0.976, 0.976, and 0.991, respectively, which were all above the accepted threshold value of .70 (Nunnally & Bernstein, 1994). The KMO values varied between .948 and .955 and Bartlett's tests were significant at $p < .001$ indicating sampling adequacy and factorability.

Table 3: Reliability and Validity of Key Constructs

Construct	Cronbach's α	Items	KMO	Approx. χ^2	df	p-value	Decision
Social Media Marketing	0.976	6	0.949	2358.215	15	< .001	Adequate
Sustainability Of Public Universities	0.991	6	0.955	3562.951	15	< .001	Adequate

Source: Survey data (2026).

Descriptive Findings on Social Media Marketing

Participants were presented with six statements on social media marketing practices. Results in table 4 revealed mean score of 3.70 and 3.84, which implied that participants agreed with all the statements, which is evidence of the university using social media platforms, to promote sustainable marketing. These scores provide insight on the use of social platforms for sustainability communication by universities and how the use of analytics and strategic integration is not consistent. Digital sustainability communication needs to have a clear message, credible evidence, be responsive to different stakeholders, and be systematically measured in terms of reach and engagement (Kapoor et al., 2021; Lipschultz, 2023; Schroeder, 2024).

Table 4: Descriptive Analysis of Social Media Marketing

Item	N	Min	Max	Mean	Std. Dev.
The university actively uses social media platforms to promote sustainability initiatives.	280	1	5	3.70	0.962
Social media platforms are effective tools for promoting the university’s sustainability efforts.	280	1	5	3.85	1.006
The university tracks engagement metrics on social media for sustainability-related content.	280	1	5	3.74	1.023

The use of social media helps the university build a sustainable institutional image.	280	1	5	3.79	1.014
The university engages with external stakeholders via social media on sustainability issues.	280	1	5	3.84	0.900
The university's use of social media for sustainability is part of its overall marketing strategy.	280	1	5	3.74	1.041

Source: Survey data (2026).

Descriptive Findings on Sustainability of Public Universities

Participants were presented with six statements on sustainability of public universities in Kenya. Results in table 5 showed mean score range between 3.66 and 3.86, which was evidence that participants agreed with all the set of statement given with implication that universities in Kenya were moderately sustainable. In aggregate, outcomes indicate that public universities have sustainability fundamentals in terms of academic relevance, outreach, staffing and alternative sources of income, yet their long-term sustainability is not even.

Table 5: Descriptive Analysis of Sustainability of Public Universities

Item	N	Min	Max	Mean	Std. Dev.
The university regularly reviews and updates academic programs to meet emerging societal and industry needs.	280	1	5	3.75	1.058
The university addresses community challenges through research and outreach activities.	280	1	5	3.86	1.116
Graduates from this university make a positive contribution to national and regional development.	280	1	5	3.66	1.092
The university has effective strategies for generating income beyond government funding.	280	1	5	3.81	1.012
Internally generated revenue complements government funding in supporting university operations.	280	1	5	3.79	1.029
The university has adequate teaching staff to deliver quality education.	280	1	5	3.76	1.077

Source: Survey data (2026).

Qualitative Findings

As a result of the interviews it was determined that social media is a sustainability communication and engagement infrastructure. Campus leaders said that digital platforms enable campus to communicate environmental efforts quickly, establish a "green" brand, and continue to directly communicate with students, graduates, communities, partners, and potential donors. The use of the

Internet was especially helpful when showcasing planted trees, waste reduction, renewable energy, the conservation programs and the research on sustainability. Thus, the qualitative results provide an explanation as to why the quantitative results have a positive association by demonstrating how social media enhances visibility, legitimacy, and stakeholder engagement.

Illustratively, one interviewee 04 noted, *"When we post sustainability activities online, stakeholders respond immediately, students share, alumni comment, and partners reach out to collaborate".*

The interviews also showed that getting your website noticed on the internet is not enough. The key stakeholders should engage with sustainability messages in ways that involve participation, sharing of content, feedback, advocacy, partnerships and provision of resources. Respondents highlighted the loss of trust in communication when commitments are advertised but not seen to be implemented, and when universities do not respond to stakeholder input. This can help understand why the moderated model was more effective than the non-moderated model; stakeholder support translates digital attention into institutional action and sustained results.

Another (interviewee 06) reflected the reputational logic underpinning social media use, stating, *"Social media is where our sustainability story lives; it shapes how the public judges our seriousness about environmental responsibility."* These perspectives align closely with the study's quantitative pattern where social media marketing predicted sustainability that positions social media as a tool for visibility, legitimacy signaling, and stakeholder interaction in sustainability contexts (Kapoor et al., 2021; Lipschultz, 2023; Schroeder, 2024).

Inferential Findings

The bivariate model was statistically significant, χ^2 (1) = 12.644, $p < .001$, showing that social media marketing improved prediction relative to the intercept-only model. The Hosmer-Lemeshow result was non-significant, χ^2 (1) = 18.321, $p = 0.121$, supporting acceptable model fit. Nagelkerke R^2 was 0.059, indicating that social media marketing independently explained 5.9% of the variation in sustainability.

Table 6: Bivariate Logistic Regression Model Fit for Social Media Marketing

Statistic	Value	df	p-value	Interpretation
Omnibus model χ^2	12.644	1	< .001	Model significant
Hosmer-Lemeshow χ^2	18.321	1	.121	Acceptable fit
-2 Log Likelihood	374.818			
Cox & Snell R^2	.044			
Nagelkerke R^2	.059			5.9% explained

Source: Survey data (2026).

Social media marketing had a positive and statistically significant influence on sustainability (β = .862, SE = 0.245, Wald = 12.362, $p < .001$). The odds ratio of 2.368 means that universities with adequate social media marketing were more likely to achieve sustainability outcomes than universities with inadequate adoption. The null hypothesis was therefore rejected.

Table 7

Variables in the Equation for Social Media Marketing

Variable	Category	β	S.E.	Wald	df	p-value	Odds Ratio
Social media marketing	Inadequate adoption (RC)	—	—	—	—	—	1.000
Social media marketing	Adequate adoption	.862	.245	12.362	1	< .001	2.368

Source: Survey data (2026).

Discussion of Findings

The results conclude that social media marketing is an effective sustainability mechanism in public universities. This helps to validate the Green Marketing Theory in that the actual communication of environmental action affects the perception of stakeholders, increases visibility and holds institutions accountable. This aligns with the findings of De Luca et al. (2022) that the use of social media brings a positive impact on stakeholders' engagement and communication of sustainability goals and with Hallar and Ali (2024) that social media campaigns enhance sustainability awareness and decision-making.

The descriptive and qualitative evidence explain the mechanism of the statistical relationship. The role of social media in the dissemination of sustainability programs is to enable public universities to communicate in a rapid manner, offer tangible evidence, engage with stakeholders and enhance their institutional image. The finding aligns with Kapoor et al., (2021) who highlighted the importance of sustainability message appeal, credibility and source characteristics for effective sustainability communication and with Albergo et al., (2025) who associated university social media with stakeholder engagement.

5.0 CONCLUSION AND RECOMMENDATIONS

There is a positive and statistically significant relationship between social media marketing and sustainability of public universities in Kenya. Universities with adequate use of social platforms to communicate about sustainability efforts are more likely to achieve sustainable outcomes than those with less or no use of social platforms. The results demonstrated that the benefits of social media on sustainability go beyond publicity. Digital platforms increase visibility, institutional reputation, and stakeholder dialogue and evidence communication of environmental action. They are less effective when universities are unresponsive to tracking engagement, communicating about sustainability as part of a wider marketing strategy or substantiating web statements with actual institutional actions.

Social media communication strategies should be formalized in public universities for their sustainability communication. The strategies should outline who the target audiences are, the roles of the platforms, the content calendars, the approval system, the standard of response, and the measurable goals. Sustainability successes must be clearly shared in authentic stories, images, numbers, progress reports and customer stories.

It is important to have trained teams within universities with a focus on sustainability content, community management and platform governance. All social media communication should be integrated with marketing, sustainability, academic, research, finance, and student-affairs efforts so that the social media messages are consistent with the actual performance of the institution and not the promotion from one department in isolation.

There is a need to make social media analytics institutional. The universities should track reach, engagement, sentiment, stakeholder participation, referral traffic, partnership enquiries and campaign conversion. Evaluation should be carried out periodically to identify which messages and platforms lead to awareness, participation, resource mobilization, and reputation benefits, which can be used as a basis for improving.

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