



AI-Enabled Business Intelligence and Digital Marketing Performance: The Roles of Customer Insights and Data-Driven Decision-Making

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ABSTRACT

The study is based on the serial-mediated model that investigated the relationship between business intelligence capabilities and digital marketing performance using two mediators: customer insights and data-driven decision-making. The study posits that the dynamic capability's view point, business intelligence capabilities allow companies to capture, integrate, analyze, and translate customer and market data into valuable knowledge for digital marketing activities. An explanatory, cross-sectional, quantitative design was used. The data were gathered from 350 employees and managers of Jordanian companies based on a structured questionnaire that are using business intelligence tools and digital marketing activities. The analysis of data was done with structural equation modelling using SmartPLS software. Results indicated that business intelligence capabilities have positive influence on the customer insights and digital marketing performance. Customer insights also positively influence data driven decision making, and Data-driven decision making positively influences digital marketing performance. In addition, the relationships between business intelligence capabilities and digital marketing performance are serially mediated by customer insights and data-driven decision making. The study raises the importance of BI capabilities in enhancing outcomes in digital marketing.

Keywords: Business Intelligence Capabilities, Digital Marketing Performance, Customer Insights, Data-Driven Decision-Making, Serial Mediation

JEL Classifications: M15, M31, O33, L86

1. INTRODUCTION

Digital transformation has transformed how companies gather data, know their customers and measure the effectiveness of their marketing efforts. Today, in business settings, marketing decisions are not made just on experience, intuition or on old-fashioned market observations. Instead, businesses rely more and more on data, analytics, dashboards and digital systems to learn more about customer behavior and make more effective marketing decisions. Business intelligence capabilities have become important capabilities within organizations as they enable firms to turn raw

data into meaningful insights to enhance strategic and operational decision-making (Al-Maaitah et al., 2026; Belhadi et al., 2019).

Business Intelligence are the technologies, processes and analytical routines used to gather, integrate, analyze and interpret data to facilitate and support the decision-making process in an organization (Alghizzawi et al., 2025; Hangl et al., 2022). Such capabilities can assist firms in tracking changes in the market, assessing customer actions, pinpointing performance deficiencies, and enhancing the caliber of managerial decisions. Previous studies show that business intelligence capabilities can contribute

to the performance of a firm, as it can make the business to sense information, change it into knowledge, and make business actions based on knowledge and evidence instead of assumptions (Mohsen, 2023). So, the BI capabilities can be considered a strategic resource that can contribute to the organizational competitiveness in a digitized market.

Business Intelligence plays a significant role in the digital marketing industry. Digital marketing websites, social media, online ads, customer relationship management, search behavior, digital campaigns, etc provide lots of data (Bataineh et al., 2022). But data does not necessarily lead to better marketing. However, companies need to have the ability to filter, sift and turn this data into actionable customer insights, and marketing choices. Recent research on data-driven marketing decision-making reveals that data collection and utilization of analytics tools allow marketers to gain insights regarding their customer preferences, marketing optimization, customer experience, and marketing effectiveness (Zheng and Khalid, 2022).

One of the major ways in which business intelligence features can enhance the performance of digital marketing is by providing customer insights. The term Customer Insights is the company's capacity to know exactly what the customer wants, likes, likes/dislikes, and expects, with the basis of systematic data analysis and understanding of customer responses and behaviors (Davenport and Ronanki, 2018). A company that adopts BI systems and uses them correctly can discover customer segments, see how customers' behaviors are changing, analyses how customers respond to campaigns, and determine what customers truly appreciate. These insights enable companies to create more contextually relevant digital content and personalize communication, as well as targeting and quick reaction to customer expectations (Qaffas et al., 2023). Therefore, customer insights can be a linchpin between BI capabilities and digital marketing outcomes.

Further, data-driven decision making is also a key aspect in converting customer insights into better digital marketing performance. Data-driven decision making is defined as making informed business decisions based on data and analysis rather than just intuition (Abu-AlSondos, 2025; Elbashir et al., 2022). For digital marketing, that translates to decision making based on performance metrics, campaign data, customer and market data, and evidence. Accurate and timely data in the hands of marketing teams or decision-makers can boost the effectiveness of campaigns, customer engagement, conversions, and ROI from digital marketing initiatives.

This study reveals that, although business intelligence is a key factor in the digital business world, more research is needed to explain the double role of BI capabilities in digital marketing performance. The literature has focused primarily on the connection between BI capabilities and firm performance, decision-making quality, or organizational performance, with fewer studies truly linking BI capabilities to digital marketing performance via certain mechanisms like customer insights and data-driven decision making (DDDM) (Femi Osasona et al., 2024; Ones-Ozigagun et al., 2024). This poses an important research

gap as high performance in digital marketing relies on the firm comprehending its customers and taking evidence-informed marketing decisions.

This study seeks to investigate and explore the influence of business intelligence capabilities on digital marketing performance through two mediators: customer insights and data-driven decision making. The study suggests that the BI capability enhances the performance of digital marketing by enhancing customer insights and consequently enabling data-driven marketing decisions. The study has included business intelligence, customer insights, and DDDM, which, by facilitating their incorporation into the study, add to the body of literature in explaining how data-related capabilities can be transformed into better digital marketing performance.

The study puts forward the model of serial mediation, where business intelligence capabilities mediate between the relationship of business intelligence capabilities and digital marketing performance via customer insights and DDDM. This model considers that the companies with good BI competencies have a greater BI capacity to deliver valuable insights to the customer. These insights then help with DDDM, which in turn, helps in improving the performance of digital marketing. Also included in the model is a direct correlation between the capabilities of business intelligence and the performance of digital marketing. This direct link means that the study can directly assess the impact of BI capabilities on the performance of digital marketing, as well as the indirect impact on customer insights and data-driven decision making.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Business Intelligence Capabilities

Business intelligence capabilities involve the firm's capacity of gathering, integrating, analyzing, and converting data into valuable knowledge to support managerial and strategic decisions. Some of these capabilities encompass data administration, data analytics, reporting, visualization, information mixture, and applying dashboards and analytical systems to help business choices. BI capabilities have become critical in the digital business world, since organizations are producing huge amounts of data collected from customers, markets, operations and digital platforms. But only data that can be translated to insights and action for the firm has value.

BI capabilities are very related to the dynamic capability's perspective. In the study Sense-Transform-Drive model of BI capabilities was developed, according to (Belhadi et al., 2019), BI brings sensing capabilities, which help firms understand information, transform information into knowledge, and drive business action based on analytical evidence. Their research also reveals that BI capabilities (technology and skills) can improve the operating efficiency of firms and their economic results, which supports the perspective that BI is not only a technical tool, but a capability of the organization (Khawaldeh and Alzghoul, 2024).

Business Intelligence capabilities are considered as the key independent variable in this study owing to the fact that they are the basic capacities for the firm to utilize data and analytics to support digital marketing activities (Apasrawirote et al., 2022). It is companies with good BI capabilities that can analyse customer behavior, track campaign performance, discover market opportunities, analyse customer segments, and enhance the quality of their decision-making process (Bank, 2019). For this reason, it is reasonable to believe that BI capabilities will directly and indirectly aid in the performance of digital marketing, via customer insights and DDDM.

2.2. Customer Insights

Customer insights are the capacity of the firm to understand the customer needs, likes/dislikes, expectations, actions and reactions by analyzing data systematically. Customer insights play a critical role for businesses in digital marketing as customers engage with companies across various digital channels such as websites, social media, online ads, mobile apps, and customer service. The interactions generate valuable information that can be used to gain insight into the customer's needs, behavior, and response to marketing actions (Wei et al., 2020).

Business intelligence can improve customer understanding by enabling companies to integrate data from a variety of resources, uncover customer trends, interpret customer preferences and draw conclusions (Valashiya and Luke, 2023). That is, BI systems are working to help businesses transcend raw data and leverage this information into actionable knowledge about their customers. This aligns with the data-driven marketing literature, that data-driven marketing leverages customer data from various sources to gain insights into consumer behavior, preferences, and trends, while informing more personalized marketing initiatives (Jawabreh et al., 2023).

Likewise, the companies that are more capable in the area of BI are expected to be able to produce deeper and better customer insights. These insights can help the company gain a better understanding of customers and make more informed marketing decisions. Thus, the first hypothesis is put forward:

- H_1 : Business intelligence capabilities positively impact the customer insights of the company.

2.3. Data-Driven Decision-Making

Data-driven decision making involves using data, analytics, evidence and performance indicators to inform manager's decisions. What this translates to in marketing, is that targeting, content design, pricing, campaign optimization, platform choice, and customer communication, is done not just on intuition, but on data. DDDM is becoming more and more significant as digital marketing platforms give real-time information on customer behavior, campaign reach, conversion rate, customer interaction and ROI.

Accurate and timely customer information is essential in helping to make informed decisions. Firms will make effective marketing decisions if they understand their customers' behavior and needs (Atieh, 2025). Customer insights help minimize uncertainty and

can be used to gather information to inform customers' actions, all the while matching up with customer expectations and market conditions (Abualrejal et al., 2022). Data-driven decision making is highly relevant and a critical issue in marketing research and practice because it enables marketers to leverage analytics, evidence and performance data to enhance marketing actions and decisions (Browder et al., 2024; Erastus Kiswili et al., 2021). As per the understanding from this study, customer insights are anticipated to impact data-driven decision making as the insights serve as a source of knowledge for implementing evidence-based marketing decisions (Alzuod et al., 2025). By comprehending consumer segments, choices and behavior, companies could make far better choices regarding their digital marketing approaches. So, the second hypothesis is put forward:

- H_2 : Customer insights have a positive impact on decision making based on data.

2.4. Digital Marketing Performance

Digital marketing performance is how well a company's digital marketing efforts meet marketing goals. These could be campaign effectiveness, customer engagement, conversion rate, online reach, customer acquisition, customer retention, digital communication effectiveness, and return of digital marketing investment. As businesses move more online, marketing performance is built on the skills to utilize data, interpret it, and make effective marketing decisions.

Through the use of data-driven decision making, digital marketing can be made more effective as companies can assess better the efficiency of their marketing efforts and make informed decisions that will lead to better performance (Fernando and Ikhsan, 2023; Wei et al., 2020). Firms can utilize analytics and BI tools to recognize effective campaigns, the most receptive customer groups, and the best-performing digital channels. According to Adobe's marketing guidance, DDDM in marketing is not an intuitive or gut-feeling practice, but instead focuses on using data to inform decisions in planning, execution, and optimization (Ali et al., 2024; Safitri and Komaryatin, 2025).

So, companies with a data-driven approach are more likely to boost performance with their digital marketing strategy. This is because the decisions are more accurate, timely and relate to the customer needs and market evidence. Thus, it is hypothesized that:

- H_3 : DDDM has a positive impact on the performance of digital marketing.

2.5. Business Intelligence Capabilities and Digital Marketing Performance

Business intelligence capabilities can also directly impact the performance of digital marketing. Companies that have good BI facilities can use Dashboards, Analytics, Reporting and Customer Database to track marketing initiatives and pinpoint performance gaps. These features aid in assessing the performance of digital initiatives, decoding consumer actions, and enhancing the success of marketing strategies. Beyond these indirect contributions to the performance of digital marketing, BI capabilities can also help improve the performance of digital marketing.

The significance of BI capabilities in terms of performance has been confirmed by prior research. BI capabilities support responding efficiently to stimuli from the environment, which in turn positively influences the performance of the firm because they enable companies to sense, transform and act on information (Mahmoud et al., 2025). In the Jordanian high-tech industry, (Khawaldeh and Alzghoul, 2024) also examined how these BI capabilities affect the performance of the firm and highlighted the significance of BI in the digital competitive environment (Khawaldeh and Alzghoul, 2024; Obeidat et al., 2025). In the digital marketing landscape, the potential applications of BI include leveraging marketing data for more effective use and better monitoring, customer targeting, and strategic responsiveness. Thus, the fourth hypothesis is put forward:

- H_4 : BI capabilities have a positive effect on the performance of digital marketing.

2.6. Serial Mediation of Customer Insights and Data-Driven Decision-Making

The proposed model proposes two sequential mediators between business intelligence capabilities and digital marketing performance: customer insights and data-driven decision making. This means that BI capabilities are first used to gain insights into customers. These insights then help in making data-driven decisions, which in turn boosts digital marketing performance. This reasoning holds true with the fact that data doesn't necessarily lead to better performance. Data has to be acted upon with the completion of two steps: converting data to insights, and converting insights to decisions and actions (Alahmari and Awad, 2025; Ones-Ozigagun et al., 2024). BI functionalities offer the technological and analytical infrastructure needed to create customer insights. Customer insights are then used to inform data-driven decisions, providing managers with valuable insights into customer needs, behavior, and how marketing strategies should be adapted. In wrapping up, DDDM boosts the performance of digital marketing by enhancing campaign performance, targeting, customer engagement and marketing efficiency.

So, how does the value of BI capabilities manifest itself: data is converted into customer understanding, customer understanding is translated into decisions backed by evidence and decisions backed by evidence result in improved digital marketing results. This argument is supported by BI literature indicating that BI capabilities convert information into knowledge and business actions, as well as marketing literature discussing that DDDM enhances marketing practices, relying on analytics and evidence-based decisions (Shehadeh et al., 2024). Hence, the fifth hypothesis is put forth:

- H_5 : The relation between BI capabilities and DMP is mediated by customer insights and DDDM in a serial way.

2.7. Conceptual Framework

The proposed conceptual framework depicts the relationship of business intelligence capabilities and digital marketing performance by a mediation in a serial process. The model proposes that with the assistance of business intelligence capabilities, firms can gather and synthesize customer as well as market data, and then analyses the data to provide valuable customer insights.

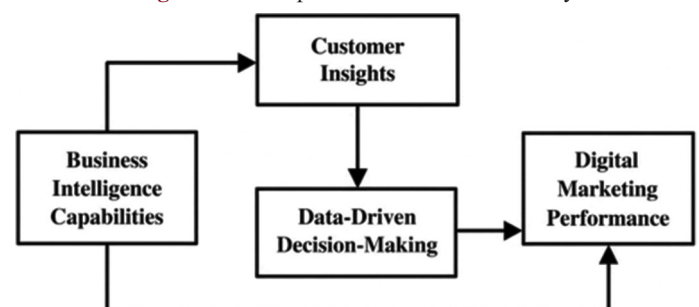
These insights then drive DDDM efforts, enabling businesses to make informed and precise decisions in digital marketing. Therefore, it is believed that DDDM has the potential to improve the performance of Digital Marketing by making better CSAs, increasing customer engagement, customer acquisition, customer retention and marketing results. The model also contains a direct path from the business intelligence capabilities to the digital marketing performance, to investigate whether the BI capabilities have a direct effect on the performance in addition to its indirect effect through customer understanding and data-driven decisions (Figure 1).

3. METHODOLOGY

The study used a quantitative and explanatory cross sectional method in order to investigate the relationship between business intelligence capabilities, customer insights, decision-making based on data and digital marketing performance in the Jordanian companies. The quantitative approach was suitable in this study because the study was designed to test hypotheses and to statistically analyse the relationships among the proposed variables. The target population were employees and managers in companies with business intelligence systems and digital marketing, mainly in marketing, business intelligence, customer relationship management, information systems, and analytics and management departments. To make sure that the respondents have adequate knowledge and experience on the study variables, a purposive sampling technique was utilized. A structured questionnaire given electronically via Google Forms was used to gather approximately 350 valid responses.

The questionnaire had two sections. The first section gathered demographic and organizational data including age, gender, education, job position, number of years of experience, size of the company and industry type. The second section assessed the core constructs of the study (business intelligence capabilities, customer insights, DDDM and digital marketing performance) on a 5-point Likert scale ranging from strongly disagree to strongly agree. The items of the measurement were designed to be reliable and valid based on previous studies. Business intelligence capabilities were gauged by their ability to gather, integrate, analyze information, and use it in dashboards, while customer insights were evaluated by how well the organization understands customers' needs, preferences and behaviors. DDDM assessed how much organizations used analytical reports, performance metrics and customer data to inform decision making, while digital

Figure 1: Conceptual framework of the study



marketing performance gauged their campaigns' effectiveness, customer engagement, acquisition, retention and overall digital marketing performance.

SmartPLS software was used to analyse the collected data. To screen data for missing values, outliers, response quality problems, etc., data screening procedures were first performed. The measurement model was then assessed with regard to reliability and convergent validity based on factor loadings, Cronbach's alpha, composite reliability and ρ_A . When it came to the assessment of the discriminant validity, the Fornell–Larcker criterion and the heterotrait–monotrait ratio were used. Following confirmatory testing of the adequacy of the measurement model, the structural model was tested by analyzing path coefficients, t-values, p-values, confidence intervals, effect sizes and predictive relevance. In addition, the direct relationships between customer insights, DDDM and digital marketing performance as well as the serial mediation effects were analyzed using bootstrapping procedures.

4. RESULTS

4.1. Data Screening and Respondents' Profile

The collected data were screened for suitability for the statistical analysis (structural equation modeling) prior to the statistical analyses. The final sample consisted of 350 valid questionnaires after discarding incomplete and invalid questionnaires. The respondents were employees and managers of the companies that utilize business intelligence tools and digital marketing activities in Jordan. Respondents ranged from marketing, digital marketing, business intelligence, customer relationship management, sales, information systems, data analytics, and management. The sample was found to be appropriate for this study as it was expected that the respondents would have a good understanding of the abilities of business intelligence, customer insights, data-driven decision making, and the performance of digital marketing in their organizations (Table 1).

4.2. Measurement Model Assessment

The measurement model was tested to determine the reliability and validity of the study constructs. Factor loadings, Cronbach's

alpha, composite reliability, ρ_A and average variance extracted were included in the analysis. Results revealed that majority of the factor loadings were greater than the suggested cut-off value of 0.70, suggesting strong relationships between the items and the constructs. Cronbach's alpha values were between 0.858 and 0.903, indicating acceptable internal consistency. The composite reliability values were between 0.895 and 0.925, which was above the recommended reliability value of 0.70. Besides, AVE values are between 0.589 and 0.672, which is higher than the minimum acceptable value of 0.50. So, the results as in Table 2, indicated that there were reliability and convergent validity of the measurement model.

4.3. Discriminant Validity

The Fornell–Larcker criterion and HTMT were used to assess the discriminant validity. The Fornell–Larcker results showed that the square root of AVE for each construct was greater than its correlations with the other constructs as in Table 3. This means that each construct was sufficiently different from the other constructs.

The HTMT values were also below the recommended threshold of 0.90, confirming that there was no serious discriminant validity issue among the study constructs (Table 4).

4.4. Structural Model Assessment

A measurement model was tested to ensure that it was reliable and valid; a structural model was subsequently tested. To check multicollinearity, the variance inflation factor values were calculated prior to testing the hypotheses. The results revealed that the VIFs of all the parameters were below the value of 5 which shows that multicollinearity was not a problem (Table 5).

4.5. Direct Effects

The direct effects were tested using bootstrapping. The findings revealed that the business intelligence capabilities positively and significantly influenced customer insights (Table 6). Thus, H_1 is accepted. H_2 was also positively impacted by customer insights when it came to data-based decision making. Moreover, the use of data for decision making significantly and positively influenced digital marketing performance, supporting H_3 . The results further indicated that business intelligence capabilities directly influenced digital marketing performance in a positive manner, thus supporting H_4 .

Results show that organizations with more powerful BI capability are more likely to be able to create beneficial customer insights. All these insights help to make better-informed decisions that enhance the performance of digital marketing. The substantial direct impact of business intelligence capabilities on digital marketing performance also indicates that business intelligence capabilities can enhance digital marketing results not only indirectly by leveraging customer insights and data-driven decision making but also directly.

4.6. Serial Mediation Analysis

Bootstrapping procedure was used in order to examine the serial mediation effect. The findings indicated that the indirect relationship of business intelligence capabilities on digital

Table 1: Respondents' profile

Variable	Category	Frequency	Percentage
Gender	Male	204	58.3
	Female	146	41.7
Age	<30 years	82	23.4
	30-39 years	148	42.3
	40-49 years	86	24.6
	50 years and above	34	9.7
Educational level	Diploma or below	44	12.6
	Bachelor's degree	216	61.7
Job position	Postgraduate degree	90	25.7
	Employee	158	45.1
	Supervisor	82	23.4
	Manager	76	21.7
	Senior manager/Director	34	9.8
Experience	<5 years	91	26.0
	5-10 years	159	45.4
	More than 10 years	100	28.6

Table 2: Construct reliability and convergent validity

Construct	Item	Loading	Cronbach's alpha	CR ρ_a	CR ρ_c	AVE
Business intelligence capabilities	BIC1	0.812	0.903	0.907	0.925	0.672
	BIC2	0.846				
	BIC3	0.861				
	BIC4	0.827				
	BIC5	0.794				
	BIC6	0.773				
Customer insights	CI1	0.781	0.878	0.881	0.908	0.623
	CI2	0.805				
	CI3	0.826				
	CI4	0.793				
	CI5	0.759				
	CI6	0.766				
Data-driven decision-making	DDDM1	0.798	0.892	0.895	0.917	0.649
	DDDM2	0.824				
	DDDM3	0.837				
	DDDM4	0.812				
	DDDM5	0.785				
	DDDM6	0.771				
Digital marketing performance	DMP1	0.756	0.858	0.864	0.895	0.589
	DMP2	0.801				
	DMP3	0.782				
	DMP4	0.744				
	DMP5	0.773				
	DMP6	0.739				

BIC: Business intelligence capabilities, CI: Customer insights, DDDM: Data-driven decision-making, DMP: Digital marketing performance

marketing performance mediated by customer insight and data-driven decision making is positive and significant as in Table 7. Hence, H_5 was accepted.

The mediation result indicates that customer insights and DDDM serially mediate the relationship between business intelligence capabilities and digital marketing performance. This means that business intelligence capabilities first help firms generate better customer insights. These insights then feed into data-powered decision-making that ultimately helps to enhance digital marketing performance. It is regarded as partial mediation because the direct impacts of business intelligence capabilities on the performance of digital marketing are still there, even after adding the mediating factors. Thus, the BI capabilities can impact the performance of digital marketing directly and indirectly, via customer insights and DDDM.

All of the proposed hypotheses were supported by the results. The use of business intelligence capabilities had a significant positive impact on customer insights and digital marketing performance. Customer insights significantly positively influenced data-driven decision making and data-driven decision making significantly positively influenced digital marketing performance. Moreover, customer insights and DDDM serially mediated the relationship between business intelligence capabilities and digital marketing performance.

5. DISCUSSION

This study's results validate the importance of business intelligence capabilities to enhance digital marketing performance. Firms with more robust BI capabilities are better equipped to access and leverage customer and market information, as evidenced by the

Table 3: Fornell–Larcker criterion

Construct	BIC	CI	DDDM	DMP
Business intelligence capabilities	0.820			
Customer insights	0.662	0.789		
Data-driven decision-making	0.617	0.684	0.806	
Digital marketing performance	0.594	0.641	0.693	0.767

*square root of the Average Variance Extracted (AVE) for each construct.

Table 4: HTMT results

Construct	BIC	CI	DDDM	DMP
Business intelligence capabilities	—			
Customer insights	0.754	—		
Data-driven decision-making	0.711	0.792	—	
Digital marketing performance	0.683	0.748	0.804	—

The HTMT values ranged from 0.683 to 0.804, which are below 0.90. Therefore, discriminant validity was confirmed

Table 5: Multicollinearity assessment

Path	VIF
BIC→CI	1.000
CI→DDDM	1.781
DDDM→DMP	2.164
BIC→DMP	2.028

Table 6: Direct effects

Hypothesis	Path	β	t-value	P-value	Decision
H_1	BIC→CI	0.662	13.284	<0.001	Supported
H_2	CI→DDDM	0.684	14.906	<0.001	Supported
H_3	DDDM→DMP	0.493	8.317	<0.001	Supported
H_4	BIC→DMP	0.289	4.826	<0.001	Supported

significant positive impact of business intelligence capabilities on customer insights. This allows businesses to acquire valuable information on customer requirements, tastes, actions and reactions

Table 7: Serial mediation analysis

Hypothesis	Indirect path	β	t-value	P-value	Decision
H ₅	BIC→CI→DDDM→DMP	0.223	6.742	<0.001	Supported

to digital marketing efforts. The findings reveal that customer insights also have a positive impact on data-driven decision making. The finding indicates that with better understanding of the customers, the firms are better equipped to make an evidence-based decision in marketing rather than purely based on hunches. Customer insights can help managers determine the needs of their customers, gauge how customers react to campaigns, provide information about market opportunities, and help them make better digital marketing decisions.

Moreover, it has been found that DDDM positively contributes to digital marketing performance. That results in businesses that use data, analytics, dashboards, key performance indicators, and analytical reports to be better equipped to make their digital campaigns more effective, boost customer engagement, acquire customers, retain customers, and improve overall marketing results. This discovery underscores the value of DDDM in the digital marketing landscape. There was also a strong direct impact of the business intelligence capabilities on the performance of digital marketing. This suggests that BI products can play a direct role in making digital marketing more effective because they enable monitoring campaigns, targeting customers, analyzing marketing efforts, and reacting strategically. Thus, BI should be considered as strategic organizational skills that will make a difference in digital marketing results. This serial mediation outcome will be useful in the explanation of the impact of BI capabilities on the performance of digital marketing. The findings indicate that BI capabilities not only augment the insights into customers but are also instrumental in DDDM, thereby impacting the performance of digital marketing. What this boils down to is that the value from BI capabilities is only realized in a series of steps: transforming data into insights, evidence-based decisions, and ultimately improved digital marketing.

6. CONCLUSION

The purpose of this study was to see how the business intelligence capabilities affect digital marketing performance using customer insights and data-driven decision making as serial mediating variables. All proposed hypotheses were supported with the results. The positive impact of business intelligence was identified in terms of customer insight and performance of digital marketing. Customer insight had a positive effect on DDDM, which in turn had a positive impact on DDDM performance in digital marketing. Furthermore, there was a significant mediation effect of customer insights and DDDM between business intelligence capabilities and digital marketing performance. The study can be added to the literature because it describes the mechanism of how business intelligence capabilities can impact digital marketing performance. In a specific way, the study reveals that BI capabilities cannot just be technical tools, but also strategic capabilities that enable companies to create customer insights and make data-driven marketing decisions. From a practical perspective, the results

indicate that companies should focus on the acquisition of BI systems, creation of dashboards, analytics tools, data management of their customers and developing decision-making based on data, so as to increase the effectiveness of digital marketing.

The results suggest that businesses should significantly improve their Business Intelligence by investing in their data collection mechanisms, analytical tools, dashboard and reporting platforms. Companies should also enhance their capacity to get customer insights by examining customer behavior, preferences, expectations and responses to digital campaigns. Furthermore, digital marketing activities should be encouraged by managers to be based on data. Don't rely solely on gut instincts when making marketing decisions; always use customer information, campaign data, and metrics. Lastly, companies should educate their marketing, business intelligence, and data analytics team members to make effective use of BI tools and capitalize on customer insights to make real-world digital marketing decisions.

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