

## Article

# The Impact of Digital Marketing Innovation on Customer Engagement With Brands: A Case Study of the Iraqi Telecommunications Sector

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**Abstract:** The current research aims to identify the impact of innovation in digital marketing across its dimensions (digital attraction, digital interaction, digital retention, digital learning, and digital communication) on customer interaction with the brand (informational interaction and social interaction). This is an applied study in the Iraqi telecommunications sector, where the research sample consisted of (163) employees in telecommunications companies in Baghdad Governorate. The research problem was represented by the main question: (What is the impact of innovation in digital marketing on customer interaction with the brand in the Iraqi telecommunications sector?) The descriptive analytical method was used to achieve the research objectives and develop its instruments, using the statistical programs (AMOS.V.29 and SPSS.V.29). The research results showed a significant positive relationship between the level of innovation in digital marketing and customer interaction with the brand in the Iraqi telecommunications sector, indicating that adopting innovative digital methods contributes to enhancing customer interest and participation.

**Keywords:** Innovation in Digital Marketing, Customer Interaction with The Brand, Telecommunications

**Citation:** Badiri, Z.G.M. The Impact of Digital Marketing Innovation on Customer Engagement With Brands: A Case Study of the Iraqi Telecommunications Sector. International Journal on Economics, Finance and Sustainable Development (IJEFS) 2026, 8(1), 315-328.

Received: 15<sup>th</sup> Jan 2026Revised: 10<sup>th</sup> Feb 2026Accepted: 25<sup>th</sup> Feb 2026Published: 10<sup>th</sup> Mar 2026

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## 1. Introduction

The world today is witnessing rapid advancements in digital technologies, leading to a radical transformation in marketing methods and how organizations communicate with their customers [1]. Digital marketing has become an essential tool for companies to enhance their market presence and build sustainable customer relationships. In the face of intense competition, relying solely on traditional methods is no longer sufficient; innovation in digital marketing has become a pressing necessity for brand differentiation and increasing its ability to influence the target audience [2].

Customer interaction with a brand is a crucial indicator of the success of marketing efforts, reflecting the level of interest, loyalty, and trust that customers develop in the company [3]. Therefore, studying the impact of digital marketing innovation on this interaction is particularly important in the telecommunications sector, which is characterized by rapid development, intense competition, and a diverse range of services [4]. This applied study on the Iraqi telecommunications sector aims to analyze the relationship between innovation practices in digital marketing and the level of customer interaction with brands, in order to understand the extent to which innovative methods contribute to enhancing the position of companies in the Iraqi market and achieving a sustainable competitive advantage.

## 2. Scientific Methodology

### A. The Research Problem

The research problem lies in the challenges facing telecommunications companies in Iraq amidst rapid digital transformation and intensifying competition. These companies strive to attract and retain customers by adopting innovative digital marketing methods. Despite the expansion in the use of digital platforms and social media, the level of customer interaction with brands remains inconsistent, raising questions about the effectiveness of the innovation strategies employed in influencing customer behavior and attitudes. The research problem lies in the lack of clarity regarding the nature of the relationship between innovation in digital marketing and the level of customer interaction with brands in the Iraqi telecommunications sector, and the extent to which innovative marketing practices contribute to enhancing positive interaction and building brand loyalty. The research problem can be formulated in the following main question: **(What is the impact of innovation in digital marketing on customer interaction with brands in the Iraqi telecommunications sector?)** This question branches into several sub-questions, such as:

- 1-What is the level of implementation of innovation in digital marketing among Iraqi telecommunications companies?
- 2-What is the level of customer interaction with brands in this sector?
- 3- Is there a statistically significant relationship between innovation in digital marketing and customer interaction?
- 4- What are the dimensions of digital innovation that have the greatest impact on enhancing customer engagement?

### B. The Importance of the Research

The importance of this research can be summarized through its contribution to achieving the following:

- 1-The importance of the research stems from the sector studied, namely the telecommunications sector, which forms the cornerstone of economic development in the country. This sector enhances the growth and development of telecommunications institutions, which constitute a vital pillar of the national economy.
- 2-The importance of the research is evident in enriching the Arabic library in general, and the Iraqi library in particular, with the aim of increasing intellectual enrichment and knowledge accumulation in the field of the research variables. This is achieved by employing the concept of digital marketing in customer interaction with the brand.
- 3-The research provides results and recommendations that Iraqi telecommunications companies can utilize to develop more innovative and effective digital marketing strategies. This contributes to raising the level of customer interaction and strengthening brand loyalty.
- 4-The research helps decision-makers and marketing departments understand the factors influencing digital customer behavior, enabling them to adopt marketing policies based on scientific principles and real data.

### C. Research Objectives

In light of the research problem presented, the most important objectives that the research seeks to achieve can be summarized as follows:

- 1-What is the level of availability of digital marketing dimensions in the telecommunications sector within the research sample.
- 2-What is the level of customer interaction with the brand and its dimensions within the telecommunications sector within the research sample.
- 3-The importance of this research stems from the rapid digital transformations witnessed by the telecommunications sector, as innovation in digital marketing has become a crucial element in enhancing the competitiveness of companies and building strong relationships with customers.

4-To provide practical results that can help telecommunications companies in Iraq develop more effective digital marketing strategies, contributing to increased customer interaction, enhanced trust and loyalty to the brand, and achieving sustainable growth in a highly competitive market.

5- To support decision-makers in this sector by providing them with clear indicators of the dimensions of digital innovation that most influence customer behavior, which helps them direct marketing resources and investments more efficiently.

#### D. The Hypothetical Scheme

Based on the research problem and in line with its objectives, the hypothetical scheme for the study was formulated and is shown in Figure (1). This scheme embodies the role of the influential relationships between the main research variables and their sub-dimensions as follows:

1-**Independent Variable:** Digital Marketing, which includes five dimensions: (digital attraction, digital interaction, digital retention, digital learning, and digital communication). This variable was measured using the scale developed by Abdullah et al.

2. **Dependent Variable:** Customer Interaction with the Brand, which includes two dimensions: (Informational Interaction and Social Interaction). This variable was measured using the scale developed by Cao et al.

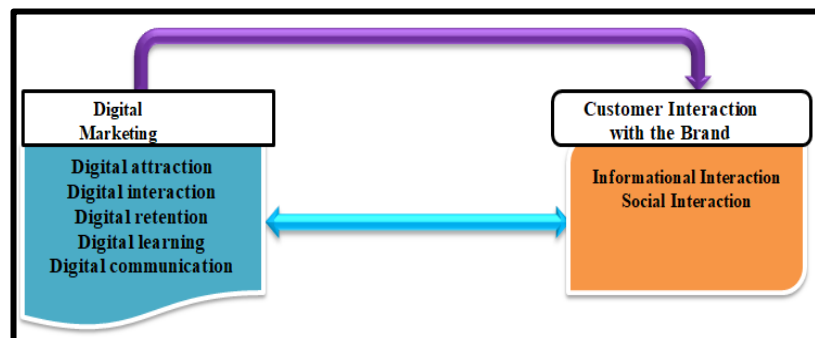


Figure 1. Hypothetical diagram.

#### E. Research Hypotheses

To achieve the research objectives and test the hypothetical model, the research relied on a set of main hypotheses as follows:

##### 1-First Main Hypothesis

There is a statistically significant correlation between the dimensions of digital marketing (digital attraction, digital interaction, digital retention, digital learning, and digital communication) and the dimensions of customer interaction with the brand (informational interaction and social interaction)

##### 2-Second Main Hypothesis

There is a statistically significant direct effect of the dimensions of digital marketing (digital attraction, digital interaction, digital retention, digital learning, and digital communication) on the dimensions of customer interaction with the brand (informational interaction and social interaction).

### 3. Theoretical Framework

#### A. The Concept of Digital Marketing

Digital marketing is a concept that has been widely used since 2010 with the emergence of social media platforms. The latest phase began in 2015 with the migration of the internet to mobile devices and their applications. The reason behind this shift was content marketing and the transformation of social media platforms into media outlets [5]. Digital marketing is a modern marketing concept that is constantly evolving due to

rapid technological advancements [6]. Digital marketing is not limited to online marketing; it is a broader term encompassing computers and the internet, including all modern digital media such as mobile internet, radio, and television. Digital marketing is an activity focused on sales and advertising, aiming to influence the buyer to achieve a profitable purchase through satellite television channels, social media platforms, smartphones, and other digital communication tools [7]. Digital publicizing is the fastest-growing and record in-demand subdivision of publicizing today. As the ecosphere has converted a smaller apartment, charge up with increases and movements is vibrant for pushers trying to range new customers, who are gradually troubled and have fewer trust in outmoded businesses. Goods are regularly evolving and adjusting to the numeral market, and venders are trying to connect the power of the internet for their particular needs [8]. Widowati et al. definite it as publicizing that uses processers and the internet to encourage or present products and amenities in a target bazaar division [4]. The creation of digital publicizing is vast and infinite, accomplishment every creature on Earth concluded a headset and internet construction.

WU itemized that digital publicizing is premeditated for small dealings and is a method for interesting customers to harvests [9]. With the help of cardinal presentation, we can encourage our goods online. Digital publicizing also allows establishments to target explicit harvests. In universal, digital publicizing uses correspondences, websites, standards, SMS letters, and correspondents to encourage a invention [1]. The perfect concept of numeral publicizing is based on publicizing merchandises or amenities online complete various systems such as publicizing on the publicizing network, search appliance publicizing operations, blog publicizing, content publicizing, viral publicizing, creating cassettes of people consuming a merchandise, social broadcasting, and message marketing. Related to outmoded publicizing systems, cardinal marketing is rather reasonable and affords an opening to reach a assemblage of customs who use processers [10]. It is a new type of publicizing that involves using outmoded and advanced online utensils and procedures to govern customer consummation complete contacts for profit and other assistances for the business association [11]. It is also a set of average publicizing happenings designed operational, the main resolution of which is to maximize the bearing on the probable audience on the website [12].

Innovation in digital marketing is the process of developing and using new and creative ideas and methods to promote products or services through digital media [13]. This innovation aims to attract the attention of the target audience in a way that differs from traditional methods, improve customer experience, and increase engagement and sales [2].

Innovation in digital marketing relies on leveraging modern technologies such as data analytics, artificial intelligence, and social media platforms to understand customer behavior and deliver content that aligns with their interests and needs [14]. It also includes designing interactive advertising campaigns, using short videos, influencer marketing, and tailoring advertising messages to each audience segment [15].

### **B. The Importance of Digital Marketing**

The importance of innovation in digital marketing lies in its being a fundamental element for the success of organizations in the modern competitive environment. It contributes to developing new and more effective methods for reaching customers and influencing their purchasing decisions [16]. Its importance is multifaceted, including its ability to differentiate a brand from competitors by offering unconventional content and ideas that capture the audience's attention [17]. It also contributes to improving the user experience through the use of modern technologies that facilitate the search and purchase process [18]. Furthermore, innovation enables companies to understand customer behavior more accurately through data analysis, which helps in providing customized offers that meet their needs [12]. In addition, it leads to increased interaction and

engagement across digital platforms, which enhances trust and builds long-term relationships with customers [7].

### **C. Dimensions of Digital Marketing**

The digital marketing variable is measured through five dimensions [17] :

#### **1-Digital Attraction**

This is the foundation of consumer communication, as it necessitates them to happily visit the collaborating submission (the website). It includes: fascinating patrons to the submission, producing an audience, keeping the product in mind, and rewarding consideration to billboards. Vendors can attract regulars through billboards on websites, pop-up openings, or appropriate families [19]. Other establishments may possibility to using desirability methods concluded the establishment's suggestion with a group of altruistic activities, shopper loyalty sequencers, or constructing biologically friendly goods for the purpose of attracting customers [3], [20].

#### **2- Digital Interaction**

Occasionally called content publicizing, this is observed as user contact in terms of sharing, interest, and accomplishing engagement, achievement, or corporate completion. Contact is a key driver of petition creation and embraces: generating concentration and engagement, creative software design, collaborating satisfied, use of the resulting contented, and everyday proficiencies [21]. Many digital publicizing submissions fail in the collaboration phase outstanding to weak pleased or poor arrangement, while others may be exceedingly refined with high-definition charts and impact, thus apprehending the shopper's kindness [3].

#### **3- Digital Retention**

This encompasses in case relevant, cooperating, and valuable contented to develop patron relationships. It embraces ensuring patron return and so long as dynamic, distinguishing contented. When consumers enter an establishment's website and participate with relevant pleased that creates treasured interaction, they are failsafe to return. Establishments should focus on unindustrialized and continuing associations with their customs, which requires winning with them, thoughtful their needs, and have confidence in that they will homecoming [3]. Maintenance also involves publicizing using numeral marketing stands and electrical search appliances to encourage the fundamentals of the numeral publicizing mix (invention, circulation, elevation, evaluating, actions, hominoid element, corporal facilities, efficiency and eminence), and this necessitates the unremitting renewal of the content providing to them or the establishment of incessantly changing but cooperating contented [22].

#### **4-Digital Learning**

This is a process used by vendors through collaborating communication channels to obtain supplementary data approximately patrons (trends, behaviors, insolences, and demographic material) concluded examinations and forms [3]. Digital erudition embraces preferences, evidence capture, nonstop penchant, and erudition. Interactive material can be mined after customer records in microelectronic files or mouse click journals on mainframes. Most concerns backing chat systems to beseech exchanges and thoughts to understand patron procuring predilections [22].

#### **5-Digital Communication**

This is a publicizing opportunity to engrave and focus collaboration on a target arcade to learn added about the purchaser. It embraces: bespoke statement, on-demand announcement, and announcement on petition [3]. Chan et al., believe that statement is one of the furthestmost imperative openings for creating value in cardinal publicizing, as it is the utmost apposite way to allocate collaboration amongst the service providing and publicizing time and sweat to more than one purchaser at the equivalent stretch, since alphanumeric publicizing methods allow for announcement, circulation and expressive more approximately a single shopper [21].

#### **D. Concept of Customer Engagement**

The thought of customer assignation emerged in publicizing literature during the last epoch and was communicated as a pioneer to consumer procuring and brand allegiance. Customer assignation is definite as the emotive, perceptive, and communication overtones with a brand [23]. Shopper engagement shows four homes of value attained by the purchaser: Life value, which situations to the consumptions made by the shopper from the trademark [24], [25]. i.e., customs acclaiming the brand's goods to other customs; Influence value, which revenues the shopper's willingness to talk almost their purchasing understanding with the brand and segment it with others Nicolescu & Tudorache, and Comment, which refers to the comment providing by the shopper to the variety, such as submissions or grumbles, and also includes operational merchandise examinations on e-commerce websites [26], [27], [28].

Consumer engagement incorporates all forms of announcement and interaction amongst an association and its customs during their buying journey, starting brand awareness to post-purchase understandings. Its aim is to physique strong associations, foster constancy, and increase customer approval [29]. It embraces both direct (phone, support) besides indirect (announcement channels, self-contained content, advertising) exchanges, and it goes elsewhere mere pleasure to encompass perceptive, emotive, and communiqué characteristics [27].

Customer assignation is demarcated as the set of perceptive, emotional, and communication rejoinders and behaviors unveiled by customs as a result of their unswerving or indirect collaboration with an association or its brand diagonally various touchpoints [28]. This concept replicates the level of patron partaking and assignation in publicizing activities, such as evidence sharing, communicating thoughts, cooperative through digital conduits, and partaking in product or service advance [22].

The perception of customer collaboration has progressed in current eons as more establishments seek to transform ways to attract and remember loyal regulars. In the past, basically offering a excellent invention or package was necessary [29]. Nevertheless, modern data and analytics apparatuses show that communication is a exceedingly influential feature in a customer's procuring conclusion. Today, purchaser interface is a pervasive topic. Despite this increasing acceptance, the concept of shopper interaction remainders undecided to countless [20]. Customer interface is about construction an ongoing affiliation between a establishment and a customer that goes beyond simply implementation a business [31]. It is a conscious and dependable approach espoused by a establishment to provide supplementary value in every shopper collaboration, thereby encouragement reliability Huang et al.

Purchaser interaction is nearby erection an unending affiliation between a establishment and a purchaser that goes elsewhere simply effecting a matter Monfort et al. It is a sensible and unswerving attitude adopted by a establishment to deliver supplementary assessment in every customer collaboration, thereby improving consumer allegiance Huang et al. Patron assignation refers to the magnitude to which customs transfer and intermingle with every other on societal media boards. Regulars contribute in these daises to interact through peers who segment communal interests and through other trademarks to gain further value, such as theater, staying knowledgeable about the modern movements, and reading merchandise examinations, which in chance supports relationships amongst regulars [32]. Definitely, customs share, appreciate, and nonstop themselves on these daises, which strengthens municipal ties and reassures evidence exchange midst members of the operational municipal [33].

#### **E. The Importance of Customer Engagement**

Patron rendezvous is a crucial needle of the métier of the affiliation amongst the shopper and the association. It backs to attractive happiness, loyalty, and trust, prominent to an upgraded consumer understanding and the manufacture of united value for both

merrymakings. Moreover, it supports a workable competitive improvement in a self-motivated marketing location [34]. The reputation of customer assignment stems as of its pivotal role in erection strong and sustainable interactions between consumers and establishments in a competitive and repetitively changing professional atmosphere. Customer engagement contributes to a more accurate understanding of customer needs and expectations, enabling organizations to develop products and services that align with their genuine desires and improve the overall customer experience [35].

Customer engagement also leads to increased satisfaction and loyalty levels, as customers feel valued and involved in the marketing process. This strengthens their emotional connection to the brand and reduces the likelihood of them switching to competitors [36]. Furthermore, customer interaction helps to stimulate positive recommendations and spread the organization's good reputation, especially through digital channels and social media [37]. The importance of customer interaction also lies in its being a significant source of information and creative ideas, as it allows organizations to benefit from customer thoughts and feedback to progress routine and modernization [33]. Consequently, customer collaboration is a premeditated tool to backing affordability and achieve sustainable collective value for both the association and its customs [38].

#### **F. Dimensions of Customer Interaction**

The customer interaction variable is measured through two dimensions: informational interaction and social interaction [39] :

##### **1-Information Interaction**

It should be distinguished that material exchange embraces user boundaries associated to the invention, product, and preferment material [40]. Functioning social broadcasting positions are operative stands for exhaustive for and locating suggestion, as they horizontal its discussion between imposts [41]. Advocates of these podiums share their fluencies of brand ingestion in a eloquent way, seemly merchandise use, trademark awareness, equipment, market suggestion, and other fragments related to ingestion. A eloquent product breastfeeding immersion means that consumers share their certain selfless of the brand complete their extraordinary drinking fluencies, which helps them feel a erudition of fitting, repute, and thoughtful after other consumers [43]. Thus, salaried social propagation positions are conscientious computerized daises somewhere suggestion is circulated since highly assorted sources [42].

##### **2-Social Interaction**

Common partnership is an ultimate part of consumer partnership on social dissemination platforms. Cliques of these opinions nonstop their certain thoughts or direct identifications complete this partnership [44]. In enterprise so, they proposition and admit moral wherewithal and societal association from accompanying believers of the location. As a upshot, this self-disclosure enhancements trust and propinquity among podium advocates [45]. A newsworthy study institute that characteristics encourage relationship among consumers on social broadcasting podiums to segment their alertness. Social relationship refers to particular contacts among pedestal affiliates that stay not constant correlated to the variety's origination but are imperative for community and agricultural social connotations among pedestal followers, bequeathing to confident shopper happenings [46].

#### **4. Practical Aspects**

##### **A. Relating and Coding Research Variables**

This period aims to afford the symbols that embody the variables and fundamentals of the quantity instrument, selection the bookworm to recognize the results acceptably and giving a vibrant understanding of the points that the study finds to uncover. Hence, Table (1) illustrates the coding and explanation of the training variables.

**Table 1.** Variable Coding and Description.

Variables	Dimensions	NO.	Symbol
Innovation in Digital Marketing	Digital Engagement	4	DAT IDM
	Digital Interaction	4	DEN
	Digital Retention	5	DRE
	Digital Learning	3	DLE
	Digital Communication	4	DCO
Customer Interaction with the Brand	Informational Interaction	3	CII CEB
	Social Interaction	5	CSI

### B. Normality Test

The grades in Table (2) indicate the breakdown of the data correlated to the exploration variables. A arithmetic test was cast-off to verify whether the numbers surveyed a normal spreading. This illustrations that the consequence level is bigger than 0.05, meaning that the numbers do follow a ordinary spreading. Consequently, the null supposition, which circumstances that the data gained from the study illustration survey a normal pattern, was conventional, and the alternate supposition was rejected.

**Table 2.** Test for normality of study variables.

Dimensions	Normal distribution parameter	Probability
Digital Engagement	0.278	0.181 0.129
Digital Interaction	0.253	0.173
Digital Retention	0.226	0.148
Digital Learning	0.313	0.157
Digital Communication	0.153	0.109
Informational Interaction	0.216	0.162 0.126
Social Interaction	0.287	0.156

### C. Analysis of the Measurement Instrument's Reliability

The results in Table (4) show that the overall reliability coefficient of the measurement instrument was (0.971). This coefficient was distributed among the variables of innovation in digital marketing, represented by five dimensions and (20) items, which achieved a reliability coefficient of (Cronbach's Alpha = 0.888). The dependability of its magnitudes ranged since a low cost of (0.796) for the numeral statement breadth to a high value of (0.923) for the ordinal retention aspect, indicating the evenness of the form items. The results also signposted that the needy variable (customer collaboration with the brand), epitomized by two magnitudes and (8) items, completed a reliability amount of (Cronbach's Alpha = 0.852). The trustworthiness of its proportions extended from a low value of (0.869) for the evidence interaction breadth to a high value of (0.876) for the social collaboration breadth, signifying the uniformity of the form stuffs.

**Table 4.** Cronbach's Alpha Test Restriction.

Variables	Dimensions	Cronbach's Alpha
Innovation in Digital Marketing	Digital Engagement	0.889 0.888 0.971
	Digital Interaction	0.818
	Digital Retention	0.923
	Digital Learning	0.877
	Digital Communication	0.796
Customer Interaction with the Brand	Informational Interaction	0.869 0.852
	Social Interaction	0.876

#### D. Statistical Description of Variables

The grades in Table (5) show a pure focus by workforces in the Iraqi broadcastings sector on cultivating revolution in digital promotion, reaching a callous of (3.43) and a average eccentricity of (0.63). This is recognized to the Iraqi telephones sector's meditation on espousing the Digital Announcement (DCO) breadth, achieving a uncaring of (3.55) and a ordinary unorthodoxy of (0.53). For now, the Digital Collaboration (DEN) breadth achieved a uncaring of (3.32) and a commonplace unorthodoxy of (0.86). This shows the necessity for slight and medium-sized originalities (SMEs) to enhance risk-taking thinking, numeral publicizing skills, and announcement to support their attractiveness and routine.

The outcomes in Table (5) signpost a clear concentration by workforces in the Iraqi telephones sector in civilizing customer collaboration with the brand, as demonstrated by an calculation mean of (3.49) and a ordinary deviation of (0.75). This is due to the Iraqi telecommunications sector's focus proceeding adopting the CII informational collaboration dimension, achieving an reckoning mean of (3.57) and a ordinary aberration of (0.76). Temporarily, the CSI social collaboration width achieved an calculation mean of (3.40) and a standard unorthodoxy of (0.58). This illustrations that the use of collaborative contented and contemporary digital stands directly contributes to hovering the level of interaction, whether through comments, dividends, or commending the brand to others.

**Table 5.** Statistical Description.

NO.	MEAN	S.D	NO.	MEAN	S.D
<b>DAT1</b>	3.57	0.82	<b>DCO1</b>	3.58	0.76
<b>DAT2</b>	3.53	0.90	<b>DCO2</b>	3.48	0.80
<b>DAT3</b>	3.41	0.90	<b>DCO3</b>	3.55	0.78
<b>DAT4</b>	3.18	1.13	<b>DCO4</b>	3.57	0.81
<b>DAT</b>	<b>3.42</b>	<b>0.81</b>	<b>DCO</b>	<b>3.55</b>	<b>0.53</b>
<b>DEN1</b>	3.23	1.03	<b>IDM</b>	<b>3.43</b>	<b>0.63</b>
<b>DEN2</b>	3.24	1.08	<b>CII1</b>	3.35	0.84
<b>DEN3</b>	3.32	1.10	<b>CII2</b>	3.84	0.98
<b>DEN4</b>	3.48	0.95	<b>CII3</b>	3.51	0.82
<b>DEN</b>	<b>3.32</b>	<b>0.86</b>	<b>CII</b>	<b>3.57</b>	<b>0.76</b>
<b>DRE1</b>	3.55	0.78	<b>CSI1</b>	3.47	0.90
<b>DRE2</b>	3.57	0.81	<b>CSI2</b>	3.28	0.77
<b>DRE3</b>	3.35	0.84	<b>CSI3</b>	3.36	0.89
<b>DRE4</b>	3.48	0.98	<b>CSI4</b>	3.58	0.76
<b>DRE5</b>	3.51	0.82	<b>CSI5</b>	3.33	0.77
<b>DRE</b>	<b>3.49</b>	<b>0.64</b>	<b>CSI</b>	<b>3.40</b>	<b>0.58</b>
<b>DLE1</b>	3.47	0.90	<b>CEB</b>	<b>3.49</b>	<b>0.75</b>
<b>DLE2</b>	3.28	0.77			
<b>DLE3</b>	3.36	0.89			
<b>DLE</b>	<b>3.37</b>	<b>0.66</b>			

#### E. Hypothesis Testing and Path Analysis

**H1: There is a significant correlation between innovation in digital marketing and customer engagement with the brand.**

The outcomes in Table (6) show a momentous relationship between origination in digital publicizing and patron assignation with the brand. This signposts a correlation asset of (0.916), which embodies the relationship amongst these variables. This upshot is ascribed to the sample's durable focus on the rapport between the magnitudes of these variables, through relationship strengths vacillating from (0.672) amongst the Digital Statement (DCO) breadth and the Evidence Interaction (CII) dimension, to (0.945) amongst the Digital Maintenance (DRE) height and the Information Collaboration (CII)

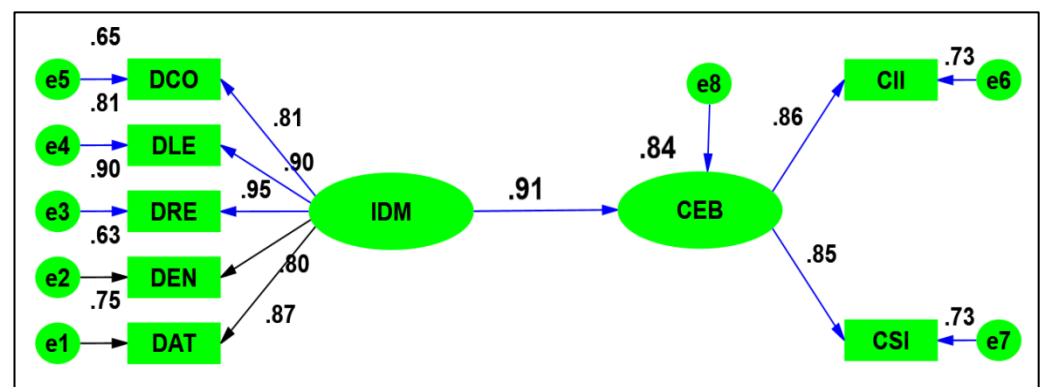
breadth. This, in turn, establishes a positive relationship between origination in digital publicizing and the level of patron rendezvous with the brand amongst the graphed model.

**Table 6.**Correlation Matrix.

	DAT	DEN	DRE	DLE	DCO	IDM	CII	CSI	CEB
DAT	1								
DEN	.855**	1							
DRE	.792**	.746**	1						
DLE	.805**	.695**	.799**	1					
DCO	.705**	.699**	.842**	.654**	1				
IDM	.937**	.906**	.918**	.877**	.847**	1			
CII	.759**	.673**	.945**	.796**	.672**	.849**	1		
CSI	.790**	.707**	.770**	.908**	.734**	.865**	.746**	1	
CEB	.826**	.735**	.928**	.903**	.747**	.916**	.950**	.916**	1

**H2: There is a significant impact of innovation in digital marketing on customer interaction with the brand.**

The results in Table (7) and the data presented in Figure (2) show that there is a significant impact of innovation in digital marketing on customer interaction with the brand. An increase of one unit in digital marketing innovation leads to an improvement in customer interaction with the brand of (0.908), with a standard error of (0.096) and a critical value of (9.458). This indicates that the sample recognizes the importance of enhancing customer interaction with the brand by focusing on the requirements of innovation in digital marketing. This points to the priority and feasibility of digital transformation in building the requirements of companies through building their internal processes.



**Figure 2.** Path Analysis of the Impact of Digital Marketing Innovation on Customer Engagement with the Brand.

Digital marketing innovation contributed to explaining (0.838) of the variance in customer engagement with the brand. The remaining value falls outside the scope of the study.

**Table 7.** Results of the Path Analysis of the Impact of Digital Marketing Innovation on Customer Engagement with the Brand

Path	Standard weights	standard error	critical value	R <sup>2</sup>	P
IDM ---> CEB	0.908	0.096	9.458	0.838	***

## 5. Conclusions and Recommendations

### A. Conclusions

1-The study results showed a significant positive relationship between the level of innovation in digital marketing and customer interaction with the brand in the Iraqi telecommunications sector. This indicates that adopting innovative digital methods contributes to enhancing customer interest and engagement.

2-The study revealed that using interactive content and modern digital platforms directly contributes to increasing the level of interaction, whether through comments, shares, or recommending the brand to others.

3-The study revealed that tailoring marketing messages based on customer data analysis leads to enhancing their sense of interest and appreciation, which positively impacts the level of trust and loyalty towards the brand.

4-The results showed that telecommunications companies that invest in modern digital technologies achieve a clear competitive advantage compared to companies that rely on traditional marketing methods.

5- The study demonstrated that innovation in digital marketing not only affects immediate customer interaction but also contributes to building long-term relationships based on continuous communication and added value.

6- The results confirmed that developing innovative digital marketing strategies requires the integration of technical, creative and administrative aspects, to ensure maximum impact on customer interaction and enhance the brand image in the Iraqi market.

### B. Recommendations

1-The necessity of adopting innovative digital marketing strategies based on creativity and continuous innovation, through investing in modern technologies and developing interactive content that attracts customers and motivates them to participate.

2-Enhancing reliance on customer data analysis to accurately understand their behavior and needs, which contributes to designing customized marketing campaigns that increase the level of interaction and brand trust.

3-Focusing on developing the skills of marketing staff in Iraqi telecommunications companies through continuous training in the areas of digital innovation, digital platform management, and the use of modern analytics tools.

4-Focusing on improving the user experience across websites and mobile applications, by facilitating access to services and providing clear and responsive content.

5-Encouraging direct interaction with customers through social media by responding quickly to inquiries and complaints, and launching digital campaigns and competitions that promote positive engagement.

6- Allocating clear budgets for research and development in the field of digital marketing, and measuring the impact of innovative campaigns periodically to ensure the achievement of marketing objectives and enhance the brand's position in the Iraqi telecommunications market.

## References

- [1] A. Q. Bataineh, I. A. Abu-ALSondos, M. Idris, A. S. Mushtaha, and D. M. Qasim, "The role of big data analytics in driving innovation in digital marketing," in *2023 9th International Conference on Optimization and Applications (ICOA)*, 2023, pp. 1–5.
- [2] R. Vettriselvan, "Harnessing innovation and digital marketing in the era of industry 5.0: resilient healthcare SMEs," in *The Future of Small Business in Industry 5.0*. IGI Global Scientific Publishing, 2025, pp. 163–186.
- [3] T. S. Teo, "Usage and effectiveness of online marketing tools among business-to-consumer (B2C) firms in Singapore," *International Journal of Information Management*, vol. 25, no. 3, pp. 203–213, 2005.
- [4] I. Widowati, E. Setidewi, and D. Sitimasitoh, "Cyber marketing: Media effective interest for potential customer in advertising products and services online," 2013.
- [5] M. Oklander, T. Oklander, O. Yashkina, I. Pedko, and M. P. Chaikovska, "Analysis of technological innovations in digital marketing," 2018.
- [6] I. Muis, "Digital marketing and innovation effects on marketing performance," *Advances in Social Science, Education and Humanities Research*, 2022.
- [7] I. Muis, T. M. Adhi, and R. F. Kamalia, "The impact of digital marketing and innovation on marketing performance influenced through the development of competitive advantage," *Revista de Gestão Social e Ambiental*, vol. 18, no. 8, pp. 1–17, 2024.
- [8] M. L. Roberts and D. Zahay, *Internet Marketing: Integrating Online and Offline Strategies*. Boston: Cengage Learning, 2012.
- [9] J. Y. Wu, "Application analysis of cyber marketing in real estate," in *International Conference on Economics and Management*, 2016.
- [10] S. Geiger and S. G. Martin, "The internet as a relationship marketing tool: Some evidence from Irish companies," *Irish Marketing Review*, vol. 12, no. 2, 2015.
- [11] M. S. S. C. F. Rosiana, "Defeminasi keluarga pra sejahtera melalui program kelompok usaha bersama berbasis cyber marketing," *Jurnal Qiema*, vol. 6, no. 2, pp. 128–141, 2020.
- [12] A. A. Budacia and M. F. Busuioc, "The challenges of inside marketing generated by the new context of extended telework," *Journal of Information Systems & Operations Management*, vol. 15, no. 1, pp. 42–50, 2021.
- [13] W. Boonmalert, C. Ayasanond, B. Phoothong, and T. Chaitorn, "A causal influence model of innovation and digital marketing on SME performance in Thailand," *European Journal of Molecular & Clinical Medicine*, vol. 8, no. 3, pp. 63–72, 2021.
- [14] Y. Purwanti et al., "The influence of digital marketing and innovation on school performance," *Turkish Journal of Computer and Mathematics Education*, vol. 12, no. 7, pp. 118–127, 2021.
- [15] S. U. Jung and V. Shegai, "The impact of digital marketing innovation on firm performance: Mediation by marketing capability and moderation by firm size," *Sustainability*, vol. 15, no. 7, p. 5711, 2023.
- [16] R. Varadarajan, R. B. Welden, S. Arunachalam, M. Haenlein, and S. Gupta, "Digital product innovations and digital marketing innovations: Evolution and future research directions," *International Journal of Research in Marketing*, vol. 39, no. 2, pp. 482–501, 2022.
- [17] A. Abdullah, A. Taliang, B. Efendi, M. Kasmi, and A. Aman, "Examining the effects of entrepreneurial mindset, digital marketing innovation and networking on SME performance," *Journal of System and Management Sciences*, vol. 14, no. 6, pp. 113–127, 2024.
- [18] E. C. Ku, "Digital marketing innovation and industrial marketing: Evidence from restaurants' service robots," *Asia Pacific Journal of Marketing and Logistics*, vol. 36, no. 11, pp. 3099–3117, 2024.
- [19] W. K. Chong, M. Shafaghi, C. Woollaston, and V. Lui, "B2B e-marketplace: An e-marketing framework for B2B commerce," *Marketing Intelligence & Planning*, 2010.
- [20] C. W. Kian, *The Design and Development of an E-Marketing Framework for the Asian B2B Marketplace*. Bolton: University of Bolton, 2011.

- [21] N. L. Chan and B. D. Guillet, "Investigation of social media marketing: How does the hotel industry in Hong Kong perform in marketing on social media websites," *Journal of Travel & Tourism Marketing*, vol. 28, no. 4, pp. 345–368, 2011.
- [22] F. Habibi, C. A. Hamilton, M. J. Valos, and M. Callaghan, "E-marketing orientation and social media implementation in B2B marketing," *European Business Review*, 2015.
- [23] D. Lee, "Untact: A new customer service strategy in the digital age," *Service Business*, vol. 14, no. 1, pp. 1–22, 2020.
- [24] V. Guerola-Navarro, H. Gil-Gomez, R. Oltra-Badenes, and J. Sendra-García, "Customer relationship management and its impact on innovation," *Journal of Business Research*, vol. 129, pp. 83–87, 2021.
- [25] L. Nicolescu and M. T. Tudorache, "Human-computer interaction in customer service: Experience with AI chatbots," *Electronics*, vol. 11, no. 10, p. 1579, 2022.
- [26] Y. Baashar et al., "Customer relationship management systems in healthcare: A systematic literature review," *Computer Standards & Interfaces*, vol. 71, 2020.
- [27] M. Adam, M. Wessel, and A. Benlian, "AI-based chatbots in customer service and their effects on user compliance," *Electronic Markets*, vol. 31, no. 2, pp. 427–445, 2021.
- [28] A. AlHarbi, C. Heavin, and F. Carton, "Improving customer oriented decision making through the customer interaction approach," *Journal of Decision Systems*, vol. 25, no. sup1, pp. 50–63, 2016.
- [29] A. D. Subagja et al., "Improving customer service quality in MSMEs through the use of ChatGPT," *Jurnal Minfo Polgan*, vol. 12, no. 1, pp. 380–386, 2023.
- [30] V. Guerola-Navarro, H. Gil-Gomez, R. Oltra-Badenes, and P. Soto-Acosta, "Customer relationship management and entrepreneurial marketing," *International Entrepreneurship and Management Journal*, vol. 20, no. 2, pp. 507–547, 2024.
- [31] A. Monfort, B. López-Vázquez, and A. Sebastián-Morillas, "Building trust in sustainable brands," *Sustainable Technology and Entrepreneurship*, 2025.
- [32] M. L. Cheung, G. Pires, P. J. Rosenberger, and M. J. De Oliveira, "Driving consumer–brand engagement and co-creation by brand interactivity," *Marketing Intelligence & Planning*, vol. 38, pp. 523–541, 2020.
- [33] A. Coelho, C. Bairrada, and F. Peres, "Brand communities' relational outcomes through brand love," *Journal of Product & Brand Management*, vol. 28, pp. 154–165, 2019.
- [34] R. Nicholls and M. Gad Mohsen, "Managing customer-to-customer interaction: Insights from the frontline," *Journal of Services Marketing*, vol. 33, no. 7, pp. 798–814, 2019.
- [35] R. Nicholls, "Customer-to-customer interaction: A cross-cultural perspective," *International Journal of Contemporary Hospitality Management*, vol. 23, no. 2, pp. 209–223, 2011.
- [36] J. N. Sheth, V. Jain, and A. Ambika, "The growing importance of customer-centric support services," *Journal of Business Research*, vol. 164, p. 113943, 2023.
- [37] C. Eckert, C. Neunsinger, and K. Osterrieder, "Managing customer satisfaction: Digital applications for insurance companies," *The Geneva Papers on Risk and Insurance*, vol. 47, no. 3, pp. 569–602, 2022.
- [38] N. Rane, S. Choudhary, and J. Rane, "Hyper-personalization for enhancing customer loyalty and satisfaction in CRM systems," SSRN, 2023.
- [39] Y. Cao, Z. Zhou, and S. Majeed, "Stimulating customer inspiration through online brand community climates," *Frontiers in Psychology*, vol. 12, p. 706889, 2021.
- [40] Y. Liu, Z. Shao, and N. Hoffmann, "Global attention mechanism: Retain information to enhance channel-spatial interactions," *arXiv preprint arXiv:2112.05561*, 2021.
- [41] Y. E. Rachmad, "From traditional to digital: The evolution of buyer and seller interactions," 2024.
- [42] E. Ismagilova, L. Hughes, N. P. Rana, and Y. K. Dwivedi, "Security, privacy and risks within smart cities," *Information Systems Frontiers*, vol. 24, no. 2, pp. 393–414, 2022.

- 
- [43] T. L. Smith and E. B. Moore, "Storytelling to sensemaking," in *Proceedings of the CHI Conference on Human Factors in Computing Systems*, 2020.
- [44] R. Q. Bell, "Contributions of human infants to caregiving and social interaction," in *Childhood Socialization*, 2020, pp. 103–122.
- [45] A. Czeszumski et al., "Hyperscanning: A valid method to study neural inter-brain underpinnings of social interaction," *Frontiers in Human Neuroscience*, vol. 14, p. 39, 2020.
- [46] M. Kolhar, R. N. A. Kazi, and A. Alameen, "Effect of social media use on learning, social interactions, and sleep duration," *Saudi Journal of Biological Sciences*, vol. 28, no. 4, pp. 2216–2222, 2021.