

Analyzing the Role of Technological Capabilities and Digital Marketing on the Performance of E-Commerce-Based SMEs

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Abstract

Purpose : The research study aimed to analyze the impact of digital marketing and technological capabilities on the financial and operational efficiency of e-commerce-based small and medium-sized enterprises (SMEs) in India. The organizations spending their marketing budgets on digital marketing platforms plan to get more efficiency and cost optimization with their campaigns. Such optimization may be crucial, particularly for small and medium-sized businesses that rely on e-commerce. The goal of the study was to determine how contemporary SMEs may enhance their performance by utilizing advanced technology, growing smartphone usage, and improving technical competence.

Methodology : A theoretical framework was proposed, premised on the substantial impact of digital marketing and technological capabilities on SMEs' performance. Empirical data was collected from SME executives in India. The data was analyzed using factor analysis and regression techniques to assess the impact on the performance of these e-commerce-based SMEs.

Findings : The analysis revealed the significant role of technological capabilities and digital marketing in enhancing the financial and operational performance of e-commerce-based SMEs in India.

Practical Implications : The study provided managerial insights into how SMEs can effectively harness digital marketing and technological capabilities to improve their operational efficiency and financial outcomes. The findings suggested strategies for SMEs to adapt to dynamic customer expectations and increased competition in the digital marketplace.

Originality : The research contributed to the existing literature by developing a theoretical model that links digital marketing and technological capabilities to the performance of e-commerce-based SMEs in a developing country, specifically India.

Keywords : technology capabilities, digital advertising, mobile marketing, e-commerce SMEs, sales performance, mobile app development, customer relationship management

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Technological capabilities and online services platforms significantly drive the evolution of developed economies and societies. In the past two decades, these online platforms have been deeply embedded in virtually every domain of life, whether personal or business, worldwide (Ariyani et al., 2019). As a vital digital economy component, e-commerce-based small and medium enterprises (SMEs) include manufacturers, financial service providers, recruitment, pure intermediaries, or a combination of aggregators (Rochet &

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Tirole, 2003). The role played by technology and online platforms is undoubtedly instrumental to the swift development of the digital economy, from its humble beginnings to its present formidable size and stature (Aggarwal, 2023). Global internet access and adoption are rapidly increasing, with over five billion internet users worldwide, so the number of people making purchases online is on the rise. Approximately 5.7 trillion US dollars were expected to be spent on retail e-commerce in 2022, and this number is expected to grow at a higher rate in the near future (van Gelder, 2024).

According to Kumar and Mittal (2012), Kumar and Sharma (2015), Kumar and Ayodeji (2021b), and Kumar and Lata (2022), Indian firms are prepared to embrace technology-enabled platforms, such as digital marketing and e-commerce, despite the danger of cybercrime. With digitalization and mobile commerce leading to millions of new consumers accessing internet shopping channels for everyday purchases (Mittal & Kumar, 2018; Sharma et al., 2023), competition among players has increased for customer acquisition and market share. Traditional and e-commerce companies are excited about digital marketing opportunities to take their offerings to the target customers. According to Research and Markets (2024), the B2C e-commerce sector in India is expected to expand at a rate of 10.75% annually, reaching US\$107.3 billion in 2023. Over the forecast period of 2023–2027, this industry is anticipated to expand steadily with a CAGR of 8.68%, taking its gross merchandise value from US\$96.9 billion in 2022 to US\$149.7 billion by 2027. Therefore, this sector's future appears promising (Research and Markets, 2024).

The significance of mobile presence for SMEs globally was demonstrated by the fact that mobile devices accounted for 55% of all online purchases, compared to 45% for desktop sales. Because it gives fashion brands a wider audience, increased brand recognition, and increased final sales wherever and at any time, mobile commerce is a favorite among the fashion sector for its online presence. Digital marketing campaigns delivered on mobile devices further trigger users' actions, resulting in increased sales (Kumar & Mittal, 2020). In 2023, online traffic generated over mobile phones was 78.96%, and desktop traffic was 21.04% globally. A total of 71% of sales over mobile, while 29% were accounted for desktops. The digital marketing campaigns used by the companies are also delivered over mobile platforms, making mobile marketing accessible to people around the clock (Kumar & Mittal, 2020). The SMEs can utilize the technological capabilities and take their offerings quickly to the customers over digital marketing platforms and drive the business value.

Hence, this research has been designed to explore the impact of technology capabilities and digital marketing on e-commerce-based SMEs. The manuscript identifies a research gap in the context of developing economies, particularly India, where there is limited empirical data on the subject. It highlights how important internet platforms are in wealthy economies and suggests that things may be different in developing countries due to differences in digital infrastructure and literacy levels. The research is positioned to fill this gap by providing data-driven insights specific to India, a rapidly growing digital market. The research outcomes of this paper will be critical to the management of small and medium-sized organizations while developing their plans to meet business goals. By strategically implementing and utilizing technology infrastructure, SMEs can tap the opportunities offered by digital marketing and e-commerce platforms for resource optimization.

E-Commerce-Based SMEs and Online Marketing

Leveraging online platforms offers an opportunity for SMEs to overcome the issues related to their size and improves their capacity to benefit from advanced change (Kumar & Nanda, 2023; Sur, 2018). These digital platforms provide SMEs various advantages, such as a method for accessing new markets, offering new products, process optimization, cost reduction, and resource utilization over different channels (Kumar et al., 2011). Moreover, they allow for the development of efficiencies that can support economies of scale, capitalize on network effects, and eventually boost productivity and competitiveness. Technology adoption,

including e-commerce and digital marketing, may significantly cut down on several costs, including search costs, replication costs, delivery costs, following expenses, and verification costs (Goldfarb & Tucker, 2019; Nanda & Kumar, 2023; Saurabh & Kumar, 2017). A recent empirical assessment spanning 10 OECD nations in the hotel, restaurant, taxi, and retail industries found that e-commerce platforms can boost the efficiency of incumbents and reallocate the staff to more productive tasks (Rivares et al., 2019). COVID-19 has induced disruption and opened up new opportunities (Baig et al., 2020; Bhardwaj & Kumar, 2023). However, there have been challenges for SMEs as the need for more digital infrastructure and trained human resources put up a limitation to creating internal computerized infrastructures to take advantage of digitalization (OECD, 2019). The COVID-19 crisis has seen changes in customer behavior, market balance, and supply chains affecting businesses (Carvalho et al., 2020; Ceylan et al., 2020). They may use digital tools to help them make the most of this window of opportunity. As per the UNCTAD (2021) report, the COVID-19 pandemic accelerated the digital transformations in organizations as digital solutions were increasingly needed to conduct economic and social activities remotely. During the pandemic, there was growth in e-commerce in developing countries, with long-term implications. The COVID-19 epidemic has increased the usage of online platforms, but this increase has been relatively uneven across industries and nations (Kovid & Kumar, 2022; UNCTAD, 2021). A faster increase was observed in nations with more advanced digital infrastructure and greater levels of digital literacy, indicating that investing in these capacities may help countries be more resilient to shocks in the future (OECD, 2021). The pandemic has highlighted the importance of digital transformation as organizations felt the adversities of not having embraced it earlier (Baig et al., 2020; Butt, 2020).

In light of the global spread of COVID-19, many governments have been assisting SMEs in adopting cutting-edge technology-enabled methods of doing business. Several countries desire to support SMEs and business owners using Internet platforms. Some governments have enacted policies that are especially important after the pandemic because they aim to increase SMEs' e-commerce expertise, online presence, and capacity to use correspondence channels for remote labor. Foreign Trade Policy (2023) for India has emphasized boosting e-commerce and MSME exports and pegged its export potential at \$200–300 billion by 2030. The FISME, however, says that these estimates are far from the actual situation and that concerted action is required from exporters, platform owners, and the government. The \$2 billion of e-commerce exports make up less than 0.5% of the country's total exports in 2023 (Foreign Trade Policy, 2023).

During the pandemic, small companies implemented technological solutions and reacted strongly to the growth of e-commerce and digital platforms for marketing their products and services. Sandberg et al. (2020) indicated that in the United States, 51% of small businesses had increased online customer interactions, 36% of privately owned firms using digital tools had shifted to virtual sales only, and 35% of businesses revisited their practices and extended digital payment options. Brazilian SMEs also took small steps toward digitizing elements of their operations, utilizing simple entry-level technologies for each critical undertaking. Social media platforms like Instagram, Facebook, and WhatsApp were used in direct sales campaigns, payment transactions were carried out through bank applications, and some SMEs paid for the first time for internet advertising (Agrawal et al., 2023; SEBRAE, 2020; Sharma et al., 2024).

There is no denying that the increasing adoption of mobile phones for online communication and shopping has further propelled e-commerce transactions (Kusumawati et al., 2021; Kumar & Usman, 2024). In late 2022, mobile devices accounted for over 70% of website visits for retail purposes and resulted in most orders being placed via smartphones instead of desktops or tablets (van Gelder, 2024). M-commerce is going to continue to be a key component of future purchasing as its popularity is accelerating even more in places with weak digital infrastructure. In Asia, where mobile devices account for well over two-thirds of internet purchases, this idea is particularly clear in nations like China and South Korea.

Pelletier and Cloutier (2019) claimed that SMEs now have easier access to digital tools that can streamline their

operations, such as social media applications, mobile secure payment services, video conferencing, instant messaging, and e-commerce platforms, thanks to more capable and reasonably priced technology infrastructure. These tools offer a simplified approach to managing processes and boosting customer-supplier relationships (Aggarwal, 2023; Pelletier & Cloutier, 2019; Sur, 2018). About a third of small firms and about a quarter of medium-sized ones get at least 20% of their revenue from online marketplaces. SMEs in Europe rely on online sales for at least 20% of their total revenue. Data shows that 29% of small and 24% of medium-sized firms produce at least 20% of their sales from e-commerce marketplaces (Eurostat, 2021).

Literature Review and Conceptual Framework

The company's marketing success relies primarily on its website, social marketing, and digital advertising (Alalwan et al., 2017). Websites are typically viewed as a platform for SMEs to portray an expert image and market/advertise their products. However, SMEs heavily rely on mobile technology due to its advantages in transacting business, flexibility, and communication (Kabanda & Brown, 2017). Mechman et al. (2022) analyzed the relationship between online business, modern digital marketing, and the success of small and medium-sized firms in Iraq. Their research established that new methods of advertising and conducting business online are essential to the success of SMEs. The analysis of a structured questionnaire-based survey from 228 employees in Baghdad, Iraq-based micro SMEs highlighted that these employees were excited about e-commerce and digital marketing, changing the competitive landscape for SMEs. Key performance indicators for SMEs connected to digital marketing and e-commerce also improved. This study showed that the company may use these digital channels to sustain above-average performance over time.

A theoretical study of electronic commerce in Tanzania was done by Kabanda and Brown (2017). Based on the focus group methodology, the primary goal was to identify structural causes of e-commerce-related behavior among Tanzanian SMEs. The findings supported the arguments made by structuration theory and an interpretive viewpoint that Tanzanian SMEs participate in three fundamental e-commerce activities. Websites are utilized for advertising and public perception enhancement, broad mobile technology utilization for trades, and technical issue resolution via collaboration. These actions are influenced by the social, cultural, technological capabilities, economic hierarchies, and environments surrounding them. Evidence suggests that SMEs were not using the internet effectively due to a belief that online transactions are incompatible with the traditional face-to-face business methods in Tanzania. The results also showed that SMEs have difficulties with environmental technology, mostly because of a lack of industry and institutional support. As a result, SMEs collaborate with international organizations that could help them overcome technological obstacles. The study gave practitioners a better understanding of Tanzanian SMEs' views on e-commerce in light of environmental and hierarchical opportunities and requirements.

Alzahrani (2019) investigated the effects of e-commerce on the business practices of SMEs in Saudi Arabia. The relationship between e-commerce and business strategy, as well as the consequences of e-commerce knowledge for SMEs' strategic management, were also examined. The data analysis results suggested that e-commerce influenced SMEs' strategies. Many players in the Saudi market claimed that their priorities and strategies have evolved with the introduction of online shopping. The research identified and analyzed the most critical aspects of the business strategy and e-commerce relationship.

Shahzad et al. (2020) focused on the success of SMEs in Malaysian blocks and concrete and pure-play e-retailers. The resource-based view and the unified theory of acceptance and use of technology (UTAUT model) provided the theoretical groundwork for this research. The integrated framework also provided a fresh approach to studying factors that affected a business's performance after adopting e-commerce and digital marketing. Two hundred twenty-five small and medium-sized Malaysian businesses (SMEs) that had embraced e-commerce responded to a structured questionnaire for the quantitative analysis of the importance of digital marketing. There

was no doubt among the business sectors on the necessity of promoting the use of digital marketing and e-commerce that improves performance. However, the two groups of businesses had vastly different expectations about the time and energy needed to embrace e-commerce fully. This research was necessary for business owners and managers as it classified e-commerce customers into subsets with different marketing requirements.

Elia et al. (2021) looked into the potential for corporations to promote globalization via digital media. Additionally, we discovered that businesses with an e-commerce manager were more likely to use computerized export than those with a traditional export manager. This is true for businesses of all sizes. Alalwan et al. (2017) found that a company's marketing success strongly relied on its website, social marketing, and digital advertising. Bala and Verma (2018) uncovered a strong positive correlation between e-marketing and SMEs' performance, with its implementation having a positive influence on an organization's use of e-commerce. Ramdani et al. (2013) identified that digital marketing was integral to SMEs' adoption of digital commerce.

Hence, the existing literature is more inclined to SMEs' adoption of e-commerce platforms to reach wider audiences. This kind of research on SMEs and how digital marketing affects their performance is quite pertinent in the Indian setting. SME budgets for digital marketing initiatives and company strategies must be cautious due to their restricted resources.

The crucial variables for analyzing the effect of technology capabilities and digital marketing on the performance of e-commerce-based SMEs have been found as:

Independent Variables

- Technology capabilities
- Digital marketing features
- E-commerce features

Dependent Variable

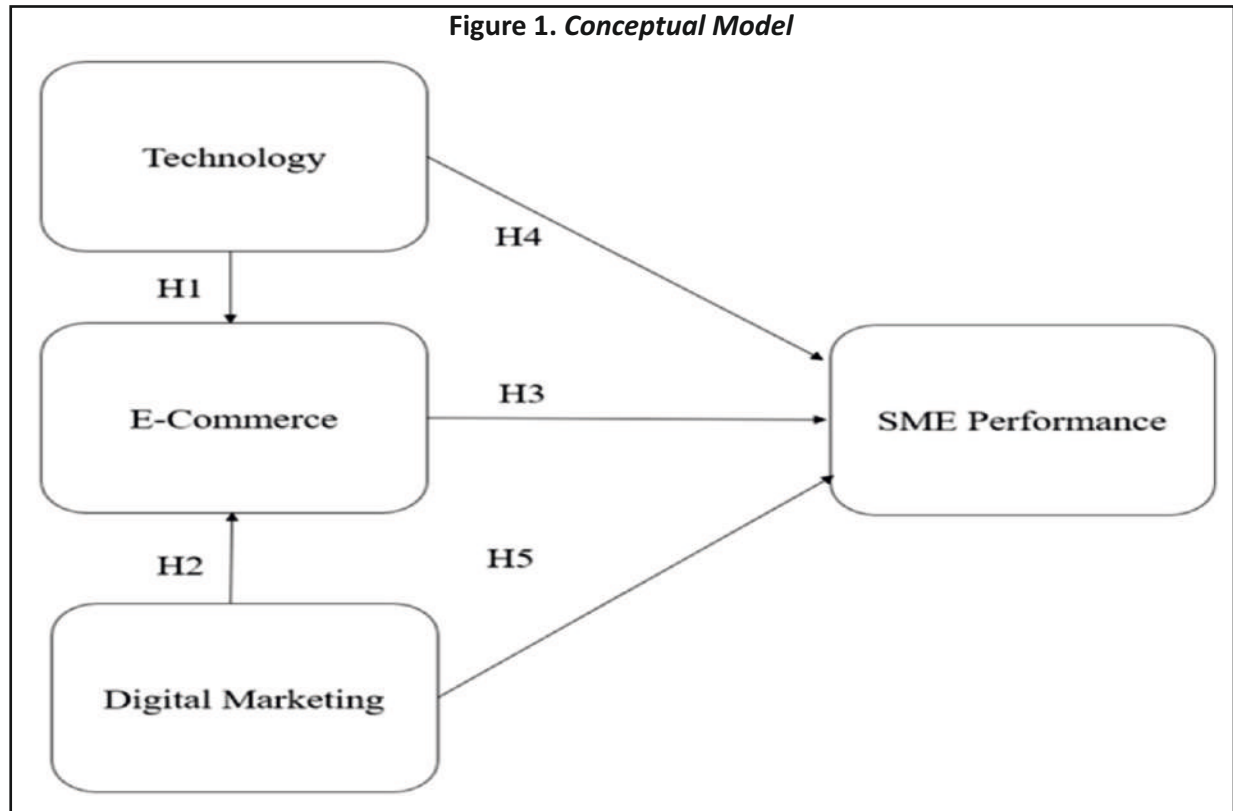
- SME performance

Four factors (each explained by several items) have been identified based on the literature study to understand how digital marketing and technical capabilities affect the success of SMEs that rely on e-commerce. These parameters have been presented in Table 1, and a conceptual model has been framed as presented in Figure 1.

Table 1. Research Constructs Obtained from the Literature Review

S. No.	Constructs	Variables	Description	Reference
1	Technological Capability (<i>TECH</i>)	<i>TECH1</i>	Organizations effectively utilize modern technologies like e-commerce and digital marketing, enhancing productivity and efficiency in order processing.	(Kabanda & Brown, 2017; Kumar & Lata, 2022; Ramdani et al., 2013; Shahzad et al., 2020; SEBRAE, 2020)
2		<i>TECH2</i>	Integrating new technologies like e-commerce and digital marketing has positively impacted the overall performance.	
3		<i>TECH3</i>	The organization ensures the availability of reliable and affordable technology infrastructure to facilitate e-commerce and digital marketing.	(Alzahrani, 2019; Bala & Verma, 2018; Rochet & Tirole, 2003; SEBRAE, 2020)

4		<i>TECH4</i>	Digital infrastructure management and marketing campaigns are critical to the growth and optimization of operations in our organization.	
5	E-Commerce Features (<i>ECOM</i>)	<i>ECOM1</i>	Our product/service offerings are effectively presented on digital marketing platforms and well-integrated with the e-commerce solution.	(Alalwan et al., 2017; Alzahrani, 2019; Bala & Verma, 2018; Elia et al., 2021; Faisol et al., 2023; Kumar & Ayodeji, 2021a; Kabanda & Brown, 2017; Kumar et al., 2011; Saurabh & Kumar, 2017; Mittal & Kumar, 2018; Pelletier & Cloutier, 2019; Shahzad et al., 2020)
6		<i>ECOM2</i>	E-commerce allows my organization to launch and promote new product lines on digital platforms.	
7		<i>ECOM3</i>	Our organization can better manage the orders received using the e-commerce platforms due to direct linkage with digital marketing channels.	
8		<i>ECOM4</i>	E-commerce has helped automate business processes, including finance, stock management, etc.	
9		<i>ECOM5</i>	E-commerce has enabled our organization to provide efficient and timely customer support across all digital platforms.	
10	Digital Marketing (<i>DM</i>)	<i>DM1</i>	Digital marketing campaigns' flexibility and tracking help assess the overall impact on business.	(Alalwan et al., 2017; Bala & Verma, 2018; Bhardwaj & Kumar, 2023; Elia et al., 2021; Kumar et al., 2011; Kumar & Lata, 2022; Kumar & Mittal, 2020; Kumar & Nanda, 2022; Mechman et al., 2022; Prasad & Amruta, 2023)
11		<i>DM2</i>	High-quality content plays a significant role in attracting and retaining customers for our organization.	
12		<i>DM3</i>	Our organization finds it essential to maintain an active presence on relevant social media platforms to connect with customers.	
13		<i>DM4</i>	The content presented by our organization on digital platforms is found to be engaging and relevant to the target audience.	
14	SME Performance (<i>SME</i>)	<i>SME1</i>	E-commerce enables a reduction in operational costs and brings efficiency to our business.	(Alalwan et al., 2017; Bala & Verma, 2018; Faisol et al., 2023; Kabanda & Brown, 2017; Kumar & Lata, 2022; Mechman et al., 2022; Mittal & Kumar, 2018; Ramdani et al., 2013; Shahzad et al., 2020)
15		<i>SME2</i>	Digital marketing campaigns have significantly reduced our marketing campaign budgets and offer better results tracking.	
16		<i>SME3</i>	Digital marketing efforts are tailored to address the specific needs and preferences of the target audience.	
17		<i>SME4</i>	Digital marketing campaigns and e-commerce platforms help better target customers for different product offerings.	



The discussion above brings us to the development of the following hypotheses:

- **H1** : Technology capability can directly impact the E-commerce efficiency of the SMEs.
- **H2** : Digital marketing can directly impact the E-commerce efficiency of the SMEs.
- **H3** : E-commerce features has a positive impact on the performance of SMEs.
- **H4** : Technology availability has a positive impact on the performance of the SMEs.
- **H5** : Digital marketing has a positive impact on the performance of the SMEs.

Research Methodology

Descriptive and exploratory designs are used in the study. In order to get empirical data for quantitative research, a structured questionnaire was employed, and participants looked at the main elements impacting the constructs and how they interacted with one another. The 5-point Likert scale has been used to take the opinion of the respondents. Having *strong disagreement* is 1, and *strong agreement* is 5. SME representatives were contacted via LinkedIn between September and December 2023 using convenience sampling. The assessment is predicated on 200 complete and legitimate answers.

The questionnaire's measuring scale was subjected to a reliability assessment, and its Cronbach's alpha value was calculated to establish its consistency. Confirmatory factor analysis (CFA) was applied (using AMOS software) to verify the factor structure of the observed variables. The hypothesis that there is a

connection between observed variables and their underlying latent constructs can be tested by the researcher using CFA. Factor reliability denotes the uniformity of the analysis and measurement (Wang et al., 2022). A value of 0.7 or higher was considered to be Cronbach's alpha, which measures reliability (Nunnally, 1978). For each scale, the useable factors, factor loading value, and percent of variation were displayed using SPSS 25.0 software.

Data Analysis and Results

The data analysis has been done using SPSS version 25.0. Table 2 summarizes the socio-demographic profile of participants in this research.

Normality Test

A major assumption in multivariate research was normality. A variable's dispersion and stability were evaluated using the skewness and kurtosis tests. Table 3 shows the results of skewness and kurtosis analyses, which showed that the observed values fell within the permitted range. All the tested items received *p*-values of 0.05 or below, indicating that the evaluation was accurate and established the information's significance.

Table 2. Respondent Demographics

Variables	Category	Percentage
Gender	Male	67%
	Female	33%
Age	>25	10%
	25–34	20%
	35–44	40%
	45 Above	30%
Educational	Secondary School	10%
	Diploma	30%
	Graduate	35%
	Others	25%
Experience	0–5 Years	29%
	6–10 Years	61%
	11 and above	10%

Table 3. Normality Test

	Kolmogorov–Smirnov			Skewness	Kurtosis
	Statistics	df	Sig.		
Technology	0.124	199	0.000	–1.100	0.751
Digital Marketing	0.115	199	0.000	–0.523	0.523
E-commerce	0.156	199	0.000	–0.856	0.623
SME Performance	0.133	199	0.000	–1.063	1.053

Reliability

Cronbach's alpha has been used to determine the reliability of the research instrument (Sekaran & Bougie, 2019). The sample size $N = 200$, for which Cronbach's alpha values in the reliability statistics table are shown in Table 4. Cronbach's alpha for the entire investigation is impressively over 0.7. Therefore, the research model was successfully tested using the scales, demonstrating its reliability and usefulness. Hair Jr. et al. (2010) stated that a legitimate convergence has an average variance extracted (AVE) over 0.5, an average heap above 0.7, and a CR above 0.7. Table 4 shows that the AVE for each new construction was greater than 0.5.

CFA was computed using AMOS to test the measurement model. Following CFA, factor loading was assessed to confirm the explored factors of EFA. CMIN/ Df , GFI, CFI, TLI, SRMR, and RMSEA were observed to assess the overall goodness of the model. These values were within the acceptance range. The composite reliability values were assessed, which were greater than and near 0.7 for all constructs. The model is accepted and shows good model fit indices of the measurement model. The values of indices are mentioned in Table 4. Convergent validity is analyzed using AVE in Table 3 (Fornell & Larcker, 1981). The AVE value must be more than the 0.5 threshold; in our instance, it is close to that threshold. Consequently, the scale was approved for the current investigation.

After evaluating the measurement model, the study assesses the structural path for determining the path coefficient, or the statistical significance of the correlations between constructs to test the hypothesis. According to the interpretation of Table 5, there is a strong correlation between TECH ($p, 0.000$) and SME and ECOM. Similarly, DM ($p, 0.000$) is found to be strongly correlated with ECOM and SME. It may also be observed that the ECOM ($p, 0.000$) is also strongly correlated with the SME.

Table 4. Factor Analysis, Reliability, and Validity

Factor	Variables	Factor Loading Value	% Variance Explained	Cronbach's Alpha	Sample Adequacy	Composite Reliability	AVE
Technology (TECH)	TECH1	0.709	79.49	0.705	KMO = 0.835 Barlett's Test of Sphericity: Chi-Square: 109.534 $df = 3$; Sig. 0.000	0.71	0.517
	TECH2	0.660					
	TECH3	0.714					
E-Commerce (ECOM)	ECOM1	0.657	75.51	0.602	KMO = 0.721 Barlett's Test of Sphericity: Chi-Square: 232.916 $df = 4$; Sig. 0.000	0.70	0.522
	ECOM2	0.746					
	ECOM3	0.747					
Digital Marketing (DM)	DM1	0.609	79.49	0.685	KMO = 0.805 Barlett's Test of Sphericity: Chi-Square: 89.534 $df = 3$; Sig. 0.000	0.69	0.497
	DM2	0.620					
	DM3	0.714					
SME Performance (SME)	SME1	0.750	78.65	0.697	KMO = 0.780 Barlett's Test of Sphericity: Chi-Square: 122.897; $df = 3$; Sig. 0.000	0.68	0.525
	SME2	0.678					
	SME3	0.678					

Table 5. Hypotheses Testing: Regression Analysis

Hypotheses No.	Hypothesized Relationship	Beta	T	Exact P	Adjusted R Square	Hypothesis Result
1.	TECH → ECOM	0.136	3.723	0.000	0.562	Accepted
2.	DM → ECOM	0.124	4.333	0.000	0.441	Accepted
3.	ECOM → SME	0.351	4.769	0.000	0.488	Accepted
4	TECH → SME	0.329	3.346	0.000	0.386	Accepted
5	DM → SME	0.185	3.143	0.000	0.585	Accepted
Model Fit CMIN/Df = 2.28, GFI = 0.911, CFI = 0.89, TLI = 0.899, SRMR = 0.042 and RMSEA = 0.068						

In Table 5, the adjusted *R*-squared values indicate that the impact of DM on ECOM is 0.441, and ECOM on SME is 0.488. The impact of TECH on ECOM is 0.562, and on SME is 0.386. The impact of DM on SMEs is found to be 0.585. This means that technology's impact on e-commerce is supported by 56.2%, and SME performance is supported by 38.6% of the respondents. At the same time, the impact of digital marketing on the SMEs is supported by 58.6% of the responses.

Further, the study assesses the individual impact of independent variables on the dependent variables by observing the beta value of the regression analysis. The H1 of TECH impact on ECOM has ($\beta = 0.136, p < 0.01$). The H2, DM impact on ECOM ($\beta = 0.124, p < 0.01$), is found to be statistically significant. Further, H3 of ECOM on SMEs ($\beta = 0.351; p = 0.000$) is also found to be statistically significant. In addition, TECH is also found to be a predictor ($\beta = 0.329, p = 0.000$) of SMEs, which proves the hypothesis H4. The direct relation of DM ($\beta = 0.185, p = 0.00$) with SMEs tests the hypothesis H5.

Findings

The study's findings suggest that digital marketing plays a crucial role in impacting the performance of SMEs in India. The analysis focused on three critical aspects of SMEs: technological capabilities, digital marketing, and e-commerce platform features. All these three were found to be positively related to SMEs' performance. Technology capabilities enable the organization to adopt e-commerce and digital marketing solutions quickly. Due to the ready availability of technology, the SMEs are able to better manage their resources and conduct business transactions smoothly.

Managerial Implications

E-commerce-based SMEs are increasingly turning to digital marketing as a pivotal strategy to navigate the competitive tides. The research study delved deeply into how these SMEs leverage their financial resources for better targeting the customers in the expansive digital marketing space, highlighting the significant impact on both financial returns and operational workflows. In addition to lowering the costs associated with advertising, client acquisition, and business operations, digital marketing and e-commerce platforms also assist companies in expanding into new markets and product categories. The implementation of digital marketing and e-commerce also led to improved customer service, campaign tracking, segmentation of business data, and better customer targeting of customers. These findings underscore the significance of leveraging digital marketing platforms for better customer connections, generating more leads, and using social media as a powerful tool for business growth.

Theoretical Implications

Small and medium-sized businesses can gain important information about consumer behavior by utilizing advanced analytics tools and targeted social media advertising. This will allow them to tailor their outreach with previously unheard-of precision. Furthermore, marketing strategies that use technology are driving a revolution in which agile approaches designed for quick market reactions replace more conventional approaches. The framework this study presents validates the contributions of digital marketing and technology to the firm's cost optimization and efficiency.

Conclusion

This study offers empirical evidence to support the notion that digital marketing benefits e-commerce businesses, notably those of a smaller or medium size. The findings highlight the significance of utilizing technology capabilities, digital marketing strategies, mobile marketing, and e-commerce platforms to boost SMEs' success in a competitive market. These findings have implications for e-commerce-based SMEs in India and provide practitioners and policymakers with actionable data to base marketing strategies and legislation to facilitate their growth and success. Empirical testing of the framework has further validated the applicability and usability of digital marketing campaigns for e-commerce-based SME organizations. The association between SMEs' use of digital marketing and performance enhancement globally is reinforced by this empirical data from India.

Limitations of the Study and Scope for Future Research

This study has been conducted on a sample size of only 200 respondents from SMEs using e-commerce-based platforms and digital marketing techniques for promoting their businesses and products. The study was conducted in the Indian industry only, and it may not apply to developed countries with a more mature setup for small and medium-sized organizations. In India, e-commerce and digital marketing were adopted much later than in the developed world, so the applicability of the results may be tested in different settings of least developed, developing, and advanced economies. SMEs may be defined differently in various nations and areas, which could lead to varied outcomes. Adopting e-commerce and digital marketing may also vary per product/service category, customer profile, rural/urban areas, etc. The respondents are not members of the general population because the study is centered on SMEs. We have used convenience sampling and considered the responses from organizations that have digital technologies and use online marketing platforms. Random sampling may be used for research on a bigger scale for unbiased results. Hence, there is good scope for expanding the research objectives, and new insights may be developed.

Authors' Contribution

Both authors contributed to the study's conception and design. Each author thoroughly reviewed and analyzed the selected papers for the review. Saurabh Mittal wrote the initial manuscript draft, and Vikas Kumar provided valuable feedback on earlier versions. Both authors reviewed and approved the final manuscript.

Conflict of Interest

The authors have no conflicts of interest to declare. All co-authors have seen and agree with the contents of the manuscript, and there is no financial interest to report. We certify that the submission is our original work and is not under review at any other publication.

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