ISSN 2348-3156 (Print)
International Journal of Social Science and Humanities Research ISSN 2348-3164 (online)
Vol. 13, Issue 3, pp: (326-332), Month: July - September 2025, Available at: www.researchpublish.com

INFLUENCE OF SOCIAL MEDIA MARKETING ON SALES PERFORMANCE OF MOBILE NETWORK OPERATORS IN KENYA

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DOI: https://doi.org/10.5281/zenodo.17008573

Published Date: 30-August-2025

Abstract: **The general objective of this study was to examine the influence of social media marketing on sales performance of the mobile network operators in Kenya. A descriptive research approach was employed for the analysis. The focus of the study was on the marketing departments of three selected telecom companies in Kenya: Safaricom Plc, Telkom Kenya, and Bharti Airtel Kenya. A total of 2223 sales representatives from the marketing sector were part of the research. To achieve a representative sample, respondents were divided into two groups using a stratified sampling technique. The selection of participants was conducted through a simple random sampling method. Data was gathered through a structured questionnaire. An initial test was done with 22 participants from Safaricom, who were excluded from the main research. This study incorporated content validity, which evaluates how well the test items reflect the subject matter it aims to assess. The questionnaires' reliability was measured using the Cronbach alpha method. The analysis of quantitative data collected was subjected to mean and standard deviation-based descriptive statistical analysis. To understand the relationships between variables, the research utilized inferential statistics, including techniques such as multiple regression and correlation analyses. The findings indicated that social media marketing positively and significantly impacted the sales outcomes of mobile network providers in Kenya. The study concluded that social media marketing greatly benefits mobile network operators in Kenya by boosting sales because it allows direct customer engagement, helping operators understand preferences and tailor offerings, which builds brand loyalty and encourages repeat purchases. The study recommended that the companies should develop targeted advertising campaigns that focus on specific demographics and regions within Kenya, utilizing data analytics to identify potential customer segments.**

Keywords: **Social Media Marketing, Digital Marketing Strategy, Sales Performance.**

1. INTRODUCTION

Individuals utilize the Internet, regarded as a reliable source, to investigate products and services prior to making purchases (Kagollah, 2022). According to Kaveke (2024), business leaders utilize the Internet as a marketing instrument to boost revenue and improve communication. As social media ads and online sales gain prominence, they offer effective channels for accessing new markets and growing their enterprises. Consequently, digital marketing offers opportunities for companies to achieve profits by collaborating with stakeholders, customers, and employees.

Marketing, as highlighted by Sufian, Min, Murad and Aziz (2020), serves as an essential tool for companies since it improves brand awareness, increases profitability and expansion, draws in and keeps customers, and elevates engagement. For a business to succeed in the market and connect with its target audience, it is essential to utilize efficient marketing strategies. Abiodun and Kolade (2020) argue that the success of an organization hinges on the implementation of effective marketing strategies, as marketing dictates the production nature, distribution channels, and sales enhancement methods like advertising, public relations, and promotions. Thus, a key advantage of marketing for an organization is the cultivation of reputation.

Park and Mithas (2020) claim that the ways in which companies and brands leverage technology and digital marketing for promotional purposes have evolved due to the advancements in digital marketing during the 1990s and 2000s. In 2018, Yasmin, Tasneem, and Fatema also observed that online advertising efforts are on the rise and proving to be more successful due to the increasing favor for online gadgets over in-store shopping and the expanding incorporation of online platforms into advertising plans and everyday activities. Olonde (2021) observe that the emergence and integration of the internet across industries have transformed the world into a global village by eliminating barriers related to time, distance, and communication. Consequently, the structure of businesses for succeeding in the contemporary economy is undergoing significant transformations. Thus, global digital marketing strategies are experiencing fundamental alterations and are poised to continue shaping marketing theory and practice in global markets.

Adiyono, Rahmat and Anindita (2021) indicate that sales performance outlines the path of revenue generation over various periods. Sales activities usually consist of supplying products or services to customers. A service is an intangible activity or advantage provided by one party to another, without transferring ownership. Mehralian (2022) highlight the crucial importance of aligning marketing and sales for achieving organizational success. The overall performance of the business enhances when the sales and marketing teams share a common language, exhibit mutual respect, and foster trust. Therefore, it is essential for every department to understand the functions of the others, encouraging open communication and common goals.

Tabiat (2022) observe that essentially, the effectiveness of sales is dependent on the strategic efforts made by sales staff, characterized by specific mindsets, behaviors, and organizational standards, including assertiveness and cleverness. As stated by Sassi (2024), sales performance is made up of two crucial elements: the behavior demonstrated by the sales team and the results obtained. Sales force performance relates to how well salespeople can fulfill their duties efficiently, reliably, and skillfully.

Effendy, Mas’adi and Murtiyoko (2021) observe that sales volume is a primary focus for all companies, closely connected to revenue and profit margins. A rise in volume results in greater profits and enhances the efficiency of organizational management processes. Purnomo (2023) suggest that sales metrics linked to sales success must logically correspond with the existing sales strategy. The sales approach employed by a reputable firm with a varied product lineup will vary greatly from that of a new company concentrating on one product. As a result, the criteria for assessing the performance of each sales team must precisely reflect the expectations set for them. This study assessed sales performance by evaluating factors such as sales team effectiveness, revenue produced, and achievement of sales goals.

Poorahmadi, Budaghi, Gelard and Rostamzadeh (2023) indicate that digital marketing strategy is a method employed to advertise a company's products or services via digital means, mainly online platforms, while also including mobile devices, display advertisements, and various other digital channels. As pointed out by Nitami, Yani, Susanto, Diman, Fadillah, Aprillia and Fujari, (2024), companies can aim at specific customer groups through their marketing efforts by employing digital marketing tactics that consider elements such as age, socioeconomic status, preferences, and financial abilities. By utilizing digital marketing strategies, businesses can lower their marketing costs, given that digital channels are significantly cheaper than traditional methods. The main emphasis of this study was on content marketing, search engine marketing, and social media marketing concerning the assessment of digital marketing strategy.

Kenya's mobile telephony sub-sector has experienced significant exponential growth in recent years. The recognition by the Kenyan Government of the crucial role played by the information and communication sectors in the nation's economic development is evident. This research specifically examined the operations of the three major Mobile Network Operators in Kenya, namely Safaricom PLC, Airtel Kenya, and Telkom Kenya. Safaricom originated as a mobile division within Telkom Kenya back in 1997, leading to a surge in the demand for mobile cellular phone connections. Airtel Kenya entered the market in 2000, and together with the other two operators, they embarked on an extensive countrywide expansion of their cellular services, sparking intense competition that resulted in a significant increase in the mobile network coverage in both rural and urban areas of Kenya.

Safaricom PLC, established in 1997 as a listed company, operates as a major mobile network operator in Kenya. The company is predominantly owned by Vodacom South Africa and the Kenyan Government. Safaricom offers integrated services encompassing voice, data, and mobile money transfer services, notably M-PESA. With a workforce exceeding 5000 employees deployed across its regionalized structure within the country, the company is at the forefront of technological advancements, providing a range of technologies including 2G, 3G, 4G, LTE, and soon to launch 5G. Safaricom PLC boasts a subscriber base exceeding 30 million, playing a significant role in societal transformation. Given its extensive and robust mobile network coverage in Kenya, offering a diverse array of services and global network connectivity, the company manages substantial amounts of data and subscriber information, necessitating stringent safeguards and protection measures. As a pioneer in technology, Safaricom PLC is a prime target for cyber threats, thus necessitating proactive measures to mitigate information system risks through advanced defensive strategies and neutralization of potential attacks.

Airtel, established in 2000, stands as the second-largest mobile operator in the nation with its parent organization being Bharti Airtel of India. The operator boasts a subscriber base exceeding 9 million individuals, delivering a diverse range of services encompassing voice, data, and mobile financial services under the brand Airtel Money. Through a series of organizational structural modifications in recent years, the entity has undergone transitions in its management team, evolving from Kencel communication to Celtel and subsequently Zain, culminating in its rebranding as Airtel Kenya in 2010. With a comprehensive mobile network coverage nationwide, the operator furnishes 2G and 3G services, having recently introduced 4G services. Functioning as an operator, it establishes connections with networks globally utilizing a myriad of systems and services, thereby making significant contributions to the country's economy.

Telkom Kenya, the third largest operator in the country, has the distinction of being the oldest, having been established in 1999 as Kenya Post and Telecommunication Ltd. Initially operating as a fixed-line provider, the company later diversified into mobile telephony services, offering 2G and 3G technologies. With a workforce exceeding 1400 employees dispersed throughout the nation, Telkom Kenya has amassed a subscriber base surpassing 4 million individuals, playing a constructive role in the country's economy through its array of services. Notably, the company takes pride in its mobile financial transfer services, widely recognized as T-KASH.

2. STATEMENT OF THE PROBLEM

The Kenyan government has recognized the telecommunications sector as a crucial facilitator for promoting economic development. This sector displays not only a high level of activity but also a constant state of evolution due to the emergence of novel technologies and infrastructure. The start of the COVID-19 pandemic worldwide, reported in Kenya in March this year, has had a substantial impact across various sectors within the country. Consequently, the government has advocated for the utilization of ICT through the implementation of e-government services, e-health initiatives, and e-education programs as part of strategies to mitigate the transmission of the pandemic. By June 30th, 2020, the total number of mobile subscriptions had reached 57.0 million, marking a 3.3 percent increase from the 55.2 million subscriptions documented in the preceding quarter. As a result, the mobile SIM penetration rate in the country was recorded at 119.9 percent during that period.

In the specific timeframe under examination, the aggregate volume of local mobile voice traffic originating from mobile networks was documented at 15.2 billion minutes, indicating a decrease of 0.9 percent from the 15.3 billion minutes reported in the earlier quarter. This decline can be attributed to the reduced commercial operations witnessed during the lockdown and curfew periods brought about by the COVID-19 crisis, which disrupted the usual calling patterns. The quantity of local on-net mobile voice traffic also experienced a decline of 1.6 percent, resulting in a total of 13.3 billion minutes during the period in review. Additionally, there was an 11.8 percent reduction in international incoming fixed voice traffic, with figures dropping to 4.3 million minutes from the 4.9 million minutes recorded in the previous quarter. Similarly, international outgoing fixed voice traffic decreased by 14.8 percent during the same review period, registering 3.3 million minutes compared to the 3.9 million minutes in the prior quarter. These declines can be attributed to the adverse effects of the COVID-19 pandemic on economic activities.

3. LITERATURE REVIEW

Theoretical Literature Review

Technology Acceptance Theory

In 1985, Fred Davis presented the idea of the Technology Acceptance Model (TAM). The TAM suggests that three key elements, namely perceived utility, ease of use, and the user's attitude towards its application, play a crucial role in determining whether users embrace new technologies. Acheampong et al. (2017) elucidated that a sequence starting from attitudes, leading to beliefs, and eventually planned behavior, determines an individual's inclination towards utilizing a specific technology. This suggests that prior to embracing and implementing any technology, individuals must assess its utility, usability, and cultivate an attitude that influences its acceptance.

According to Wu and Chen (2017), the perceived usefulness in TAM enables a company to examine how a digital marketing approach can assist the company in reaching its marketing objectives. This model assists organizations in selecting the suitable marketing tactics for targeting specific market segments. Furthermore, customer beliefs regarding particular digital technologies, such as social media or email, can aid companies in determining an appropriate digital marketing strategy for optimal market reach. Moreover, the TAM framework involves a progression where users initially form an attitude towards a technology before fully embracing it. Hence, TAM is applicable in the realm of digital marketing.

Empirical Literature Review

In 2018, Kagondu conducted a research that examined how social media marketing affected the sales in supermarkets located in Nairobi City County, Kenya. The study focused on advertising through platforms such as Facebook, Instagram, and Twitter. A total of 135 supermarkets in Nairobi City County were selected as participants using a descriptive method. An extensive questionnaire was employed to gather preliminary data. Descriptive statistical techniques were utilized for the analysis of this data. The results revealed that most supermarkets had adopted social media marketing, with frequent usage of various social media sites by customers having a considerable impact on their sales figures. Nonetheless, the research concentrated exclusively on the sales results of retail establishments, leaving a gap in the existing academic literature.

In order to explore how Facebook functions as a successful medium for competitive communication marketing for Small and Medium Enterprises (SMEs) in Nakuru, Kenya, a research study was conducted by Chepkemoi, Zakayo, and Koima in 2018. The investigation considered various elements, including Facebook. From a total of 350 registered small businesses in the Nakuru central business district, a random sample of 78 businesses was chosen to form the research population. Primary data was collected through the use of structured questionnaires. The findings indicated that Facebook plays a vital role in attracting clients and fostering relationships. However, the study solely focused on Facebook, neglecting its broader functions beyond social media marketing, thus generating a theoretical gap.

Sufian et al. (2020) examined the influence of social media promotion on the revenue of small e-commerce companies. They included 150 small business owners from Malacca in their study; some of them lacked prior experience establishing a social media marketing platform for their companies. According to the study, small online businesses in Malacca rely heavily on good customer relationships and communication, even though sales performance is not directly impacted by customer feedback. Nonetheless, the study utilized an explanatory research framework, leading to a deficiency in the methodology.

Hasna (2020) looked into how social media marketing affected medium-sized businesses in Arusha City and how it affected their performance as a company. The study gathered information from ninety businesses of moderate size located in the Arusha municipal region that offer various products and services to local and regional customers. The sample was chosen by random sampling, and information was gathered by distributing questionnaires. A descriptive analysis was then performed. The primary findings indicate that businesses primarily utilize social media marketing to tackle growing competition by aiding them in building an online identity and responding to customer inquiries. Nevertheless, a methodological limitation was identified in the study due to the utilization of cluster sampling, which is susceptible to increased sampling errors.

The study conducted by Syaifullah, Syaifudin, Sukendar, and Junaedi (2021) investigated the correlation between Medium-Sized Enterprises' Business Performance and Social Media Marketing during the COVID-19 Pandemic. The analytical method employed in the quantitative research approach was Structural Equation Modeling (SEM) relying on Partial Least Squares. A total of 254 businesses were selected through intentional sampling to create the sample size of medium- sized businesses that were actively involved in social media marketing. Internet questionnaires were utilized to collect information. The research's results suggest that the perceived usefulness, compatibility, and simplicity of use are among the elements influencing the adoption of social media marketing. The research reveals that social media marketing enhances the efficiency, creativity, customer interactions, and expansion of sales for medium-sized enterprises, particularly in these areas. However, the study's reliance on purposive sampling method for respondent selection introduced a potential sample bias, thus highlighting a methodological limitation.

4. RESEARCH METHODOLOGY

A descriptive research approach was employed for the analysis. The focus of the study was on the marketing departments of three selected telecom companies in Kenya: Safaricom Plc, Telkom Kenya, and Bharti Airtel Kenya. A total of 2223 sales representatives from the marketing sector were part of the research. To achieve a representative sample, respondents were divided into two groups using a stratified sampling technique. The selection of participants was conducted through a simple random sampling method. Data was gathered through a structured questionnaire. An initial test was done with 22 participants from Safaricom, who were excluded from the main research. This study incorporated content validity, which evaluates how well the test items reflect the subject matter it aims to assess. The questionnaires' reliability was measured using the Cronbach alpha method. The analysis of quantitative data collected was subjected to mean and standard deviation-based descriptive statistical analysis. To understand the relationships between variables, the research utilized inferential statistics, including techniques such as multiple regression and correlation analyses.

5. FINDINGS

The descriptive statistics results on social media marketing are presented in Table 1.

Table 1: Social Media Marketing

Statements	**SD (%)**	**D(%)**	**N(%)**	**A(%)**	**S A(%)**
Reducing expenses allows companies to provide products or services to their clients at lower rates.	4.6	15.6	1.9	37.8	40.1
Reducing expenses allows the company to broaden its range of products and services without raising prices.	0.1	5.7	0.0	62.2	31.3
Converting a reader into a buyer through a positive online interaction with a customer signifies success.	4.6	9.9	0.0	43.9	41.6
Instant feedback on products and services through interactivity helps marketing managers pinpoint target markets.	5.7	4.2	1.5	39.7	48.9
Enhancing internal communication is a result of brands fostering a robust customer service culture.	0.0	0.0	0.0	44.7	55.3
Every interaction reflects a customer-centric approach when adopted by a company.	1.5	7.3	3.3	45.5	42.4
Aggregate score	**2.8**	**7.1**	**1.1**	**45.6**	**43.3**

Source: Survey Data (2024)

Key: SD-Strongly Disagree; D-Disagree; N-Neutral; A-Agree; SA-Strongly Agree

The information presented in Table 1 shows that a large portion (88.9%) of participants concurred that social media marketing impacted the sales effectiveness of mobile network providers in Kenya. Meanwhile, 1.1% remained neutral, and 9.9% expressed disagreement. This outcome implies that there is a strong consensus among the majority of participants regarding the effectiveness of social media marketing in enhancing sales for mobile network operators, indicating its potential as a valuable strategy in the industry. This finding agree with Kagondu (2018) research observation most grocery stores have adopted marketing through social media, and the consistent engagement of customers on various social media platforms has greatly impacted their sales.

Inferential Statistics Results

Table 2: Correlation Analysis

		Social media marketing	Sales performance
Social media marketing	Pearson correlation	1	
	Sig (2-tailed		
	N	327	
Sales performance	Pearson correlation	0.639	1
	Sig (2-tailed	0	
	N	327	327

The information displayed in Table 2 illustrates that the Pearson r coefficient relating social media marketing to sales performance stands at 0.639, accompanied by a significance level of 0.000, which is beneath the threshold of 0.05. This indicates that social media marketing significantly affected the sales outcomes of mobile network operators in Kenya. These results align with the conclusions drawn in the research conducted by Sufian et al. (2020), which investigated the effects of social media marketing on the sales figures of small online enterprises. According to the study, small online businesses in Malacca rely heavily on good customer relationships and communication, even though sales performance is not directly impacted by customer feedback.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.809[a]	.731	.723	1.916.

The findings from the model summary displayed in Table 3 indicate an R value of 0.809, which is nearer to 1. This suggests a strong correlation between the social media marketing and sales performance of mobile network operators in Kenya. The R square value recorded was 0.731, which again is closer to 1, highlighting that the model explains variability effectively. The adjusted R square value was 0.723, indicating that 72.3% of the sales performance variation for mobile network operators in Kenya can be attributed to shifts in social media marketing. Additionally, this reveals a 27.7% gap representing other factors that were not examined.

Table 4: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.510	.114		4.447	.000
	Social media marketing	.711	.258	1.203	2.756	.000

The findings depicted in Table 4 indicate that, in the absence of social media marketing the sales performance for mobile network operators in Kenya would sit at 0.510. The regression coefficient related to social media marketing stood at 0.711, suggesting that enhancing social media marketing by 1 unit would boost the sales performance of mobile network operators in Kenya by a factor of 0.711.

From these outcomes, the final regression equation is stated as follows:

$Y = 0.510 + 0.711X_1 + \acute{\varepsilon}$

Where, Y = Sales performance

X_1= Social media marketing

$\acute{\varepsilon}$ = Error term

The aspect of social media marketing demonstrated a beneficial and notable effect on the sales outcomes for mobile network providers in Kenya, indicated by a t-value of 2.756 with a significance level of 0.000. This outcome aligns with the research conducted by Hasna (2020), which examined the impact of social media marketing on mid-sized companies in Arusha City and its effect on their performance as businesses. The primary findings indicate that social media marketing is predominantly utilized to combat rising competition by aiding enterprises in creating an online presence and responding to customer inquiries.

6. CONCLUSIONS

The study concluded that social media marketing greatly benefits mobile network operators in Kenya by boosting sales because it allows direct customer engagement, helping operators understand preferences and tailor offerings, which builds brand loyalty and encourages repeat purchases. Social media marketing serves as a cost-effective advertising channel, reaching a wider audience without the high costs of traditional methods. Social media also enables real-time feedback and customer service, enhancing satisfaction and retention. Moreover, its viral nature can amplify campaigns, increasing visibility and sales as satisfied customers share their experiences.

7. RECOMMENDATIONS

The study recommended that the companies should develop targeted advertising campaigns that focus on specific demographics and regions within Kenya, utilizing data analytics to identify potential customer segments. Leverage influencer partnerships to reach a wider audience, collaborating with local influencers who resonate with the target market to promote mobile services. Encourage consumers to share their experiences and narratives about the mobile network, leveraging user-generated content to foster a sense of community and build trust.

REFERENCES

[1] Abiodun, E. A., & Kolade, O. G. (2020). Marketing strategies impact on organizational performance. *International journal of scientific & technology research,* 9(1), 1758-1762

[2] Adiyono, N. G., Rahmat, T. Y., & Anindita, R. (2021). Digital marketing strategies to increase online business sales through social media. *Journal of Humanities, Social Science, Public Administration and Management,* 1(2), 31-37.

[3] Chepkemoi, C., Zakayo, C., & Koima, J. (2018). Facebook as A Competitive Social Media Marketing Tool on Sales Performance for Small and Medium Enterprises in Nakuru CBD, Kenya. *World Journal of Innovative Research (WJIR),* 5(4), 5 – 11

[4] Effendy, A. A., Mas'adi, M., & Murtiyoko, H. (2021). Implementation of digital marketing strategies to increase sales during the Covid-19 pandemic. *Kontigensi: Jurnal Ilmiah Manajemen,* 9(1), 155-163

[5] Hasna, H. (2020). *The role of social media marketing on business performance: A Survey Of Micro medium sized company's in Arusha City* (Dissertation, Institute of Accountancy Arusha)

[6] Kagollah, M. O. (2022). *Digital marketing strategy and sales performance of Safaricom Public Limited Company, Kenya* (Doctoral dissertation, Kenyatta University)

[7] Kagondu, L. W. (2018). *Effect of Social Media Marketing on Sales Performance of Large Retail Stores in Nairobi City County, Kenya* (Doctoral dissertation, University of Nairobi)

[8] Kaveke, M. M. (2024). *Effect of digital marketing strategies on sales performance of insurance firms in Kenya* (Doctoral dissertation, Machakos University Press)

[9] Mehralian, M. M. (2022). Identifying and Explaining the Effective Factors of Digital Marketing Strategies in Consumers' Emotional States and Sales Rates: A Mixed Methods Research. *In 20th International Conference of the Business and Strategic Management,* 7(1), 5 – 9

[10] Nitami, M., Yani, R. N., Susanto, D. B., Diman, B., Fadillah, N., Aprillia, R., & Fujari, I. (2024). Digital Marketing as A Strategy to Increase Sales and Consumer Satisfaction. *Journal Informatic, Education and Management (JIEM),* 6(2), 54-69

[11] Olonde, J. O. (2021). *Impact of digital marketing on sales growth of small and medium enterprises in Nairobi, Kenya* (Doctoral dissertation, University of Nairobi)

[12] Park, Y., & Mithas, S. (2020). Organized Complexity of Digital Business Strategy: A Configurational Perspective. *MIS quarterly*, 44(1), 5 – 12

[13] Poorahmadi, H., Budaghi H., Gelard, P., & Rostamzadeh, R. (2023). Evaluating Online Marketing Tools and Providing a Model to Improve Sales Performance. *International Journal of Digital Content Management*, 4(6), 367-394

[14] Purnomo, Y. J. (2023). Digital marketing strategy to increase sales conversion on e-commerce platforms. *Journal of Contemporary Administration and Management (ADMAN)*, 1(2), 54-62

[15] Sassi, N. E. Y. (2024). *Optimizing Digital Marketing Strategies for Enhancing Sales Performance* (Doctoral dissertation, Higher School Of Management and Digital Economy)

[16] Sufian, A., Min, C. S., Murad, M. A., & Aziz, N. A. (2020). The impact of social media marketing on sales performance of small online business. *European Journal of Molecular & Clinical Medicine*, 7(3), 922-940

[17] Syaifullah, J., Syaifudin, M., Sukendar, M. U., & Junaedi, J. (2022). Social Media Marketing and Business Performance of medium sized companies During the COVID-19 Pandemic. *The Journal of Asian Finance, Economics, and Business*, 8(2), 523-531

[18] Tabiat, A. (2022). The impact of digital marketing on sales performance: The case of Lebanese pharmaceutical companies. *European Journal of Business and Management Research*, 7(4), 349-355

[19] Wu, B., & Chen, X. (2017). Continuance intention to use MOOCs: Integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, 67(2017), 221- 232