

The Impact of Top Management Support on Firm Performance: Exploring the Mediating Role of Digital Marketing

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Abstract

The aim of this study is to evaluate the impact of top management support (TMS) on business performance (BP) through the mediating role of digital marketing (DM). To achieve this objective, a research model was developed and tested using data (n = 140) collected from marketing managers employed in different sectors of Algerian companies. Structural equation modeling (SEM) was employed for data analysis. The results support the hypotheses that TMS has a positive impact on both DM usage and BP. Additionally, the findings revealed a significant relationship between DM and BP. Finally, DM mediated the relationship between TMS and BP. However, this study makes theoretical contributions by examining many of the known relationships between variables; it also contributes empirically and expands the scope of the literature, while leaving certain aspects for future research. Our findings can also help decision-makers and economic policymakers develop digital marketing and TMS by designing effective management tools that improve the efficiency of Algerian companies.

Keywords: Management of Technology, Digital marketing, Top management support, Business Performance, SEM.

JEL Classifications : M31, M15, L25, C38

DOI: 10.24818/REJ/2026/92/04

1. Introduction

In a constantly evolving world, digitalization has become a key strategic lever for companies, regardless of their size or industry. It entails a profound reconfiguration of organizational processes, commercial strategies and management practices, leading to a redefinition of traditional business models (Bouncken et al., 2023). Nowadays, with the rise of technology, product life cycles are shrinking, prompting

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companies to focus more and more on making informed and smarter decisions. These decisions can help them gain a competitive advantage by shifting from traditional business practices to digital ones (Sheikh et al, 2018). Accelerated by the rise of new technologies, this transformation compels companies to innovate and adopt suitable digital strategies to enhance their performance and operational efficiency in an increasingly competitive environment (Ducrey & Vivier, 2019, pp. 401-412). In response to these changes, organizations must rethink their structures and processes to avoid a decline in performance and relevance. Top management support plays an important role in this context by promoting a coherent digital vision and facilitating the adoption of digital technologies as drivers of innovation and growth. Indeed, information and communication technologies (ICTs) enhance real-time decision-making, increase responsiveness to market changes, and enable more efficient resource management. These elements are critical to ensuring business sustainability and growth (Jameel et al., 2017; Bharadwaj et al., 2013).

In order to achieve sustainable business performance and make smarter decisions, in recent years, companies have attached great importance to digital marketing and its applications (Dodson, 2016; Sheikh et al, 2018). Likewise, the most successful companies are those that have fully integrated digital tools into their marketing strategies. Digital marketing is an essential strategic lever for improving customer experience, reducing costs, and supporting expansion into new markets (Chaffey & Ellis-Chadwick, 2019). It relies on the effective use of digital channels such as online advertising, social media, search engines, websites, and mobile applications. These tools offer valuable opportunities for companies to increase brand awareness, foster customer loyalty, and refine commercial strategies, thereby directly contributing to improved organizational performance (Isaac et al., 2014; Kotler et al., 2021). Moreover, in an environment marked by intensifying competition and increasingly demanding consumers, companies must adopt effective digital strategies to secure competitive advantage and enhance performance. All of this leads to improved competitiveness and organizational transformation and contributes to effectively repositioning the product in the customer's mind (Silva et al., 2022, Nuvriasari et al 2024). Several studies demonstrate a positive correlation between digital marketing adoption and improved business performance (Kwayu et al., 2017; Ditung et al., 2016; Rambe, 2017; Odoom et al., 2017; Sheikh et al., 2018; Hariandi et al., 2019; Qalati et al., 2021). Digital marketing enables companies to optimize promotional activities, enhance customer relationships, and maximize return on investment—key factors in boosting organizational performance (Rambe, 2017; Petrović, 2020). Moreover, strategic leadership (Top management support) acts as a critical catalyst for the success of digital initiatives, fostering better integration of digital

technologies and promoting managerial innovation (Adegbuyi et al., 2015; Bharadwaj et al., 2013).

Despite the increasing use of digital marketing by Algerian organizations, the relationship between top management support (TMS), digital marketing programs and business performance has received little academic attention (Sheikh et al., 2018; El Hachimi et al., 2023). Consequently, research on the relationship between TMS, digital marketing and business performance lacks sufficient quantitative research. In addition, recent studies have indicated the need to examine the relationships between “TMS& digital marketing”, “TMS& business performance” and “digital marketing & business performance”, in depth (Jung & Shegai, 2023; Sharabati et al., 2024). This research fills this gap by examining the mediating role of digital marketing in linking TMS and business performance.

Therefore, to fill the above mentioned research gap, the present research attempts to theoretically and empirically analyze the direct and indirect impact of TMS on business performance. More specifically, the study explores the mediating role of digital marketing in the dynamics of the relationship between TMS and business performance. The findings of the study may; (1) help companies and managers to promote digital marketing in Algeria; (2) identify customer potential in digital markets and encourage online shopping on e-commerce sites; (3) emphasize the pivotal role of digital marketing in supporting top management support to enhance the organization’s readiness and commitment to digital transformation initiatives; (4) highlight how enhanced business performance can be achieved by effectively integrating TMS and digital marketing efforts within competitive markets.

Further, the remaining part of this article is structured as follows: First, a literature review will be presented to contextualize the study under investigation and examine the existing academic contributions on the relationship between TMS, digital marketing and business performance. Next, the theoretical framework and the conceptual model will be outlined, formulating the research hypotheses that guide the analysis. The methodological section then will detail the approach used for data collection and analysis. Finally, the results will be presented and their managerial and strategic implications for businesses will be discussed.

2. Literature review

2.1 Top Management Support and Adoption of Digital Marketing

Top Management Support (TMS) is a major strategic device for the successful adoption of digital marketing. Beyond resource allocation, it entails active leadership engagement in defining a clear digital vision, fostering an innovation-driven culture, and coordinating cross-functional efforts. Such commitment, as highlighted by Mahoney (2011) and Sheikh et al. (2018), reduces organizational resistance and

enhances the capacity of the firm to seize digital opportunities. According to Daellenbach et al. (1999), the technological orientation of executives stimulates innovation and strengthens competitiveness, while their direct involvement in digital initiatives significantly improves the effectiveness of marketing strategies (Adegbuyi et al., 2015). In addition, Bantel and Jackson (1989), Roa and Weintraub (2013) and Sheikh et al (2018) agree on the critical role that TMS plays in pushing companies to use innovative technology. Moreover, recent years have witnessed significant technological advancements and as a result, organizations have undergone significant changes in their marketing strategies. They have come to rely on digital marketing, viewing it as a key tool for expanding their growth and enhancing market performance (Sharabati et al., 2024). In this context, TMS is a key factor in the success of digital initiatives and the enhancement of business performance.

Daellenbach et al. (1999) emphasize that the technological orientation of leaders stimulates innovation and strengthens competitiveness, while Mahoney (2011) identifies managerial commitment as a critical determinant of digital project success. Moreover, Adegbuyi et al. (2015) demonstrate that TMS involvement improves the effectiveness of digital marketing campaigns. However, their role goes beyond marketing, encompassing various digital levers such as artificial intelligence, process automation and data analytics, all of which contribute directly to business performance and competitiveness. In this context, several studies have concluded that TMS provides ideal leadership for the effective implementation of new technology and for expressing the need for innovation, such as e-marketing (Henderson & Venkatraman, 1993; Powell & Dent-Micallef, 1997; Srinivasan, Lilien & Rangaswamy, 2002; Wu, Mahajan, & Balasubramanian, 2003; Sheikh et al., 2018). Haugh and Robson (2005) also note that companies whose TMS is more committed to the technology adoption process are more likely to encourage technology adoption more quickly (Sheikh et al., 2018). Based on these insights, the following hypothesis is proposed:

Hypothesis H1: The top management support has a positive impact on digital marketing.

2.2 Top Management Support and Business Performance

Numerous studies have explored the relationship between TMS and business performance, focusing on aspects such as strategic direction, managerial consistency, innovation, and flexibility. Finkelstein and Hambrick (1990) demonstrate that companies with clearly defined strategic direction from TMS exhibit better performance than those with less focused leadership. Similarly, Hambrick and Mason (1984) highlight that coherence in TMS actions is positively

correlated with organizational performance. More recently, Lek et al (2022) examine the effect of TMS on innovation and business performance, revealing a positive relationship between these variables. In addition, Ahmed et al (2016) empirically demonstrate that multidimensional TMS has a strong positive effect on business performance, underlining its importance as a driver of overall organizational effectiveness". Furthermore, the EFQM Excellence Model underscores the importance of leadership in the continuous improvement of processes and outcomes, thereby contributing to overall business performance. In this context, the concept of performance excellence, as defined by the Malcolm Baldrige National Quality Award criteria, similarly identifies leadership as a central element in achieving outstanding results. Additionally, the Management by Objectives (MBO) approach introduced by Peter Drucker in 1954 stresses the importance of setting clear and shared objectives to improve corporate performance. Overall, the literature suggests that TMS can positively influence business performance, particularly in terms of strategic direction, consistency, innovation, and adaptability. However, it is important to note that these effects may depend on specific company characteristics such as size, industry and organizational culture. Based on this literature, the following hypothesis is proposed:

Hypothesis H2: Top management support has a positive impact on business performance.

2.3 Digital Marketing and Business Performance

Digital marketing uses internet technology to communicate, interact, and influence existing customers while simultaneously attracting new audiences (Kaur, 2017). To do so, it uses websites to promote products or services to customers (Yasmin et al., 2015; Giuliani & Nuvriasari, 2024). Furthermore, techniques used by digital marketing include engaging with consumers across various digital platforms, online advertising, search engine optimization (SEO) and social media marketing. Likewise, digital marketing helps companies to implement more personalized marketing with customers, enabling them to enhance customer satisfaction and loyalty (Sharabati et al., 2024). Digital marketing also improves customer experiences, drives company growth and enables them to gain a competitive advantage (Nouri Hussein et al., 2023; Nuvriasari et al., 2024). Several studies highlighted a positive relationship between the adoption of digital marketing and improved business performance. For instance, Gitau et al. (2017) show that integrating social media into corporate communication strategies allows firms to reach more customers, increase sales, enhance customer relationships, and ultimately boost overall performance. Furthermore, Martins (2023) note that the relationship between business (MSMEs) performance and dynamic capabilities is significantly enhanced by digitalization. Likewise, Rambe (2017) and Petrović (2020)

found that digital marketing especially via social media and websites is significantly associated with increased business performance. In this regard, Kwayu et al. (2017) suggest that prioritizing social media strategy within the organization is essential for enhancing business performance. Additionally, Ferhane (2019) finds that the use of digital marketing is significantly linked to performance improvements in firms. These findings are supported by several other studies. For example, Hariandi et al. (2019) demonstrate that SMEs can leverage e-commerce to gain a competitive advantage and enhance performance. Similarly, Sheikh et al. (2018) show that the use of e-marketing plays a significant role in improving business performance. Other research such as that conducted by Hall (2013), Ditkus et al. (2016), Hammami and Zghal (2016), Singh et al. (2016), Odoom et al. (2017), and Qalati et al. (2021) also confirms the positive relationship between digital marketing usage and enhanced business performance. Based on this work, the following hypothesis is formulated:

Hypothesis H3: The digital marketing has a positive impact on business performance.

Drawing on the work of Brodie et al (2007), Sheikh et al (2018), Ferhane (2019), Kianto et al (2013), Gitau et al (2017) and Qalati et al (2021), a research model (figure. 1) which aims at analyzing the interactions among three key variables: Top Management Support (independent variable), Business Performance (dependent variable) and digital marketing (mediating variable) is proposed.

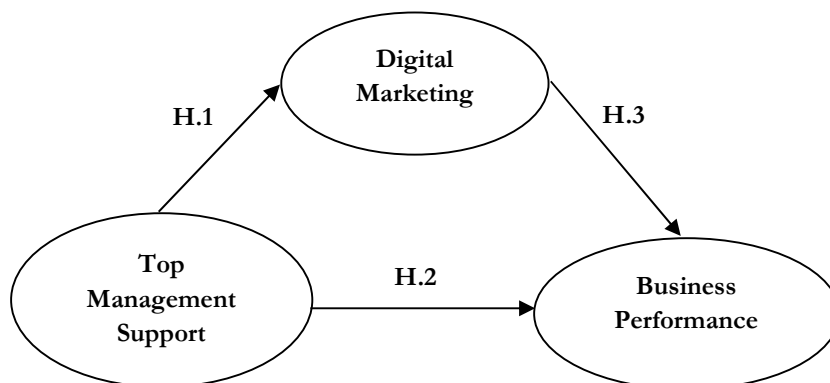


Figure. 1. Conceptual Framework of the Research

3. Methodology

In this section, the field study methodology will be discussed. It includes a presentation of items, description of the sample studied and data analysis methods adopted.

3.1 Variables and Measure

The questionnaire served as the primary data collection tool for this study; that is why it was distributed online. A specially designed questionnaire was used as the data collection tool, as it is typical in the literature on the variables exploited in this research (e.g. Sheikh et al., 2018; Kwayu et al., 2017; Rambe, 2017; Adegbuyi et al., 2015). To carefully design the scale and identify the variables, measures, and relationships most appropriate to the theoretical model leading to content validity (Roy, Dewit& Aubert, 2001), we used two experts to conduct a literature analysis, which helped us avoid methodological problems and the costs associated with using multiple indicators (Bergkvist & Rossiter, 2007 and Buhalis et al., 2020). We used a five-point Likert scale to identify respondents' opinions regarding the study items, providing the following five options: (5) strongly agree, (4) agree, (3) neutral, (1) strongly disagree, (2) disagree. Therefore, the questionnaire consisted of a set of scales covering core variables of the study, Top Management Support [TMS], Digital Marketing [DM] and Business Performance [BP]. It includes 17 items, which were brought and adapted according to insights from prior studies. All items are presented in table 3. First, the 5 items related to TMS have been designed according to the contributions of Sheikh & al. (2018). These items were selected because they cover the key dimensions of TMS, namely direct support for digital initiatives, a strategic vision for digital marketing, investment in employee training, building a “digital-first” culture, and viewing digitalization as a competitive advantage. These indicators reflect the level of senior leadership commitment and its impact on the successful adoption of digital marketing within the business. Second, the scale used to measure DM usage comprises 7 items adapted from the works of Nuvriasari et al (2024); El Hachimi et al (2023) and Ferhane (2019). These items were adopted because they represent the actual and integrated use of digital marketing within a business, from promoting through digital channels and integrating digital activities into the business strategy to tracking performance and analyzing results. The items also cover the most important modern digital marketing tools, such as websites, customer relationship management (CRM), mobile marketing, and digital advertising campaigns. Finally, BP is measured using 5 items adapted from Qalati et al. (2021); Odoom et al (2017); Adegbuyi et al. (2015). These items were chosen because they measure the direct impact of digital marketing on a business's key performance indicators, such as sales, market share, revenue, and competitive advantage. These indicators allow for an assessment of how digital initiatives

contribute to improving overall performance and achieving the business's strategic goals.

The 17 items relating to the three variables clearly indicate that they are directed at entrepreneurs and/or managers responsible for marketing and communications in both public and private institutions.

3.2 Data Collection

The sample consisted of 140 Algerian companies (82% private and 18% public) from various sectors (see Table. 1). This distribution reflects the predominance of the private sector in the Algerian economy, while the public sector remains concentrating on strategic domains. Data collection was carried out over a four-month period using a random sampling method, with random days selected to reinforce the randomness of the process (Cha et al., 2016). Only firms that had integrated at least one digital channel into their marketing strategy were retained. The sample included services (52%), the most represented sector and highly exposed to digitalization; industry (16%), where digital tools enhance competitiveness; the construction sector (3%), traditionally less digitalized but increasingly adopting digital tools for tenders and project promotion; commerce (21%), strongly dependent on digital platforms to reach customers and other activities (8%), which also rely on digital tools. This sectoral distribution illustrates the diversity of the Algerian economy and reinforces both the relevance and generalizability of the findings.

Table 1. Type and Industry Sector of Companies

	Type of Company		Industry Sector				
	Private	public	services	industry	Construction sector	commerce	others
Number of employees	115	25	73	23	4	30	10
%	82%	18%	52%	16%	3%	21%	8%

Source: own elaboration

To assess digital maturity, respondents were asked to rate their knowledge of digital marketing on a scale from 1 (poor) to 10 (excellent). The results (Figure 2) indicate that only 13 respondents (10%) reported an “excellent” level, while most positioned themselves between ‘7 and 8’. This distribution suggests that, despite the availability of internet access and business digitalization, proficiency in digital marketing remains relatively limited.

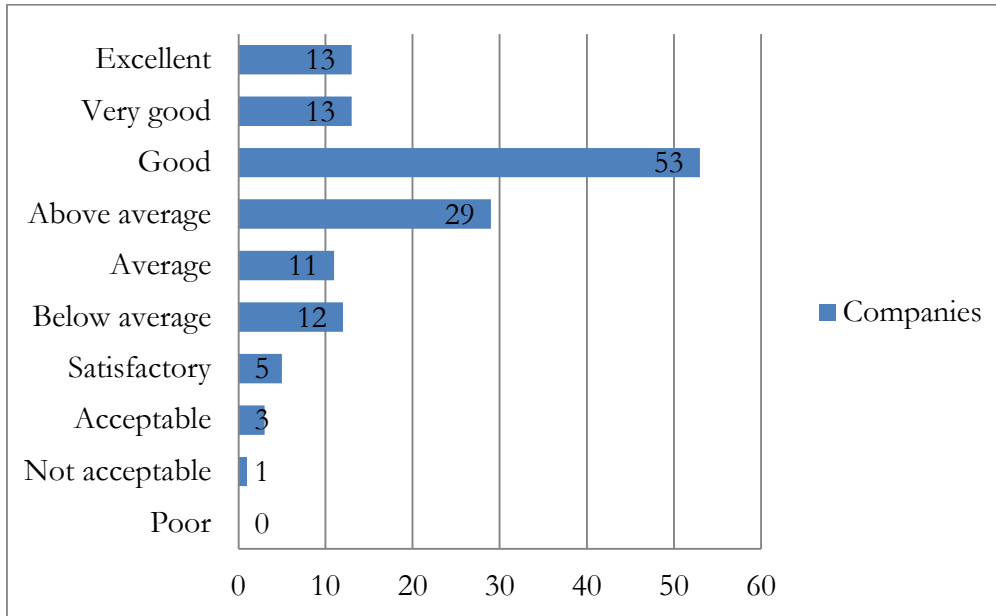


Figure. 2. Distribution of Companies by Self-Reported Digital Marketing Knowledge

Source: own elaboration

3.3 Data Analysis Methods

The data were analyzed using statistical methods appropriate to the quantitative nature of the study. Structural equation modeling (SEM) was employed as the primary analytical technique. An exploratory data analysis was conducted using SPSS version 22 to examine the consistency of the items and to identify any potential anomalies or inconsistencies in the responses. Descriptive statistics including arithmetic mean, standard deviation, were used to summarize the characteristics of the sample and the participants' response patterns. The validity and reliability of the measurement model were verified using Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE). Item loadings were also examined to ensure their suitability. This approach allowed participants to select the items that best reflect their perspective, which facilitated the quantification of responses and the calculation of the total score for each analyzed dimension.

Furthermore, correlation and regression analyses were conducted to analyze the relationships between the variables. The mediating role of DM between TMS and BP was tested. These methods supported the interpretation of the results and enabled a scientific and rigorous examination of the study's research hypotheses.

4. Results

This section presents the results of the field study exploring the relationship between TMS, digital marketing, and business performance. Data were analyzed using descriptive statistics and principal component analysis to provide a comprehensive overview of the sample characteristics and the measures used.

4.1 Descriptive and Principal Component Analysis

A Principal Component Analysis (PCA) was conducted using the varimax procedure for interpretable factors to ensure the distinctiveness of the variables used, to identify the latent variables to which the items belong. The detailed results of PCA analysis are presented in table 2.

Table 2. Summary Table of Principal Component Analysis (N = 140)

Latent Variables	Items	SD	Mean	Fisher's test	α	KMO	Total Variance Explained %
Top Management Support (TMS)	5	0.92	4.29	3.31	0.920	0.860	77.82
Digital marketing (DM)	7	1.10	3.78	49.04	0,803	0.806	64.02
Business Performance (BP)	5	0.97	3.51	9.54	0.850	0.810	63.41

Note: Mean: Average answers; SD: Standard deviation; α : Cronbach's Alpha; KMO: Kaiser–Meyer–Olkin

All seventeen items related to the three variables obtained means ranging between 3.51 and 4.29, expressing a high degree of agreement among the sample members included in the survey, exceeding the score of 3, indicating that the responses tended to agree [5 = strongly agree]. Regarding the standard deviation (SD), its value approached one, indicating at the same time that the responses were similar and thus the mean best represents the data suggesting a generally positive trend in participants' responses. Moreover, the mean score of TMS was the highest at 4.29 (SD=0.92), following by Digital marketing at 3.637 (SD=1.10). The lowest score was 3.51 (SD=0.97) in Business Performance. Additionally, we examined total variance explained, alpha and KMO. The total variance explained ranged from

54.58% to 77.82% of the cumulative variance (i.e. exceeding the minimum recommended by Fornell and Larcker, 1981 and Šerićet Gil-Saura, 2012, which is 50%).

We included all concepts related to the construct and found that the majority of the variance could be explained by a common factor. Therefore, we concluded that more than 50% of the variance of the construct is attributable to its indicators. Likewise, Cronbach's alpha scores for all constructs ranging between 0.85 and 0.92 exceeded the 0.7 threshold recommended by Hair (2010), confirming satisfactory internal reliability and indicating that the respondents understood the variables appropriately. Furthermore, the KMO values for the latent variables were all greater than 0.5, suggesting that the dataset is suitable for factor analysis and can be adequately reduced through component extraction. These findings support the existence of a statistically acceptable factor solution and confirm the relevance of the relationships among the variables under study.

4.2 Validity Check

Table 3 shows the results of the confirmatory factor analysis (CFA). To assess the significance of the factor loadings between the observed variables and the latent constructs, it was ensured that their values exceed 0.5 and their significance must be confirmed using the student's t-test. For AVE, it must be greater than or equal to 0.5 while CR and Alpha Cronbach must not be less than 0.7. Table 3 shows also the convergent validity results which enable us to know the extent of that validity and whether the items are able to effectively reflect their corresponding constructs (Anderson & Gerbing, 1988). The results of the measurement model analysis show that the constructs of TMS, DM and BP are reliable and valid.

Table 3. Reliability and Validity test

Constructs	Items	λ (≥ 0.5)	α (≥ 0.7)	AVE (≥ 0.5)	CR (≥ 0.7)
Top Management Support (TMS) Nuvriasari et al. 2024; El Hachimi et al.	Your top management supports digital marketing initiatives.	0.885	0.920	0.801	0.952
	Your management considers digital marketing strategic for growth.	0.900			
	In your company, employees are trained or made aware of digital marketing.	0.923			

Constructs	Items	λ (≥ 0.5)	α (≥ 0.7)	AVE (≥ 0.5)	CR (≥ 0.7)
2023; Ferhane, 2019)	Your company adopts a digital-first culture.	0.863			
	Your management sees digital as a competitive advantage	0.896			
Digital Marketing (DM) (Nuvriasari et al. 2024; El Hachimi et al. 2023; Ferhane, 2019)	Your company uses digital marketing to promote its products/services	0.874	0.803	0.607	0.910
	Digital marketing actions are integrated into the global commercial strategy	0.776			
	Your company can adjust the digital results	0.651			
	Note that the website is a central outlet for marketing (presentation, conversions, analytics)	0.784			
	You enter a common site using your client's relationship	0.845			
	Do you want to use mobile marketing (smsing, application) in your customer relationship service	0.744			
	Your enterprise has digital publicity campaigns (Google Ads, Facebook Ads, etc.) that are there	0.760			
Business Performance (BP) (Qalati et al. 2021; Odoom et al. 2017; Adegbuyi et al. 2015)	Digital marketing has helped increase our sales.	0.825	0.850	0.641	0.899
	Your company has gained market share through its digital initiatives.	0.793			
	Your overall business performance has improved since adopting digital marketing.	0.805			
	The company's revenue has increased following the integration of digital technology.	0.835			
	Digital marketing has improved our competitive advantage	0.743			

Note: α : Cronbach's Alpha; λ : Loading; AVE: Average Variance Extracted; CR: Composite Reliability.

Moreover, the results of all standardized factor loadings demonstrate that the convergent validity of the measurement items exceeded the minimum acceptable threshold [0.5], as exceeded 0.65 and t-values indicate that these factor loadings are significant ($T > 1.96$, $p < 0.05$) at the 0.05 level, with values ranging from 0.65 to 0.92. The AVEs for all constructs ranged from 0.60 to 0.80, exceeding the minimum acceptance threshold (0.50) surpassed 0.607, indicating convergent validity and robust reliability, while the CRs exceeded 0.7, ranging from 0.89 to 0.95. Therefore, we conclude in this study that all indices have good convergent validity, being higher than the standard values (Bagozzi & Yi, 1988). Consequently the results of the CFA analysis are significant, indicating good data consistency of the three latent variables.

4.3 Assessment of the model fit

Table 4 summarizes the fit indices for the three subscales. Sequential chi-square (χ^2) difference tests were performed to assess the validity of each variable and the degrees of freedom. As shown in this table, the chi-square value $\chi^2 = 511.61$ and the degree of freedom $df = 118$. Therefore, the ratio between χ^2/df index recorded a value of 4.33, which falls within the acceptance range of 2 and 5 recommended by the researchers (Awang, 2014 and Al-Mamary et al. 2020b). Furthermore, the Goodness of Fit Index 'GFI', Normed Fit Index 'NFI', Non-Normed Fit Index 'NNFI', and Comparative Fit Index 'CFI' indices recorded the following values, respectively: 0.952; 0.931; 0.969; 0.973; 0.92; and 0.973 exceeding the minimum acceptance limit of 0.9, while the RMSS recorded a value of 0.107 (is close to 0.08), which was somewhat acceptable suggesting a well-fitting model. This allows us to conclude that our structural model demonstrates a very good fit with the empirical data.

Table 4. Fitness indexes of the relationship model (N = 140)

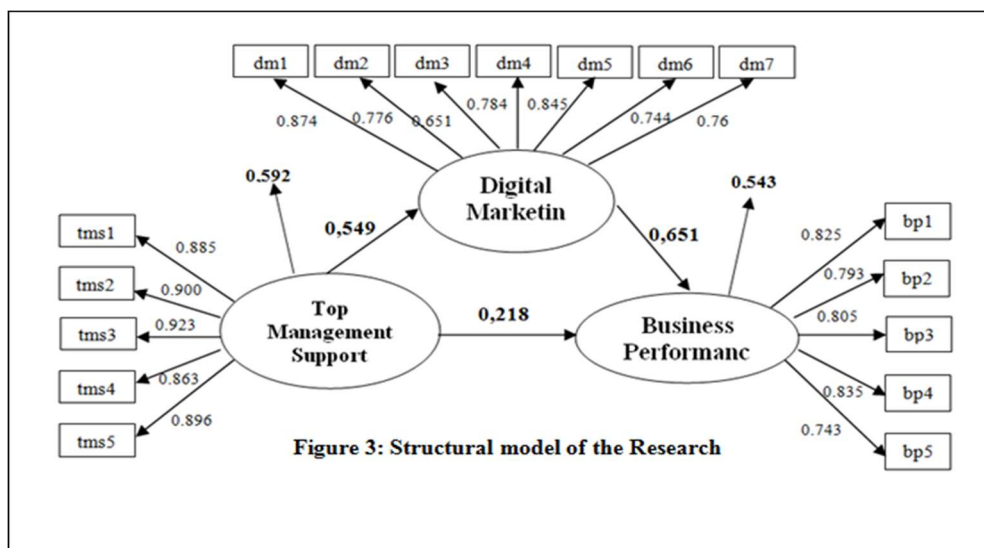
χ^2/df	GFI	NFI	NNFI	CFI	Bollen's Rho	Bollen's Delta	RMSS
511.61/118 = 4.33	0.952	0.931	0.969	0.973	0.92	0.973	0.107

Note: GFI: Goodness of Fit Index; NFI: Normed Fit Index, NNFI: Non-Normed Fit Index; CFI: Comparative Fit Index.

Overall, all the indexes belong to the statistically recommended range. These results indicated that the sample data were consistent and compatible with the theoretical model of the study. Given the satisfactory results of the reliability and validity test and fit index, we proceeded by examining the correlations (β) among the latent variables in the structural model. The fit indices provided by Statistica.08 software, therefore show that the data provided is well aligned with the theoretical model.

4.4 Hypotheses Testing and Correlation Analysis

In this research, hypothesis testing analyzed the influence of digital marketing and TMS on Business performance and the mediating role of digital marketing in the relationship between TMS and Business performance.



The results are consistent with the hypotheses. After verifying the reliability and validity of the structural model variables through CFA and conducted structural equation modeling (ML estimation model) using Statistica 8.0 software to test the proposed hypotheses. Table 5 and Figure 3 demonstrate the consistency between multivariate and univariate linear regression models in identifying regression relationships between business performance and other determinants.

The results of the regression analysis for the structural relationships presented in Table 5, revealed that the constants are statistically significant and consequently, the three hypotheses of the study were accepted. As for the beta coefficients (β), their validity was confirmed by ensuring that the t-values exceeded 1.96 in absolute terms and that the probability of error was below 5%. Critically, significantly TMS influences digital marketing ($H_1: \beta_1 = 0.549, T = 8.96, p = 0.000$) and Business Performance ($H_2: \beta_2 = 0.218, T = 2.27, p = 0.000$) respectively, where the effect of the independent variable (TMS) on the dependent variables (DM and BP) was close. This means that digital marketing plays a major role in TMS and improving the performance of business organizations, indicating that digital marketing strategies are a crucial factor in the success of any initiative adopted by any organization, which enables it to improve its performance and reap good results. Accordingly, H_1 and H_2 were supported. In addition, the results also revealed that digital marketing

(DM) contributes to influencing business performance (BP) ($H_3: \beta_3=0.651, T=7.1, p < 0.05$). However, the relationship between TMS and BP is significant compared to the relationship between TMS and DM and between DM and BP. The apparent weaker regression relationship between TMS and BP, compared to other regression coefficients, maybe attributed to the indirect influence of TMS on BP mediated by DM, as well as the influence of other factors more important to the organization than TMS, such as the size of the target market, the strength of competition, and the quality of strategy implementation. Therefore, this may not lead to a strong relationship between TMS and BP, but H_3 is nevertheless supported.

Table 5. Regression Coefficients of Structural Relationships (ML)

Relationships Between Latent Variables	Parameter Estimate β_i	Standard Error ξ	T-Statistic	p-Value
H1: (TMS)-35->(DM)	0.549	0.061	8.96	0.000
H2: (TMS)-36->(BP)	0.218	0.096	2.27	0.023
H3: (DM)-37->(BP)	0.651	0.092	7.10	0.000
(ZETA1)-->(DM)	0.592	0.067	8.79	0.000
(ZETA2)-->(BP)	0.543	0.079	6.89	0.000

Note: **TMS**: Top Management Support; **DM**: Digital Marketing; **BP**: Business Performance; **Zeta**: measurement error.

Mediation Analysis: The mediation role of DM on digital transformations was investigated. The results presented in Table. 5 revealed that the direct effect of TMS on DM was statistically significant, with " $\beta_1=0.549$ ". However, with the inclusion of the mediating variable (DM), the effect of TMS on BP became " $\beta_2=0.218$ ", and the effect of DM on BP became " $\beta_3=0.651$ ". Thus, we note that the indirect effect of TMS on BP mediated by DM was better than the direct effect. Therefore, we conclude that the relationship between TMS and BP is better indirectly mediated by DM.

5. Discussions of Results

The objective was to evaluate the direct and indirect impact of top management support (TMS) on business performance (BP) via digital marketing (DM) in the digital age. The first hypothesis (H_1) examines the effect of TMS on DM, with the latter acting as a mediating variable. The results obtained confirm a significant positive relationship between these two variables by demonstrating that TMS have a positive impact on DM. These results indicate that the adoption of DM is strongly supported by TMS. Moreover, these findings highlight the importance of TMS for

the success of any project or technology adoption. Furthermore, the more digital marketing improves through the generation of innovative ideas, the more it will enhance understanding of the technology's needs and benefits, provide the necessary resources, and develop an organizational strategy for its implementation. This result is consistent with previous studies, such as: Qalati et al. (2021), Ferhane (2019), Sheikh et al. (2018), and Adegbuyi et al. (2015), which emphasize the essential role of TMS engagement in the implementation and success of digital marketing strategies. The second hypothesis (H_2) analyzes the direct influence of TMS on BP. The structural model analysis results indicate a significant direct effect of DM on BP, thus validating H_2 . This result indicates that the use of digital marketing to promote products online by the organizations studied positively impacts their activity and sales levels, thus enabling them to reach a wider audience, increasing their visibility and improving their performance. This conclusion is in agreement with prior research, including Hall (2013), Ditkus et al. (2016), Hammami & Zghal (2016), Singh et al. (2016), Gitau et al. (2017), Rambe (2017), Odoom et al. (2017) and Qalati et al. (2021), Djakasaputra et al (2021); Jung and Shegai (2023); Juliani & Nuvriasari (2024); Nuvriasari et al (2024) and Sharabati et al (2024), all of which highlight the positive impact of digital marketing on performance indicators such as sales optimization, improved customer relationships, and increased market share. The third hypothesis (H_3) aims to demonstrate the influence of DM on BP. This relationship suggests that digital marketing effect on business performance, leading to confirm H_3 , which is consistent with previous research (e.g. Nuvriasari et al., 2024; Ferhane, 2019 and Sheikh et al., 2018) identifying a positive link between transformation digital strategy and improved business performance. This discrepancy may be attributed to contextual factors, including the specific characteristics of the Algerian market, varying levels of digital maturity among companies, or organizational resistance to new technologies.

6. Conclusions and Implications

This study examined the theoretical relationships between key variables digital marketing and top management support and their role in enhancing business performance. Through a mediation model, the primary objective was to analyze the mediating effect of digital marketing between top management support and business performance, while also exploring the direct relationship between top management support and business performance. The structural equation modeling analysis generally supported all the hypothesized relationships.

Theoretical implications

This study confirms the importance of TMS and digital marketing in improving business performance and enabling them to achieve a competitive advantage.

Therefore, various forms of digital marketing (e.g., social media marketing, online advertising, mobile applications, and search engines) and TMS enhance their market presence and reach to potential customers, which improve their performance in the marketing environment. This study revealed that TMS is imperative and plays a significant role in the implementation and success of digital marketing strategies. This research also provides a comprehensive understanding of the role of digital marketing adopted by companies in ensuring their market position in the era of digital transformation. Moreover, this study indicates that the tools and methods used to implement digital marketing strategies enable companies to communicate and engage with customers, which is essential for increasing their efficiency and maintaining their market position.

Managerial implications

This study highlights the strategic importance of digital marketing as a key driver of business performance. Digital transformation not only automates organizational processes but also reduces operational costs and enhances overall efficiency. In this respect, it represents a major source of competitive advantage, particularly for firms operating in sectors that remain relatively under-digitized. Algerian companies are therefore encouraged to progressively integrate digital tools into their strategic practices. The use of social media, corporate websites, email marketing, and search engine marketing provides new opportunities to reach wider audiences at relatively low cost. These tools also enable firms to overcome geographical constraints and expand their market presence. Moreover, digital marketing facilitates continuous and direct interaction with customers, allowing companies to better understand their needs and expectations. This, in turn, enables faster and more informed strategic decision-making. Furthermore, digital innovation contributes to strengthening brand visibility and differentiation in increasingly competitive markets. In this context, data analytics emerges as a crucial lever for performance improvement, as it supports evidence-based decision-making and performance monitoring. Finally, the sustainable adoption of digital technologies constitutes a key condition for ensuring long-term competitiveness and organizational sustainability.

Limitation and future research

Although our study provides very useful information, it does have some limitations, which we will summarize below. Firstly, this research primarily focuses on a single geographic region (Tlemcen city), which may limit the transferability of the study's findings to other regions and across countries. Secondly, this study relies solely on quantitative data, which does not always provide a clear picture of the potential determinants of successful digital marketing use by businesses. Further research

could also include qualitative data collection methods to gain a better understanding of the marketing environment in which businesses operate, enabling them to address challenges and exploit opportunities in the digital age. Thirdly, to measure digital marketing, overall items were used. Therefore, a more accurate measurement of digital marketing requires a multidimensional approach that includes a range of aspects related to: the nature of the website, customer conversion rates on the website, the degree of visibility on social media, search engine rankings, and others. Therefore, at first glance, digital marketing may appear difficult to measure, as it involves identifying, analyzing, and tracking a range of metrics across multiple websites, channels, and platforms. Thus, we recommend that future research considers these aspects and metrics. Fourthly, previous studies must examine the impact of the Technology Acceptance Model (TAM) variables developed by Davis (1987) on the implementation of digital marketing strategies. According to this model, if a user perceives the ease of using technology and anticipates its usefulness, this will lead them to make a decision to purchase a company's products, which will subsequently and positively impact its performance. Another limitation is that this study did not examine all factors influencing the relationship between digital marketing, top management support, and business performance. Therefore, this research recommends that future studies address organizational culture and readiness for digital transformation; the availability and quality of digital skills within the workforce; the level of technological infrastructure and integration across business processes; competitive intensity and market dynamics; and the role of customer engagement and satisfaction within digital channels in the digital marketing environment.

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