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DIGITAL MARKETING CAPABILITY, CUSTOMER VALUE, AND CUSTOMER ENGAGEMENT: ENHANCING MSME PERFORMANCE IN EMERGING ECONOMIES

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Abstract

Digital transformation has encouraged widespread adoption of digital marketing channels among micro, small, and medium enterprises (MSMEs), yet this growing digital presence has not consistently translated into stronger marketing performance, particularly where digital activity remains operational rather than strategic. This study examines the effect of digital marketing capability on MSME marketing performance, positioning customer value as a mediator and customer engagement as a moderating boundary condition. Primary data were collected from 212 MSME owners/managers through purposive sampling and analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM). The measurement and structural models met established validity, reliability, and fit standards. Digital marketing capability was found to have a positive and significant effect on both customer value and marketing performance, and customer value likewise had a positive and significant effect on marketing performance. Customer value partially mediated the effect of digital marketing capability on marketing performance, accounting for about half of the total effect (VAF = 50.4%), while customer engagement was confirmed as a pure moderator, strengthening rather than independently driving marketing performance. An Importance-Performance Map Analysis further identifies digital marketing capability as the primary intervention priority. This study contributes to Dynamic Capability Theory and Customer Engagement Theory by showing how a joint mediation-moderation mechanism explains the translation of digital capability into marketing outcomes among resource-constrained enterprises, and offers practical guidance for MSME owners and policymakers in emerging economies designing integrated, value- and engagement-oriented digital marketing strategies.

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INTRODUCTION

Digital transformation has driven widespread adoption of digital marketing channels among micro, small, and medium enterprises (MSMEs), from social media and marketplaces to instant messaging applications (Deku et al., 2024; Elkhoudary et al., 2026). Yet this growing digital presence has not consistently translated into stronger marketing performance: several studies show that the effect of digital marketing activity on business performance weakens considerably when owners lack the organizational capacity to manage digital channels strategically rather than merely operationally (R. D. Sari et al., 2023; Y. A. Sari & Suwarno, 2024; Setiyaningrum et al.,

2022). This pattern indicates that the core constraint facing MSMEs is no longer the presence or absence of a digital channel, but the extent to which owners possess the digital marketing capability required to convert that channel into a genuine source of value and performance.

Digital marketing capability reflects an organization's ability to sense market opportunities, integrate digital resources, and reconfigure marketing routines in response to a rapidly changing competitive environment (Kannan & Li, 2017; Teece, 2007; Teece et al., 1997). Framed through Dynamic Capability Theory, this capability is not reducible to the mere operation of digital media; it is a higher-order strategic resource that determines whether digital activity is converted into differentiated market response (Ellström et al., 2022; Saeedikiya et al., 2024). A growing body of evidence documents a positive association between digital marketing capability and small-enterprise performance (Deku et al., 2024; Liang et al., 2025; Wang & Kim, 2017), yet most of this literature stops at the direct effect and treats performance as an immediate outcome of capability, leaving the mechanism connecting capability to performance comparatively under-examined. Customer value offers one plausible mechanism: because customers evaluate a business not only by product attributes but by the benefit, convenience, and trust generated through digital interaction (Woodruff, 1997; Zeithaml, 1988), digital marketing capability may influence marketing performance largely by first shaping the value customers perceive (Christanti & Jatiputra, 2023; Indarto, 2024; Mu, 2017).

The effectiveness of digital marketing capability is also unlikely to be uniform across firms; it plausibly depends on how actively customers themselves engage with a business's digital activities. In digital spaces, customers no longer only receive marketing messages but participate through comments, reviews, recommendations, and content sharing (Kulikovskaja et al., 2023; Van Doorn et al., 2010). Such engagement can amplify the performance-generating effect of digital marketing capability by extending the organic reach of information and building trust more quickly than paid or owned communication alone (Brodie et al., 2011; Kamyabi et al., 2025; Vivek et al., 2012; Wong & Sijabat, 2022). The relationship between digital marketing capability and marketing performance therefore cannot be adequately understood as a simple direct effect: it plausibly operates through customer value as a mediating mechanism, under a boundary condition set by customer engagement, rather than through either mechanism in isolation.

This issue is especially relevant for MSMEs operating in secondary cities and localized markets within emerging economies, where competition is increasingly open but marketing resources, digital literacy, and access to professional marketing support remain comparatively limited (Munawar et al., 2025; Prihandono et al., 2024; Saeedikiya et al., 2024; Sudaryanti et al., 2025). Evidence from Indonesian MSMEs indicates that targeted strengthening of digital and marketing capability can accelerate performance improvement in precisely such settings (Mamengko et al., 2023; Prihandono et al., 2024; Siahaan et al., 2024; Triandra et al., 2019). However, research that explicitly positions digital marketing capability as the central predictor, with customer value modeled as a mediator and customer engagement as a moderator within a single integrated framework, remains comparatively scarce, particularly outside large metropolitan contexts. This is the gap that motivates the novelty of the present study: developing and empirically testing an integrated mediation-moderation model linking digital marketing capability, customer value, customer engagement, and

MSME marketing performance, rather than examining these mechanisms in isolation as most prior studies have done (Duah et al., 2024; Elkhoudary et al., 2026).

Digital marketing capability in this study is grounded in Dynamic Capability Theory (Teece, 2007; Teece et al., 1997) together with the concept of market-driven capability (Day, 1994) and the marketing capability-performance link (Morgan, 2012; Mu, 2017), which jointly argue that competitive advantage stems from an organization's capability to sense and respond to the market rather than from asset ownership per se. Customer value is grounded in Consumption/Perceived Value Theory (Zeithaml, 1988) and the concept of customer value as a source of competitive advantage (Woodruff, 1997), while customer engagement is grounded in Customer Engagement Theory (Brodie et al., 2011; Van Doorn et al., 2010; Vivek et al., 2012), which frames engagement as behavior that extends beyond the purchase transaction itself. MSME marketing performance is grounded in the concept of marketing performance as a measure of market-achievement success (Ferdinand, 2000) and in marketing performance measurement systems (Clark, 1999; Homburg et al., 2012). Taken together, these four theoretical streams, dynamic capability, perceived value, customer engagement, and marketing performance measurement, have rarely been integrated into a single empirical model for resource-constrained enterprises, which further motivates the theoretical contribution of this study.

Based on the foregoing, this study addresses three research questions: (1) does digital marketing capability affect MSME marketing performance; (2) does customer value mediate the relationship between digital marketing capability and MSME marketing performance; and (3) does customer engagement moderate the relationship between digital marketing capability and MSME marketing performance. In line with these research questions and the theoretical foundations above, this study proposes five hypotheses: H1, digital marketing capability has a positive and significant effect on MSME marketing performance; H2, digital marketing capability has a positive and significant effect on customer value; H3, customer value has a positive and significant effect on MSME marketing performance; H4, customer value mediates the effect of digital marketing capability on MSME marketing performance; and H5, customer engagement moderates the effect of digital marketing capability on MSME marketing performance. The conceptual framework depicting these five hypotheses is presented in Figure 1. The objective of this study is to empirically test these five relationships among MSMEs in a secondary-city, emerging-economy setting using a PLS-SEM approach, and further to identify improvement priorities through an Importance-Performance Map Analysis (IPMA).

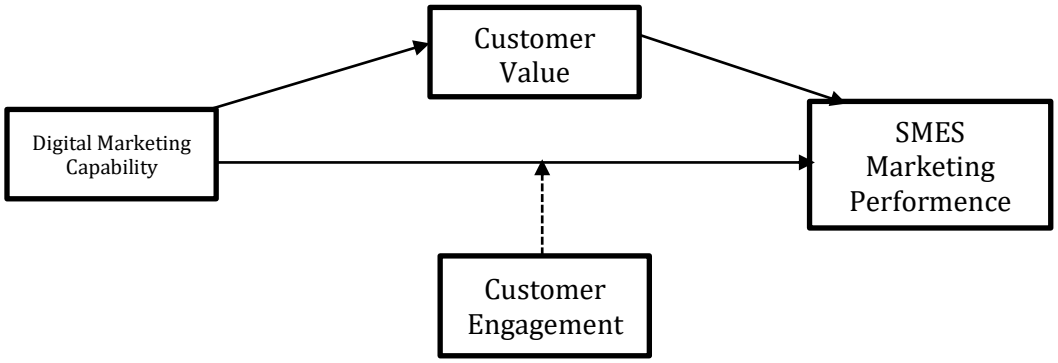


Figure 1. Conceptual Research Framework

RESEARCH METHODS

This study employs a quantitative explanatory research design to test the hypothesized cause-and-effect relationships among variables, using primary data collected through a survey questionnaire on a 1-5 Likert scale (1 = strongly disagree, 5 = strongly agree).

The population of this study consists of active MSME owners/managers in Kota Banjar, West Java, Indonesia, a secondary-city setting representative of the localized, resource-constrained markets in which many emerging-economy MSMEs operate. The sample was determined using purposive sampling with the following criteria: (1) the MSME had been operating for at least one year; (2) it had used at least one digital marketing channel (WhatsApp Business, Instagram, Facebook, TikTok, marketplace, or website); (3) the respondent was the owner/manager who understood the business's marketing activities; and (4) the respondent was willing to complete the questionnaire in full. Data collection yielded 212 valid respondents spread across four subdistricts (19.8%-31.6% each), exceeding the initial target of approximately 200 respondents.

This study involves four reflective latent variables, measured through a 48-item instrument (four dimensions per variable, three indicators per dimension): Digital Marketing Capability (X), the exogenous variable, operationalized as a firm's ability to plan, execute, and evaluate technology-based marketing activities to reach markets and communicate with customers; Customer Value (M), the mediating variable, operationalized as the benefit, convenience, trust, and positive experience customers derive from the business's digital interactions; Customer Engagement (Z), the moderating variable, operationalized as the intensity of customer interaction, participation, and responsiveness toward the business's digital marketing activities; and MSME Marketing Performance (Y), the endogenous variable, operationalized as sales growth, customer growth, market reach, and achievement of marketing targets. Indicators were adapted from established measures (Ferdinand, 2000; Kannan & Li, 2017; Van Doorn et al., 2010; Woodruff, 1997; Zeithaml, 1988).

Because Customer Value and Customer Engagement were measured from the perspective of the MSME owner/manager rather than through direct surveys of end customers, this study follows the single key-informant design commonly used in small-enterprise research, in which the owner-manager is typically the individual with the most complete, first-hand knowledge of customer interaction and is therefore treated as a competent proxy informant (Kull et al., 2018). This approach is methodologically practical for the informally managed MSME context of this study, but it carries an inherent risk of perceptual bias relative to customers' own reports; this limitation is revisited in the Conclusion.

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software (Ringle et al., 2015), selected for its suitability for predictive models with reflective constructs and a moderate sample size (Hair et al., 2021). The measurement model was evaluated for convergent validity (outer loading and Average Variance Extracted), construct reliability (Cronbach's Alpha, rho_A, and Composite Reliability), and discriminant validity via the Fornell-Larcker criterion (Fornell & Larcker, 1981) and the Heterotrait-Monotrait Ratio (Henseler et al., 2015). The structural model was evaluated for explained variance (R^2), model fit (SRMR and NFI), and path-coefficient significance through nonparametric bootstrapping with 5,000 subsamples (T Statistics > 1.96, $p < 0.05$). The mediating effect of customer

value (H4) was tested following established PLS-SEM mediation procedures (Baron & Kenny, 1986; Hair et al., 2021; Zhao et al., 2010), with the Variance Accounted For (VAF) computed to classify the type of mediation observed. The moderating effect of customer engagement (H5) was tested through the two-stage approach in SmartPLS (Becker et al., 2018), with the interaction of Digital Marketing Capability x Customer Engagement modeled as a distinct construct. Finally, an Importance-Performance Map Analysis (Ringle & Sarstedt, 2016; Sarstedt et al., 2024) was conducted to identify improvement priorities among the antecedent constructs relative to marketing performance.

RESULTS AND DISCUSSION

Respondent Characteristics

The characteristics of the 212 respondents are summarized in Table 1. This profile confirms that the study sample broadly represents micro-small MSMEs in a secondary city that have begun adopting digital marketing, albeit with varying levels of capability.

Table 1. Summary of Respondent Characteristics

No	Characteristic	Dominant Profile (n=212)
1	Gender	Female 54.7%; Male 45.3%
2	Age	30–49 years 59.4%
3	Last Education	Senior high school/equivalent 45.3%
4	Business Duration	2–10 years 58.5%
5	Business Sector	Culinary and Trade/Retail 54.2%
6	Number of Employees	1–5 people 80.7% (micro-small scale)
7	Annual Revenue	≤ IDR 100 million 57.1% (micro class)
8	Digital Marketing Intensity	Moderate–very high 73.5%
9	Primary Digital Media	WhatsApp Business 85.4%; Instagram 67.5%
10	Subdistrict Distribution	Banjar 31.6%; Pataruman 25.9%; Langensari 22.6%; Purwaharja 19.8%

Measurement Model Evaluation (Outer Model)

The measurement model (outer model) results show that all 48 indicator items across the four constructs have outer loadings above the 0.70 threshold (0.785-0.863), and Average Variance Extracted (AVE) for all constructs exceeds 0.50 (0.672-0.690), with Cronbach's Alpha and Composite Reliability for all constructs exceeding 0.95, jointly indicating adequate convergent validity and reliability (Hair et al., 2021). Discriminant validity via the Fornell-Larcker criterion (Fornell & Larcker, 1981) is satisfied for every construct pair, including the Digital Marketing Capability-Customer Value pair, which shows the narrowest margin (square root of AVE = 0.829 versus an inter-construct correlation of 0.823). The Heterotrait-Monotrait Ratio (HTMT) confirms all pairs fall below the conservative 0.90 threshold, although the Digital Marketing Capability-Customer Value pair (HTMT = 0.858) sits close to the stricter 0.85 cut-off proposed for conceptually distinct constructs (Henseler et al., 2015). We interpret this proximity as theoretically expected rather than as evidence of weak discriminant validity: within Dynamic Capability Theory, digital marketing capability is explicitly defined as an antecedent resource whose primary function is to generate customer value (Kannan & Li, 2017; Mu, 2017), so a strong empirical association between the two constructs is a predictable consequence of the very causal logic under test (H2), not an artifact of item redundancy, a distinction increasingly emphasized in refined

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discriminant-validity criteria such as HTMT2, which explicitly separates true conceptual overlap from a strong causal relationship between adjacent constructs (Roemer et al., 2021). The two constructs nonetheless retain conceptually distinct item content (capability items describe firm-level digital marketing actions; value items describe customer-perceived benefit, trust, and convenience), and collinearity testing (VIF ≤ 3.61 at the indicator level and ≤ 3.14 at the structural level) remains well below the threshold of 5, indicating no multicollinearity problem of the kind that would otherwise accompany genuine item redundancy. This proximity is nonetheless flagged as a point warranting instrument refinement in future replications.

Structural Model Evaluation (Inner Model)

The structural model (inner model) explains 67.7% of the variance in Customer Value and 78.8% of the variance in MSME Marketing Performance (R^2), both classified as substantial under conventional thresholds (Hair et al., 2021). The Standardized Root Mean Square Residual (SRMR = 0.039) and Normed Fit Index (NFI = 0.870) indicate a good fit between the model and the empirical data. Significance testing of the five hypothesized paths was conducted through bootstrapping with 5,000 subsamples; the results, including effect sizes (f^2) where applicable, are presented in Table 2.

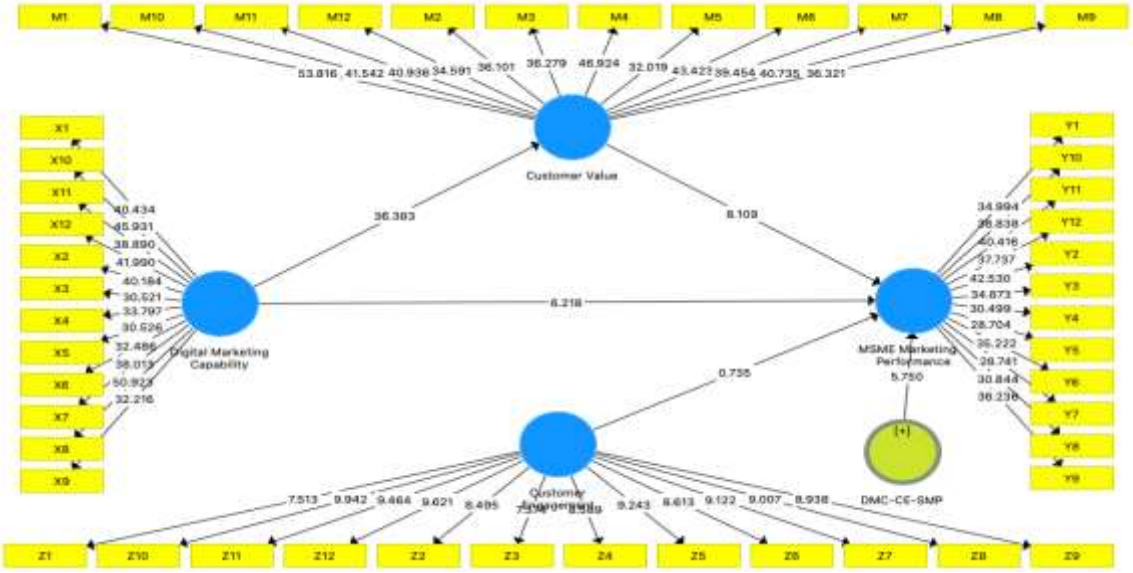


Figure 2. Structural Model — SmartPLS Bootstrapping T-Statistics Output (n=212)

Table 2. Summary of Hypothesis Testing (H1–H5)

Code	Hypothesized Path	β	t	p	Decision
H1	Digital Marketing Capability → MSME Marketing Performance	0.387	6.218	0.000	Supported
H2	Digital Marketing Capability → Customer Value	0.823	36.383	0.000	Supported
H3	Customer Value → MSME Marketing Performance	0.478	8.109	0.000	Supported (large effect, f^2=0.347)
H4	Digital Marketing Capability → Customer Value → MSME Marketing Performance (mediation)	0.393	7.907	0.000	Supported (partial mediation, VAF=50.4%)
H5	Customer Engagement moderates Digital Marketing Capability → MSME Marketing Performance	0.298	5.750	0.000	Supported (pure moderator, large effect, f^2=0.398)

Significant at α=5% (t > 1.96; p < 0.05), tested through bootstrapping with 5,000 subsamples.

Discussion of Hypothesis Testing

Hypothesis 1 (H1) states that digital marketing capability has a positive effect on MSME marketing performance. The results support this hypothesis (Table 2), consistent with Dynamic Capability Theory (Teece, 2007; Teece et al., 1997) and the market-driven capability perspective (Day, 1994), and in line with prior evidence linking digital marketing capability to small-enterprise performance (Deku et al., 2024; Liang et al., 2025; Triandra et al., 2019). This reinforces the argument that the core constraint for MSMEs is not the presence of a digital channel per se, but the extent to which strategic capability is built to exploit it (Christanti & Jatiputra, 2023; Mu, 2017). As the subsequent hypotheses show, however, this direct path is not the strongest mechanism in the model, a pattern that becomes clearer once the mediating and moderating routes are considered jointly.

Hypothesis 2 (H2) states that digital marketing capability has a positive effect on customer value. The results show the strongest and most precisely estimated path in the entire model (Table 2), reinforcing Consumption/Perceived Value Theory (Zeithaml, 1988) and the customer-value literature (Woodruff, 1997): a business's ability to deliver marketing messages, understand customer needs, and respond to digital interactions translates directly into perceived benefit, convenience, and trust. This is consistent with studies affirming that digital marketing capability actively creates customer value rather than merely operating digital media (Fitri & Halik, 2023; Indarto, 2024; Mu, 2017). Practically, this implies that customer-value programs should be designed as a downstream consequence of capability investment rather than as a stand-alone initiative.

Hypothesis 3 (H3) states that customer value has a positive effect on MSME marketing performance. The results support this hypothesis with a large effect size (Table 2), making customer value the strongest direct predictor of marketing performance in the model, stronger than digital marketing capability itself (H1). This underscores that perceived benefit, trust, and positive experience are more proximal determinants of marketing performance than capability alone, consistent with the logic that digital marketing activity must ultimately be converted into customer value before it translates into purchase, loyalty, and performance growth (Clark, 1999; Ferdinand, 2000; Homburg et al., 2012). Read together with H2, the most effective lever for MSMEs is therefore not simply the volume of digital activity, but ensuring that such activity genuinely converts into perceived customer value.

Hypothesis 4 (H4) states that customer value mediates the effect of digital marketing capability on marketing performance. Because the direct effect (H1) remains significant once customer value is entered as a mediator, the mediation is classified as complementary partial mediation (Baron & Kenny, 1986; Zhao et al., 2010), with customer value accounting for roughly half of the total effect (Table 2). This indicates that customer value is an important, but not the sole, mechanism connecting digital marketing capability to performance outcomes (Indarto, 2024): the remaining share of the effect plausibly operates directly, for instance through marketing-cost efficiency or an expanded market reach that does not depend on customer-value perception. Practically, this suggests that strategies aimed solely at strengthening customer value, without parallel investment in digital capability itself, would leave a substantial share of the achievable performance gain untapped.

Hypothesis 5 (H5) states that customer engagement moderates the effect of digital marketing capability on marketing performance. Using the two-stage approach, with the interaction of Digital Marketing Capability x Customer Engagement modeled as a distinct construct, the results support this hypothesis with a large effect size (Table 2). Notably, the main effect of customer engagement on marketing performance, estimated without the interaction term, was non-significant, while the interaction term itself was strongly significant, the empirical signature of a pure moderator (Kamyabi et al., 2025). This pattern is analytically meaningful rather than a statistical curiosity. Customer engagement, as conceptualized here (comments, reviews, and active participation in a business's digital activities), does not itself constitute a marketing action that generates sales or reach: an MSME's customers can be highly engaged without that engagement independently producing measurable performance gains, because engagement carries no direct commercial content of its own. What engagement does is condition the audience that receives and amplifies the business's digital marketing activity; it operates as a multiplier on the capability-performance path rather than as a parallel input. Concretely, the same promotional or content-management action taken by a digitally capable MSME reaches further, is trusted more readily, and converts more efficiently when its customer base is already engaged (commenting, sharing, reviewing) than when it is not, because engaged customers amplify the organic reach and perceived credibility of that action through peer-to-peer diffusion (Brodie et al., 2011; Kulikovskaja et al., 2023; Van Doorn et al., 2010; Vivek et al., 2012). This is consistent with Customer Engagement Theory's view of engagement as a relationship-intensifying behavior that extends beyond the purchase transaction (Wong & Sijabat, 2022), and with recent evidence that engagement functions most consistently as a boundary condition on marketing-capability effectiveness rather than as an independent performance driver (Kamyabi et al., 2025; Kulikovskaja et al., 2023). The comparatively large effect size of this interaction indicates that the moderating role of customer engagement is a substantively important boundary condition for MSME marketing strategy, rather than a marginal refinement of the model.

Importance-Performance Map Analysis (IPMA)

The Importance-Performance Map Analysis (Ringle & Sarstedt, 2016; Sarstedt et al., 2024) for the MSME Marketing Performance construct shows that Digital Marketing Capability has the highest importance (total effect = 0.780), followed by Customer Value (0.478) and Customer Engagement (0.028), yet its performance score (54.86, rescaled 0-100) is lower than that of Customer Value (55.56). This combination of high importance but comparatively low performance places Digital Marketing Capability in the "Main Priority" quadrant (Figure 3), indicating that strengthening this capability, encompassing promotional ability, market communication, content management, and digital customer responsiveness, represents the intervention area with the greatest potential impact on MSME marketing performance. This is consistent with evidence that targeted strengthening of digital and marketing capability accelerates performance improvement among resource-constrained enterprises (Mamengko et al., 2023; Prihandono et al., 2024; Saeedikiya et al., 2024). Notably, IPMA reveals a nuance that hypothesis testing alone cannot: although customer value shows a strong direct effect on performance (H3), its already higher performance score means that further gains from improving customer value are likely to be smaller than gains achievable by strengthening digital marketing capability, whose performance still lags its importance.

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Figure 3. Importance-Performance Map (IPMA) — Target: MSME Marketing Performance

Novelty and Research Contribution

Compared with prior studies that generally test the direct effect of digital marketing on MSME performance (Deku et al., 2024; Liang et al., 2025; Triandra et al., 2019) or that position a single mediator such as dynamic or innovation capability (Christanti & Jatiputra, 2023; Indarto, 2024), this study offers novelty by simultaneously integrating a mediating mechanism (customer value) and a moderating mechanism (customer engagement) within a single model, and by empirically demonstrating that customer engagement functions as a pure moderator, a pattern still rarely made explicit in MSME research. The IPMA analysis further provides practical novelty by identifying digital marketing capability, rather than customer value or customer engagement, as the primary intervention priority, even though all three constructs are significantly related to marketing performance, a nuance unavailable from hypothesis testing alone.

Theoretical Implications

Theoretically, this study extends Dynamic Capability Theory (Teece, 2007; Teece et al., 1997) by demonstrating its relevance not only to large, resource-rich firms, the setting in which the theory was originally developed, but also to resource-constrained micro and small enterprises operating in a secondary-city digital economy. The strong path from digital marketing capability to customer value (H2) empirically substantiates the theoretical linkage proposed by Consumption/Perceived Value Theory (Zeithaml, 1988) and the customer-value literature (Woodruff, 1997), showing that a dynamic capability's ultimate performance contribution is substantially routed through the value it creates for customers rather than operating as an unmediated, purely internal process. At the same time, the confirmation of customer engagement as a pure moderator (H5) extends Customer Engagement Theory (Brodie et al., 2011; Van Doorn et al., 2010; Vivek et al., 2012) by clarifying a boundary condition that prior MSME studies have rarely tested explicitly: customer engagement amplifies the performance-generating effect of a firm's own capability rather than substituting for it. This

integrated mediation-moderation structure, a single model in which customer value operates as an intervening mechanism and customer engagement operates as a boundary condition on the same core relationship, offers a more complete theoretical account of how digital marketing capability translates into marketing performance than models that examine mediation or moderation in isolation, as most of the reviewed literature does (Christanti & Jatiputra, 2023; Wong & Sijabat, 2022).

Managerial Implications

From a managerial standpoint, the IPMA results (Figure 3) offer a clear, ranked basis for resource allocation: because digital marketing capability combines the highest importance with comparatively lower performance, MSME owners and business-development agencies should prioritize investment in this capability, for example, structured training in content planning, promotional messaging, and digital customer response, ahead of initiatives targeting customer value or customer engagement alone. However, the partial-mediation result (H4) indicates that capability-building efforts alone would capture only part of their potential performance impact; effective programs should therefore be designed to simultaneously strengthen the customer-value outcomes of digital marketing activity (for instance, ensuring that promotional content is not just frequent but genuinely useful, trustworthy, and easy to act on for customers) rather than treating capability development and value creation as separate initiatives. Furthermore, because customer engagement was confirmed as a pure moderator (H5) rather than a direct performance driver, engagement-building tactics, encouraging reviews, responding actively to comments, or running community-based loyalty activities, should be framed by policymakers and MSME mentors not as stand-alone performance levers, but as amplifiers that should accompany, not substitute for, digital capability development. Local government and MSME-support institutions can use these findings to design integrated assistance programs that combine technical digital-marketing training with customer-relationship coaching, rather than programs that address digital literacy and customer engagement as unrelated tracks.

CONCLUSION

This study examined the effect of digital marketing capability on MSME marketing performance, testing customer value as a mediating mechanism and customer engagement as a moderating boundary condition, using PLS-SEM on primary survey data from MSME owners/managers. The findings show that digital marketing capability contributes positively to marketing performance both directly and indirectly through the value it creates for customers, confirming that digital marketing capability is best understood as a strategic, performance-generating resource rather than as the mere operation of digital channels. Customer value was found to partially, rather than fully, mediate this relationship, indicating that capability also affects performance through channels other than customer value alone. Customer engagement, in turn, was confirmed to act as a pure moderator: it does not independently drive marketing performance, but it meaningfully strengthens the effectiveness of digital marketing capability once that capability is present. Taken together, these findings answer the study's three research questions and support all five proposed hypotheses, demonstrating that the translation of digital marketing capability into MSME marketing performance is best explained through a joint mediation-moderation mechanism rather than through any single direct-effect pathway.

Theoretically, these findings extend Dynamic Capability Theory into the context of resource-constrained micro and small enterprises and show that Consumption/Perceived Value Theory and Customer Engagement Theory can be coherently integrated within a single mediation-moderation model to explain MSME marketing performance, as elaborated in the Theoretical Implications discussion above. Practically, the Importance-Performance Map Analysis indicates that strengthening digital marketing capability represents the intervention area with the greatest potential impact on MSME marketing performance, and that such capability-building efforts are most effective when designed jointly with initiatives that build customer value and customer engagement rather than treated as separate programs, as detailed in the Managerial Implications discussion above. Local governments, business-development agencies, and MSME-mentoring institutions can draw on these findings to design integrated assistance programs that combine technical digital-marketing training with customer-relationship coaching, rather than addressing digital literacy and customer engagement as unrelated tracks.

This study has several limitations that warrant attention in future research. Its cross-sectional design constrains strong temporal-causal inference; its measurement of customer value and customer engagement relies on MSME owners'/managers' perceptions rather than on direct surveys of end customers, a single-informant approach that is common but not bias-free in small-enterprise research; the empirical association between Digital Marketing Capability and Customer Value, while theoretically expected, leaves room for further instrument refinement; and the study's geographic and sectoral scope is limited to MSMEs in a single secondary-city setting, which constrains generalizability to other emerging-economy contexts. Future research is encouraged to triangulate owner/manager reports with direct customer surveys, extend the model to other emerging-economy MSME populations to test its generalizability, and adopt a longitudinal design to strengthen causal evidence regarding the relationships among digital marketing capability, customer value, customer engagement, and MSME marketing performance.

Statement on the Use of Artificial Intelligence.

Artificial intelligence (AI) was used in the preparation of this manuscript. The authors used AI tools to assist with supporting data analysis, drafting narrative text based on the authors' own SEM-PLS data processing, and improving language, writing style, and clarity of presentation. The authors remain fully responsible for the accuracy, originality, integrity, and academic content of this manuscript. All AI-assisted content was reviewed and verified by the authors against the primary research data before use.

Conflicts of interest

The authors declare no conflict of interest related to this research and its publication.

Author contributions

Conceptualization, A.R. and A.H.M.; methodology, A.H.M.; data collection, A.R.; formal analysis, A.H.M.; validation, M.R.; writing - original draft preparation, A.R. and A.H.M.; writing - review and editing, M.R.; supervision, M.R. All authors have read and approved the final version of the manuscript.

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