Digital Marketing Adoption And Its Impact On Business Sustainability Of MSMEs In West Sumatra

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ABSTRACT

The rapid advancement of digital technology has encouraged Micro, Small, and Medium Enterprises (MSMEs) to adopt digital marketing as a strategic approach to sustaining business performance. This study aims to examine the effect of digital marketing adoption on business sustainability among MSMEs in West Sumatra. Digital marketing adoption is operationalized through social media usage, e-commerce platform utilization, digital content quality, and digital marketing analytics usage. This research employs a quantitative approach using a survey method targeting MSMEs that have implemented digital marketing practices. Data were analyzed using multiple linear regression with the support of IBM SPSS version 25. The findings reveal that e-commerce platform utilization, digital content quality, and digital marketing analytics usage have a positive and significant impact on business sustainability, whereas social media marketing usage does not exhibit a significant effect. These results indicate that effective utilization of e-commerce platforms plays the most dominant role in enhancing business sustainability, followed by the quality of digital content and the application of marketing analytics. The negative and significant constant suggests the presence of other influential factors beyond the proposed research model. From a policy perspective, the study highlights the need to prioritize strengthening e-commerce utilization, alongside improving digital content development and analytics capabilities through integrated and sustainable MSME capacity-building programs. Furthermore, this study recommends enhancing MSMEs' digital literacy through continuous training and mentoring, while encouraging future research to incorporate additional variables and employ more comprehensive analytical methods.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) represent a fundamental pillar of Indonesia's economy, contributing substantially to employment creation, income distribution, and overall social welfare. Their significant share in gross domestic product and labor absorption positions MSMEs as a strategic sector in national economic development. Nevertheless, MSMEs continue to face persistent structural challenges, including limited access to capital, insufficient managerial capabilities, and increasing competitive pressure, which heighten their vulnerability to business discontinuity (OECD, 2019; Kraus et al., 2020). The rapid advancement of information and communication technologies has fundamentally reshaped

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consumer behavior and market dynamics. Consumers increasingly rely on digital channels to search for product information, evaluate alternatives, and conduct online transactions. This shift compels MSMEs to engage in digital transformation in order to remain relevant and competitive in an increasingly volatile business environment. Digital transformation extends beyond mere technology adoption, encompassing changes in managerial strategies, business processes, and data-driven marketing approaches that enhance organizational adaptability (Vial, 2019; Verhoef et al., 2021).

Within this context, digital marketing has emerged as a critical strategic tool for MSMEs. The use of social media platforms, e-commerce marketplaces, websites, and other digital channels enables MSMEs to expand market reach, strengthen brand visibility, and foster closer customer relationships. Compared to traditional marketing methods, digital marketing offers greater cost efficiency, flexibility, and performance measurability through digital data and analytics (Kotler et al., 2021; Dwivedi et al., 2021). Consequently, digital marketing adoption is increasingly viewed as a viable solution for MSMEs to overcome resource constraints and intensifying competition. Empirical evidence indicates that digital marketing adoption positively influences marketing performance and sales growth among MSMEs (Tiago & Veríssimo, 2018; Dwivedi et al., 2021). However, much of the existing literature emphasizes short-term outcomes, such as sales volume, customer acquisition, or brand awareness. Studies that explicitly examine the relationship between digital marketing adoption and long-term business sustainability remain relatively limited, particularly in the context of MSMEs operating in developing economies like Indonesia (Kraus et al., 2020; Centobelli et al., 2020).

Moreover, prior research frequently treats digital marketing as a unidimensional construct, which restricts the ability to identify the distinct contributions of its various components. In practice, digital marketing adoption involves multiple dimensions, including social media usage, e-commerce platform utilization, digital content quality, and digital marketing analytics usage, each of which may exert different effects on MSME sustainability (Chaffey & Ellis-Chadwick, 2019; Verhoef et al., 2021). This limitation underscores the need for a more comprehensive analytical approach. Business sustainability has become a central concept in contemporary management, emphasizing not only short-term economic performance but also an organization's capacity to survive, adapt to environmental changes, and continuously create value over time. For MSMEs, sustainability is reflected in their ability to maintain operations, stabilize revenues, retain customers, and respond effectively to the evolving digital marketplace (Elkington, 2018; Bansal et al., 2021). In the digital economy, business sustainability is closely linked to MSMEs' capability to manage and optimize digital technologies, particularly in marketing activities.

Based on these considerations, this study addresses the existing research gap by examining the long-term impact of digital marketing adoption on MSME business sustainability in Indonesia. Unlike previous studies, this research adopts a multidimensional perspective on digital marketing, encompassing social media usage, e-commerce platform utilization, digital content quality, and digital marketing analytics usage. This approach provides a more nuanced understanding of which dimensions of digital marketing contribute most significantly to MSME sustainability. The objective of this study is to analyze the effect of digital marketing adoption on MSME business sustainability in Indonesia using a multiple linear regression approach. The novelty of this research lies in integrating a long-term business sustainability perspective with a multidimensional analysis of digital marketing adoption within the Indonesian MSME context. The findings are expected to contribute theoretically to the literature on digital marketing and sustainability, while also offering practical insights for MSME practitioners and policymakers in designing sustainable, digitally driven MSME development strategies.

LITERATURE REWIEW

Business Sustainability

Business sustainability is a central concept in management and entrepreneurship studies, referring to a firm's capacity to maintain operational continuity and generate economic value consistently over the long term. In the context of MSMEs, sustainability is not solely reflected in short-term financial performance, but also in the ability to withstand business pressures, adapt to market changes, and sustain competitive advantage over time (Bansal et al., 2021; Kraus et al., 2020). In Indonesia, MSMEs encounter multifaceted sustainability challenges, including limited financial resources, inadequate managerial capabilities, fluctuating market demand, and rapidly evolving consumer behavior driven by digitalization. These

conditions require MSMEs to implement adaptive and innovative business strategies in order to secure their long-term viability. The sustainability of MSMEs in Indonesia is strongly influenced by entrepreneurs' capacity to manage resources efficiently and respond promptly to external environmental dynamics (OECD, 2019; Ministry of Cooperatives and SMEs, 2021).

Recent literature conceptualizes business sustainability as a dynamic capability that reflects an organization's ability to learn, innovate, and adjust continuously to environmental changes. MSMEs that successfully adopt innovation and leverage digital technologies tend to exhibit higher levels of business sustainability. This perspective aligns with the view that digital transformation represents a key determinant of organizational sustainability in the digital economy (Vial, 2019; Verhoef et al., 2021). Empirical studies on MSMEs typically operationalize business sustainability through economic-oriented indicators that capture business resilience and continuity. Commonly used measures include stable sales growth, consistent profitability, customer retention, and the ability to maintain long-term operations. These indicators represent the extent to which MSMEs are able to create sustainable economic value amid environmental uncertainty (Bansal et al., 2021; Kraus et al., 2020).

Within the Indonesian context, MSME sustainability is also closely associated with the ability to exploit digital market opportunities and manage customer relationships effectively. The digitalization of marketing activities enables MSMEs to enhance operational efficiency, expand market reach, and strengthen customer loyalty. Accordingly, technology-based strategies particularly the adoption of digital marketing are widely recognized as critical drivers of MSME business sustainability in Indonesia (Kotler et al., 2021; Dwivedi et al., 2021). Based on this discussion, business sustainability in this study is defined as the ability of Indonesian MSMEs to maintain business continuity and achieve stable growth through effective strategic management and the optimal utilization of digital technologies. This concept serves as the foundational framework for examining the impact of digital marketing adoption on MSME business sustainability.

Social Media Marketing Usage (X_1)

Social media marketing usage refers to the extent to which business owners utilize social media platforms to conduct marketing activities, establish two-way communication with customers, and deliver brand value in a digital environment. In the Indonesian MSME context, platforms such as Instagram, Facebook, WhatsApp Business, and TikTok have become primary marketing channels due to their ease of access, relatively low operational costs, and widespread adoption among consumers (Dwivedi et al., 2021; Statista, 2023). Social media enables MSMEs to interact directly with customers through visual content, textual communication, and various interactive features. These interactions function not only as promotional tools but also as mechanisms for building long-term relationships, enhancing trust, and strengthening customer loyalty. Social media–based marketing approaches encourage higher levels of consumer engagement, which in turn can positively influence marketing performance and long-term business sustainability (Dessart et al., 2019; Dwivedi et al., 2021).

Within digital marketing literature, social media marketing usage is commonly conceptualized as a multidimensional construct encompassing the intensity of platform usage, consistency of content publication, level of customer interaction, and utilization of business-related features embedded in social media platforms. MSMEs that actively manage their social media presence, respond promptly to customer feedback, and leverage social media analytics tend to demonstrate more adaptive and market-responsive marketing capabilities (Verhoef et al., 2021; Kotler et al., 2021).

In Indonesia, a market characterized by high social media penetration, social media marketing represents a particularly relevant strategy for MSMEs. Beyond product promotion, social media serves as a channel for consumer education, brand community development, and customer service delivery. Recent empirical evidence suggests that effective social media utilization can enhance brand visibility, expand market reach, and stimulate sales growth among Indonesian MSMEs (Sari & Nugroho, 2021; Pratama et al., 2022). Nevertheless, the level of social media utilization among MSMEs remains heterogeneous. While some firms employ social media strategically and in an integrated manner, others adopt it in a limited and unstructured way. Key challenges include insufficient digital literacy, limited content management skills, and inadequate use of social media data and analytics for marketing decision-making (Kraus et al., 2020; OECD, 2019). Based on this discussion, social media marketing usage in this study is defined as the degree to which Indonesian MSMEs employ social media platforms in a planned, interactive, and customer-

oriented manner to support marketing activities. Effective use of social media is viewed as a potential driver of MSME business sustainability through enhanced consumer engagement, stronger brand image, and broader market reach.

E-Commerce Platform Utilization (X_2)

E-commerce platform utilization refers to the extent to which business actors use online marketplaces and electronic commerce channels to facilitate digital transactions, expand market access, and improve operational efficiency. In Indonesia, e-commerce platforms such as Tokopedia, Shopee, Bukalapak, Lazada, and Blibli have emerged as key distribution channels that integrate MSMEs into the national digital economy (OECD, 2019; Verhoef et al., 2021). E-commerce platforms enable MSMEs to overcome geographical and scale limitations by providing direct access to wider consumer markets. Through these platforms, MSMEs can display products, manage orders, process digital payments, and utilize integrated logistics systems. The effective use of such features offers opportunities to increase sales volume, reduce operational costs, and enhance service speed and reliability (Kraus et al., 2020; Dwivedi et al., 2021).

In management and digital marketing literature, e-commerce platform utilization is regarded as a multidimensional construct that includes the intensity of marketplace usage, the degree of integration with internal business processes, ease of transaction management, and the ability to leverage promotional and analytical tools provided by the platform. MSMEs that adopt e-commerce platforms actively and strategically tend to demonstrate stronger digital marketing capabilities and higher competitive advantage (Chaffey & Ellis-Chadwick, 2019; Verhoef et al., 2021). In the Indonesian context, the rapid growth of e-commerce users presents significant strategic opportunities for MSMEs to enhance business sustainability. E-commerce platforms function not only as sales channels but also as tools for promotion, customer review collection, and trust-building mechanisms. Empirical studies indicate that effective e-commerce utilization contributes to improved marketing performance, market expansion, and greater business resilience among Indonesian MSMEs (Siregar & Wardhani, 2021; Pratama et al., 2022).

Despite these opportunities, the degree of e-commerce adoption among MSMEs varies considerably. While some MSMEs have successfully integrated e-commerce into their overall business strategies, others continue to face challenges such as limited digital skills, difficulties in managing online operations, and intense price competition within marketplaces. These challenges highlight that successful e-commerce utilization depends not only on platform access but also on managerial capabilities and the implementation of appropriate marketing strategies (Kraus et al., 2020; OECD, 2019). Accordingly, e-commerce platform utilization in this study is defined as the extent to which Indonesian MSMEs employ e-commerce platforms to conduct online sales and marketing activities, including transaction management, product promotion, and customer interaction. Effective utilization of e-commerce platforms is considered a critical factor in supporting MSME business sustainability through expanded market reach, improved operational efficiency, and enhanced competitiveness.

Digital Content Quality X_3.

Digital content quality refers to the degree to which digital marketing content demonstrates clarity, attractiveness, relevance, and informational value when delivered through digital channels. In the context of MSMEs, digital content encompasses various formats used to communicate product and brand information, including text, images, videos, and interactive materials distributed via social media, e-commerce platforms, and websites. High-quality digital content plays a crucial role in capturing consumer attention, shaping favorable brand perceptions, and stimulating customer engagement and purchasing decisions (Kotler et al., 2021; Dwivedi et al., 2021). The rapid expansion of the digital economy has significantly elevated consumer expectations regarding the quality of online content. Consumers increasingly seek not only product-related information but also engaging and meaningful digital experiences that align with their needs and preferences. Consequently, digital content quality has become a strategic element of modern marketing, particularly for MSMEs that must compete despite limited resources. Well-crafted digital content enables MSMEs to communicate their value propositions effectively and differentiate themselves from competitors (Verhoef et al., 2021; Chaffey & Ellis-Chadwick, 2019).

Marketing literature conceptualizes digital content quality as a multidimensional construct comprising visual appeal, informational clarity, message creativity, and content relevance to the target audience. Strong visual quality enhances professionalism and aesthetic appeal, while clear and concise information facilitates

quick consumer understanding of product benefits. Creativity and relevance further contribute to higher levels of consumer interaction and stronger brand–customer relationships (Dwivedi et al., 2021; Kotler et al., 2021). In the Indonesian MSME context, digital content quality has gained increasing importance due to the widespread use of social media and e-commerce platforms. Content that is informative, authentic, and culturally resonant tends to be more readily accepted by local consumers. Empirical studies in Indonesia indicate that high-quality digital content positively influences customer engagement, brand trust, and purchase intention, which ultimately contribute to MSME performance and long-term business sustainability (Sari & Nugroho, 2021; Pratama et al., 2022).

Despite its importance, many Indonesian MSMEs continue to face challenges in producing high-quality digital content. Limitations in design skills, content production capabilities, and strategic understanding of digital content management often result in inconsistent and less compelling content. These constraints highlight the need for capacity-building initiatives aimed at strengthening MSMEs' competencies in digital content development as part of a sustainable marketing strategy (Kraus et al., 2020; OECD, 2019). Based on the above discussion, digital content quality in this study is defined as the overall quality of digital marketing content produced by Indonesian MSMEs, encompassing visual presentation, informational clarity, creativity, and relevance. High digital content quality is regarded as a key determinant in enhancing digital marketing effectiveness and supporting the sustainability of MSME businesses.

Digital Marketing Analytics Usage X_4.

Digital marketing analytics usage refers to the extent to which business actors utilize data and analytical tools to plan, monitor, and evaluate digital marketing activities. Through digital analytics, MSMEs are able to collect, process, and analyze consumer behavior data generated across various digital channels, including social media, e-commerce platforms, and websites. The use of analytics enables firms to gain deeper insights into customer preferences, content performance, and overall campaign effectiveness (Wedel & Kannan, 2016; Davenport et al., 2020). In the digital economy, data-driven decision making has become a critical factor in enhancing business competitiveness. Digital marketing analytics reduce uncertainty in managerial decisions by providing real-time and measurable information. Metrics such as website traffic, engagement rates, conversion levels, and purchasing patterns serve as essential inputs for MSMEs in evaluating and refining their marketing strategies (Kannan & Li, 2017; Kotler et al., 2021).
Contemporary marketing literature views digital marketing analytics usage as a strategic capability that allows firms to optimize marketing resources more efficiently. For MSMEs with limited capital and human resources, analytics tools function as vital support mechanisms for identifying high-impact marketing initiatives. Effective use of analytical data facilitates more accurate market segmentation, personalized marketing messages, and improved allocation of promotional budgets (Chaffey & Ellis-Chadwick, 2019; Verhoef et al., 2021). In Indonesia, however, the adoption of digital marketing analytics among MSMEs remains relatively limited. Although many MSMEs actively use social media and online marketplaces, their utilization of available analytics features is often minimal. Digital platforms are frequently employed merely as promotional and sales channels without systematic analysis of the generated data. This occurs despite the availability of built-in analytics tools on platforms such as Instagram, Facebook, and various marketplaces that could significantly enhance marketing effectiveness and business decision making (KemenKopUKM, 2021; Sari & Nugroho, 2022).

Empirical studies in Indonesia demonstrate that digital marketing analytics usage has a positive impact on marketing performance and business sustainability among MSMEs. Firms that actively leverage analytical data tend to exhibit greater adaptability to market changes, faster responses to consumer needs, and stronger prospects for long-term survival. These findings suggest that digital marketing analytics not only improve short-term performance but also play a critical role in supporting sustainable business development (Pratama et al., 2021; Rahmawati & Hidayat, 2023). Accordingly, digital marketing analytics usage in this study is defined as the extent to which Indonesian MSMEs employ digital marketing analytics tools and data to support data-driven marketing decisions. This variable reflects MSMEs' capabilities in monitoring digital marketing performance, understanding consumer behavior, and continuously optimizing marketing strategies to enhance business sustainability.

Research Hypotheses

Based on the theoretical discussion and empirical evidence presented, the research hypotheses are formulated as follows:

H1: Social Media Marketing Usage has a positive effect on Business Sustainability.

H2: E-Commerce Platform Utilization has a positive effect on Business Sustainability.

H3: Digital Content Quality has a positive effect on Business Sustainability.

H4: Digital Marketing Analytics Usage has a positive effect on Business Sustainability.

Conceptual Framework

The conceptual framework of this study is developed on the premise that the adoption of digital technologies and marketing strategies plays a critical role in enhancing the business sustainability of MSMEs. Social Media Marketing Usage functions as an interactive communication channel that enables business owners to establish long-term relationships with customers, strengthen brand visibility, and continuously expand market reach. Through consistent engagement and two-way communication, social media supports sustainable customer relationships that contribute to business continuity. E-Commerce Platform Utilization, on the other hand, facilitates more efficient transactional processes and provides MSMEs with access to broader markets without geographical limitations. By streamlining sales operations and increasing market accessibility, e-commerce platforms create new revenue opportunities that reinforce firms' ability to survive and grow in a competitive environment.

Furthermore, Digital Content Quality represents a crucial element in capturing consumer attention and fostering trust. High-quality digital content that is informative, relevant, and visually appealing enhances customer perceptions and encourages stronger emotional and behavioral attachment to the brand, which in turn supports customer retention and long-term sustainability. In addition, Digital Marketing Analytics Usage enables MSMEs to evaluate marketing performance through data-driven insights. By systematically analyzing consumer behavior and campaign outcomes, firms can make more informed strategic decisions, optimize marketing efforts, and adapt more effectively to changing market conditions. Taken together, these four dimensions of digital marketing adoption are viewed as complementary drivers of business sustainability. Conceptually, the framework assumes that each variable contributes positively to sustaining MSME operations by improving market reach, customer engagement, operational efficiency, and strategic decision making.
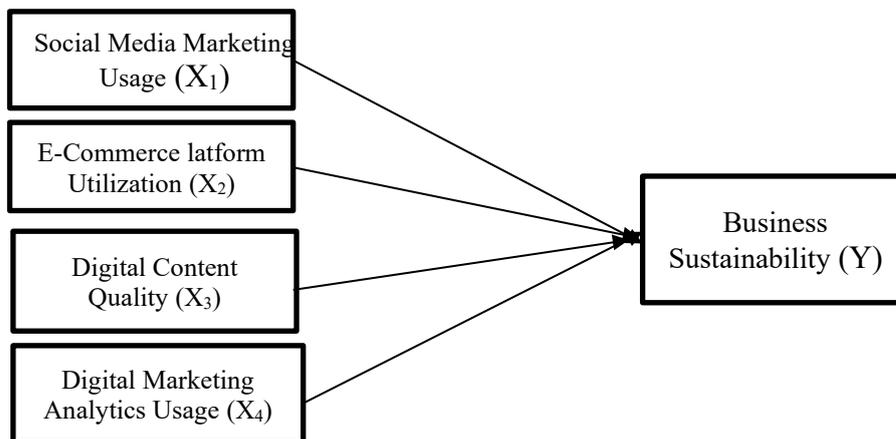

Figure 1. Conceptual Framework of the Study

Research Methodology

Research Design

This study adopts a quantitative approach with a causal research design to examine the relationships between digital marketing variables and business sustainability. Data were collected through a survey using a structured questionnaire. The population consists of Micro, Small, and Medium Enterprises (MSMEs) in Padang City that have adopted digital marketing practices. A purposive sampling technique was employed,

with selection criteria focusing on MSMEs that actively utilize social media and/or e-commerce platforms for marketing activities. The determination of sample size was based on the requirements for multiple linear regression analysis. According to Hair et al. (2019), an adequate sample size for multivariate analysis ranges from five to ten observations per independent variable. Given that this study includes four independent variables, the minimum required sample size is 40 respondents. To enhance the robustness and reliability of the statistical estimates, this study employed a total of 80 respondents, which exceeds the minimum recommended threshold.

Data Analysis Technique

The data were analyzed using IBM SPSS Statistics version 25, applying multiple linear regression analysis to assess the effect of independent variables on the dependent variable. Prior to hypothesis testing, data quality assessments were conducted, including validity and reliability tests, to ensure that the measurement instruments were both accurate and consistent. Furthermore, classical assumption tests were performed to verify the suitability of the regression model. These tests included a normality test to examine data distribution, a multicollinearity test to ensure the absence of high intercorrelations among independent variables, and a heteroskedasticity test to assess the homogeneity of residual variances. The multiple linear regression model employed in this study is specified as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon,$$

where Y represents Business Sustainability, **α** denotes the constant, β_1 - β_4 are the regression coefficients of the independent variables Social Media Marketing Usage (X_1), E-Commerce Platform Utilization (X_2), Digital Content Quality (X_3), and Digital Marketing Analytics Usage (X_4) and **ε** refers to the error term. Hypothesis testing was conducted using the *t-test* for partial effects and the *F-test* for simultaneous effects, with a significance level set at 5 percent ($\alpha = 0.05$).

RESULT

The Results and Discussion section presents the empirical findings derived from data processing and statistical analysis, followed by a scientific interpretation of these findings.

Validity Test

The Item–Total Statistics for the Business Sustainability variable (Y) indicate that all measurement items (Y.1 - Y.9) have Corrected Item Total Correlation values exceeding the threshold of 0.30. This result confirms that each item is valid and adequately represents the underlying construct. In addition, the Cronbach's Alpha if Item Deleted values remain consistently high, ranging approximately from 0.88 to 0.89, suggesting that removing any item would not lead to a meaningful improvement in reliability. Therefore, the Business Sustainability measurement instrument demonstrates strong internal consistency, and all items are appropriate for inclusion in subsequent analyses.

Table 1
Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Y.1	29.37	25.427	.656	.887
Y.2	29.29	25.448	.692	.884
Y.3	29.79	24.473	.690	.884
Y.4	29.87	24.592	.652	.888
Y.5	29.60	25.003	.721	.882
Y.6	29.60	25.104	.707	.883
Y.7	29.50	24.861	.649	.888
Y.8	29.76	25.044	.660	.887
Y.9	29.61	26.392	.544	.895

The Item–Total Statistics results for the Social Media Marketing Usage variable (X_1) indicate that all measurement items (X1.1 - X1.12) have Corrected Item Total Correlation values exceeding 0.30, confirming their validity in representing the intended construct. In addition, the Cronbach's Alpha if Item Deleted values remain consistently high (approximately 0.92 - 0.93) across all items, demonstrating strong internal consistency. Therefore, the Social Media Marketing Usage instrument is considered reliable, and all items are appropriate to be retained for subsequent analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X1.1	41.80	56.162	.651	.930
X1.2	41.86	53.031	.732	.928
X1.3	41.60	54.446	.782	.925
X1.4	41.66	54.201	.769	.926
X1.5	41.60	56.116	.744	.927
X1.6	41.70	53.985	.804	.924
X1.7	41.45	57.592	.655	.930
X1.8	41.30	58.263	.523	.935
X1.9	41.61	58.494	.621	.931
X1.10	41.69	56.952	.688	.929
X1.11	41.60	54.446	.782	.925
X1.12	41.66	54.201	.769	.926

Table 2

The Item Total Statistics results for the E-Commerce Platform Utilization (X_2) variable indicate that all measurement items (X2.1–X2.9) exhibit Corrected Item Total Correlation values exceeding the threshold of 0.30, confirming that all items are valid. The Cronbach's Alpha if Item Deleted values range from 0.77 to 0.81, suggesting that the reliability of the scale remains stable even if any individual item is removed. Therefore, it can be concluded that the E-Commerce Platform Utilization instrument demonstrates adequate internal consistency, and all items are appropriate for inclusion in subsequent analyses.

Table 3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
x2.1	30.74	19.664	.371	.811
x2.2	30.86	18.500	.597	.787
x2.3	31.03	19.240	.478	.800
x2.4	30.73	18.075	.577	.788
x2.5	30.86	18.880	.515	.796
x2.6	30.85	17.243	.637	.779
x2.7	31.06	17.502	.513	.797
x2.8	31.08	17.918	.550	.791
x2.9	31.10	18.522	.407	.811

The Item–Total Statistics results for the Digital Content Quality (X_3) variable indicate that all measurement items (X3.1 - X3.11) obtained Corrected Item - Total Correlation values exceeding the threshold of 0.30, confirming their validity. In addition, the Cronbach's Alpha if Item Deleted values ranged from 0.77 to 0.79, reflecting a satisfactory and consistent level of reliability. Therefore, the Digital Content Quality instrument demonstrates adequate internal consistency, and all items are considered appropriate for further

statistical analysis.

Table 4
Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X3.1	38.23	31.822	.345	.794
X3.2	38.19	30.104	.489	.778
X3.3	38.08	30.830	.494	.778
X3.4	38.11	30.101	.538	.773
X3.5	38.08	31.311	.434	.784
X3.6	37.96	31.100	.463	.781
X3.7	38.30	29.782	.505	.776
X3.8	38.46	30.530	.490	.778
X3.9	38.36	31.019	.401	.788
X3.10	38.41	31.157	.430	.784
X3.11	38.33	31.513	.421	.785

The Item–Total Statistics results for the Digital Marketing Analytics Usage (X4) variable indicate that all statement items (X4.1–X4.9) have Corrected Item–Total Correlation values exceeding 0.30, confirming their validity. The Cronbach's Alpha if Item Deleted values range from 0.69 to 0.72, suggesting an acceptable level of reliability. Therefore, the Digital Marketing Analytics Usage instrument demonstrates adequate internal consistency, and all items are suitable for further analysis.

Table 5
Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
x4.1	30.99	18.316	.357	.713
x4.2	30.87	18.288	.431	.701
x4.3	30.96	17.556	.478	.692
x4.4	30.92	18.172	.426	.702
x4.5	30.80	18.719	.373	.710
x4.6	31.12	17.402	.453	.696
x4.7	31.28	17.746	.445	.698
x4.8	31.17	18.425	.327	.719
x4.9	31.28	18.379	.351	.715

The reliability test results indicate that all research variables   Social Media Marketing Usage (X_1), E-

Commerce Platform Utilization (X_2), Digital Content Quality (X_3), Digital Marketing Analytics Usage (X_4), and Business Sustainability (Y) obtained Cronbach's Alpha values exceeding 0.70. This finding confirms that the research instruments meet the accepted reliability standards and demonstrate internal consistency in measuring the examined constructs. Therefore, all measurement items for each variable are considered appropriate for further analysis, as the instruments are capable of producing stable and reliable results. Adequate reliability also suggests that respondents provided consistent responses to the questionnaire items.

Table 6
Recapitulation of Instrument Reliability Test Results

Variabel	Kode	Jumlah Item	Cronbach's Alpha	Kriteria	Keterangan
Social Media Marketing Usage	X_1	12	.934	> 0,70	Reliabel
E-Commerce Platform Utilization	X_2	9	.814	> 0,70	Reliabel
Digital Content Quality	X_3	11	.798	> 0,70	Reliabel
Digital Marketing Analytics Usage	X_4	9	.729	> 0,70	Reliabel
Business Sustainability	Y	9	.898	> 0,70	Reliabel

Classical Assumption Tests

Prior to conducting regression analysis, classical assumption tests were performed to ensure the validity and reliability of the estimated model. These tests are essential to confirm that the regression model meets the fundamental statistical requirements, thereby allowing accurate parameter estimation and valid inferential conclusions.

Normality Test

The normality test was conducted using the Normal Probability Plot (Normal P–P Plot). The results indicate that the residuals are distributed closely around the diagonal line and follow its direction. This pattern suggests that the residuals are approximately normally distributed, indicating no substantial violation of the normality assumption. Consequently, the regression model satisfies the normality criterion and is considered appropriate for further statistical analysis.
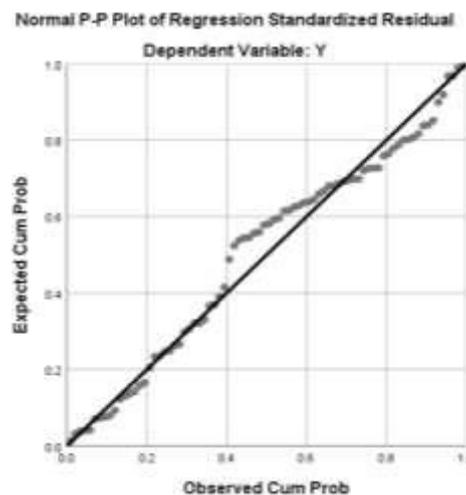

Figure 2. Normality Test

Multicollinearity Test

Multicollinearity was assessed using IBM SPSS Statistics version 25. The results show that all independent variables have tolerance values above 0.10 and Variance Inflation Factor (VIF) values below 10. Specifically, tolerance values range from 0.664 to 0.905, while VIF values range from 1.105 to 1.506. These findings indicate that multicollinearity is not present in the regression model, confirming that all independent variables are appropriate for inclusion in the multiple linear regression analysis.

Table 7

Coefficients^a

Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
1	(Constant)	-9.450	4.605		-2.052	.044		
	X1	.025	.056	.036	.453	.652	.823	1.215
	X2	.490	.105	.417	4.655	.000	.664	1.506
	X3	.365	.077	.394	4.715	.000	.764	1.310
	X4	.264	.091	.221	2.887	.005	.905	1.105

a. Dependent Variable: Y

Heteroscedasticity Test

Based on the scatterplot analysis, the residual points are randomly dispersed and do not exhibit any discernible pattern. The distribution of residuals appears to be evenly spread both above and below the zero line on the Y-axis. This indicates that the variance of the residuals remains relatively constant across different levels of the predicted values. Therefore, it can be concluded that the regression model does not suffer from heteroscedasticity and satisfies the classical assumption required for further multiple linear
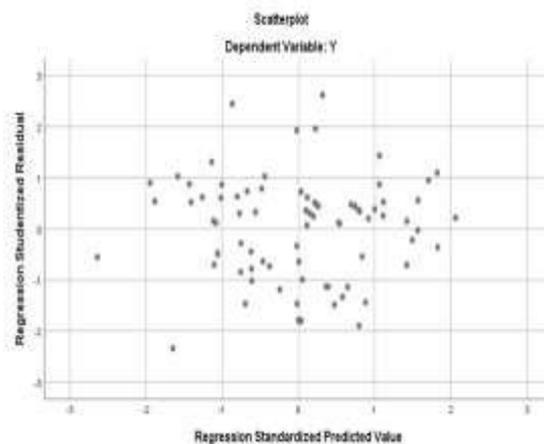

Figure 3. Heteroscedasticity Test

Results of Multiple Linear Regression Analysis

Based on the results of the multiple linear regression analysis, the following regression equation was obtained:

$$Y = -9{,}450 + 0{,}025X_1 + 0{,}490X_2 + 0{,}365X_3 + 0{,}264X_4$$

The results of the multiple linear regression analysis indicate that the constant value is –9.450 and statistically significant at the 5 percent level (p = 0.044). The negative and significant intercept suggests that when all independent variables—Social Media Marketing Usage (X1), E-Commerce Platform Utilization (X2), Digital Content Quality (X3), and Digital Marketing Analytics Usage (X4)—are at their minimum levels, Business Sustainability (Y) tends to decline. This finding also implies the presence of other external factors influencing business sustainability that are not captured within the current regression model. Partially, Social Media Marketing Usage exhibits a positive regression coefficient of 0.025; however, the effect is not statistically significant at the 95 percent confidence level. This result indicates that although social media marketing usage is directionally aligned with business sustainability, its impact is insufficient to meaningfully explain variations in the dependent variable. Therefore, the hypothesis stating that Social Media Marketing Usage has a significant effect on Business Sustainability is rejected.

In contrast, E-Commerce Platform Utilization demonstrates a positive and statistically significant effect on Business Sustainability, with a regression coefficient of 0.490 and a significance level below 0.05. This finding suggests that an increase in e-commerce platform utilization leads to an improvement in business sustainability, assuming other variables remain constant. Furthermore, the standardized beta coefficient of 0.417 indicates that this variable has a relatively strong influence within the research model, thus supporting the proposed hypothesis. Similarly, Digital Content Quality shows a positive and significant relationship with Business Sustainability, as indicated by a regression coefficient of 0.365 and a p-value below 0.05. The standardized beta value of 0.394 confirms that digital content quality contributes substantially to enhancing business sustainability. Accordingly, the hypothesis regarding the significant effect of Digital Content Quality is accepted.

Moreover, Digital Marketing Analytics Usage has a positive regression coefficient of 0.264 and is statistically significant at the 5 percent level. This result demonstrates that greater utilization of digital marketing analytics effectively improves business sustainability. Hence, the hypothesis asserting a significant influence of Digital Marketing Analytics Usage is also supported. Based on the standardized beta coefficients, E-Commerce Platform Utilization emerges as the most dominant factor affecting Business Sustainability, followed by Digital Content Quality and Digital Marketing Analytics Usage. Meanwhile, Social Media Marketing Usage exerts the weakest and statistically insignificant effect. Overall, the findings emphasize that e-commerce utilization, high-quality digital content, and effective use of digital marketing analytics play crucial roles in enhancing business sustainability, whereas the contribution of social media marketing usage remains limited and warrants further investigation.

Discussion

The results of the multiple linear regression analysis indicate that the constant term is –9.450 and statistically significant at the 5 percent level (p = 0.044). A negative and significant constant suggests that when all independent variables—namely social media marketing usage, e-commerce platform utilization, digital content quality, and digital marketing analytics usage—are at their lowest levels, business sustainability tends to decline. This finding implies that business sustainability cannot be achieved passively, but rather requires active and effective digital marketing practices. Furthermore, the significance of the constant indicates the presence of other determinants of business sustainability that are not captured in the regression model, such as external environmental conditions, managerial capabilities, and market dynamics, as highlighted by Hair et al. (2021).

Partial regression results show that social media marketing usage has a positive regression coefficient of 0.025; however, the effect is not statistically significant at the 95 percent confidence level. This suggests that although social media usage is directionally associated with business sustainability, its intensity and effectiveness are insufficient to generate a meaningful impact. The finding indicates that merely maintaining a presence on social media, without high-quality content and systematic performance evaluation, is not enough to serve as a key driver of sustainability for SMEs. This result is consistent with recent studies emphasizing that the effectiveness of social media marketing depends heavily on its strategic integration with other digital marketing components (Dwivedi et al., 2021). In contrast, e-commerce platform utilization demonstrates a positive and statistically significant effect on business sustainability, with a regression coefficient of 0.490. This result indicates that greater adoption and utilization of e-commerce platforms directly enhance business sustainability. The standardized beta coefficient of 0.417 confirms that this variable exerts the strongest influence in the model. This finding supports contemporary literature suggesting that e-commerce adoption enables SMEs to expand market reach, improve operational efficiency, and strengthen long-term business resilience (Kraus et al., 2022).

Similarly, digital content quality shows a positive and significant relationship with business sustainability, reflected by a regression coefficient of 0.365 and a standardized beta value of 0.394. This indicates that high-quality digital content plays a crucial role in fostering customer trust, increasing consumer engagement, and creating sustainable brand value. The result aligns with current perspectives that emphasize informative, relevant, and consistent digital content as a central pillar of successful SME digital marketing strategies (Chaffey & Ellis-Chadwick, 2021). Moreover, digital marketing analytics usage is found to have a positive and significant effect on business sustainability, with a regression coefficient of 0.264. This finding suggests that the use of digital analytics supports data-driven decision-making, performance evaluation, and continuous strategic adjustment. Consequently, analytics-driven marketing

contributes to greater efficiency and long-term sustainability, in line with recent literature on data-driven marketing practices (Wedel & Kannan, 2021).

Based on the standardized beta coefficients, e-commerce platform utilization emerges as the most influential determinant of business sustainability, followed by digital content quality and the use of digital marketing analytics. In contrast, social media marketing usage shows the weakest effect and is statistically insignificant. Overall, these findings indicate that the sustainability of MSMEs is driven more by the effective use of integrated digital platforms, high-quality content, and data-driven marketing analytics than by mere social media presence. This study implies that MSME digital marketing strategies should move beyond visibility-oriented efforts toward more systematic, analytics-based approaches that emphasize long-term value creation.

CONCLUSIONS

Based on the results of the multiple linear regression analysis, it can be concluded that E-Commerce Platform Utilization, Digital Content Quality, and Digital Marketing Analytics Usage (X4) have a positive and statistically significant effect on Business Sustainability. In contrast, Social Media Marketing Usage does not exhibit a significant influence on business sustainability. These findings suggest that improvements in e-commerce utilization, the quality of digital content, and the use of marketing analytics play a substantial role in enhancing business sustainability, whereas the contribution of social media marketing remains relatively limited and has yet to generate a meaningful impact. Furthermore, the presence of a negative and significant constant indicates that business sustainability is not solely explained by the independent variables included in the model but is also affected by other factors beyond the scope of this study. This result highlights the need for future research to develop a more comprehensive model by incorporating additional explanatory variables to better capture variations in business sustainability. Based on the standardized beta coefficients, E-Commerce Platform Utilization emerges as the most dominant determinant of business sustainability, followed by Digital Content Quality and Digital Marketing Analytics Usage.

POLICY IMPLICATIONS

The policy implications of this study indicate that efforts to enhance the dependent variable should primarily focus on strengthening E-Commerce Platform Utilization as the most influential factor, followed by the development of Digital Content Quality and Digital Marketing Analytics Usage. Accordingly, key stakeholders—including local governments, SME support institutions, and business practitioners—are encouraged to design and implement programs and policies that systematically promote improvements in the quality, intensity, and sustainability of e-commerce utilization, digital content development, and data-driven digital marketing practices. Meanwhile, Social Media Marketing Usage requires further attention and critical evaluation, both in terms of its conceptual framework and practical implementation, to ensure that it can contribute more effectively to improving the dependent variable in the future. In addition to these practical implications, the findings also offer important academic implications by highlighting opportunities for future research to examine other potential determinants beyond the proposed model. Such investigations are expected to provide a more comprehensive and in-depth understanding of the factors influencing the dependent variable.

RECOMMENDATION

The practical implications of this study underline the need to strengthen the digital literacy and digital competencies of micro, small, and medium enterprises (MSMEs) through targeted training initiatives and sustained mentoring support. From a policy perspective, the findings can serve as a reference for policymakers in formulating and refining digital-oriented MSME development programs that are responsive to current technological changes. In addition, future studies are encouraged to expand the research model by incorporating other relevant variables, such as digital literacy, entrepreneurial orientation, and government support, as well as by employing more comprehensive and advanced analytical techniques to obtain deeper and more robust insights.

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