

DIGITAL ORGANIZATIONAL CULTURE AND HUMAN RESOURCE COMPETENCE IN SHAPING STRATEGIC DIGITAL MARKETING FOR ENHANCING MARKETING PERFORMANCE IN SMEs

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Abstract:

Background: Digital transformation is crucial for small and medium enterprises (SMEs) to remain competitive, but many face barriers in linking technology adoption to marketing performance due to resource constraints, technology adoption barriers, low digital competency, weak digital culture, and fragmented strategic execution.

Purpose: This study examines how employee competencies and digital culture influence adaptive marketing strategies through social media and e-commerce and their implications, by adopting a theoretical dynamic resource and capability perspective.

Design/methodology/approach: A survey of 900 randomly selected SME managers was conducted, and the data were analyzed using structural modeling to test for direct mediation.

Findings/results: Results reveal that employee competence and digital culture drive adaptive marketing strategies, which in turn have the strongest impact on marketing performance. Marketing strategies act as a critical bridge between internal resources and market outcomes, highlighting the transformative role of strategic execution. The findings further indicate that digital culture alone does not directly enhance performance unless it is operationalized through structured and responsive digital marketing strategies.

Conclusion: Unlike most prior studies that only examined direct links between resources and performance, this research integrates two theoretical perspectives and empirically demonstrates how intangible resources are transformed into marketing performance through adaptive digital strategies. The results provide important insights for SMEs in developing economies, where digital readiness varies across sectors and regions, emphasizing the importance of strategic alignment rather than mere digital adoption.

Originality/value (State of the art): This study expands the research boundaries by highlighting the role of digital marketing strategies as a mediating mechanism in linking SMEs' internal capabilities with superior marketing performance.

Keywords: digital culture , social media, marketing performance, marketing strategy, SMEs

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INTRODUCTION

Digital transformation has become a fundamental driver reshaping organizational structures and marketing strategies across industries, including Small and Medium Enterprises (SMEs). In the context of SMEs, digital transformation offers opportunities to enhance marketing performance through efficient resource management and technology adoption (Dwivedi et al. 2024; Papadopoulos et al. 2022). However, despite widespread access to digital platforms, many SMEs still fail to achieve tangible improvements in revenue growth, customer loyalty, and brand awareness (Zhang & Zhang, 2025; Civelek et al. 2024).

One major barrier to effective digital transformation is organizational readiness, particularly related to internal culture and human resource capabilities. At the operational level, SMEs commonly face low digital literacy among owners and employees, the absence of structured and continuous digital training programs, resistance to change rooted in traditional business mindsets, and severe financial and time constraints that limit investments in digital infrastructure and skill development (OECD, 2021). SMEs frequently lack a strong digital organizational culture that fosters innovation and adaptability, and they often face limited digital competencies among employees (Rashid et al. 2024; Salamzadeh et al. 2024; Uthailiang & Kiattisin 2023). Consequently, digital strategies are often fragmented and fail to deliver optimal outcomes (Turkyilmaz et al. 2024). In many cases, digital initiatives are implemented in an ad hoc manner, without clear strategic alignment or internal capability development, leading to underutilization of digital tools and weak performance impacts (Warner & Wäger, 2019). Mismanaged digital transformation can widen the competitiveness gap between SMEs and larger firms that are technologically adaptive (Radicic et al. 2023).

In developing countries, these challenges are even more pressing because digital technologies, while increasingly accessible, are not always integrated into business processes due to cultural misalignment (Pradana et al. 2025; Viswanathan et al. 2021). In the Indonesian context, empirical evidence shows that many SMEs adopt digital platforms primarily for promotional purposes, such as social media presence or online marketplaces, without integrating digital tools into strategic decision-making, customer analytics, or value

creation processes (Akhmad et al. 2025). Furthermore, Indonesian SMEs are often characterized by owner-centric decision-making and informal organizational structures, which hinder the development of systematic digital capabilities and limit organizational learning related to digital innovation (Anatan & Nur, 2023). Despite strong government initiatives to promote SME digitalization, disparities in digital readiness across regions and sectors remain substantial, reinforcing the need for context-specific studies that address internal organizational factors rather than mere technology adoption (Rafiah et al. 2025).

In this context, recent studies on digital-related capabilities also show that the success of digital innovation depends heavily on an organization's ability to build internal and external collaboration in developing digital business processes (Kohli & Melville, 2019; Nasiri et al. 2023). These findings reinforce the argument that digital culture readiness and human resource competency are key foundations for the success of SME digital transformation, particularly in developing countries.

Scholars highlight the critical role of digital organizational culture (DOC) in shaping firms' resilience and technological adaptability (Zhen et al. 2021) and the importance of human resource competence (HRC) in supporting data-driven, customer-centric digital initiatives (Salamzadeh et al. 2024). In line with this, previous studies have confirmed that digital capabilities directly impact SME business performance, both through digital transformation and directly (Hutama et al. 2024). However, although Hutama et al. (2024) demonstrated that digital capabilities influence business performance through innovation capabilities, the study did not consider the role of digital organizational culture (DOC) and human resource competencies (HRC) as internal resources that shape these capabilities. Furthermore, the study did not explore strategic digital marketing capabilities (DMS) as a mediator, leaving the mechanism by which digital capabilities translate into marketing performance unexplained. Within this context, digital marketing strategy (DMS) acts as a dynamic capability that reconfigures internal resources (DOC and HRC) to achieve superior marketing performance (MP) (Teece et al. 2016; Dwivedi et al. 2024). Yet, most previous studies focus on direct effects of DOC and HRC on firm performance while overlooking how DMS mediates these relationships (Zhang et al. 2024; Yu et al. 2025).

This gap is significant because digital marketing methods translate internal values and competencies into measurable market outcomes such as customer retention, revenue growth, and brand recognition (Taiminen & Ranaweera, 2023; Papadopoulos et al. 2022).

To address this issue, this study adopts an integrated framework combining the Resource-Based View (RBV) and Dynamic Capability Theory (DCT). RBV emphasizes that sustainable competitive advantage stems from valuable, rare, difficult-to-imitate, and immutable internal resources, such as digital organizational culture (DOC) and human resource competencies (HRC) (Barney, 1991).

However, RBV alone is insufficient to explain how companies can adapt in a rapidly changing business environment. DCT focuses on an organization's ability to sense, harness, and reconfigure internal resources to remain relevant in a dynamic digital environment (Teece et al. 2016). Through this perspective, digital marketing strategy (DMS) is positioned as a dynamic capability that enables SMEs to reconfigure their cultural capabilities and human resource competencies into an adaptive, data-driven marketing strategy.

By integrating these two theories, this study constructs a conceptual model explaining how the combination of DOC and HRC as strategic resources, through DMS as a dynamic capability, can drive improved marketing performance (PM) in SMEs. This approach not only enriches the conceptual understanding of the relationship between internal resources and dynamic capabilities but also provides an empirical basis for understanding how SMEs can manage digital transformation in a sustainable and performance-oriented manner (Warner & Wäger, 2019; Li et al. 2020). These challenges require strengthening internal capacity as a key prerequisite for the effective implementation of a dynamic capabilities-based strategy (Muljono et al. 2021).

The objective of this research is to empirically test a conceptual model linking DOC and HRC to MP through DMS as a mediating variable. The findings are expected to contribute to strategic digital management literature, particularly in SME contexts, and provide practical insights for managers and policymakers in designing resource-based and culturally aligned digital marketing strategies.

METHODS

This study uses primary data collected from a sample of 900 SME managers in Indonesia. The sampling frame was obtained from the registered SME database provided by the Indonesian Ministry of Cooperatives and SMEs. SMEs considered for the sampling process had to meet three eligibility criteria: (1) active operations for at least one year, (2) digital marketing activities through social media or e-commerce platforms, and (3) valid and verifiable WhatsApp contact information. After data collection and screening, 900 valid responses were obtained and became the final sample used in the analysis.

A total of 1,000 SMEs selected through a sampling process were invited to participate via WhatsApp messages containing an introduction to the study, a consent form, and a link to an online questionnaire (Google Forms). The findings from this phase were used to refine the instrument before final distribution. After this screening process, 900 responses met the validity criteria and were used as the research dataset. The measurement indicators were adapted from previous studies: HRC from Salamzadeh et al. (2024), DOC from Zhen et al. (2024), DMS from Dwivedi et al. (2024), and MP from Papadopoulos et al. (2022).

Data were analyzed using SEM techniques with the lavaan package in R Studio. Confirmatory Factor Analysis (CFA) was performed first to validate the constructs, followed by structural model testing to examine causal relationships. Model fit was evaluated using several indices, including χ^2/df (values <3 indicate an adequate model), TLI and CFI (values ≥ 0.90 indicate a good fit), and RMSEA (values ≤ 0.08 indicate an acceptable fit and ≤ 0.05 indicate a close fit). Mediation analysis was conducted using the bootstrapping method with 5,000 replications. Construct reliability was assessed using Composite Reliability (CR > 0.70), while convergent validity was evaluated using Average Variance Extracted (AVE > 0.50) and discriminant validity using the Fornell–Larcker criteria (Hair et al. 2022; Henseler et al. 2023).

A strong digital organizational culture fosters openness, experimentation, and cross-functional collaboration, which are essential conditions for developing coherent and adaptive digital marketing strategies (Zhen et al. 2021). Accordingly, this study posits that digital organizational culture is positively associated

with strategic digital marketing capabilities (H1). Similarly, human resource competencies, reflected in employees' digital literacy, creativity, analytical skills, and strategic thinking, are expected to enhance SMEs' ability to design and implement effective digital marketing strategies (Dwivedi et al. 2024; Viswanathan et al. 2021). Therefore this study proposes that HRC is positively associated with strategic digital marketing capabilities (H2).

Beyond its indirect role, HRC is also expected to exert a direct influence on marketing performance. Employees with strong digital competencies and customer understanding are better able to optimize the use of digital tools, improve interaction quality, personalize marketing communication, and respond more effectively to customer needs, which directly contributes to higher marketing performance (Zhang et al. 2025; Salamzadeh et al. 2024). Accordingly, this study hypothesizes a direct positive relationship between HRC and marketing performance (H3).

As a dynamic capability, strategic digital marketing is expected to directly enhance marketing performance by transforming internal resources into customer value, market responsiveness, and competitive positioning (Mikalef et al. 2022; Matarazzo et al. 2024). Thus, this study proposes that DMS is positively associated with marketing performance (H4). Furthermore, DMS is expected to function as a mediating mechanism that translates internal organizational readiness into measurable marketing outcomes. Specifically, strategic digital marketing is hypothesized to mediate the relationship between digital organizational culture and marketing performance (H5), as well as between human resource competencies and marketing performance (H6), indicating that digital technology adoption yields meaningful performance gains only when supported

by strong internal resources and dynamic capabilities (Dwivedi et al. 2024; Affandi et al. 2024)

This model links DOC and HRC directly to DMS, with DMS mediating their influence on MP. SMEs with strong digital culture and competent human resources must adopt adaptable digital marketing strategies to sustain performance. Integrating RBV and DCT addresses the limitations of viewing resources in isolation and provides a dynamic perspective on how SMEs reconfigure resources via digital strategies, offering a nuanced understanding of capability development and performance in resource-constrained environments as in Figure 1.

RESULTS

Descriptive Statistics

To understand the respondent profile in this study, a descriptive analysis is performed concerning key characteristics such as age, educational attainment, type of business conducted, and the most frequently utilized digital platform in business activities. Table 1 presents the frequency distribution and percentage of each responder trait.

Based on Table 1, 39% of respondents are under 25 years old, indicating the dominance of digital natives in Indonesia's SME ecosystem. This group, closely linked to digital technology growth, is active on Instagram and TikTok (Data Report, 2025). However, 55% of respondents only hold a high school diploma, reflecting limited digital literacy that needs development, consistent with Affandi et al. (2024), who noted educational attainment affects digital readiness.

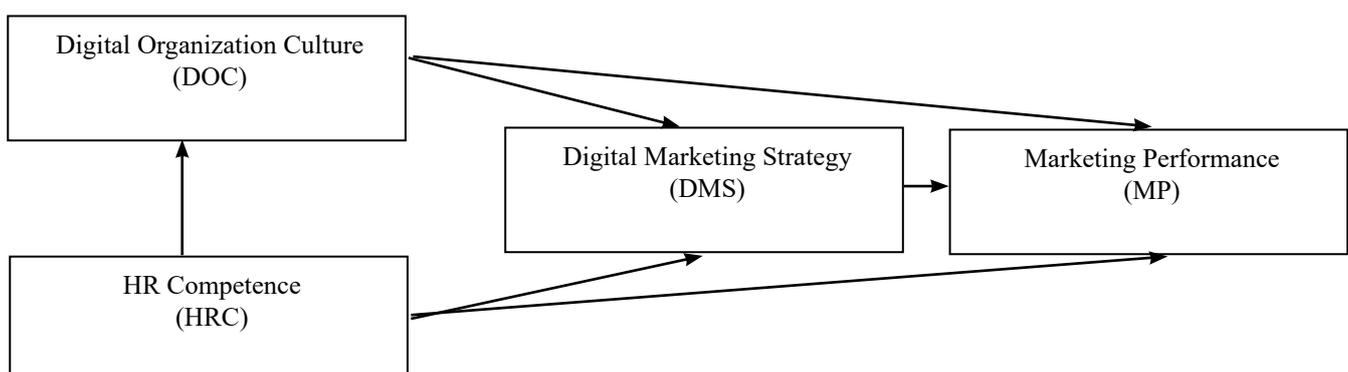


Figure 1. Research model

Table 1. Demographics

	Factor	Qty	%
Age (Year)	< 25	352	39
	26-35	206	23
	36-45	172	19
	> 45	170	19
	Total	900	100
Education	Master Degree	18	2
	Diploma/Bachelor's Degree	308	34
	High School	496	55
	Junior High School	49	5
	Elementary	29	3
	Total	900	100
Type of Business	Fashion	103	11
	Services	64	7
	Handicrafts	51	6
	Transportation	2	0
	Food and Beverages	506	56
	Printing	11	1
	Livestock and Agriculture	14	2
	Grocery Store	40	4
	Others	109	12
	Total	900	100
Platform	Facebook	45	5
	Instagram	206	23
	Whatsapp	433	48
	Lazada	3	0
	Shopee	63	7
	Tiktok	57	6
	Tokopedia	4	0
	Others	89	10
	Total	900	100

The food and beverage sector dominates (56%), supporting Research and Markets (2025), which highlights this sector's strong potential for digitalization via e-commerce and social media. This dominance also reflects national conditions, where food and beverage MSMEs are the largest and most developed business group and are the sector that is most active in utilizing digital technology for promotion and sales (Nurbasari et al. 2026). WhatsApp, used by 48% of respondents, is the main engagement channel, reflecting the importance of real-time interaction (Meltwater, 2024). Older users favour Facebook and WhatsApp, while younger ones choose Instagram and TikTok, supporting Tricruise's (2025) demographic-based strategy insights.

Digital transformation effectiveness depends on integrating HRC and DOC (Gonzalez-Varona et al. 2024). Content usage shows 242 respondents combine photos/videos and 155 add testimonials, yet static images dominate (165 users) due to limited video production skills. Interactive features like giveaways or live streaming are less frequent, limited by technical resources (Dwivedi et al. 2024). However, interactive content can boost engagement (Zhang & Zhang, 2025), while testimonials strengthen digital trust (Papadopoulos et al. 2022). Training is needed to align content strategies with platform features and audience preferences.

Measurement Model Evaluation

Construct Validity

Table 2 displays the results of the construct validity test using the standardized factor loading values for each indicator. The loading factor values, based on a minimal threshold of > 0.70 , demonstrate that the indicator strongly contributes to the measured construct (Hair et al. 2022). The indicator validity assessment shows satisfactory standardized loadings, all above 0.7, confirming strong representation of underlying factors (Hair et al. 2022). These results confirm that all constructs are represented by valid, reliable metrics.

Convergent Validity

Before analyzing the structure, we checked if the tests for convergent validity and construct reliability were correct to make sure each indicator truly reflects the underlying variable being measured. Table 3 presents

the AVE and CR test findings for each construct in this study model. These results support the recommendations of Hair et al. (2022), which state that for an indicator to be considered valid in CFA-based SEM, its loading value should be higher than 0.7. All construct indicators in the study satisfy the criteria for convergent validity ($AVE > 0.50$) and composite reliability ($CR > 0.70$).

Structural Model Evaluation

Discriminant Validity

The square root of the AVE value shown in the table's diagonal is compared to the correlations of the constructs in the other cells to check for discriminant validity. Table 4 presents the results of the discriminant validity assessment for each construct in this research model. The results show that each part of the research model is clearly different from the others, as all parts, DOC, HRC, DMS, and MP, meet the necessary standard.

Table 2. Standard loading factor indicator for each variable

Construct	Indicator	Loading factor	Interpretation
Digital Organization Culture	X11	0.744	Good
	X12	0.797	Good
	X13	0.792	Good
HR Competence	X21–X26	0.753–0.859	Very Good
Digital Marketing Strategy	M1	0.822	Very Good
	M2	0.800	Good
	M4	0.724	Good
Marketing Performance	Y1	0.832	Very Good
	Y2	0.803	Very Good
	Y3	0.770	Good

Table 3. Evaluation of convergent validity

Variables	Indicators	AVE	CR
Digital Organization Culture	X11, X12, X13	0.542	0.780
HR Competence	X21–X26	0.498	0.856
Digital Marketing Strategy	M1, M2, M4	0.544	0.781
Marketing Performance	Y1, Y2, Y3	0.574	0.801

Table 4. Evaluation of discriminant validity

Variables	Digital Organization Culture	Hr Competence	Digital Marketing Strategy	Marketing Performance
Digital Organization Culture	0.736	0.593	0.590	0.500
HR Competence	0.593	0.706	0.641	0.579
Digital Marketing Strategy	0.590	0.641	0.738	0.615
Marketing Performance	0.500	0.579	0.615	0.758

Model Fit

The feasibility of measurement and structural models in SEM analysis is evaluated using goodness-of-fit testing. Table 5 presents the model fit test results and their interpretation according to the criteria established by Hair et al. (2022). The results of the goodness-of-fit analysis indicate that the research model meets the feasibility criteria established by Hair et al. (2022). The model aligns closely with the actual data, demonstrated by a TLI value of 0.926 and a CFI value of 0.941, both exceeding the minimum threshold of ≥ 0.90 . The findings suggest that the proposed conceptual model likely shows how the variables are connected and can be used to explore cause-and-effect relationships within the structural model.

Direct Hypothesis

We perform path analysis using standardized estimates and p-values to evaluate the links among variables in the structural model. Table 6 displays the findings of the path analysis among the variables HRC, DOC,

DMS, and MP. The direct path estimation revealed that HRC significantly affects DOC, with a standardized coefficient of 0.679 ($p < 0.001$), and also influences DMS, with a value of 0.439 ($p < 0.001$). These findings confirm that digitally proficient individuals are essential in influencing the organization's digital culture and marketing strategy. Additionally, DOC exerts a favourable and substantial effect on DMS ($\beta = 0.415$; $p < 0.001$); however, it does not have a direct significant impact on marketing performance (MP) ($\beta = 0.065$; $p = 0.228$). DMS exerts the most substantial effect on MP ($\beta = 0.471$; $p < 0.001$), whereas the direct impact of HRC on MP is considerable but comparatively lesser ($\beta = 0.253$; $p < 0.001$).

Indirect Hypothesis

Mediation analysis was performed to assess the function of DMS as a mediating variable within the research model. Table 7 displays the outcomes of the indirect effects and the categories of mediation as determined by the standardized coefficient values and their significant levels.

Table 5. Evaluation of the Goodness of Fit

Index	Values	Standard	Interpretation
CFI	0.941	≥ 0.90	Very Good
TLI	0.926	≥ 0.90	Very Good
RMSEA	0.081	≤ 0.08	Good
SRMR	0.051	≤ 0.08	Very Good

Table 6. Outcomes of direct hypothesis testing

Hypothesis	Standardized	P-Value	Interpretation
HR Competence (HRC) → Digital Organization Culture (DOC)	0.679	0.000	indicating significance; HR capability positively influences digital organizational culture
Digital Organization Culture (DOC) → Digital Marketing Strategy (DMS)	0.415	0.000	Significant; digital culture augments digital marketing strategy.
HR Competence (HRC) → Digital Marketing Strategy (DMS)	0.439	0.000	Significant; proficient HRC enhances digital strategy
Digital Marketing Strategy (DMS) → Marketing Performance (MP)	0.471	0.000	Significant; DMS has a direct influence on marketing performance.
HR Competence (HRC) → Marketing Performance (MP)	0.253	0.000	Significant; HRC exerts a direct influence on marketing performance.
Digital Organization Culture (DOC) → Marketing Performance (MP)	0.065	0.228	Insignificant; no direct impact

Table 7. Outcomes of indirect hypothesis evaluation

Hypothesis	Standardized	P-Value	Type of Mediation
Digital Organization Culture (DOC) → Digital Marketing Strategy (DMS) → Marketing Performance (MP)	0.196	0.000	Full (indirect-only)
HR Competence (HRC) → Digital Marketing Strategy (DMS) → Marketing Performance (MP)	0.207	0.000	Partial

Theoretical Implications

This study adds to our understanding by combining the RBV and DCT ideas in the context of SMEs in today's digital world. The study's findings indicate that the advancement of DMS, which directly affects marketing effectiveness, is substantially shaped by HR competences and a digital organizational culture. The visualization of each hypothesis is shown in Figure 2.

Human Resource Competence as a Strategic Enabler for Digital Transformation

The study's results demonstrate that HRC significantly influences digital marketing strategies ($\beta = 0.439$; $p < 0.001$) and digital organizational cultures ($\beta = 0.679$; $p < 0.001$). This provides empirical support for the RBV, which posits that valuable, rare, inimitable, and non-substitutable (VRIN) resources, such as competent human capital, are essential for sustainable competitive advantage (Barney 1991). Consistent with prior SME studies, human resource competence has been identified as a critical intangible asset that enhances organizational learning, innovation capacity, and strategic responsiveness in digital contexts (Dwivedi et al. 2024). In the context of digital SMEs, HRC manifests through digital literacy, adaptive thinking, and the ability to design and execute strategic digital content. These skills position employees as key intangible resources that drive organizational adaptability and innovation, aligning with RBV assumptions.

Moreover, the significant effect of HRC on DMS aligns with the Dynamic Capabilities Theory, which emphasizes that internal resources must be continuously reconfigured to address environmental turbulence (Teece et al. 2016). Previous studies have shown that digitally competent employees function as microfoundations of dynamic capabilities by enabling opportunity sensing, agile decision-making, and rapid execution of digital strategies (Mikalef et al. 2022; Warner & Wäger, 2019). In this study, HRC enables SMEs to sense market trends, seize opportunities

through adaptive digital marketing initiatives, and transform internal routines into market-facing actions. This finding extends Viswanathan et al. (2021), who noted that many SMEs possess digital tools but lack competent human capital to convert them into strategic value.

HRC also exerts a strong influence on DOC, indicating its role as a driver of cultural transformation. This result is consistent with Papadopoulos et al. (2022) and Affandi et al. (2024), who found that digitally skilled employees play a central role in embedding openness, experimentation, and collaboration within organizational culture. Competent human resources facilitate the assimilation of digital practices, thereby fostering a culture supportive of innovation and continuous adaptation. Zhang et al. (2025) similarly emphasize that employees act as cultural carriers who translate digital values into everyday organizational behavior.

Overall, by situating these findings within both RBV and DCT and aligning them with prior empirical evidence, this study demonstrates that HRC is not merely a standalone resource but an integrative mechanism that simultaneously strengthens DOC and DMS. Practically, these results reinforce existing recommendations that SMEs should invest not only in technical skill development but also in strategic, analytical, and adaptive competencies to sustain digital competitiveness in dynamic environments.

Digital Organizational Culture and the Necessity of Strategic Mediation.

The study's findings indicate that DOC significantly influences DMS ($\beta = 0.415$; $p < 0.001$) but does not exert a direct impact on Marketing Performance (MP) ($\beta = 0.065$; $p = 0.228$). This finding indicates that while digital organizational culture is a critical enabling resource, its impact on performance is inherently indirect rather than immediate. This outcome strongly supports Dynamic Capabilities Theory (DCT), which

posits that internal resources such as culture must be strategically deployed through specific capabilities to generate performance outcomes (Teece et al. 2016; Mikalef et al. 2022). DOC fosters openness, collaboration, and risk-taking; however, these cultural attributes do not automatically translate into superior marketing performance because they lack intrinsic execution mechanisms. Descriptive results further show that although SMEs actively use platforms such as Instagram, TikTok, and WhatsApp, performance variation arises not from mere digital presence but from the extent of strategic customization, including targeted campaigns, interactive content, and data-driven engagement. This reinforces the argument that cultural readiness alone is insufficient to create value without being operationalized into concrete strategic actions, consistent with DCT’s capability-deployment logic.

The mediation analysis confirms that DMS fully mediates the DOC–MP relationship (indirect effect $\beta = 0.196$; $p < 0.001$). This full mediation suggests that DOC functions as a foundational but latent resource whose value is realized only when transformed into structured digital marketing processes, such as customer segmentation, platform optimization, and adaptive content strategies. These findings align with Matarazzo et al. (2024) and Yu et al. (2025), who emphasize that digital culture must be strategically framed and tactically aligned to influence performance. Theoretically, this result advances both RBV and DCT by demonstrating that DOC, although a VRIN-type

resource under RBV, remains inert without dynamic orchestration via DMS.

Digital Marketing Strategy as the Core Driver of Marketing Performance

Among all factors, DMS shows the strongest direct effect on MP ($\beta = 0.471$; $p < 0.001$), confirming its role as the main mechanism for translating internal resources into external outcomes. This finding is consistent with prior studies that identify digital marketing strategy as a key driver of SME performance in digitally turbulent environments (Mikalef et al. 2022). DMS reflects a firm’s ability to sense market changes, seize emerging opportunities, and transform business approaches based on consumer behaviour and technological trends (Teece et al. 2016). Previous research shows that SMEs with adaptive digital marketing capabilities outperform competitors in terms of customer acquisition, engagement, and revenue growth (Dwivedi et al. 2021). The descriptive data indicate that SMEs utilizing interactive content (e.g., livestreams, polls, giveaways) achieve higher engagement and revenue growth compared to those using static photos. This empirical pattern aligns with studies emphasizing the importance of interactive and experiential digital content in enhancing marketing effectiveness (Kaplan & Haenlein, 2019). This supports Uden et al. (2025) and Lin & Chen (2025), who assert that DMS effectiveness relies on adaptability, content relevance, and consistency across digital platforms.

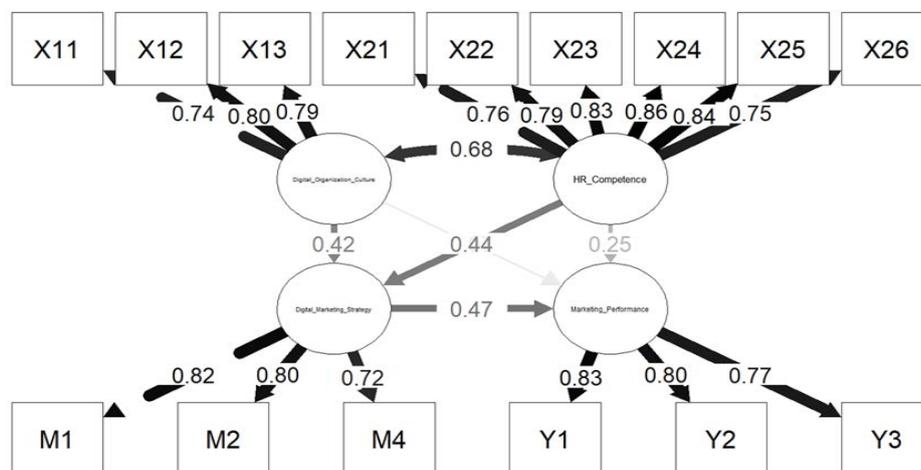


Figure 2. Visualization of hypothesis testing results

DMS also functions as a mediating mechanism: it partially mediates the HRC–MP relationship ($\beta = 0.207$; $p < 0.001$) and fully mediates the DOC–MP relationship ($\beta = 0.196$; $p < 0.001$). Similar mediating effects of digital capabilities have been reported in prior SME studies, indicating that internal resources alone are insufficient to generate performance without strategic deployment (Matarazzo et al. 2024). Thus, the findings extend RBV by empirically demonstrating the conditional nature of resource value creation, which becomes fully effective only when integrated into dynamic capabilities such as DMS.

Theoretically, this research clarifies inconsistencies in prior findings by identifying DMS as both a performance enhancer and a transformation agent. While earlier studies often treated digital marketing as a tactical tool, this study supports recent arguments positioning DMS as a higher-order capability that orchestrates resources in response to environmental change (Teece, 2016). It connects RBV's static view of resources with DCT's dynamic process orientation, showing that competitive advantage in SMEs depends not only on owning valuable resources but also on deploying them strategically in response to fast-changing digital environments. This integrated perspective redefines digital strategic planning for SMEs, emphasizing that intangible resources like HRC and DOC should be enacted through context-specific, customer-focused marketing strategies (Sipos et al. 2025).

Managerial Implications

This study's findings offer critical insights for SMEs stakeholders and policymakers in enhancing digital transformation readiness by optimizing internal capacities. The significant influence of human resource competence on both digital organizational culture and digital marketing strategies highlights HR's strategic role as a key driver of transformation. This aligns with Matarazzo et al. (2024), who stress the role of strategic agility and digital proficiency in enhancing SME competitiveness. The study also finds that digital organizational culture alone does not impact marketing performance without the mediation of digital strategies. Therefore, values such as collaboration, flexibility, and customer focus must be embedded into actionable strategies aligned with market shifts. Zhang et al. (2024) support this by noting that cultural values drive impact when integrated into dynamic capabilities. Given that the food and beverage sector dominates the

sample, SMEs in other sectors, such as manufacturing, services, and creative industries, are encouraged to adapt digital strategies according to their operational characteristics, customer interaction patterns, and value creation processes.

Other findings in this study also have important implications for SMEs in other sectors that may have lower levels of digital readiness. A study by Muljono et al. (2021) shows that many SMEs outside the food and beverage sector face fundamental barriers such as limited digital infrastructure, low technological literacy, and a lack of training and mentoring, which hinder their ability to effectively leverage digital transformation. Therefore, the implementation of capability-based digital marketing strategies such as DOC integration and HRC enhancement, needs to be tailored to the sectoral context. This adaptive approach allows SMEs across sectors to build the foundation for digital transformation gradually and sustainably, without having to replicate the high adoption patterns seen in the food and beverage sector.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study shows that employee competence and digital culture are fundamental internal resources for driving digital transformation in small and medium enterprises (SMEs). However, consistent with dynamic capability perspectives, these resources alone do not guarantee superior marketing performance. Instead, digital marketing strategy plays a critical mediating role, transforming organizational culture and employee competence into market-oriented outcomes. The findings reveal that employee competence has a dual influence: directly improving marketing performance and shaping both digital culture and digital marketing strategies, confirming its strategic value as a human capital asset. In contrast, digital culture, while fostering a supportive environment and openness to innovation, does not directly influence marketing performance but works fully through digital marketing strategy.

Recommendations

Practically, SMEs are advised to focus on strengthening digital marketing strategy capabilities, particularly in aligning platform selection, content formats, and

customer engagement. Investment in continuous digital skills development, fostering innovation-oriented cultures, and implementing structured digital marketing planning are essential. In addition, SMEs are strongly encouraged to engage in peer-to-peer learning and inter-firm collaboration, such as shared digital communities, sector-based clusters, and collaborative marketing initiatives, to overcome resource limitations and accelerate knowledge diffusion across industries. Collaboration with digital service providers, participation in government digitalization programs, and structured knowledge-sharing within SME networks are recommended to accelerate strategic execution. Policymakers are encouraged to design integrated capacity-building programs combining human capital development, cultural transformation, and collaborative digital strategy mentoring to strengthen SMEs' readiness for digital transformation. Future research should investigate contextual moderators such as digital infrastructure, regulatory support and inter-firm collaboration mechanisms to further extend and validate this model.

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