



## Enhancing MSME Marketing Performance through AI, Creativity, and Response Speed: Lessons for Educational Management and Entrepreneurial Development

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### ABSTRACT

#### Keywords:

Digital Marketing Strategy; Customer Experience; Entrepreneurial Performance

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This study aims to examine the influence of Artificial Intelligence (AI) utilisation, marketing creativity, and response speed on the marketing performance of Micro, Small, and Medium Enterprises (MSMEs) in Bangka Belitung Province, with customer experience positioned as a mediating variable. Employing a quantitative research design, data were collected through structured questionnaires distributed to MSMEs actively engaged in digital marketing practices. The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) to test the proposed relationships. The findings indicate that marketing creativity and response speed have a significant positive effect on customer experience, whereas AI utilisation does not show a significant effect on customer experience. Furthermore, customer experience significantly influences marketing performance and serves as a mediating variable in the relationship between marketing creativity, response speed, and marketing performance. Specifically, marketing creativity and response speed contribute both directly and indirectly to improved marketing performance through enhanced customer experience. These results provide important theoretical contributions to digital marketing and customer experience literature, while offering practical implications for MSME managers and educational institutions in designing technology-oriented marketing strategies and entrepreneurship learning that prioritise creativity, responsiveness, and customer-centred approaches.

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## INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in supporting socio-economic development, employment creation, and community resilience, particularly in developing regions such as Indonesia (Dewi, 2025; Kusumawati, 2025; Najiburohman et al., 2025; Syafiih, 2025). Their importance

extends beyond economic contribution, as MSMEs also function as learning-based organizations where managerial skills, technological literacy, and adaptive capacities are continuously developed. In the era of digital transformation, marketing performance has become a critical determinant of MSME sustainability, requiring not only access to technology but also managerial learning and strategic capability development. Evidence from national data indicates that although the number of MSMEs continues to increase annually, their contribution to exports and global market competitiveness remains limited. This condition highlights a gap between quantity and quality of MSME performance. From a broader societal perspective, strengthening MSME marketing performance is not merely an economic agenda but also an educational and managerial issue, as it involves improving digital competencies, strategic thinking, and experiential learning among business actors. Therefore, research that explores how technology, creativity, responsiveness, and customer experience interact to enhance marketing performance is essential for fostering sustainable economic and educational development in society.

Despite their strategic role, MSMEs face persistent structural and managerial challenges that hinder optimal marketing performance. Limited access to digital infrastructure, low levels of digital literacy, and inadequate data-driven decision-making remain common problems, particularly outside major urban centers. These challenges are not purely technological but also educational, reflecting gaps in managerial training, organizational learning, and strategic capability development (Hidayat et al., 2024; Mulyadi & Sutiah, 2025; Saharani & Diana, 2024; Susanti et al., 2025; Zaini, 2024). Many MSME owners rely on traditional marketing practices and intuitive decision-making, which are increasingly insufficient in a highly competitive digital environment. The lack of structured learning systems within MSMEs limits their ability to adopt innovative technologies such as Artificial Intelligence (AI) effectively. Moreover, weak responsiveness to customer needs and inconsistent customer experience management further constrain performance outcomes (Fanani & Hidayah, 2024; Fawaid et al., 2025; Rofiki & Badriyati, 2025). These issues collectively indicate that improving MSME marketing performance requires more than technology adoption; it demands an integrated management and educational approach that enhances learning, creativity, and responsiveness. Without addressing these foundational problems, digital transformation efforts risk becoming superficial and unsustainable, reinforcing the need for empirical research that examines these interconnected factors.

Empirical conditions in regions such as the Bangka Belitung Islands illustrate the uneven progress of MSME digital transformation. While some MSMEs successfully leveraged digital platforms during the COVID-19 pandemic

to expand market reach and strengthen customer relationships, many others struggled to adapt due to limited managerial competence and technological readiness. Field observations indicate that MSMEs capable of responding quickly to customer inquiries, creating engaging digital content, and delivering consistent customer experiences were more resilient during periods of crisis. However, the adoption of AI-based tools such as chatbots, recommendation systems, and targeted advertising remains relatively low and often limited to basic applications (Saleha & Sholihah, 2024; Widad & Munif, 2025; Yahya, 2023). This phenomenon suggests that technology alone does not guarantee improved marketing performance. Instead, the ability of MSMEs to learn, experiment, and integrate technology into their managerial practices plays a decisive role. These real-world dynamics underscore the importance of examining customer experience as a mediating factor that translates managerial creativity, responsiveness, and AI utilisation into tangible marketing outcomes.

Previous studies have demonstrated that AI adoption can enhance marketing efficiency through automation, data analytics, and personalised communication, leading to improved customer engagement and operational efficiency (Aslam et al., 2025; Firly, 2024; Gupta, 2025). Other research highlights the importance of marketing creativity in differentiating firms within saturated markets and strengthening emotional connections with customers (Kedi et al., 2024). Responsiveness has also been identified as a key driver of customer satisfaction and loyalty, particularly in digital environments where speed and accuracy are highly valued (Novitasari et al., 2025). From an educational management perspective, these studies implicitly emphasize the role of learning, adaptation, and capability development within organizations. However, most existing research examines these variables in isolation or focuses on large firms and advanced digital ecosystems, limiting their applicability to MSMEs in developing regions.

Despite growing interest in digital marketing and AI, several gaps remain in the literature (Ataman & Safitri, 2024; Baharun et al., 2025; Fatmasari et al., 2025; Hidayat et al., 2024). First, limited empirical studies integrate AI utilisation, marketing creativity, and response speed within a single explanatory framework that considers customer experience as a mediating variable, particularly in the MSME context. Second, existing research often overlooks the managerial and educational dimensions of technology adoption, such as learning processes, digital skill development, and experiential knowledge transfer within MSMEs. Third, regional contexts like Bangka Belitung are underrepresented, despite facing distinct infrastructural and human resource challenges. These limitations suggest the need for research that not only measures technological impact but also explains how managerial learning and customer experience jointly shape

marketing performance. Addressing these gaps is crucial for developing context-sensitive strategies that align digital innovation with sustainable MSME development.

This study offers novelty by integrating AI utilisation, marketing creativity, and response speed into a comprehensive model that positions customer experience as a mediating mechanism influencing MSME marketing performance. Unlike previous studies, this research explicitly incorporates a management and educational perspective, viewing MSMEs as learning organizations that must continuously develop digital competencies and adaptive capabilities. The study advances the state of the art by applying this integrated model to MSMEs in Bangka Belitung, a region characterised by both growth potential and structural constraints. By employing PLS-SEM, the research provides robust empirical evidence on the relative influence of technological and managerial factors, offering insights into how digital tools can be transformed into meaningful performance outcomes through experiential learning and customer-focused management.

Based on the identified gaps and empirical context, this study addresses the following research problem: How do AI utilisation, marketing creativity, and response speed influence MSME marketing performance, and to what extent does customer experience mediate these relationships? The central argument of this research is that customer experience serves as a critical learning-based mechanism through which managerial strategies and digital technologies translate into performance gains. By strengthening customer experience, MSMEs can enhance market responsiveness, customer loyalty, and long-term competitiveness. Theoretically, this study contributes to the literature by bridging digital marketing, customer experience, and management education perspectives. Practically, it provides evidence-based insights for MSME practitioners, educators, and policymakers to design capacity-building programs that integrate technology adoption with managerial learning and customer-centric strategies.

## RESEACH METHOD

This study adopts a quantitative research design using Structural Equation Modelling (SEM), specifically the Partial Least Squares SEM (PLS-SEM) approach (Ghanad, 2023; Sardana et al., 2023). This design was selected because it enables the simultaneous examination of complex causal relationships among multiple latent variables, including direct and indirect effects. PLS-SEM is particularly suitable for predictive research and theory development, especially when models involve mediating variables and data may not fully meet multivariate normality assumptions. In this study, Customer Experience is

positioned as a mediating variable that links Artificial Intelligence (AI) utilisation, marketing creativity, and response speed to marketing performance. Therefore, SEM is considered the most appropriate analytical method to test the conceptual framework comprehensively and to capture the dynamic interactions among technological, managerial, and experiential constructs in MSME marketing performance (Hair et al., 2019).

The research was conducted in the Province of Bangka Belitung Islands, Indonesia, focusing on MSMEs actively engaged in digital marketing activities. This location was selected due to its strategic economic role and unique contextual characteristics. Despite the growing number of MSMEs in the region, Bangka Belitung faces challenges related to digital infrastructure, human resource capacity, and uneven adoption of advanced marketing technologies such as AI. These conditions make the region a relevant and meaningful setting for examining how AI utilisation, creativity, and responsiveness influence marketing performance. Furthermore, the region provides an appropriate context to explore customer experience as a mediating factor, as MSMEs in Bangka Belitung are currently undergoing a transitional phase of digital transformation.

Data were collected using a structured questionnaire administered to MSME owners or managers who met specific criteria. The sampling technique employed was purposive sampling, targeting MSMEs that (1) have used digital media for marketing for at least one year, (2) possess experience or basic knowledge of AI-based tools or digital applications, and (3) actively interact with customers through digital platforms. The sample size was determined following the guidelines proposed by Hair et al. (2019), which recommend a minimum of 5–10 times the number of research indicators in SEM analysis. With approximately 20–30 indicators, a minimum sample size of 287 respondents was required to ensure model stability and representativeness. Questionnaires were distributed both online via Google Forms and offline, depending on respondents' accessibility, to maximise participation and data coverage.

The collected data were analysed using SmartPLS software with the PLS-SEM procedure. The analysis was conducted in two main stages: outer model evaluation and inner model evaluation. The outer model assessment focused on testing indicator validity and reliability by examining factor loadings, Average Variance Extracted (AVE), composite reliability, and discriminant validity. The inner model evaluation assessed the structural relationships among variables by analysing the coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), predictive relevance ( $Q^2$ ), and path coefficients. Hypothesis testing was performed using the bootstrapping technique to determine the statistical significance of both direct and indirect effects, particularly the mediating role of customer experience.

To ensure the validity and reliability of the research data, several procedures were implemented. Content validity was established through expert judgment, ensuring that the questionnaire items accurately represented the conceptual definitions of each variable. Construct validity and convergent validity were confirmed through factor loading and AVE values, while reliability was assessed using composite reliability and Cronbach's alpha. Additionally, discriminant validity was evaluated to ensure that each construct was empirically distinct. The use of PLS-SEM further enhanced the robustness of the findings by accommodating complex models and minimising measurement errors. Collectively, these procedures ensured that the research results were credible, consistent, and suitable for drawing valid conclusions regarding MSME marketing performance.

## RESULT AND DISCUSSION

Based on the results of path analysis using the Partial Least Squares (PLS) model, it can be concluded that Customer Experience (CE) has a very significant effect on Marketing Performance (KP), with an original sample value of 0.469 and a p-value of 0.000 ( $< 0.05$ ). This indicates that the better the customer experience, the higher the company's marketing performance. The t-statistic value of 3.655 indicates that this influence is quite strong and stable. This reinforces previous literature that customer experience is an important factor in driving loyalty, word-of-mouth, and customer retention, which ultimately contributes to the achievement of marketing objectives.

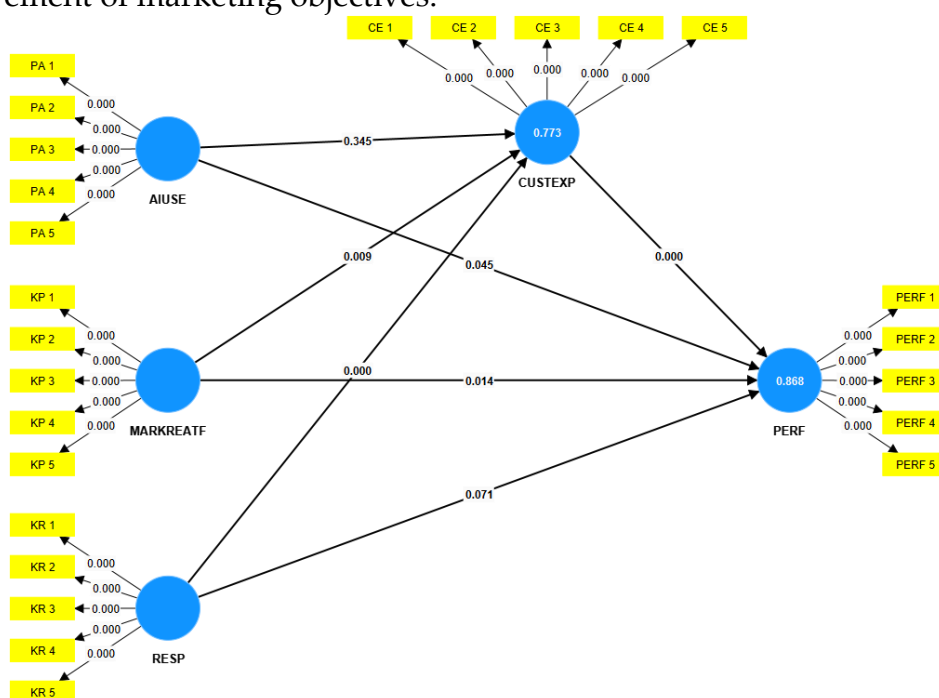


Figure 1. Path Coefficient Analysis

Meanwhile, the Response Speed (KR) variable shows a highly significant relationship with Customer Experience, with a coefficient value of 0.662, a t-statistic of 6.032, and a p-value of 0.000. This indicates that responding quickly to customer questions, requests, or complaints contributes greatly to creating a positive experience. However, when viewed from its direct influence on Marketing Performance, response speed has a p-value of 0.071 ( $> 0.05$ ), which means that this relationship is not statistically significant. This indicates that the impact of response speed on marketing performance is indirect, namely through an improvement in customer experience as a mediating variable.

Furthermore, Marketing Creativity (KPemas) has been proven to have a significant effect on both Customer Experience (p-value 0.009) and Marketing Performance (p-value 0.014). The respective coefficient values of 0.281 and 0.241 indicate that the more creative the marketing strategy—for example, through innovative campaigns, engaging content, and a personalised approach—the more positive the customer experience will be and the higher the marketing results will be. This is in line with the theory that creativity in marketing can create differentiation and strengthen the brand's position in the minds of consumers.

Interestingly, the AI Utilisation (PAI) variable did not show a significant effect on Customer Experience, with a negative coefficient value (-0.049), a t-statistic of only 0.945, and a p-value of 0.345. This indicates that the use of AI in the current context has not been able to have a direct positive impact on customer experience. AI utilisation may be still focused on operational or analytical aspects that are not directly felt by customers on an emotional level. However, the influence of AI on Marketing Performance is quite significant, albeit weak, with a p-value of 0.045 and a coefficient of 0.096. This indicates that AI can contribute to efficiency, segmentation, and marketing data analysis processes, but is not yet optimal in the context of direct customer interaction.

Based on the results of the mediation effect analysis using the Partial Least Squares (PLS) method, it can be concluded that Customer Experience (CE) plays an important role as a mediator in the relationship between several independent variables and Marketing Performance (MP). First, the path Response Speed  $\rightarrow$  Customer Experience  $\rightarrow$  Marketing Performance shows a coefficient value of 0.311 with a p-value of 0.002. This is strong evidence that the effect of response speed on marketing performance occurs largely indirectly through improved customer experience. This means that the speed of responding to customer complaints, requests, or questions significantly improves customer perception of the brand, which ultimately enhances marketing performance such as loyalty, repeat purchases, and word-of-mouth.

Furthermore, the relationship between Marketing Creativity → Customer Experience → Marketing Performance was also proven to be significant, with a mediation coefficient value of 0.132 and a p-value of 0.044. This shows that creativity in delivering marketing messages, content design, and innovative approaches to consumers contributes positively to customer experience, which in turn has a positive impact on marketing performance. This finding is in line with contemporary marketing literature, which emphasises that creativity is not only about aesthetics or originality, but also about how communication can build emotions, engagement, and added value in the minds of customers. An engaging and memorable experience becomes the bridge between creativity and sales conversion.

Conversely, the AI Utilisation → Customer Experience → Marketing Performance pathway shows statistically insignificant results, with a p-value of 0.397 and a negative coefficient of -0.023. This indicates that although AI is expected to strengthen customer service and marketing, its utilisation has not been able to effectively improve customer experience, and even tends to make a weak negative contribution. This result is most likely due to the implementation of AI, which is still technical in nature and has not been directed towards building personal and emotional interactions with customers. For example, the use of automated chatbots or recommendation systems may be considered insufficiently responsive or relevant by customers.

The ineffectiveness of AI in shaping positive customer experiences indicates the need for a more strategic and human-centred approach to technology integration. Organisations need to consider empathy, context, and personalisation in their use of AI in order to truly address customers' emotional needs and preferences. Without a human touch or customer-centric experience design, AI can become an obstacle rather than a facilitator in creating value through experience. Therefore, digital transformation in marketing should not only emphasise efficiency, but also pay attention to the quality of interactions that are built.

## CONCLUSION

The most important insight derived from this study is that Customer Experience serves as the central mechanism linking marketing strategies to marketing performance among MSMEs in Bangka Belitung. This finding highlights that technological adoption and operational responsiveness alone are insufficient unless they are translated into meaningful customer interactions. Marketing creativity emerged as the strongest driver, exerting both direct and indirect effects on marketing performance through enhanced customer

experience. Meanwhile, response speed significantly shaped customer experience but did not directly influence marketing performance, indicating that fast service functions as a relational foundation rather than an immediate performance driver. From a scholarly perspective, this study contributes to the marketing and management literature by empirically validating customer experience as a mediating construct within a technology-driven MSME context, particularly in emerging economies. The integration of AI utilisation, marketing creativity, and response speed into a single SEM framework enriches theoretical discussions on experiential marketing and digital transformation in MSMEs.

Despite its contributions, this study has several limitations that open avenues for future research. First, the research is limited to MSMEs in Bangka Belitung Province, which may restrict the generalisability of the findings to other regions with different digital readiness levels and market dynamics. Second, AI utilisation was measured broadly, without distinguishing between types of AI applications, which may explain its limited impact on customer experience. Future studies are encouraged to examine specific AI tools, such as personalised chatbots or predictive analytics, to better capture their experiential value. In addition, this study employed a cross-sectional design, which limits causal inference over time. Longitudinal or mixed-method approaches are recommended to explore how customer experience evolves as MSMEs increasingly adopt advanced digital technologies. These future research directions are expected to strengthen the understanding of strategic digital marketing management and its long-term implications for MSME performance.

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