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ABSTRACT

This study examines the potential advantages of amalgamating customer relationship management (CRM) platforms with digital marketing capabilities (DMC) within the hospitality sector. Using structural equation modeling, data collected from 569 hospitality employees in Vietnam supported the hypothesis that DMC exerts both a direct and an indirect positive influence on DMC and CRM. This study offers novel perspectives on how DMC impacts the dynamics between CRM and the performance of lodging businesses. It added a nuanced understanding of the interconnections between DMC, hospitality business performance (HBP), and CRM and their collective impact on organizational performance within the hospitality industry. The results provide valuable insights for making informed policy decisions and fine-tuning marketing and CRM strategies to enhance hospitality organizations' competitive edge in this competitive industry.

Introduction

Digital marketing has been described as utilizing digital media to promote products and services to clients (Clement Addo et al., 2021). The refreshing era of digital consumerism has reshaped consumer behavior, where people are increasingly gravitating toward digital avenues for their shopping, entertainment, and social interactions (Mathew & Soliman, 2020). This pivot toward online platforms has profoundly influenced the marketing domain, especially digital marketing capabilities (DMC).

DMC refers to the skills, tools, strategies, and technologies businesses and individuals use to promote their products or services through digital channels (Mathew & Soliman, 2020). These capabilities encompass various activities to reach and engage target audiences online (Wong et al., 2020). Since consumers

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are dedicating more of their time to online activities and relying extensively on e-commerce platforms, businesses have found themselves compelled to adjust and improve their DMC to connect with this evolving consumer landscape. Despite being cognizant of these trends, businesses often play the catching-up game with consumers in adopting digital technologies (Annarelli et al., 2021). Critical reasons for these are a lack of digital maturity and capabilities (F. Wang, 2020), uncertainty regarding the performance benefits of digitalization (Annarelli et al., 2021), and inability to effectively deploy digitalization to support organizational transformation (Marsh et al., 2022).

For the hospitality industry, such a situation is even more glaring for them. Hospitality players operate in an environment where customer satisfaction and loyalty are paramount. More often than not, customer relationship management (CRM) has been instrumental in managing customer interactions, fostering relationships, and tailoring services to individual preferences (Nannelli et al., 2023). Industry reports have found that hospitality organizations leveraging CRM data to fuel personalized marketing campaigns, such as targeted e-mail promotions based on individual preferences, have indicated a six-fold increase in transaction rates for personalized campaigns (Vietnam News, 2023). With CRM tools able to review customer feedback from diverse sources, such as online reviews, it is not surprising when Gartner (2022) highlighted that using social media engagement with CRM tools is a crucial strategy projected to surpass 4.4 billion by 2025.

In this regard, one of the critical developments of CRM is electronic CRM (e-CRM). e-CRM has emerged as a pivotal strategy in the modern business landscape, particularly in industries like hospitality, where customer interactions increasingly occur through digital channels (Kumar et al., 2021). e-CRM represents an evolution of traditional CRM practices, leveraging digital technologies to enhance customer engagement, streamline processes, and drive marketing effectiveness (Jafari Navimipour & Soltani, 2016). Integrating various digital channels such as websites, social media, e-mail, and mobile apps, e-CRM enables businesses to interact with customers in real-time, delivering personalized experiences and targeted messaging (Oumar et al., 2017). By collecting and analyzing data from these digital touchpoints, organizations gain valuable insights into customer behaviors, preferences, and sentiments, allowing for more informed decision-making and targeted marketing campaigns. Besides, e-CRM facilitates omnichannel integration, ensuring consistency and coherence in customer experiences across all digital touchpoints (Oumar et al., 2017). Overall, e-CRM empowers businesses in the hospitality industry to adapt to the digital age, strengthen customer relationships, and drive competitive advantage through enhanced digital marketing capabilities.

Despite its growing popularity, there are existing gaps that this study will attempt to address. First, the landscape of customer interactions is continually shaped by technological advancements, societal norms, and consumer

expectations (Lim & Rasul, 2022). This perspective is further demonstrated by Liu-Thompkins et al. (2022), who examine how artifical intelligence marketing agents shape human-based interactions with service providers. Given this recent development, it is timely to explore how contemporary CRM strategies adapt to these shifts, especially within the context of the hospitality industry.

Second, despite CRM being widely acknowledged as a vital tool for enhancing customer retention and satisfaction, there is a noticeable scarcity of comprehensive research in the hospitality industry that examines its specific influence on various dimensions of business performance, such as revenue perspective, market share, customer loyalty and the learning. This observation can be seen from existing works that primarily focused on specific dimensions of business, such as customer loyalty (Al Karim et al., 2023), service innovation (Kumar et al., 2023) and new service development (Morgan et al., 2023). Without a holistic and integrated understanding of CRM's impact on multiple facets of business performance, the hospitality industry may miss valuable insights crucial for strategic decision-making. In doing so, it seeks to offer actionable insights that can empower hospitality practitioners to optimize their CRM strategies for maximum effectiveness.

Additionally, despite sporadic investigations into the performance outcomes of DMC for international enterprises (F. Wang, 2020) and the moderated mediation role of DMC and innovation capability in micro-business performance (Hashim et al., 2023), a comprehensive examination of the intricate connections between DMC, CRM, and a hospitality organization's overall performance is still lacking. The absence of these results represents a critical gap in our theoretical knowledge, hindering the advancement of a holistic framework that can guide scholars, practitioners, and policymakers in understanding the nuanced dynamics between DMC and CRM and their combined impact on hospitality organization performance. Lim and Rasul (2022) highlight that a deeper exploration of these connections is vital to building a more comprehensive theoretical foundation to inform strategic decision-making in the digital age.

In sum, the objectives of this paper are threefold. Firstly, to provide a more lucid conceptualization of DMC; secondly, to present concrete empirical evidence illuminating the synergistic impact of integrating DMC and CRM on overall performance; and lastly, to make a valuable contribution to the expanding body of literature by examining the role of conditional mediation within the relationship between DMC and business performance through CRM in the hospitality sector. The research questions that this study will address are:

(1) What empirical evidence supports the postulation that integrating DMC and CRM has a synergistic impact on hospitality business performance?

(2) How does conditional mediation play a role in influencing the relationship between DMC and business performance through CRM in the hospitality sector?

Research Context

As the second-fastest-growing digital economy in Southeast Asia, Vietnam anticipates a substantial increase in its internet economy, projected to expand from 14% of its gross domestic product in 2020 to 30% by 2030 (CNBC, 2023). To this end, Vietnam's Ministry of Planning and Investment attributes this robust digital growth to the various initiatives by the Vietnam National Innovation Centre. These initiatives have created an environment conducive to attracting investments in innovative businesses and developing human resources (Vietnam National Innovation Center, 2023). Unquestionably, one of the sectors benefitting from this digital surge is Vietnam's tourism industry.

Underpinning the growth of the digital economy is a significant population of internet-savvy users. The Ministry of Information and Communications stated that, in 2023, 78.59% of the country's population had internet access, with the number of mobile broadband subscribers reaching 85.7 million (Vietnam National Innovation Center, 2023). These substantial pools of internet users are expected to serve as the foundation for developing smart tourism and accelerating digital transformation within the sector. Besides, the hospitality industry in Vietnam has been buoyed by domestic demand and the return of international tourists. Vietnam welcomed 1.5 million foreign visitors in January 2024, an increase of 10.3% from December and 73.6% from the year before (Business Times, 2024). This increase is attributed to the 45-day visa-free arrangement Vietnam has with neighboring countries, with the possibility of extending to other countries like China and India (Vietnam News, 2023). Given its tourism growth trajectory and the potential due to digitalization, it is timely for us to study how hospitality organizations equipped with DMC can enhance their business performance.

Theoretical Background

The underlying theoretical framework for this research is built upon two main concepts: the dynamic capabilities perspective and the resource-based view (RBV) theory. According to RBV , an organization's performance hinges on its available resources and ability to effectively utilize them to develop capabilities (Barney et al., 2011). RBV emphasizes the need for two types of resources: tangible assets such as cash, inventory, and machinery, and intangible resources like human capital and strategic assets (Barney et al., 2011).

On the other hand, the dynamic capabilities theory complements RBV by defining capabilities as an organization's capacity to gather, integrate, and

deploy resources in a coordinated manner to gain a competitive edge (Day, 1994). To outperform competitors, businesses must repurpose their existing resources innovatively, showcasing the adaptive capabilities that enable them to adjust strategies in response to market dynamics (Morgan et al., 2023). When combined with other resources, CRM technology develops specialized marketing skills that enhance overall business success (Jiang & Hong, 2021).

As such, social media marketing tools boost performance, strengthen customer relationships, and bolster marketing departments. The specific technological capabilities within DMC provide businesses with a competitive edge, positioning them as a valuable resource (Hashim et al., 2023). While RBV has been a commonly employed theoretical underpinning in economic marketing literature, it is underrepresented in digital marketing research (Apasrawirote et al., 2022). From this light, Figure 1 purports that integrating DMC with CRM systems is essential in creating a distinct capability at the hospitality organizational level that significantly influences overall business performance.

Literature Review and Hypothesis Development

Effect of Digital Marketing Capabilities (DMC) and Hospitality Business Performance (HBP)

In RBV, organizations are seen as a collection of resources and capabilities which play a crucial role in determining an organization's performance (Barney et al., 2011). In other words, organizations use resources (tangible or intangible) to achieve their objectives (Cusumano et al., 2008). At the same time, capabilities are an organization's consistent and repeatable patterns of core routines and skills when performing various activities effectively (Barney, 1991). In this regard, marketing capability refers to an organization's consistent actions that effectively address the business's marketing needs (Chang et al., 2010). To further extend the definition, Kane et al. (2015) explained that DMC encompasses the relational competencies necessary to harness the advantages of digitalization in a digitally enabled world where business opportunities hinge on real-time and seamless communication among various stakeholders, such as suppliers or customers.

Expectedly, the rise of new technologies such as smart products, IoT, and AI has further fueled DMC's growth and shaped future marketing strategies in the hospitality industry (Dwivedi et al., 2023). According to Tan, Gim et al. (2023), the appearance of these new media allows users to engage, communicate, and exchange ideas, opinions, and experiences. From the hospitality organization's perspective, De Pelsmacker et al. (2018) emphasized the importance of actively managing their online presence as it is the main conduit to attract customers, enhance customer loyalty, increase market share, and cross-sales opportunities. Besides, the
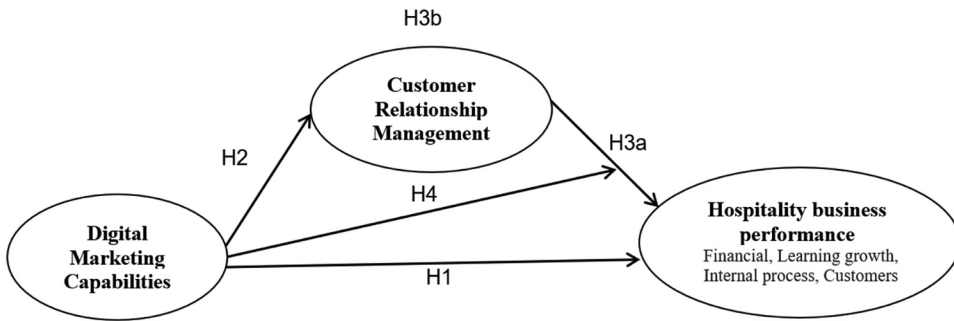
Figure 1. Model research.

use of social media analytics can provide insights into customer engagement, which, as a result, improves guests' overall impressions of the hotel's performance by placing a higher emphasis on digital capabilities (Torres et al., 2015).

Aligning with the above arguments, previous studies such as Deb et al. (2022) have investigated the impact of social media and online apps on business performance, particularly in the business-to-consumer setting where social media influences customers' purchase decisions. Business performance can be categorized into two dimensions – Effectiveness and efficiency. Effectiveness refers to the extent to which an organization successfully attains its intended goals, while efficiency is about the relationship between the resources it consumes and the outcomes it achieves (Vorhies & Morgan, 2003).

Within the hospitality industry, our review shows no consistent approach to identifying factors that constitute business performance. For instance, Venkatraman and Ramanujam (1986) proposed three approaches to performance evaluation: financial performance, enterprise performance, and hospitality organizational performance. Roy (2023), on the other hand, evaluated the hospitality organizations' business performance based on meeting customer demands by addressing online reviews to boost customer loyalty and maximize sales revenue. However, Tajeddini et al. (2020) measured business performance by long-term and short-term performance using growth and financial return.

Following the preceding literature, it is apparent that business performance takes on multiple facets. We naturally conceptualize HBP as a higher-order construct encompassing four dimensions: financial performance, learning growth, internal process, and customer satisfaction. This conceptualization aligns with contemporary strategic management and performance measurement frameworks such as the balanced scorecard advocated by Kaplan and Norton (2004).

Financial Performance

Financial perspective is often considered a fundamental indicator of business performance. Scholars such as Kaplan and Norton (2004) highlighted the significance of financial metrics in evaluating an organization's success. Numerous studies, such as Khan et al. (2023), have emphasized the correlation between financial performance and overall business success. Financial metrics, such as revenue, profit margins, and return on investment, are crucial benchmarks for assessing an organization's viability and competitiveness.

Learning Growth

Learning growth is the capacity of a business to innovate, grow, and learn intrinsically linked to its value. According to Kaplan and Norton (2004), an organization can only expand and enhance value by consistently penetrating new markets and developing products that deliver excellent customer value while optimizing operational efficiencies. Learning growth metrics center on the organization's capacity to efficiently create and introduce standard products at a rapid pace and stability in running new products, not enhancements to the manufacturing process of extant products (Hwang & Yoon, 2023).

Internal processes

Efficient internal processes are essential for long-term success and competitiveness (Heffernan et al., 2021). Scholars such as Cafferkey et al. (2018) argue that effective management of internal processes leads to operational excellence and, consequently, improved business performance. The RBV posits that internal processes contribute to a firm's competitive advantage by enhancing its capabilities and operational efficiency (Barney et al., 2011). Therefore, incorporating internal processes into the business performance model aligns with the strategic management perspective and reflects the holistic nature of hospitality organizational success.

Customer satisfaction. Customer satisfaction is a pivotal element in contemporary business models, recognizing the customer as a critical stakeholder (Boo & Kim, 2022). Extensive research has demonstrated the positive impact of customer satisfaction on business performance (Alalwan, 2020; Boo & Kim, 2022; Liang & Shiau, 2018). In these works, a commonality is the focus on a customer-centric approach that emphasizes the importance of creating value for customers to achieve sustained success. Hence, integrating customer satisfaction into the business performance model acknowledges the customer's role as a determinant of market share, brand loyalty, and long-term profitability.

Given the acknowledged significance of financial perspective, learning growth, efficient internal processes, and customer satisfaction as critical business performance indicators, it provides reasonable ground to hypothesize that the DMC will positively influence HBP.

H1: DMC positively influences HBP.

Effect of Digital Marketing Capabilities (DMC) and Customer Relationship Management (CRM)

In the evolving landscape of CRM, it is crucial to recognize the impact of DMC on the traditional CRM model. Historically, CRM has been the convergence of software and technologies to automate sales, marketing, and customer service operations (Annarelli et al., 2021). However, the surge in social media networking has transformed the dynamics of customer interactions, necessitating a reevaluation of the traditional CRM perspective. Customers are now actively leveraging digital media platforms to connect with individuals and businesses and co-create their experiences with companies (Apasrawirote et al., 2022). This shift in consumer behavior demands a reconsideration of CRM practices.

As highlighted earlier, DMC encompasses a spectrum of online channels, including social media, search engines, display and video ads, and offline digital advertising. This vast array of tools provides businesses with unprecedented opportunities to enhance customer – organization interactions. Through digital platforms, consumers communicate with businesses and influence each other, shaping brand communities (Roy, 2023). Furthermore, the inbound cycle of DMC aligns seamlessly with CRM objectives. DMC analyses customer demands and behavior through personalized feedback and evaluations, reinforcing CRM's focus on awareness, learning, and market transformation (Xiang et al., 2017). Integrating data reviews and analytics into CRM practices allows businesses like hotels to leverage online marketing effectively. This can be achieved by linking or integrating third-party reviews on their websites, utilizing tracking software to analyze reviews on Online Travel Agency (OTA) sites, and consulting OTA management reports (De Pelsmacker et al., 2018). As part of a comprehensive CRM strategy, hotels can engage in meaningful dialogs with guests through digital platforms. This interaction fosters customer relationships and aligns with the evolving expectations of today's digitally connected consumers. Given the above, our following hypothesis is:

H2: DMC positively influences CRM.

Effect of Customer Relationship Management (CRM) on Hospitality Business Performance (HBP)

In light of the substantial costs associated with acquiring new customers, which are estimated to be five to ten times higher than retaining existing ones, it is evident that a customer retention strategy is paramount

(Ganesh et al., 2000). CRM is positioned as a comprehensive strategy aimed at optimizing connections with existing and potential clients (Deb et al., 2022). Hotels stand to gain significantly from implementing CRM, mainly as it provides an avenue to enhance customer value, elevate satisfaction levels, and achieve superior business performance and profitability (Roy, 2023).

Al Karim et al. (2023) underscore the potential of CRM not only to boost customer satisfaction and loyalty but also to enhance overall business performance, considering both financial and non-financial indicators. The hotel industry, in particular, has seen a growing emphasis on the implications of CRM (Pillai et al., 2021). More importantly, CRM extends beyond traditional financial metrics to include non-financial perspectives, analyzing intangible assets and intellectual property (Kumar et al., 2023). The multifaceted impact of CRM on business performance encompasses meeting customer requirements with the highest quality service, staff training to fulfill customer needs, enhancing customer satisfaction, and driving sales and loyalty (Al Karim et al., 2023). In all, CRM contributes to the efficiency of customer communications and internal administration, indicating that hospitality organizations adept in CRM will likely experience improved overall hospitality organizational performance. Hence, our following hypothesis is

H3a: CRM positively influences HBP.

Mediating Effect of Customer Relationship Management (CRM)

Our previous arguments suggest that DMC strengthens CRM capabilities, and these enhanced capabilities positively influence customer engagement, the effectiveness of the customer relationship process, and overall business performance. This argument aligns with Chang et al. (2010), who revealed that marketing capabilities are crucial in mediating the relationship between CRM system utilization and organizational performance. This is consistent with the RBV and Dynamic Capabilities Theory, which argues that adopting new technology enhances existing capabilities, ultimately improving hospitality organization performance. Consequently, we postulate DMC as a resource that generates outcomes that are likely to enhance hospitality organization performance through improved CRM capabilities, leading to the formulation of the following hypothesis:

H3b: CRM positively mediates the relationship between DMC and HBP.

DMC as a Conditional Mediation in the Relationship Between Digital Marketing Capabilities (DMC) and Hospitality Business Performance (HBP) Through Customer Relationship Management (CRM)

DMC plays a significant role in improving CRM by facilitating the exchange of feedback between customers and businesses (Deb et al., 2022). Digital media serves as a connection between users and hotel guests, enabling communication and idea-sharing about hotels. Travelers readily embrace mobile technology because they find it convenient for booking services, making payments, and navigating unfamiliar places (Pillai et al., 2021). Creating, modifying, posting, and discussing online content about businesses and their products on social media platforms can profoundly affect their longevity, reputation, and success (Pillai et al., 2021). According to Martins (2022), DMC helps add new features to the product lifecycle, fosters iterative innovation based on digital technology, and considerably boosts its innovative capabilities.

From a hotel's perspective, these channels are utilized to engage with customers more personally by offering service assistance, sharing events, videos, and images, and seeking feedback through surveys and other activities (Lim & Rasul, 2022). Through these platforms, users and visitors can share their firsthand experiences, contributing to a wealth of knowledge and information. As such, these technological platforms and tools serve as valuable resources for users and hotels, fostering an interactive and informative environment within the travel industry (Liu et al., 2022).

Based on this, we argue that using social media technology indirectly affects performance, with this relationship mediated by organization-level CRM capabilities. Hence, DMC serves as a conditional mediator, influencing the indirect connection between DMC and performance through CRM. In simpler terms, DMC's impact on business performance has a direct relationship and is mediated through CRM (De Pelsmacker et al., 2018). When DMC is more effective, it strengthens the influence of CRM on performance, leading to a more pronounced indirect effect. This conditional mediation underscores the dynamic interplay between DMC and CRM and their combined impact on driving improved outcomes for the hospitality business. Consequently, we anticipate the following:

H4:   The DMC moderates the indirect relationship between DMC and HBP through CRM.

Methodology

Data Collection Procedure and Sample

650 out of 6042 hotels were picked using a stratified sampling technique. These hotels, classified into five categories from one-star to five-star, were chosen from a comprehensive list provided by Vietnam's Ministry of Culture, Sports, and Tourism based on criteria situated in Ho Chi Minh City and addressed the needs of both domestic and international tourists. Agag et al. (2024) and Han and Mikhailova (2024) used a similar sampling method. Additionally, the selection of 650 enterprises was guided by the necessity to meet the minimum sample size requirements for robust statistical analysis.

Leveraging the power analytics method advocated by Cohen (1992), a minimum sample size of 85 was needed at 80% power, considering the number of predictors and an effect size of 0.15. Furthermore, following the recommendations of Kock (2018), who advised a minimum sample size of 146 for structural equation modeling analysis, this study's sample size significantly exceeded this benchmark, ensuring robust statistical power at 99.99%. In tourism-related studies, such sample sizes are not uncommon. A review by Do Valle and Assaker (2015) revealed a trend toward larger sample sizes, with recent articles averaging 562 participants, compared to a mean of 451 for earlier publications. These considerations underscore the appropriateness of this study's sample size selection.

The first pilot test was conducted on 86 hotel employees in Ho Chi Minh City to assess the questionnaire's constructs, validity, and reliability. These respondents were not part of the official survey. They were invited to complete the questionnaire during a face-to-face session. The pilot study results indicated that the measurement scales employed in the research exhibited high levels of reliability and validity. After that, we conducted surveys by sending the questionnaire to 650 hotel employees in May 2023. To ensure bona fide respondents, we set filter questions to allow only those with knowledge of the CRM system to participate. At the end of the data collection period in October 2023, 593 responded, of which only 569 responses were usable, yielding a response rate of 87.5%.

Measures and Data Analysis

The study used multi-item scales based on previous research to measure the constructs in the research model (see Appendix A). The scale items ranged from 1 (strongly disagree) to 5 (strongly agree). We used SPSS-AMOS 28 to examine observable and latent relationships. As Hair et al. (2017) suggested, we followed a two-step process to evaluate our research model, starting with the measurement model and moving on to the structural model evaluation. Additionally, this study establishes the concept of HBP as a second-order

construct comprising four sub-constructs: Financial Return, Learning Growth, Internal Process, and Customers. Hence, the measurement and structural model analysis are done at both levels with three models.

In Model 1, the primary objective was to investigate the impact of three control variables, including the time utilization of CRM, lodging types, and job titles of respondents, on the dependent variable of HBP. Next, Model 2 showed that three control variables, the independent variable of DMC and the mediating variable of CRM, influenced HBP. Finally, Model 3 was employed to examine the interactions among three control variables, one independent variable (DMC), one mediating variable (CRM), one conditional mediation variable (DMC*CRM), and HBP.

Common Method Bias Assessment (CMB)

CMB is false covariance between variables caused by the same data collection method (Malhotra et al., 2006). According to Podsakoff et al. (2003), Harman's single-factor test was the first assessment method to identify the presence of CMB. Our results showed that 38.32% of the variation is attributed to a factor, indicating CMB is not a severe concern in our model. Additionally, we leverage the marker-variable strategy to assess CMV. This study examined data using three marker variables. The result shows $rM = 0.011$, p-value = .817, and the mean of change in correlations of the important constructs $(rU - rA)$ when partially out the influence of rM was $0.005 < 0.1$, supporting the earlier conclusion that CMB is not a significant issue in this research.

Control Variables

While control variables are typically not the primary focus of investigation, they are often examined due to their potential to confound relationships among the main variables (Shiau et al., 2024). Such confounding can distort results and, consequently, jeopardize the validity of recommendations. In hospitality studies, De Pelsmacker et al. (2018) demonstrated that hotel ratings influence business performance, including revenue and consumers' perceptions of hotel quality. Additionally, studies such as Chang et al. (2010) have shown that different job titles can impact involvement in CRM, thereby influencing the overall effectiveness of CRM strategies within the organization. Similarly, Z. Wang and Kim (2017) controlled for the effects of CRM usage over time, arguing that the amount of usage would influence the effectiveness of CRM and performance. Building on these previous studies, it is natural that we have included (a) hotel rating and ranking, (b) job title, and (c) the frequency of CRM implementation as control variables. To this end, Table 6 reveals that these control variables had no significant relationship with the endogenous variable.

Results

Respondents Profile

According to the data shown in Table 1, it can be observed that 17.6% of hospitality organizations have been utilizing CRM systems for a duration exceeding three years. In addition, 51.1% have implemented CRM systems within one to three years. Most respondents (62.2%) held positions as directors of customer service, while IT and finance administrators accounted for 17.8% and 14.6% of the overall sample, respectively. Notably, a smaller proportion of respondents (5.4%) identified themselves as hotels with a 1-star rating.

Measurement Constructs

With a total of 569 valid samples and Kaiser – Meyer – Olkin (KMO) was 0.949 at $p < .001$, it indicates that the sampling is adequate and that no cross-loading occurred. After that, we examined the convergent validity, which involves assessing Cronbach alpha (α), the composite reliability (CR), and the Average Variance Extracted (AVE) of all constructs. For good convergent validity, the recommended values for α, CR, and AVE are 0.70, 0.70, and 0.50, respectively (Fornell & Larcker, 1981). The results in Table 2 showed that the criteria were met.

According to Hu and Bentler (1999), the Chi-square/degree of freedom (df) value benchmark should be between 1 and 3, and the RMSEA and SRMR should be below 0.06 and 0.08, respectively. The acceptable score for the Tucker – Lewis index (TLI) and comparative fit index (CFI) should be over 0.95. In Tables 3a and 4a, the model fit of CFA was good (CFA-first order was $\chi2/df = 1.052$, CFI = 0.998, SRMR = 0.010, RMSEA = 0.024 and CFA-second order was $\chi2/df = 1.030$, CFI = 0.999, SRMR = 0.025, RMSEA = 0.007).

Another vital parameter in the assessment is the Heterotrait-Monotrait Ratio (HTMT). As advocated by Henseler et al. (2015), this ratio needs to be significantly below 0.80 to be considered valid. Tables 3b and 4b showed that all data points met these criteria. Therefore, our model not only demonstrates reliability but also validity.

Table 1. Respondents' profile.

		Frequency	Percentage
Time used CRM	Less than 1 year	178	31.3
	From 1 to 3 years	291	51.1
	more than 3 years	100	17.6
Job's title	Customer Service Director	354	62.2
	IT Administrator	101	17.8
	Finance Administrator	83	14.6
	Owner	31	5.4
Types of lodges	1 star	30	5.3
	2-star	92	16.2
	3-star	286	50.3
	4-star	88	15.5
	5-star	73	12.8

Table 2. Factor loadings.

| | | Factor loadings | | | |
		CFA 1 order	t-values	CFA 2 order	t-values
Constructs/measurement items	EFA				
Digital Marketing Capabilities α = 0.868; CR = 0.868, AVE = 0.569					
Your business creates and manages durable customer relationships through digital media.	0.740	0.747	Fixed		
Your business predicts changes in customer preferences using digital media to enhance market-sensing digital.	0.814	0.767	17.679		
Your business use channel-bonding with wholesalers, retailers through digital media.	0.694	0.721	16.592		
Your business takes advantages of capabilities in creating durable relationships with suppliers through digital platforms	0.670	0.746	17.181		
Your business is able to use digital marketing to retain customers.	0.816	0.789	18.196		
CRM α = 0.863; CR = 0.863, AVE = 0.558					
CRM System uses personal information to provide customized products/ services.	0.689	0.729	Fixed		
CRM System has many functions to enhance customer experience (reservation, customer type analysis, customer profile …).	0.722	0.761	17.009		
CRM System provides Process-driven approach (correctly, rapidly).	0.795	0.751	16.791		
CRM System provides technology orientation well (e-mail reply, inbox pop-up, online real-time human response …).	0.745	0.758	16.933		
CRM System is reliable to use.	0.747	0.736	16.457		
HBP α = 0.789; CR = 0.887, AVE = 0.663					
Learning growth α = 0.836; CR = 0.836, AVE = 0.630				0.809	Fixed
Employees improve their problem-solving ability	0.787	0.762	Fixed		
Employees intend to learn in the near future	0.739	0.825	18.853		
Employees effectively promote the corporate culture	0.734	0.792	18.233		
Financial return α = 0.865; CR = 0.866, AVE = 0.564				0.846	13.482
Your business increases return on investment	0.795	0.780	Fixed		
Your business grows in return on assets	0.672	0.695	16.809		
Your business reduces unexpected losses	0.746	0.770	18.89		
Your business reduces total costs	0.719	0.715	17.354		
Your business increases net profit margin	0.734	0.791	19.49		
Customers α = 0.864; CR = 0.864, AVE = 0.615				0.822	13.452
Your business satisfies the needs of various types of customers	0.829	0.801	Fixed		
Your business makes an increase in customers intending to purchase	0.705	0.781	19.631		
Your business increases customer satisfaction	0.773	0.779	19.571		
The customers loyal to your business	0.734	0.774	19.436		
Internal process α = 0.862; CR = 0.863, AVE = 0.611				0.78	12.852
Your business increases operating efficiency	0.814	0.783	Fixed		
Your business reduces customer complaint	0.740	0.782	18.995		
Your business improves the ability to retain old customers	0.736	0.782	18.994		
Your business improves the ability to confirm target customers	0.777	0.78	18.953		

Structural Model Evaluation

Model 2 had the model fit figure as $\chi 2/df = 1.091$, GFI = 0.996, TLI = 0.999, CFI = 1.000, SRMR = 0.017, and RMSEA = 0.013. Moreover, Model 3 had the model fit result as $\chi 2/df = 1.425$, GFI = 0.992, TLI = 0.995, CFI = 0.997, SRMR = 0.036, and RMSEA = 0.027 (see Table 5). Thus, the results revealed a good model fit for each model we tested.

The results presented in Table 6 revealed several important relationships in the study. Firstly, H1, which posited a positive impact of DMC on HBP, is supported by the data ($\beta = 0.343$, $p < .001$), indicating that the implementation of DMC indeed has a favorable influence on high-performance outcomes. The

Table 3a. Convergent validity – CFA 1 order.

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) DMC	3.208	0.589	**0.754**								
(2) CRM	3.320	0.628	0.548	**0.747**							
(3) GROW	3.465	0.754	0.515	0.511	**0.793**						
(4) FIN	3.472	0.731	0.528	0.560	0.690	**0.751**					
(5) CUSTOM	3.448	0.747	0.500	0.543	0.670	0.689	**0.784**				
(6) INTER	3.433	0.736	0.484	0.525	0.622	0.657	0.647	**0.781**			
(7) Used_CRM			0.407	−0.003	0.062	0.027	−0.025	0.043			
(8) Job's title			0.364	0.007	−0.063	−0.038	−0.008	−0.079	−0.761		
(9) Types_of_lodges			0.322	−0.016	0.051	0.014	−0.024	0.061	0.854	−0.771	

(i) Model Fit Statistics ($\chi 2 = 298.904$, df = 284; $\chi 2/df = 1.052$, CFI = 0.998, SRMR = 0.010, RMSEA = 0.024).
(ii) DMC: Digital Marketing Capabilities; CRM: Customer Relationship Management; GROW: Learning Growth; CUSTOM: Customers; INTER: Internal Process; FIN: Financial Return.

Table 3b. Discriminant validity- CFA 1 order.

	DMC	CRM	GROW	FIN	CUSTOM	INTER
DMC						
CRM	0.552					
GROW	0.514	0.507				
FIN	0.528	0.558	0.689			
CUSTOM	0.501	0.543	0.665	0.692		
INTER	0.486	0.525	0.621	0.656	0.649	

(i) Discriminant validity achieved at $HTMT_{0.85}$ (ii) DMC: Digital Marketing Capabilities; CRM: Customer Relationship Management; GROW: Learning Growth; CUSTOM: Customers; INTER: Internal Process; FIN: Financial Return.

Table 4a. Convergent validity – CFA 2 order.

	Mean	SD	DMC	CRM	HBP	Used_CRM	Job	Types_of_hotels
DMC	3.208	0.589	0.754					
CRM	3.320	0.628	0.548	0.747				
HBP	3.454	0.610	0.622	0.657	0.814			
Used_CRM			0.043	−0.003	0.033			
Job's title			−0.060	0.007	−0.057	−0.761		
Types_of_lodges			0.007	−0.016	0.031	0.854	−0.771	

(i) Model Fit Statistics ($\chi 2 = 300.819$, df = 292; $\chi 2/df = 1.030$, CFI = 0.999, SRMR = 0.025, RMSEA = 0.007).
(ii) DMC: Digital Marketing Capabilities; CRM: Customer Relationship Management; HBP: Hospitality Business Performance.

Table 4b. Discriminant validity- CFA 2 order.

	CRM	DMC	HBP
CRM			
DMC	0.552		
HBP	0.593	0.626	

(i) Discriminant validity achieved at $HTMT_{0.85}$ (ii) DMC: Digital Marketing Capabilities; CRM: Customer Relationship Management; HBP: Hospitality Business Performance.

findings supported H2, as they revealed a positive impact of DMC on CRM ($\beta = 0.508$, $p < .001$). This result suggests that DMC is crucial in enhancing CRM, positively affecting corporate performance. The data also supported H3a, revealing a direct and significant relationship between CRM and HBP

Table 5. Model fit of structural model.

Model	χ2	df	χ2/df	Δχ2/df	GFI	TLI	CFI	RMSEA	SRMR
1	156.298	1	156.298	-	0.893	0.287	0.881	0.523	0.067
2	6.546	6	1.091	155.207	0.996	0.999	1.000	0.013	0.017
3	15.677	11	1.425	0.334	0.992	0.995	0.997	0.027	0.036

Note: (i) Model 1: 3 control variables (Used_CRM, Types_of_hotels, Job's Title) and HBP; Model 2: 3 control variables, DMC, CRM and HBP; Model 3: 3 control variables, DMC, CRM, DMC*CRM and HBP. (ii) CFI: Comparative fit index; GFI: Goodness-of-fit index; TLI: Tucker-Lewis index; RMSEA: Root mean square error of approximation; SRMR: Standardized root mean squared residual.

Table 6. Structural model evaluation.

	Direct model		Conditional Indirect Effect for Moderator		
Relationships	Unstandardized Coefficient	p-Value	Unstandardized Coefficient	p-Value	Confidence Interval
Used_CRM ->HBP	−0.069	0.217			
Types_of_lodges ->HBP	0.033	0.299			
Job's title ->HBP	−0.031	0.354			
H1: DMC -> HBP	0.343	<0.001			
H2: DMC -> CRM	0.508	<0.001			
H3a: CRM -> HBP	0.367	<0.001			
H3b: DMC -> CRM -> HBP	0.343	<0.001	0.187	<0.001	[0.145; 0.235]
H4: DMC_X_CRM -> HBP	0.340	<0.001			
Index of Moderated Mediation			0.172	<0.001	[0.122; 0.222]
High Level of DMC			0. 292	<0.001	[0.237; 0.352]
Mean Level of DMC			0.187	<0.001	[0.145; 0.235]
Low Level of DMC			0.081	<0.001	[0.033; 0.137]

Note: (i) DMC: Digital Marketing Capabilities; CRM: Customer Relationship Management; HBP: Hospitality Business Performance.

($\beta = 0.367$, $p < .001$), suggesting that effective CRM directly impacts overall hospitality organizations' performance. The results also supported H3b, demonstrating an indirect effect of DMC on hospitality organization performance through CRM ($\beta = 0.343$, $p < .001$).

Regarding the conditional mediation of DMC, this study is based on the recommendations by Cheah et al. (2021). The initial step involves examining whether an indirect relationship exists. Table 6 demonstrates a significant indirect relationship between DMC and HBP through CRM. We further developed the moderated mediation index of DMC, which is significant at $\beta = 0.172$, $p < .001$. Following Tan, Ho et al. (2023), this demonstrated that the mediated effect depends on DMC. The results also revealed that at a higher level of DMC, the indirect effect at $\beta = 0.292$, $p < .001$ is higher compared to the indirect effect at lower DMC ($\beta = 0.081$, $p < .001$), showing that with an increase in DMC, the indirect effect is increased (see Figure 2). Hence, H4 is supported.

Discussion of Results

Our results demonstrated that CRM and DMC enhance organizational performance in the hospitality industry. These results align with many

of the arguments in existing studies such as Apasrawirote et al. (2022); F. Wang (2020). A probable explanation could be that the integration of CRM and DMC enables hospitality businesses to understand their customers comprehensively. This argument has been highlighted in studies such as Chang et al. (2010). By utilizing advanced data analytics and CRM tools, organizations can delve deep into customer preferences, behaviors, and needs. This deeper understanding empowers businesses to tailor their services and offerings more effectively, enhancing customer satisfaction and loyalty. Another possible reason is that integrating CRM and DMC facilitates personalized marketing strategies and services, improving customer experience, engagement and loyalty (Kumar et al., 2021).

Similar to studies such as Charoensukmongkol and Sasatanun (2017), our results show that CRM is the mediating factor between DMC and HBP. This result demonstrates that effective CRM acts as the conduit through which companies can leverage their DMC to influence HBP positively. As consistently highlighted across different literatures, the ability to manage CRM intricately across different touch points allows personalized marketing efforts that cultivate deeper connections and long-term relationships that translate to profits and loyalty (see Al Karim et al., 2023; Kumar et al., 2023; Oumar et al., 2017).
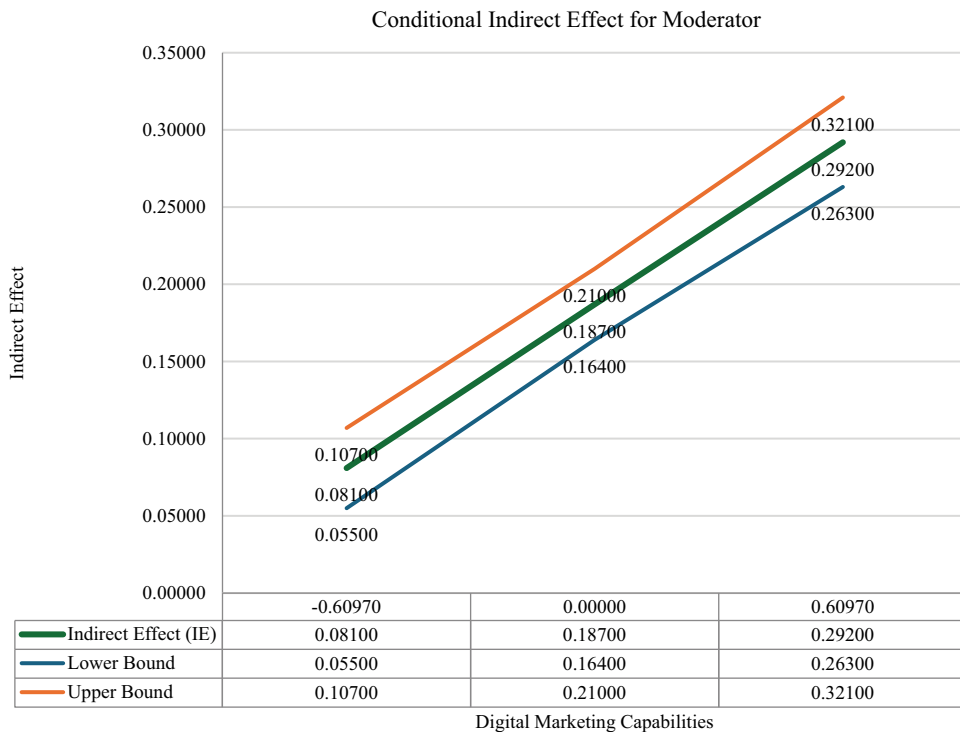

Conditional Indirect Effect for Moderator

	−0.60970	0.00000	0.60970
Indirect Effect (IE)	0.08100	0.18700	0.29200
Lower Bound	0.05500	0.16400	0.26300
Upper Bound	0.10700	0.21000	0.32100

Digital Marketing Capabilities

Figure 2. Conditional indirect effect for mediation.

Lastly, DMC is a conditional moderator of the indirect relationship between CRM and HBP. This result signifies a nuanced understanding of the interplay between these variables within the hospitality industry. Unlike previous studies such as Munir et al. (2023), where DMC was predominantly deployed as a moderator on the direct relationship between independent and dependent variables, our findings suggest a more intricate dynamic wherein DMC indirectly influences the relationship between CRM and HBP. One probable reason for this distinction is the evolving digital marketing landscape within the hospitality sector. With advancements in technology and changes in consumer behavior, how digital marketing strategies impact overall business performance has become increasingly multifaceted (Tan, Hii, et al., 2023). Rather than solely influencing direct outcomes, such as customer acquisition or revenue generation, DMC now operates as a conditional factor that shapes the effectiveness of CRM practices in fostering guest relationships and driving hospitality business success. Therefore, our results align with emerging trends in the field, indicating that higher levels of DMC can potentially enhance marketing performance within the hospitality industry. This nuanced understanding underscores the importance of considering contextual factors and the complex interdependencies between variables when analyzing the impact of digital marketing strategies on business outcomes.

Contributions

Theoretical Contributions

Theoretically, this study contributes to the existing body of knowledge by addressing the evolving landscape of customer interactions within the context of the hospitality industry. First, our results demonstrate the necessity of integrating DMC and CRM to influence HBP positively. This study acknowledges the influence of technological advancements and changing societal norms on consumer behavior. As such, this study provides a nuanced understanding of how contemporary CRM strategies adapt to these shifts. In the process, this study responds to the call by scholars such as Al Karim et al. (2023), who address the scarcity of comprehensive research in the hospitality industry that examines CRM's influence on HBP at a higher-order construct.

Secondly, this study emphasized the conditional mediation of DMC in the relationship between DMC itself and hospitality organizations through CRM. As far as we know, this is one of the first few studies demonstrating the moderated-mediation model involving DMC. Through this, we further advanced the knowledge, and the results underscored the notion that CRM and DMC capabilities can enhance hospitality organizations' performance individually, and their combined impact is even more pronounced when they are intertwined.

In essence, this study recognizes the importance of digital technology and goes further by addressing the practical aspects of its integration into CRM. It provides businesses with a road map for harnessing the potential of digital channels, ultimately leading to improved client engagement. This, in turn, can have a positive ripple effect on a hospitality organization's profitability and overall success. Therefore, this research extends our understanding of CRM in the context of DMC by offering actionable strategies for hospitality organizations to thrive in an increasingly digital world.

Managerial Contributions

This study found that HBP is dependent on both DMC and CRM strategies. Hence, managers must stay abreast of technological advancements and changing societal norms influencing consumer behavior. By understanding these shifts, hospitality organizations can tailor their CRM strategies better to meet their customers' evolving needs and preferences. This might involve leveraging emerging digital channels, such as social media platforms and mobile applications, to engage with customers more personally and meaningfully. Given the significant impact of DMC, hospitality organizations should prioritize investments in building and enhancing these capabilities. This includes training employees on the latest digital marketing tools and CRM systems and fostering a culture of innovation and continuous improvement within the hospitality organization. And for this integration to be successful, collaboration across departments is unavoidable. Hence, managers should encourage cross-functional teamwork, promote open communication to ensure alignment of goals and objectives, and facilitate sharing insights and best practices across different functions.

Expanding on the managerial implications of conditional mediation DMC, hospitality organizations should prioritize strategic investments in digital marketing initiatives, including search engine optimization, social media marketing, e-mail marketing, and content marketing. These efforts can help enhance the hospitality organization's online visibility, attract more website traffic, and ultimately drive conversions and bookings. Managers should explore data-driven approaches to segment their customer base and deliver tailored marketing messages and offers that resonate with different audience segments. Doing so would mean continuously monitoring and analyzing the performance of their DMC initiatives. This includes tracking key metrics such as website traffic, conversion rates, engagement levels, and customer feedback. By closely monitoring these metrics, managers can identify areas for improvement and optimize their DMC strategies to maximize their impact on HBP.

Limitations and Future Research

Despite its contribution to knowledge, the study has a few limitations that must be addressed. Firstly, our study includes cross-sectional surveys and small sample size (only 569 valid responses), a relatively small proportion of 5-star hotels in the sample (12.8%), and the need for further research in different sectors and contexts with larger sample sizes. Besides, the hotels are primarily from Ho Chi Minh City, which would limit their generalization across other cities within Vietnam. Hence, future studies could explore and repeat contextual factors such as hotel size and guest demographics in other cities.

Another limitation of this study is its potential inability to fully capture the dynamic nature of DMC in the context of rapid technological advancements, particularly in areas such as artificial intelligence and immersive technologies. While this study acknowledges the importance of integrating DMC and CRM strategies and recognizes the influence of technological advancements on consumer behavior, it may not comprehensively address the evolving landscape of DMC with the emergence of new technologies. Future research avenues could explore the specific impact of AI-powered DMC tools, such as machine learning algorithms for personalized marketing or chatbots for customer service, on hospitality organizations' performance.

Thirdly, there are additional factors that should be taken into account as well. These could include aspects such as the diversity of opinions expressed in reviews, the proportion of negative feedback, the specific attributes of products or services mentioned in reviews, the strength of the positive or negative sentiment conveyed, and also the characteristics of the reviewers themselves, including their demographics, expertise, and reputation.

In addition, DMC is just one aspect of a broader range of factors that can influence the display of ratings and comments for hotels. While previous research has examined the impact of DMC on hotel ratings, other factors, such as service quality, hotel facilities, and staff behavior, influence customer feedback. It is important to investigate the influence of managerial responses to client feedback, particularly negative feedback.

Conclusion

To conclude, this study presents valuable theoretical insights and managerial implications regarding integrating DMC and CRM in the context of the hospitality industry, highlighting their significant impact on HBP. The findings underscore the necessity of aligning DMC and CRM strategies to adapt to the evolving landscape of consumer interactions influenced by technological advancements and changing societal norms. The study contributes theoretically by unveiling the conditional mediation of DMC in the relationship between itself and hospitality organizations through CRM, addressing a gap

in the literature and paving the way for future research avenues, particularly in exploring the influence of emerging technologies such as artificial intelligence and immersive technologies on DMC. However, certain limitations should be considered, including the reliance on cross-sectional surveys and the need for further research to explore contextual factors and the impact of emerging technologies on DMC. This study offers actionable insights for scholars and practitioners, providing a roadmap for navigating the dynamic relationship between DMC, CRM, and HBP in the digital age.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon request.

Informed Consent

Informed consent was obtained from all participants in this study.

Ethics

This project has been approved and follows ethics procedure laid out by Hong Bang International University, Ho Chi Minh City, Vietnam.

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Appendix A: Items Description

Variables	Items
Digital Marketing Capabilities (Hashim et al., 2023; F. Wang, 2020)	Your business creates and manages durable customer relationships through digital media.
	Your business predicts changes in customer preferences using digital media to enhance market-sensing.
	Your business use channel-bonding with wholesalers, retailers through digital media.
	Your business takes advantages of digital platform capabilities in creating durable relationships with suppliers.
	Your business is able to use digital marketing to retain customers.
Customer Relationship Management (Roy et al., 2012)	CRM System uses personal information to provide customized products/services.
	CRM System has many functions to enhance customer experience (reservation, customer type analysis, customer profile . . .).
	CRM System provides Process-driven approach (correctly, rapidly).
	CRM System provides technology orientation well (e-mail reply, inbox pop-up, online real-time human response . . .).
	CRM System is reliable to use.
Hospitality Business performance (Foltean et al., 2019)	*Learning Growth*
	Employees improve their problem-solving ability.
	Employees intend to learn in the near future.
	Employees effectively promote the corporate culture
	Financial Return
	Your business increases return on investment.
	Your business grows in return on assets.
	Your business reduces unexpected losses.
	Your business reduces total costs.
	Your business increases net profit margin
	Customers
	Your business satisfies the needs of various types of customers.
	Your business makes an increase in customers intending to purchase.
	Your business increases customer satisfaction
	The customers loyal to your business
	Internal process
	Your business increases operating efficiency.
	Your business reduces customer complaints.
	Your business improves the ability to retain old customers.
	Your business improves the ability to confirm target customers.