Humanities & Social Sciences Communications

REVIEW

https://doi.org/10.1057/s41599-026-07126-x OPEN

Digital marketing capabilities as drivers of SME innovation and performance: a systematic literature review and research agenda for emerging economies

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The digital transformation is now increasingly viewed as a major driver of innovation and competitiveness for small and medium-sized enterprises (SMEs), particularly in newly emerging economies where national development strategies prioritize digitalization and entrepreneurship. Despite its significance, research on digital marketing capabilities (DMCs) and their role in enhancing SME innovation and performance is fragmented, especially with regard to emerging markets such as Oman. This study aims to systematically synthesize existing research on the relationship between DMCs and SMEs' innovation and performance. A systematic literature review was undertaken, adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method. Thirty-eight peer-reviewed articles published between 2015 and 2025 were included and reviewed, and the Theory, Context, Characteristics, Methodology (TCCM) framework was followed to ensure structure and transparency in the analysis. The research streams identified by the findings include: strategic importance of DMCs in innovation and performance; marketing analytics and customer relationship management systems; social media and customer engagement; organizational readiness and leadership; and contextual challenges in SMEs of emerging economies. Finally, it is noted that there is considerable reliance of theories used in marketing analytics and customer relationship management on theories of Resource-Based View and Dynamic Capabilities. Longitudinal and integrative research is limited. An integrative conceptual model on the linkages between digital marketing capabilities, innovation capacity, and SME performance is developed. The current research has implications for policymakers and SME managers, with emphasis on the need for the development of digital skills, analytics, and leadership support as the driving factors for innovation-based SMEs, which are aligned with the country's development strategy, Oman Vision 2040.

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Introduction

Small and medium-sized enterprises (SMEs) are globally recognized as drivers of innovation, employment generation, and economic diversification. In developing economies, the competitiveness and survival of SMEs are increasingly linked to their capacity for adopting dynamic technological change and harnessing digital technologies for development. Under this approach, digital marketing competencies such as analytics, customer relationship management, and social media interaction have been identified as drivers of entrepreneurial innovation and organizational performance (Ibrahim et al. 2025; Sharabati et al. 2024). Through enabling SMEs in perceiving market opportunities, co-creating value with customers, and building business model innovation, DMCs are strategic change drivers of organizational agility and competitiveness (Hossain et al. 2022; Cao et al. 2023).

New research on digital transformation is increasingly relating firm-level capabilities with broader sustainability and systemic transformation agendas. For example, research on transitions in circular economy and developing a climate-neutral economy emphasized that digital drivers play a fundamental role in enabling adaptive economic systems and sustainable performance results (Georgescu et al. 2025a, 2025b). The above studies extend the logic of internal capabilities and its relationship with a more general institutional and environmental perspective, in which digital competencies can be thought of as not only enabling performance but perhaps even driving sustainability and change in developing and transitioning economies.

Globally, the DMC literature has largely followed the track of digital transformation research and typically employs the Resource-Based View (RBV) and Dynamic Capabilities (DC) theories. The theories have been used to explain the way firms seek, absorb, and utilize intangible digital resources to attain enduring competitive advantage (Vorhies and Morgan 2005; Hernández-Linares et al. 2021). The literature suggests that digital marketing tools have been found to improve the innovation performance and customer value of the firm by better market sensing, brand equity, and speeding up the innovation process (Foltean et al. 2019; Trainor et al. 2014; Atlas et al. 2025). However, the majority of the literature has been based on developed countries, while the body of literature based on the Middle East and the Gulf Cooperation Council (GCC) countries, which have been witnessing unprecedented digital transformation, is scarce (Qalati et al. 2022; Sharabati et al. 2024).

Furthermore, apart from firm-level performance, recent research on sustainability underscores the notion of digital and technological capabilities as part of a broader economic and institutional ecosystem. For instance, research on sustainability transitions in Europe suggests that economic resilience is influenced by technological modernization, institutional coordination, and innovation clustering (Georgescu et al. 2025c; Georgescu et al. 2025d). This underscores the notion of digital capabilities as not only internal firm-level capabilities but also as drivers of economic and institutional ecosystems.

In the context of Oman, SMEs account for more than 90% of the registered businesses and are at the heart of the country's diversification strategy, as outlined in Oman Vision 2040. Although there is a high level of governmental support in terms of digitalization, there are concerns about the adoption of digital marketing and analysis, as highlighted in different research studies that have shown that there are challenges in terms of organizational, human, and institutional factors (Thumiki and Magd 2023; Alraja et al. 2021; Mathew et al. 2024). However, the sustainability-oriented findings of the transition economies highlighted that there is a scope to improve the structural competitiveness and sustainability performance through digital and technological advancements (Georgescu et al. 2025a; Georgescu et al. 2025d), which can be useful in the context of emerging markets that are focused on innovation-driven and sustainable development.

At the academic level, it is still evident that the literature is dominated by methodological homogeneity and theoretical fragmentation. The vast majority of studies are based on cross-sectional survey designs using SEM and regression analysis approaches, with few longitudinal and qualitative approaches available that could potentially capture dynamic processes of innovation and capability building (Stefia et al. 2024; Morgan et al. 2018). Moreover, although RBV and DC approaches are dominant in the literature, insufficient attention is paid to entrepreneurial and innovation-oriented approaches such as Entrepreneurial Orientation (EO), Innovation Diffusion Theory (IDT), and Institutional Theory that could potentially explain how SMEs develop digital competence in constrained resource and dynamic institutional contexts (Qalati et al. 2022; Sharabati et al. 2024).

The low degree of integration between digital marketing capability research and sustainability transition research is limiting our understanding of DMCs' role in overall innovation ecosystems in emerging markets. For instance, research on circular economy and climate neutrality suggests that economic, technological, and institutional drivers are not firm-level mechanisms but rather operate in clusters (Georgescu et al. 2025c; Georgescu et al. 2025d). This suggests a need for repositioning DMCs as part of a broader innovation and sustainability approach rather than marketing-centric.

Consequently, the present research aims at bridging these research gaps through conducting a systematic literature review (SLR) of 38 studies published during 2015–2025. By employing the PRISMA protocol and the TCCM framework, this research explores the dominant theoretical perspectives, contexts, and methodological approaches underpinning the relationships between digital marketing capabilities, innovation, and SME performance. By placing the research findings from Oman on the global digital transformation agenda and the new sustainability transition research agenda, this research contributes to the fields of entrepreneurship, innovation, and sustainable development studies, as well as policy formulation in emerging economies. Specifically, this research:

1. Synthesizes the theoretical and empirical landscape of DMCs and SME performance;
2. Highlights opportunities for integrating innovation, sustainability transition, and ecosystem approaches into capability-based frameworks; and
3. Develops a future research and policy agenda that links digital marketing capabilities with SME innovation ecosystems and national transformation strategies such as Oman Vision 2040.

This integration, according to the paper, positions digital marketing not only as a communication function but rather as a key innovation and transformational mechanism, a significant entrepreneurial driver of sustainability and competitiveness in the emerging digital economy.

Methodology

Review protocol. Systematic Literature Review (SLR), as a methodology of research, is gaining more and more popularity and is considered an essential methodology for addressing the fragmented nature of research, especially for management and organizational research domains where the research literature is scattered under different theories, contexts, and methodologies.

To address these concerns of rigor and transparency, Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were adopted for conducting this systematic review. To synthesize and extract information from existing research, TCCM methodology (Theory, Context, Characteristics, Methodology), as recommended for management research (Paul and Rosado-Serrano 2019), was adopted for this review protocol for ensuring depth and scope of existing research regarding digital marketing capabilities (DMCs) and SME performance.

Databases and search strategy. In order for relevant and quality information to be obtained, three of the most popular academic information databases were selected. These are Scopus, Web of Science (WoS), and Google Scholar. The reason for selecting these databases is based on the fact that they contain all peer-reviewed articles related to management and business studies. Google Scholar is selected based on its availability of working papers and access articles.

- Time frame: January 2015 to March 2025. This time frame reflects the acceleration of digital transformation and research on digital marketing for SMEs.
- Keywords (Boolean operators):
- Document types: Peer-reviewed journal articles, systematic reviews, and high-quality conference proceedings.
- Language: English.
- The search was limited to English articles because Arabic articles were excluded due to indexing and accessibility issues.

- + ("digital marketing" or "social media marketing" or "CRM" or "online marketing" or "marketing analytics" or "marketing capabilities")
  + and ("SME" or "small and medium" or "startup" or "organization" or "entrepreneurship")
  + and ("performance" or "growth" or "profitability" or "competitiveness")
  + and ("Oman" or "Gulf" or "GCC" or "Middle East")

- Document types: Peer-reviewed journal articles, systematic reviews, and high-quality conference proceedings.
- Language: English.
- The search was limited to English articles because Arabic articles were excluded due to indexing and accessibility issues.

Inclusion and exclusion criteria. Articles were evaluated using predefined inclusion and exclusion criteria:

Inclusion criteria

- Focus on digital marketing capabilities and organizational/SME performance.
- Empirical, conceptual, or review papers published between 2015 and 2025.
- Studies conducted in Oman, the GCC, or comparable emerging markets and global studies were also included for benchmarking.

Exclusion criteria

- Papers outside the business/management domain (e.g., purely technical IT/engineering work).
- Studies not addressing SMEs or organizational outcomes (e.g., consumer-only studies).
- Non-peer-reviewed sources (blogs, editorials, and non-academic reports).

Screening process. The review process followed three main stages:

1. Identification: Initially, database searches identified around 300 results. These results were then exported to Excel for the purpose of removing duplicates.
2. After removing around 20 duplicates, 280 results remained at the title and abstract level. Out of these, 240 results were excluded at this level due to irrelevance (e.g., consumer focus, e-government, etc.).
3. Eligibility: This study is based on 40 full-text articles. At this level, two results were excluded due to a lack of methodological rigor and irrelevance to organizational performance.

The final dataset comprised 38 studies, which formed the basis of the synthesis.

Study selection. The selection process is summarized in the PRISMA flow diagram (Fig. 1). Of the 300 identified records, 280 unique articles were screened, 240 were excluded, and 38 were retained after the full-text eligibility assessment. The final set included the following:

- Oman/GCC studies (10),
- global empirical works (23), and
- foundational theoretical contributions (5).

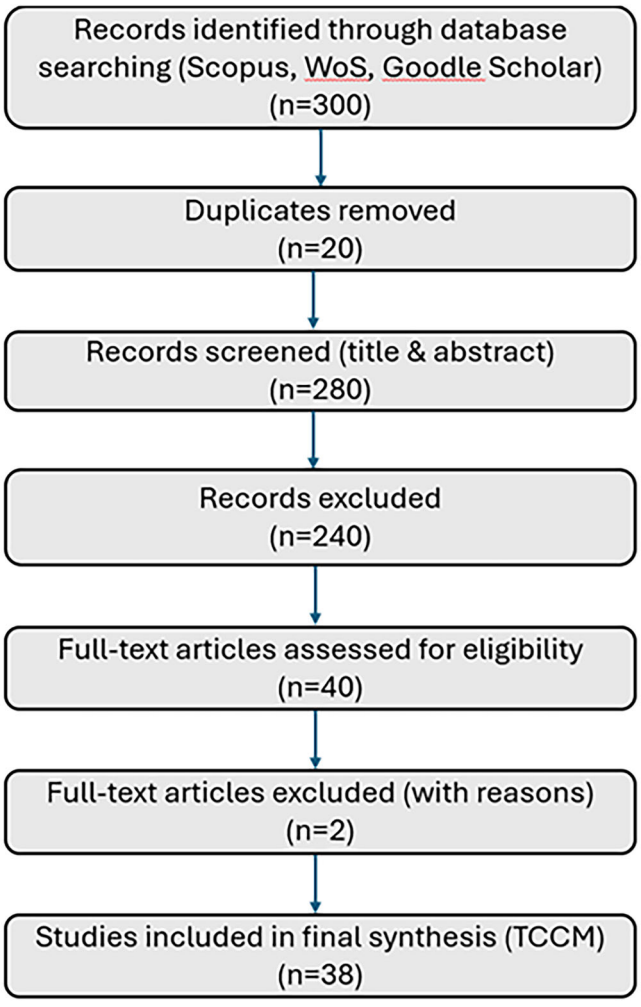

Fig. 1 PRISMA flow diagram of the study selection process. Source. Authors' own work.

Table 1 TCCM summary of studies on digital marketing capabilities and SME performance.

Theory (T)	Context (C)	Characteristics (C)	Methodology (M)
RBV DC (dominant); TOE, TAM, Brand Equity, Human Capital (minority)	Oman/GCC (10); East Asia (12); Europe (8); Multi-country/global (8)	DMCs → SME performance; mediators: innovation, customer engagement, agility; outcomes: competitiveness, profitability, growth	Surveys (70%, PLS-SEM, regression); Qualitative/case studies (10%); Reviews/conceptual (10%); Few longitudinal designs
Examples: Ibrahim et al. (2025); Foltean et al. (2019); Sharabati et al. (2024); Qalati et al. (2022); Zollo et al. (2020)	Oman studies emphasize adoption barriers and Vision 2040	Global studies emphasize analytics, CRM, social media; Oman studies stress skills and readiness	Methods heavily survey-based, lacking triangulation

Source. Authors' own work.

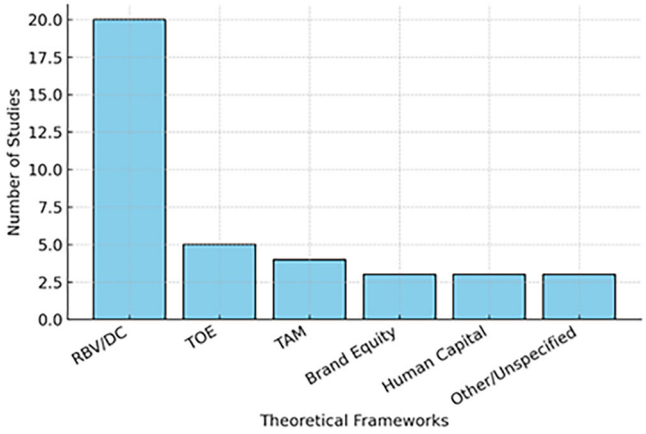

Fig. 2 Distribution of theoretical frameworks used in DMC–SME studies. Source. Authors' own work.

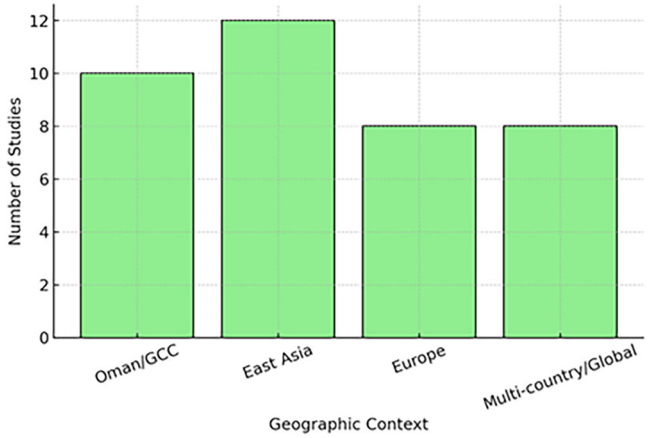

Fig. 3 Geographic distribution of studies. Source. Authors' own work.

Data extraction and coding. Each included article was systematically coded using the TCCM framework:

- Theory (T): Identifying the theoretical foundations employed (e.g., RBV, Dynamic Capabilities, TOE, TAM, Brand Equity, Human Capital).
- Context (C): Capturing the country/region (with emphasis on Oman and GCC), sector, and organizational type.
- Characteristics (C): Study objectives, constructs, and relationships examined (e.g., DMCs → performance, mediated by innovation or agility).
- Methodology (M): Research design, data sources, sample sizes, and analytical techniques (e.g., PLS-SEM, regression, case studies).

This data was extracted into an Excel-based coding sheet. Two rounds of coding occurred: the first was an extraction, followed by a second cross-checking the data against the Abstract and Methods. When there was ambiguity, such as where a theory was implied but not stated, the data were coded as "unspecified." To ensure transparency, Supplementary Appendix A includes the full list of 38 studies used in the TCCM analysis.

To create a structured framework to discuss the reviewed literature, all the 38 studies included in the review were coded and summarized using the TCCM framework, and Table 1 provides a consolidated summary of the theories, contexts, study characteristics, and methodological approaches, which could be used to inform the discussion that follows.

Figure 2 illustrates the dominance of RBV and Dynamic Capabilities across the reviewed studies, alongside complementary frameworks such as TOE, TAM, and Brand Equity.

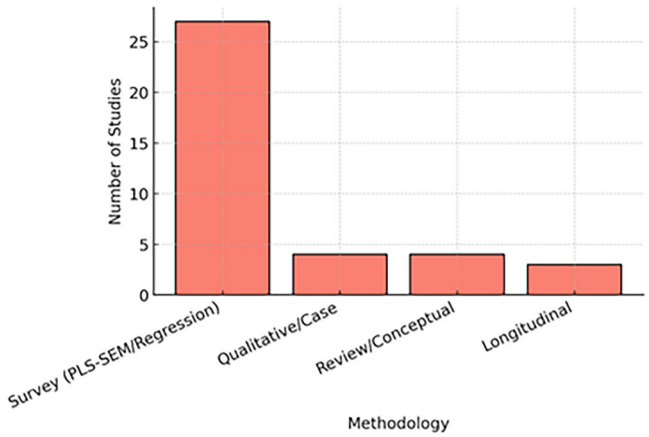

Fig. 4 Methodological approaches of reviewed studies. Source. Authors' own work.

As shown in Fig. 3, the reviewed literature is unevenly distributed, with concentrations in East Asia and Europe and relatively limited evidence from Oman and the GCC.

Figure 4 highlights the dominance of survey-based designs, typically analyzed with PLS-SEM or regression, with the limited use of longitudinal or qualitative methods.

Scope and coverage. The final dataset of 38 studies represents a diverse yet uneven distribution of theories, contexts, and methodologies. This is clearly evident as summarized in Table 1 and as shown in Figs. 2–4, wherein Resource-Based View (RBV) and

Dynamic Capabilities (DC) clearly dominated as the most prominent theories, whereas TOE, TAM, Brand Equity, and Human Capital theories were relatively less represented as complementary theories. In terms of geography, it is also evident that East Asia and Europe dominated the evidence base, whereas relatively fewer studies were represented from Oman and the Gulf Region as a whole. This is of concern because of the importance of SMEs as drivers of economic diversification strategies such as Vision 2040 in the Middle East region.

In terms of the methodological perspective, the majority of the studies adopted cross-sectional survey designs that employed regression and PLS-SEM analysis. While this has provided useful linkages between digital marketing capabilities (DMCs) and their outcomes, there are obvious gaps in the process, context, and mechanisms that need to be addressed in the future. Thus, the scope and coverage of the extant research, in total, suggest that the current evidence base, though expanding, is characterized by a high degree of concentration in terms of theory, method, and geography.

Rationale for PRISMA + TCCM. The application of PRISMA and TCCM was inspired by the twin requirements of transparency in selecting studies and synthesizing divergent findings. PRISMA ensured that the entire process of selecting and including studies was replicable and unbiased, thus lending credibility and rigor to the entire review process. TCCM offers a conceptual framework through which scattered literature could be synthesized and integrated based on theories, contexts, characteristics of studies, and methodologies applied.

The twin application of PRISMA and TCCM not only helped in mapping the scattered literature but also in synthesizing it thematically. For instance, it helped the review in identifying dominant theories and methodologies while also highlighting divergent contexts such as Oman and GCC. Thus, it offers credible and comprehensive grounds upon which further discussions and theoretical framing could be undertaken.

To sum up, it should be mentioned that the approach applied in this review is not only transparent but also offers a deeper level of analysis with the application of PRISMA and TCCM approaches together. The results of descriptive mapping show that RBV and DC are leading in terms of theoretical backgrounds of this subject, and TOE, TAM, Brand Equity, and Human Capital are applied occasionally (see Table 1). These results offer a structured base for further analysis. The next part of this review will discuss the major theoretical backgrounds of digital marketing capabilities and SME performance in detail, with a focus on their application in Oman as well.

Theoretical framework

The DMCs' role in SMEs' performance has been conceptualized from different theoretical perspectives. The most frequently used perspectives are the Resource-Based View (RBV) and the Dynamic Capabilities (DC) perspective. The Technology Organization Environment (TOE), the Technology Acceptance Model (TAM), the Brand Equity theory, the Human Capital theory, and the institutional theory, on the other hand, extend the dimensions of the role of digital tools as strategic resources and system enablers for SMEs (Table 1).

Resource-based view (RBV). The RBV theory suggests that performance is driven by rare, valuable, and inimitable resources (Barney 1991; Vorhies and Morgan 2005). In this context, it is assumed that digital marketing capabilities such as analytics tools, customer relationship management tools, and social media engagement are intangible resources that assist organizations in developing customer value and achieving competitive advantage in the market. The role of DMCs is also evident in empirical studies that suggest DMCs lead to higher brand equity, responsiveness, and innovation capacity (Ibrahim et al. 2025; Foltean et al. 2019).

However, the basis of RBV is the assumption of the immobility of resources, which makes it hard to explain the constant adaptations and knowledge transfers of SMEs in a constantly changing environment. The latest research on knowledge transfers in technological knowledge has revealed that the development of capabilities is significantly influenced by learning and employee adaptations in relation to new technologies (Noh et al. 2023). This implies that digital marketing resources should be seen as dynamic knowledge-based resources in the context of technological ecosystems.

Dynamic capabilities (DC). Dynamic Capabilities Theory is an extension of RBV Theory, and it emphasizes the role of DMCs for the capabilities of perceiving opportunities and exploiting them (Teece et al. 1997; Hernández-Linares et al. 2021). DMCs are considered to play a key role for incorporating data-driven information into the marketing and innovation practices of SMEs, making them more agile and entrepreneurial (Cao et al. 2023; Vesterinen et al. 2024; Elkhoudary et al. 2025).

In the case of Oman, DC theory is of particular interest regarding the use of digital technologies by SMEs for adapting to institutional reforms and meeting demands for Oman Vision 2040. However, whereas DC theory is of interest for understanding adaptive capacities, it is often criticized for underemphasizing entrepreneurial intentionality and value-based strategic positioning. Entrepreneurial marketing theories have highlighted the importance of digital technologies as not only adaptive mechanisms but also more intentional and entrepreneurial mechanisms for creating market space and meeting entrepreneurial purposes (Liaw et al. 2025; Yasin et al. 2025).

Entrepreneurial orientation (EO). The addition of the Entrepreneurial Orientation (EO) model, as presented by Lumpkin and Dess (1996), expands the model by also showing the relationship between DMCs and proactiveness, innovativeness, and risk-taking orientations. EO is concerned with strategic posture as a means to translate resources into sustainable competitive advantage. With reference to SMEs, DMCs can be viewed as entrepreneurial enablers, whereby analytics can enable experimentation, CRM can assist in opportunity recognition, and social media can assist in co-creation and market molding.

Current research into entrepreneurial marketing indicates that financial literacy, economic behavior, and strategic alignment based on values also contribute to the way young and emerging entrepreneurs utilize digital technologies for sustainable entrepreneurial growth (Liaw et al. 2025). Entrepreneurial values also influence digital marketing and legitimacy strategies (Yasin et al. 2025). For the case of DMCs in emerging countries like Oman, where the entrepreneurial ecosystem is still at the developmental stage, the DMCs not only act as digital technologies for the country, but also as drivers of entrepreneurial and innovation-based growth.

Technology–organization–environment (TOE)

TOE theory offers an explanation of the process of technology adoption based on the interplay of technology, organization, and environment (Tornatzky and Fleischer 1990). With respect to SME organizations, the theory offers an understanding of the process of DMC adoption based on the interplay of resource, leadership, and institutional factors (Qalati et al. 2022).

Such a model can be particularly relevant in the context of Oman because the development of infrastructure, reforms in regulation, and policy incentives have a bearing on the innovation of digital technology. Technological knowledge transfer studies have provided evidence that adaptation to modern technology depends not only on resources available in organizations but also on training systems, coordination in institutions, and sharing knowledge (Noh et al. 2023). TOE can thus be seen as an extension of RBV and EO that incorporates the development of digital capability in structural, educational, and institutional systems.

Technology acceptance model (TAM). Technology Acceptance Model, proposed by Davis (1989), offers a behavioral perspective on the DMC-performance relation through the constructs of perceived usefulness and perceived ease of use. In SMEs, especially in developing countries, the attitudes of owners/managers and employees towards digital technologies play an important role in influencing the adoption process. It explains the micro-level adoption processes, which eventually contribute to the development of capability.

In Oman, for instance, the role of technology value and digital confidence is considered a key determinant of DMC adoption (Sharabati et al. 2024). However, when complemented with entrepreneurial literacy and strategic awareness (Liaw et al. 2025), TAM provides a more nuanced understanding of cognitive and behavioral antecedents of DMC use.

Brand equity theory. Performance can be enhanced through consumer-centric means, especially brand equity and loyalty development. Social media activities enhance brand equity through interactive customer experience and relational value development (Zollo et al. 2020). This emphasis on the demand side, which is less emphasized in Oman-based studies, offers an overview of DMCs' means of developing sustainable competitive advantage.

Furthermore, the entrepreneurial marketing perspectives suggest that brand-building strategies are subject to influences from value systems and cultural positioning, thus providing support for the use of digital platforms as legitimacy-building strategies for emerging markets (Yasin et al. 2025).

Human capital approaches. Human Capital Theory focuses on the knowledge and skills of employees as the primary drivers of performance. Thumiki and Magd (2023) found that digital skills had a positive impact on the performance of Omani SMEs' entrepreneurship, and Ngo (2025) found the same for Vietnam. The importance of training and learning as essential elements for utilizing DMCs well cannot be overemphasized.

Additionally, the study on the adoption of technology shows that the development of workforce capability and knowledge transfer processes are vital for the adoption of technology (Noh et al. 2023). Therefore, the development of digital marketing capability also requires absorptive capacity and upgrading skills.

Institutional and innovation diffusion perspectives. Institutional Theory (Scott 2014) and Innovation Diffusion Theory (Rogers 2003) take the analysis to the macro-level. These theories reveal the role of structures, culture, and legitimacy in the diffusion of digital innovation in entrepreneurial ecosystems. In developing economies, institutional barriers, regulatory rigidities, and risk-averseness might deter even resource-endowed SMEs from leveraging digital capabilities.

Another stream of research in entrepreneurial marketing reveals the role of financial literacy, cultural fit, and value orientation in the deployment of digital capabilities, as seen in DMCs (Liaw et al. 2025; Yasin et al. 2025). By combining these perspectives with those of the RBV and DC, the development of DMCs can be understood at the national innovation system level.

Integrative perspective. Collectively, these theoretical lenses reinforce the notion that DMCs are indeed multi-dimensional concepts. They are:

- Strategic resources (RBV)
- Reconfigurable processes (DC)
- Entrepreneurial enablers (EO)
- Adoption behaviors (TAM)
- Institutionalized practices (TOE and Institutional Theory)
- Knowledge transfer mechanisms (Human Capital perspective)

For their effective application, there is a need for human capital, entrepreneurial intention, behavioral acceptance, and institutional support. This collective theoretical foundation places digital marketing at the core of innovation, entrepreneurship, and systemic capability development. It is a comprehensive theoretical framework for understanding the application and application outcomes of digital marketing in SMEs in Oman and in emerging economies in general.

Discussion

The development of 38 DMC and SME performance studies through TCCM indicated progress with persistent gaps in theory, method, and context. In terms of innovation and entrepreneurship, the findings resist implications in terms of new linkages in theory and policy initiatives in emerging economies.

Theoretical implications

The process of synthesis validates that Dynamic Capabilities (DC) and the Resource-Based Theory (RBT) are the dominant models in digital marketing capability research. These models offer a framework in explaining the concept of firm-level intangible resources that create and sustain competitive advantage (Hernández-Linares et al. 2021; Vorhies and Morgan 2005). However, the emphasis on the deployment of capabilities in digital marketing capabilities research underemphasizes the importance of entrepreneurial intentionality, especially in resource-constrained settings. In the context of emerging markets in Oman, SMEs must not only search for and exploit new opportunities through entrepreneurial intentionality, as defined by Lumpkin and Dess (1996).

The most recent literature on entrepreneurship can be seen to further support this shift in perspective to behavioral and ecosystemic thinking. Rafiki et al. (2026) undertook a bibliometric systematic literature review that underscored the point that entrepreneurial behavior, particularly in family and emerging market businesses, is subject to contextual, relational, and institutional embeddedness and not merely resource-based logic. This again supports the point that digital capabilities should not be conceptualized merely as resources of the firm but as a mechanism embedded in entrepreneurial ecosystems in which social capital, intergenerational effects, and regional institutional context play a role in strategic decision-making processes.

The integration of DMC studies with Entrepreneurial Orientation (EO) theory, therefore, provides a more nuanced perspective on the role that digital tools play in enhancing the proactiveness, innovativeness, and risk-takings of SMEs. Other relevant theories, such as Innovation Diffusion Theory (Rogers 2003) and Institutional Theory (Scott 2014), explain the different patterns of digital adoption that are driven by the regulatory environment, culture, and market maturity, etc. Consistent with the perspectives offered

by Rafiki et al. (2026), these theories highlight the co-shaping nature of entrepreneurial behavior and capability development, thus providing a complementary perspective to the RBV/DC, which explains the unique nature of digital transformation in emerging economies.

Accordingly, the review advocates a multi-theoretical approach bridging resource-based logic with innovation and entrepreneurship perspectives, thereby offering a more comprehensive model of how DMCs contribute to firm growth and national competitiveness.

Methodological implications

In terms of methodology, there is a high concentration of cross-sectional survey-based research, including the use of PLS-SEM and regression. While useful for establishing relationships, these methodologies are less useful for capturing dynamic and process-oriented dimensions of innovation. Very little research used longitudinal, qualitative, and/or mixed-methodological approaches, which are best suited to understanding the development of DMCs as learning processes and/or innovation capabilities over time (Stefia et al. 2024; Morgan et al. 2018).

Future research should consider multi-stage and context-sensitive research methodologies, such as:

- Longitudinal case studies on the integration of analytics into innovation projects in SMEs;
- Action research in digital incubators and accelerators; and
- Comparative regional research on the role of institutional differences in the development of capabilities.

Such extensions of research methodology are expected not only to enhance the internal validity of research findings but also enrich the understanding of entrepreneurial learning and innovation processes in SMEs in emerging markets.

Contextual implications

The significant contribution of this review is also in highlighting the geographical imbalance of DMCs' evidence base, as it is still dominated by East Asia and European countries, while Oman and the GCC region are still underrepresented in terms of DMCs, despite having robust digitalization strategies in place (Sharabati et al. 2024; Qalati et al. 2022). However, the Omani context is also a fertile ground for examining DMCs' role in innovation-driven entrepreneurial activity.

In this context, the vision of Oman 2040 focuses on innovation, human capital, and technology adoption as drivers of diversification at the national level in DMCs. In this context, DMCs are seen as innovation enablers to support SMEs in improving their visibility, developing their digital brand, and engaging in data-driven decision-making (Thumiki and Magd 2023; Mathew et al. 2024). However, there are challenges in terms of limited access to finance, insufficient training, and poor inter-organizational linkages that affect adoption (Alraja et al. 2021).

By viewing DMCs as part of national innovation systems, they can be repositioned from being simply a marketing concept to being a strategic asset that helps to drive entrepreneurial experimentation and technology diffusion in the economy. Such a perspective strongly aligns with the APJIE's emphasis on regional development.

Managerial implications

This review is particularly useful for practitioners, as it reinforces the point that DMCs should be treated as strategic innovation capabilities, rather than simple communication activities. SMEs that incorporate analytics, CRM, and social media into their innovation processes are likely to experience greater innovation agility, brand differentiation, and customer-centric innovation (Foltean et al. 2019; Cao et al. 2023).

The most important thing that policymakers should do is to develop digital entrepreneurship ecosystems. Governments in emerging economies, especially in the Gulf region, should:

- Develop digital skill and data literacy programs;
- Develop innovation-oriented financing programs for SMEs using digital technologies;
- Foster collaboration between universities, incubators, and SMEs to speed up the process of knowledge transfer; and
- Develop digital innovation clusters that bring together marketing technologies and entrepreneurship support.

By aligning these strategies with plans such as Oman Vision 2040, policymakers can develop an environment that helps DMCs speed up innovation and diversification at the macro and micro levels.

Theoretical integration for future research

Building on the identified gaps in the literature, this review proposes a concept that will integrate DMCs with innovation, entrepreneurship, and dynamic capabilities.

- From the RBV/DC perspective, DMCs will be considered valuable, rare, and reconfigurable resources.
- From the EO perspective, DMCs will be considered to represent the entrepreneurial spirit that fuels innovation.
- From the Institutional/Diffusion perspective, DMCs will be considered to be embedded in an enabling or disabling environment.

Such a concept will form the basis for the development of new models for digital entrepreneurial capability that will view marketing technologies as both antecedents and consequences of innovation processes.

Through this multiple lens analysis, scholars will be able to derive deeper insights into how SMEs in emerging economies, particularly in the GCC region, can leverage digital competencies for innovation.

Research agenda

This systematic review identifies an emerging yet disjointed body of research on digital marketing capabilities (DMCs), with obvious opportunities for advancing theory, methodology, and practice, especially for the innovation and entrepreneurship domains of emerging economies. Based on the above synthesis, four research directions are proposed.

Theoretical expansion and integration. Future studies should seek to transcend the dominant RBV and DC theories and develop more integrated models that incorporate the linkages with DMCs, entrepreneurial orientation, innovation systems, and institutional theories.

The goal is to examine the mechanisms and motivations for DMCs' innovation stimulation under contextual constraints.

Potential research questions include:

- How do DMCs foster entrepreneurial orientation and innovation performance among SMEs?
- What is the role of institutional quality, culture, and policy frameworks in shaping the relationship between DMCs and SME innovation?
- Can DMCs be conceptualized as part of a broader digital entrepreneurial capability that integrates marketing, innovation, and learning processes?

Such integration would enable scholars to theorize DMCs not only as internal resources but as *strategic innovation assets* operating within dynamic entrepreneurial ecosystems.

Methodological diversification. Empirical research continues to be mostly cross-sectional and quantitative, which does not contribute much to the dynamics of the evolution of digital innovation capacities. Future research should consider the use of multi-method, longitudinal, and qualitative approaches to better understand the causal mechanisms and dynamics at play.

Future research directions:

- Longitudinal research on the evolution of DMCs at various growth phases of SMEs;
- Mixed-method research with the use of survey research and digital analytics;
- Comparative research with the Gulf countries and other emerging regions to consider the effect of institutions on the development of digital capacities;
- Methodological innovations would improve the rigor and practical relevance of DMC research.

Sector-specific and contextual analyses. The review suggests that most of the existing studies focus on general contexts of SMEs, and sectoral differences are not explored. Future studies should be directed towards examining the role of DMCs in facilitating innovation and performance in different sectors such as tourism, logistics, retail, education, and fintech, where digital engagement is a key factor.

Illustrative questions:

- How do DMCs enhance innovation outcomes in knowledge-intensive and service sectors?
- What factors differentiate DMC adoption between traditional industries (e.g., logistics) and digitally native sectors (e.g., e-commerce, fintech)?
- How do DMCs interact with sectoral innovation systems and national digitalization policies like Oman Vision 2040?

Such studies can yield tailored insights to guide sector-based policy interventions and business support programs.

Policy and institutional linkages. Lastly, the review underlines the importance of policy-oriented research that links digital marketing capability development with other national-level innovation and entrepreneurship policies. In emerging markets, SMEs experience institutional voids, and digital capability development can be an important policy tool.

Key research questions include:

- How can public policy and incubation programs enhance SMEs' digital marketing and innovation capabilities?
- What mechanisms link government-led digital transformation initiatives to measurable SME performance improvements?
- How can partnerships among universities, incubators, and private enterprises accelerate the diffusion of DMCs across innovation ecosystems?

Addressing these questions would deepen the understanding of how DMCs contribute to national innovation systems and support inclusive entrepreneurial growth.

Summary of agenda. This agenda calls for a multi-theoretical, multi-method, and multi-context approach to studying digital marketing capabilities. By embedding DMCs within innovation and entrepreneurship frameworks, future research can:

- Advance theoretical diversity through integration of RBV/DC with EO and institutional theories;
- Strengthen methodological robustness via mixed-method and longitudinal designs;
- Enhance contextual depth through sectoral and cross-country analyses; and
- Inform policy formulation aimed at digital capability development, innovation diffusion, and SME competitiveness in emerging markets.

Such advancements will not only enrich academic literature but also provide actionable insights to guide Oman's Vision 2040 and similar regional transformation agendas.

Conclusion

This systematic review integrated the findings of 38 studies on DMCs and SME performance, using the PRISMA and TCCM frameworks to ensure methodological rigor and conceptual depth. The review reveals DMCs, including analytics, CRM, and social media engagement, are not just additional tools but rather essential innovation capabilities for SMEs to survive and thrive in dynamic business environments.

Three overarching insights emerge. First, while the resource-based and dynamic capabilities views are prominent in the literature, this review extends theory development by situating DMCs at the intersection of entrepreneurship, innovation, and institutional embeddedness. By combining Entrepreneurial Orientation, Innovation Diffusion, and Institutional Theory with the logic of the resource-based view/dynamic capabilities, this research offers a multi-theory foundation that not only explains the role of digital capabilities in facilitating resource-based competitive advantage but also explains the role of digital capabilities in facilitating entrepreneurial alertness, proactiveness, and innovation at the system level. Thus, the theoretical contribution is based on situating DMCs as entrepreneurial-systemic capabilities within national innovation systems.

Second, uniformity in methodology has hindered the understanding of the processes of development in DMCs as learning and innovation processes unfold. In this regard, this review makes a contribution to the literature in terms of methodology by pointing out the blind spots in the literature and suggesting process-oriented and context-sensitive research designs that can help to capture the development of capabilities in DMCs.

Third, context is key. The review makes a contextual contribution to knowledge as it places DMCs in the context of development in Oman and the GCC region, areas that are currently underrepresented in the global body of knowledge on digital marketing in general. The findings of this review show that for DMCs to be successful in developing economies in terms of digital transformation, additional investments in human capital, leadership orientation, and innovation systems are required. The review of DMCs as part of a national innovation system also emphasizes their strategic importance for macro-level transformation strategies such as Oman Vision 2040.

From a theoretical perspective, this review makes a contribution by advancing a framework that synthesizes resource-based, dynamic, entrepreneurial, and institutional approaches, and from a contextual perspective, by locating DMCs development within the context of emerging economy transformation strategies. Digital marketing is not simply conceived as a function of businesses; rather, it is conceived as a facilitator of entrepreneurial innovation and systemic competitiveness. The development of DMCs in SMEs could potentially fast-track the GCC region's economic transformation into a resilient, innovation-driven, and knowledge-based economy.

Policy and practical implications

To translate these insights into action, however, requires a coordinated policy and management framework, including:

1. Human capital development – Developing national and regional programs in digital marketing, analytics, and data literacy, including these themes in entrepreneurship and innovation education.
2. Innovation-oriented financing – Developing grants and venture financing schemes for SMEs, providing incentives for those firms developing and applying digital marketing innovations.
3. Ecosystem collaboration – Encouraging collaboration among universities, incubators, and businesses in co-developing and applying best practices in DMC.
4. Digital infrastructure and open data – Ensuring the development of digital platforms, analytics, and cloud technologies that can facilitate easier entry into DMC for SMEs.
5. Measurement and evaluation – Including DMC metrics in national innovation dashboards to monitor progress towards Vision 2040 goals.

For managers, the implications are strategic. DMCs should be seen as innovation assets, not cost centers. By integrating data analytics and CRM insights into product development, customer experience, and business renewal, firms can unlock greater agility, differentiation, and value growth.

Data availability

All data analyzed in this research were retrieved from already published scientific publications. There was no new primary data collected during the research. The full list of analyzed articles can be found within this published research paper and appendix. Additional data sets used during the screening and TCCM coding can be provided by the authors on a reasonable request.

Received: 29 November 2025; Accepted: 17 March 2026;
Published online: 25 April 2026

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Author contributions

Alam, Elkhoudary, and Yadav jointly conceived and designed the study. Elkhoudary conducted the literature search, data extraction, and the TCCM and PRISMA-based analysis. Elkhoudary prepared the original draft, visualizations, and tables. Alam and Yadav contributed to reviewing, editing, and refining the manuscript. All authors reviewed and approved the final submitted version and agree to be accountable for all aspects of the work.

Competing interests

The authors declare no competing interests.

Ethical approval

This study is a systematic literature review based exclusively on previously published studies and publicly available scholarly sources. It does not involve human participants, personal data, biological materials, or direct data collection from individuals. Therefore, ethical approval from an institutional review board or ethics committee was not required.

Informed consent

This study did not involve human participants or identifiable personal data. Consequently, informed consent was not required.

Additional information

Supplementary information The online version contains supplementary material available at https://doi.org/10.1057/s41599-026-07126-x.

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