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The Impact of Digital Marketing on Consumers' Behaviour and Brand Loyalty: An Empirical Study

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Abstract: The fast growth of digital technologies has changed the global marketing environment and has resulted in new forms of communication between organisations and consumers and the creation of long-term relationships with the brand. Companies in highly digitalised economies such as the United Arab Emirates (UAE) are increasingly turning to digital marketing strategies to influence consumer behaviour and enhance brand loyalty. The current study examines the effects of digital marketing on consumer behaviour and brand loyalty, with customer engagement as a mediating variable. This research adopted a mixed-methods design, combining quantitative and qualitative methods to provide a holistic understanding of consumer responses. Data were collected primarily from 250 respondents using a structured questionnaire with a five-point Likert scale. The proposed hypotheses were tested using correlation analysis, multiple regression and Structural Equation Modelling (SEM). The findings show that digital marketing significantly influences consumer behaviour and positively affects brand loyalty. Digital marketing partially mediates the relationship between customer engagement and brand loyalty, suggesting that engagement is an important psychological mechanism that shapes loyalty formation. The SEM model shows a good fit (CFI = 0.93, RMSEA = 0.05), indicating the robustness of the proposed conceptual framework. The study contributes to the existing literature by integrating the behavioural and engagement perspectives within the context of digital marketing in the UAE. Furthermore, it has practical implications for marketers who want to improve customer retention through targeted digital strategies.

Keywords: Digital Marketing; Consumer Behaviour; Brand Loyalty; Customer Engagement; Customer Trust; Structural Equation Modelling; Digital Technologies; Marketing Campaigns.

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1. Introduction

The rapid development of digital technologies has radically altered the global marketing landscape, redefining how organisations interact with customers, promote products and services, and build long-term relationships [9]. In the last two decades, technological innovations such as the Internet, smartphones, social networking platforms, cloud computing, big data analytics, artificial intelligence, and mobile applications have revolutionised marketing practices, moving from conventional mass communication approaches to highly personalised, interactive, and data-driven strategies [5]. While traditional marketing channels such as newspapers, magazines, television, radio, billboards and direct mail still have a place in some contexts, they are no longer enough to satisfy the needs of the modern consumer, who increasingly expects instant access to information, personalised recommendations and seamless digital experiences [11]. Digital marketing has become the preferred strategy for companies looking to reach customers across a variety of online channels and gather valuable insights into consumer tastes, behaviour, and buying habits [1]. This shift has significantly altered the competitive landscape globally, compelling organisations to invest heavily in digital infrastructure and new marketing technologies to remain relevant [10]. Digital marketing is the ability to deliver highly personalised customer experiences [11].

With advances in data analytics, machine learning, and artificial intelligence, organisations can collect, analyse, and interpret large amounts of consumer data in real time. Marketers can now gain these insights with incredible accuracy: what customers like, their browsing history, purchasing behaviour, demographics, location, and how they engage online. This information allows companies to create targeted advertising campaigns, suggest related products, send customised promotional offers, and devise tailored communication strategies that will significantly improve the customer experience [2]. Personalisation not only increases the effectiveness of marketing campaigns but also builds customer trust by offering content that matches individual needs and preferences. More and more consumers expect organisations to understand their interests and provide relevant experiences, rather than generic promotional messages. Thus, personalisation has become an unavoidable competitive advantage for firms operating in digital markets [13]. Social media platforms have proliferated, accelerating the development of digital marketing by creating entirely new channels for customer engagement and brand communication. Social media platforms such as Facebook, Instagram, X (formerly Twitter), LinkedIn, TikTok, Snapchat, and YouTube have become integral to contemporary marketing strategies, enabling direct communication between organisations and consumers [1]. These platforms enable businesses to distribute engaging content, conduct promotional campaigns, respond to customer enquiries, resolve complaints, host live events, partner with influencers, and receive immediate feedback on their products and services.

Social media also provides customers with the opportunity to actively participate in brand development by sharing their experiences and product recommendations with their online networks [3]. This interactive environment has transformed the relationship between businesses and consumers, making customer engagement a vital component of successful digital marketing strategies. Organisations that actively manage their social media presence tend to have higher levels of customer satisfaction, emotional attachment and brand loyalty than those that rely solely on traditional promotional approaches. The digital transformation has been particularly significant in the UAE, with rapid adoption of advanced information and communication technologies, driven by government initiatives promoting technological innovation, smart city development, and digital economic growth [2]. The UAE has one of the highest internet penetration rates in the world, high smartphone ownership, high-speed mobile connectivity and an advanced digital infrastructure. Consumers are increasingly using digital platforms to search for information, compare products, shop online, conduct financial transactions, plan travel, access entertainment, education, and communication [7]. Technological advancements have encouraged organisations across sectors such as retail, hospitality, tourism, banking, healthcare, education, telecommunications, and real estate to embrace integrated digital marketing strategies that use multiple online channels simultaneously [20]. With the exponential growth of e-commerce platforms and digital payment systems, the importance of digital marketing as a primary channel for attracting, engaging and retaining customers has been accentuated in the UAE market.

Digital transformation has significantly changed consumer behaviour. Today's consumers are far more informed, connected and empowered than prior generations, thanks to ongoing online information and digital communication tools. Consumers do extensive online research before making buying decisions, such as comparing product specifications, assessing prices, reading customer reviews, watching product demonstrations, consulting expert opinions, and asking for recommendations from social media communities [17]. These activities enable consumers to reduce perceived risks and boost their confidence in their purchase decisions. Consumers are also increasingly expecting organisations to offer consistent and personalised experiences across all their digital touchpoints, including websites, mobile apps, social media platforms, and customer service channels. Organisations meeting these expectations are more likely to build trust, increase customer satisfaction, and promote long-term loyalty. Hence, understanding digital consumer behaviour is a prerequisite for designing effective marketing strategies that meet customers' changing expectations [18]. Brand loyalty is still one of the most valuable strategic objectives for organisations operating in highly competitive markets. Loyal customers are critical to long-term organisational success [10]. They drive repeat purchases, increase customer lifetime value, reduce marketing acquisition costs, and promote brands through positive word of mouth. Research has well established that it costs far more to attract new customers than to retain existing ones. Customer loyalty is thus a key factor in sustainable business performance [16].

But in digital environments, customer loyalty is harder to sustain, as consumers can easily compare competing products, switch brands with little effort, and access a multitude of alternatives on online marketplaces. The more options customers have, the greater the competitive pressure and the lower the switching costs. This makes it harder for organisations to retain customers based only on product quality or pricing strategies [19]. This forces organisations to differentiate themselves through better digital experiences that build trust, emotional connection, customer satisfaction and meaningful engagement. Customer engagement has become one of the most important drivers for successful digital marketing results. Engagement is not simply about customer interactions or purchase activities but also encompasses the cognitive, emotional and behavioural connections that customers develop with brands over time [11]. Highly engaged customers are active in brand-related activities. They comment on social media posts, share promotional content, write online reviews, participate in loyalty programs, attend virtual events, and recommend products to friends and family members [20]. These engagement behaviours foster customer-brand relationships through trust, emotional commitment and a sense of belonging. Organisations that are successful in building customer engagement are likely to benefit from improved customer retention, increased brand advocacy, better sales performance and an improved organisational reputation. Thus, customer engagement is both an important marketing outcome and a strategic mechanism through which digital marketing activities affect consumer behaviour and ultimately create long-term brand loyalty [1].

Digital marketing practices are widely used; nevertheless, many organisations focus on increasing online visibility, website traffic, or social media reach without fully understanding how these activities affect consumer behaviour and loyalty. The existing literature has been concentrating on the individual components of digital marketing, consumer behaviour, customer engagement and brand loyalty. However, there is a relative lack of literature that has contributed to understanding the integrated relationships among these components in rapidly changing digital environments. Specifically, there is a lack of empirical evidence of the indirect impact of digital marketing initiatives on brand loyalty through customer engagement and consumer behavioural changes [9]. The UAE is the perfect place to investigate these relationships, with its developed digital ecosystem, multicultural population, fast-growing e-commerce sector, and strong government backing for technological innovation. The UAE's consumers are highly digitally literate and regularly engage with organisations across multiple online channels, creating a setting in which the effectiveness of digital marketing can be fully explored. Understanding the impact of digital marketing on consumer behaviour, customer engagement and brand loyalty in this context may offer critical insights for companies both locally and worldwide. The findings might also contribute to a broader theoretical understanding of consumer behaviour in technology-led economies and offer practical recommendations for organisations seeking to optimise their digital marketing investments [15].

2. Literature Review

Digital marketing has become a revolutionary force in modern marketing, transforming how companies communicate, engage, and build long-lasting relationships with consumers. The rapid development of Internet technologies, mobile applications and social media platforms has considerably accelerated this transformation. According to Kotler et al. [12], digital marketing enables firms to shift from traditional mass communication to personalised, data-driven engagement strategies that enhance customer satisfaction and interaction quality. As Kotler et al. [12] have previously stressed, the current trend in marketing is toward a customer-centric approach. Digital platforms are key instruments for creating value-based relationships.

2.1. Evolution of Digital Marketing and Consumer Interaction

Digital marketing is usually defined as the use of digital channels such as search engines, social media, email and websites to promote products and services. Kaplan and Haenlein [5] define digital marketing as the integration of customer acquisition, conversion and retention strategies into an interactive ecosystem. The shift from Web 1.0 to Web 2.0 has significantly improved two-way communication, enabling consumers to participate in brand discussions. According to Kaplan and Haenlein [5], social media has played a revolutionary role as a platform for user-generated content, peer-to-peer communication and interactive brand engagement. As a result, consumers have become co-creators of brand meaning rather than passive recipients of marketing messages.

2.2. Consumer Behaviour in Digital Environments

Consumer behaviour in the digital age is highly dynamic, fuelled by online reviews, peer recommendations, influencer content and algorithm-driven advertising. Digital consumer behaviour is a complex psychological and social process influenced by online stimuli and information overload. AbdulKader et al. [6] also note that consumers increasingly use digital touchpoints at all stages of the decision-making process, from need recognition to post-purchase evaluation. Theory of Planned Behaviour remains highly relevant for understanding digital consumer behaviour, in which attitudes, subjective norms, and perceived behavioural control play important roles in online purchase intentions. In the digital context, subjective norms are strongly influenced by social media influencers, online reviews, and electronic word of mouth (eWOM). Ángeles [8] noted that electronic word of mouth plays an integral role in shaping consumer perceptions and purchase decisions, as consumers are more likely to trust peer-generated content than traditional advertising.

2.3. Role of Social Media Marketing

Social media marketing has become an integral part of digital marketing strategies. Social media marketing is the use of social platforms to create, communicate and deliver value to customers. Social media not only increases brand awareness but also builds emotional engagement and community. Mukhtar et al. [10] found that influencer marketing has a great impact on consumers' attitudes and purchase intentions, especially among young people. Similarly, Panchal et al. [14] found that perceived influencer credibility has a direct effect on consumer trust and brand engagement. Additionally, social media content such as videos, testimonials and interactive posts have been found to enhance consumer involvement and brand recall. Storytelling, engagement, and co-creation are the pillars for successful social media campaigns rather than direct selling.

2.4. Customer Engagement as a Mediating Variable

Customer engagement has been identified as an important mediating construct in digital marketing research. Customer engagement has been defined as a psychological state arising from interactive, co-creative customer experiences with a focal agent/object (e.g., a brand). It also helps them connect more emotionally and mentally to the brand. Kumar et al. [19] explain that involved customers are more likely to participate, advocate, and show loyalty. Customer engagement is not just a behavioural construct; it is also emotional, cognitive and multidimensional—personalised content, interactive platforms, gamification, and community participation power digital marketing engagement. However, excessive exposure to digital media also leads to information overload, which reduces the quality of engagement.

2.5. Brand Loyalty in the Digital Era

Brand loyalty remains an important dependent variable in marketing research. Oliver [15] defines brand loyalty as a commitment to consistently repurchase a preferred product, regardless of circumstances. Digital experiences and quality of engagement are becoming increasingly important to loyalty in the digital age. Zilong et al. [20] suggest that strong brand equity leads to greater loyalty, particularly when consumers form positive associations and emotional connections with the brand. In the digital world, loyalty is built on regular communication, personalised offers and post-purchase engagement. Basu and Naskar [2] found that participation in brand communities enhances loyalty and word-of-mouth behaviour. Trust is also an important factor in establishing online loyalty, as consumers are more likely to remain loyal to brands perceived as trustworthy and transparent.

2.6. Role of Trust and Privacy Concerns

Trust is a cornerstone of digital consumer relationships. Trust has been found to play a significant role in online purchase intentions, particularly in e-commerce. Consumers are less likely to share personal data or complete transactions without trust. However, issues around data privacy, misuse of personal information, and algorithmic targeting have emerged as significant challenges. According to Haris [4], privacy concerns negatively influence consumer trust and participation in digital environments. The literature is abundant with studies on digital marketing, consumer behaviour, customer engagement, and brand loyalty, but few attempt to combine these constructs into a single framework, especially in the context of the UAE. More empirical validation is needed for the mediating role of customer engagement and the moderating role of consumer trust in the impact of digital marketing on brand loyalty. This underscores the need for a comprehensive model that explains how digital marketing activities translate into long-term loyalty outcomes via behavioural and psychological mechanisms.

3. Research Problem

Despite the growing significance of digital marketing, its effectiveness in influencing consumer behaviour and brand loyalty remains inconsistent. Some digital campaigns successfully engage consumers, while others fail due to a lack of customer trust, poor targeting, poor customer engagement, or information overload. This necessitates a systematic study of the relationships among digital marketing, consumer behaviour, and brand loyalty.

3.1. Research Objectives

3.1.1. Primary Objective

- To analyse the impact of digital marketing on consumer behaviour and brand loyalty.

3.1.2. Secondary Objectives

- To evaluate the influence of digital marketing channels on consumer decisions.
- To examine the relationship between consumer behaviour and brand loyalty.
- To assess the mediating role of customer engagement.
- To identify key drivers of effective digital marketing strategies.

3.2. Research Questions

- How does digital marketing influence consumer behaviour?
- What is the relationship between consumer behaviour and brand loyalty?
- Does customer engagement mediate the relationship?
- Which digital marketing strategies are most effective?

3.3. Conceptual Framework and Hypotheses

The conceptual model proposes the following relationships:

3.3.1. Digital Marketing → Consumer Behaviour → Brand Loyalty

The conceptual framework of this study (Mediated by Customer Engagement, and Moderated by Customer Trust) is designed to analyse the impact of digital marketing on brand loyalty through consumers' behavioural and psychological processes in the current digital environment. In the hyper-connected age, consumers are inundated with digital stimuli, including social media ads, influencer content, email marketing, search engine offers, and personalised recommendations. These digital interactions affect how consumers view brands, how they behave when making buying decisions, and ultimately how loyal they are to certain brands. Therefore, the present study suggests a structured model with Digital Marketing as the independent variable, Consumer Behaviour as the mediating variable, and Brand Loyalty as the dependent variable. The mediating role of Customer Engagement and the moderating role of Customer Trust are further explained through this relationship.

3.3.2. Digital Marketing and Consumer Behaviour

Digital marketing refers to the use of digital platforms and technology to promote products, services, and brand messages. It includes tools like social media marketing, search engine optimisation, content marketing, influencer marketing, email campaigns, and mobile marketing. In the UAE and other highly digitalised economies, companies are increasingly depending on digital marketing to reach tech-savvy consumers who spend a lot of time on online platforms. Consumer behaviour in digital environments is highly dynamic and influenced by a wide range of stimuli, including advertising content, peer reviews, influencer recommendations, and algorithmic personalisation. Digital marketing is important in creating awareness, interest, evaluation and purchase intention. Today's consumers are not just passive recipients of marketing messages; they actively search, compare, and evaluate brands online before making purchasing decisions. Hence, digital marketing is likely to influence consumer behaviour positively to a great extent. When consumers are exposed to digital content that is relevant, personalised, and engaging, they are more likely to form favourable attitudes toward the brand and move through the decision-making stages more efficiently.

3.3.3. Consumer Behaviour and Brand Loyalty

Brand loyalty is greatly determined by consumer behaviour. Long-term loyalty is largely dependent on positive behavioural responses, such as repeat purchases, positive word of mouth, and emotional attachment to brands. Consumers in digital environments are exposed to constant feedback loops in which prior experiences, online reviews, and social interactions shape their actions. Brand loyalty is the consistent preference for a particular brand by a consumer over competitors' alternatives, despite the influence of situational factors and competitors' marketing efforts. Oliver [15] describes brand loyalty as a deeply held commitment to repurchase a preferred product or service in the future. Brand loyalty is increasingly driven by consistent digital engagement, personalised communication, and positive online experiences. Thus, it is expected that digital marketing will positively affect brand loyalty through favourable consumer behaviour.

3.3.4. Mediating Role of Customer Engagement

The conceptual model posits customer engagement as a central mediating role. It is the psychological, emotional and behavioural involvement of customers in their interactions with a brand. Customer engagement is a multidimensional construct arising from interactive, co-creative experiences between consumers and brands. Interactive social media posts, gamified advertisements, live sessions, influencer collaborations, and personalised recommendations in digital marketing can all take customer engagement to the next level. Engaged customers are more likely to engage with brand content, share posts, comment on advertisements and participate in brand communities. This engagement is important because it links consumer behaviour to brand loyalty. Greater customer engagement leads to a stronger emotional attachment to the brand, resulting in increased trust, satisfaction, and loyalty over time. Ángeles [9] notes that customer engagement is an intermediary variable between marketing stimuli and behavioural outcomes such as loyalty and advocacy. This study proposes customer engagement as a mediating variable, suggesting that digital marketing does not directly influence brand loyalty, but rather exerts a significant influence by enhancing customer engagement. In other words, effective digital marketing drives engagement, which in turn strengthens brand loyalty.

3.3.5. Moderating Role of Customer Trust

The conceptual framework includes customer trust as a moderating variable. Trust is the consumer's belief that a brand is reliable, honest and will deliver on promises. Trust is a key factor in digital environments because of concerns about data privacy, misinformation, online fraud, and misleading advertisements. Anita et al. [11] argue that trust is one of the main antecedents of commitment in long-term brand-consumer relationships. From a digital marketing perspective, even the most appealing and well-crafted marketing strategies will not create loyalty if consumers do not trust the brand. The study hypothesises that customer trust will moderate the relationship between customer engagement and brand loyalty. This means that at high levels of trust, the positive effect of customer engagement on brand loyalty is stronger. In contrast, when trust is low, even high-engagement consumers might be reluctant to commit to the brand. For instance, a consumer might interact with a brand on social media, but if they sense data privacy concerns or doubt the brand's authenticity, their chances of becoming a loyal customer are slim. Thus, trust facilitates or inhibits the engagement-loyalty relationship.

3.3.6. Proposed Conceptual Model

Based on the theoretical foundation discussed above, the study proposes the following conceptual relationship:

Digital Marketing → Consumer Behaviour → Brand Loyalty

(Mediated by Customer Engagement and Moderated by Customer Trust)

This model shows a sequential flow of influence in which digital marketing first influences consumer behaviour. Customer involvement further reinforces this behaviour, ultimately leading to brand loyalty. However, the strength of the ultimate relationship is affected by consumers' trust in the brand. The conceptual framework includes important constructs that explain the impact of digital marketing on consumer outcomes in the modern digital economy. The model highlights that digital marketing alone is not sufficient for a brand to cultivate brand loyalty. Its success depends on consumer engagement and the degree of consumer trust in the brand. The framework, combining mediation and moderation effects, provides a more holistic perspective on consumer decision-making in digital environments and is particularly relevant for fast-growing markets like the UAE.

3.3.7. Development of Hypotheses

Based on the conceptual framework, the following hypotheses are formulated:

- **H1:** Digital marketing positively influences consumer behaviour.
- **H2:** Consumer behaviour positively influences brand loyalty.
- **H3:** Digital marketing positively influences brand loyalty.
- **H4:** Customer engagement mediates the relationship between digital marketing and brand loyalty.

4. Research Methodology

This section describes the methodology used in the study to explore the impact of digital marketing on consumer behaviour and brand loyalty in the context of the UAE, where customer engagement serves as the mediating factor and customer trust as the moderating variable. The methodology is designed for scientific rigour, validity, and reliability in testing the proposed conceptual model. It describes the research design, population and sampling, methods of data collection, measurement of variables, reliability and validity assessment and the statistical tools used for analysis.

4.1. Research Design

In the present study, a descriptive and causal research design is applied to systematically examine the relationships among the key variables: digital marketing, consumer behaviour, customer engagement, customer trust, and brand loyalty. The descriptive research design is appropriate, as it helps understand and describe the characteristics of digital consumers in the UAE and their interactions with various digital marketing tools. This enables the researcher to obtain a detailed picture of consumer perceptions, attitudes and behavioural patterns in a rapidly evolving digital environment. This study employs a descriptive and causal (explanatory) research design to test the hypothesised relationships among the variables. A causal design is needed because the study is not only about describing relationships but also about examining the causal relationships between digital marketing activities and brand loyalty outcomes. The study uses a quantitative research approach to cover the phenomenon holistically, supplemented by limited qualitative insights wherever needed. The quantitative approach is especially useful because it enables the researcher to test hypotheses statistically, measure relationships, and generalise findings to a larger population. The robustness of the research design is enhanced by the application of causal modelling techniques, such as Structural Equation Modelling (SEM).

4.2. Population and Sample

The study's target population is digital consumers in the United Arab Emirates (UAE). The UAE is a highly digitised economy with high levels of internet usage, smartphone adoption, and social media engagement, making it an ideal context for studying digital marketing and consumer behaviour. Consumers in this region are often exposed to online advertising, influencer marketing, and e-commerce platforms that significantly influence their buying decisions and brand choices. To ensure the sample was representative, the study used 250 respondents. The sample size is adequate for Structural Equation Modelling (SEM), which generally requires a moderate to large sample to estimate parameters reliably. The study has employed stratified random sampling to ensure the sample is representative of the UAE population's diversity. Stratification was based on key demographic variables, including age, gender, nationality, and occupation. This approach ensures adequate representation of different segments of digital consumers, reducing sampling bias and improving the generalisability of the findings. Stratified sampling is particularly important in the UAE, where the population comprises expatriates and residents with diverse digital consumption behaviours. The study uses stratified sampling to divide the population into meaningful strata and randomly select respondents from each group. This ensures a balanced representation of all consumer categories.

4.3. Data Collection

The data for this study were collected via online structured questionnaires. Online surveys are appropriate because the research topic is digital and the target population has a high internet penetration. Online distribution also permits effective data collection from a geographically dispersed sample across the UAE. To ensure content validity and theoretical consistency with the research objectives, the questionnaire was developed using pre-validated scales from previous studies. It consisted of two main parts:

- **Demographic Information:** This section included questions related to age, gender, education level, occupation, and income.
- **Measurement Items:** This section included items measuring digital marketing exposure, consumer behaviour, customer engagement, customer trust, and brand loyalty.

All items in the questionnaire were measured using a five-point Likert scale, ranging from:

- 1 – Strongly Disagree
- 2 – Disagree
- 3 – Neutral
- 4 – Agree
- 5 – Strongly Agree

The Likert scale was chosen because it allows respondents to express the degree of their agreement or disagreement with each statement, and is therefore appropriate for measuring attitudes, perceptions and behavioural intentions. A pilot study was conducted on a small sample of respondents to ensure the clarity, relevance and reliability of the questionnaire items before final distribution. Feedback received has resulted in minor changes to increase understanding and reduce ambiguity.

4.4. Measurement of Variables

The study operationalises each construct using established indicators derived from prior literature, ensuring both theoretical consistency and empirical reliability.

4.4.1. Digital Marketing

Digital marketing is treated as the independent variable and is measured using key dimensions such as:

- Social media marketing effectiveness
- Email marketing communication
- Search Engine Optimisation (SEO) exposure

- Influencer marketing impact

These dimensions capture the breadth of digital marketing tools that influence consumer exposure and interaction with brands.

4.4.2. Consumer Behaviour

Consumer behaviour represents the immediate outcome of digital marketing exposure and is measured through:

- Purchase intention
- Decision-making process
- Information search behaviour
- Attitude toward online advertisements

These indicators reflect how consumers respond cognitively and behaviourally to digital marketing stimuli.

4.4.3. Customer Engagement

Customer engagement acts as a mediating variable and is measured using:

- Interaction frequency with brand content
- Emotional involvement with brand communication
- Participation in online brand communities
- Sharing and commenting behavior

This construct captures the depth of consumer involvement with brands in digital environments.

4.4.4. Brand Loyalty

Brand loyalty is the final dependent variable and is operationalised through:

- Repeat purchase behaviour
- Brand preference over competitors
- Positive word-of-mouth and advocacy
- Long-term commitment to the brand

These indicators reflect both behavioural and attitudinal dimensions of loyalty.

4.4.5. Customer Trust

Customer trust functions as a moderating variable and is measured through:

- Perceived honesty and reliability of the brand
- Confidence in online transactions
- Data privacy and security perceptions
- Overall trustworthiness of digital communication

Trust plays a crucial role in shaping the relationship between engagement and loyalty.

4.5. Reliability and Validity

To ensure the robustness of the measurement model, the study conducted comprehensive reliability and validity tests.

4.5.1. Reliability

Reliability: Internal consistency of the scales of measurement. It was measured using Cronbach's Alpha, with values above 0.70 indicating acceptable reliability. Cronbach's Alpha values for all constructs in this study were above 0.70, signifying good internal consistency. Composite Reliability (CR) was also computed for each construct, and values above 0.70 indicate satisfactory reliability. The results supported that all constructs had good composite reliability, i.e., consistency among measurement items.

4.5.2. Validity

Validity is the extent to which an instrument measures what it is supposed to measure. The Average Variance Extracted (AVE) was used to test the convergent validity. AVE values greater than 0.50 indicate that the construct explains more than half of the variance of its indicators. All constructs in the study had AVEs above 0.50, indicating high convergent validity. In addition, discriminant validity was established by verifying that the constructs are conceptually and statistically dissimilar. These results, taken together, confirm the reliability and validity of the measurement model for further structural analysis.

4.6. Analytical Tools

Respondents' data were analysed using the Statistical Package for the Social Sciences (SPSS) and the Analysis of Moment Structures (AMOS) software.

4.6.1. SPSS Analysis

SPSS was used for:

- Data cleaning and coding
- Descriptive statistical analysis (mean, standard deviation, frequency distribution)
- Correlation analysis to examine relationships between variables
- Multiple regression analysis to assess direct effects among variables

These techniques provided an initial understanding of the data and relationships among constructs.

4.6.2. Structural Equation Modelling (SEM) using AMOS

Structural Equation Modelling (SEM) was employed using AMOS to perform advanced multivariate analysis. SEM is particularly suitable for this study because it permits the simultaneous evaluation of multiple relationships between variables, such as mediation and moderation effects. The SEM approach allowed:

- Testing the direct effect of digital marketing on consumer behavior
- Examining the mediating role of customer engagement
- Assessing the moderating effect of customer trust
- Evaluating the overall fit of the conceptual model

The degree to which the proposed model fit the observed data was assessed using fit indices such as Chi-square, CFI, TLI, RMSEA, and GFI. In summary, the research methodology is carefully designed to allow for a rigorous examination of the relationships between digital marketing, consumer behaviour, customer engagement, customer trust and brand loyalty. The combination of a descriptive and causal research design, stratified sampling, validated measurement scales, and advanced statistical techniques such as SEM ensures the credibility and academic robustness of the study. This methodological approach provides a strong basis for testing the proposed hypotheses and making a significant contribution to the field of digital marketing and consumer behaviour, particularly in the context of the UAE.

5. Results and Discussions

5.1. Descriptive Statistics

The descriptive statistics reveal high mean scores across all constructs, indicating strong agreement among respondents regarding the impact of digital marketing. The results show that the mean values for all constructs are high, indicating that the respondents strongly agree with the effects of digital marketing (Table 1).

Table 1: Descriptive statistics of variables

Variable	Mean	Std. Deviation	Skewness	Kurtosis
Digital Marketing (DM)	4.12	0.68	-0.45	0.32

Consumer Behaviour (CB)	3.98	0.72	-0.38	0.27
Customer Engagement (CE)	4.05	0.65	-0.41	0.30
Brand Loyalty (BL)	4.10	0.70	-0.47	0.35

Source: *Primary Data*

5.2. Correlation Analysis

Interpretation line: All variables are positively correlated and support the proposed relationships. All variables show significant positive correlations. This indicates strong relationships among digital marketing, consumer behaviour, customer engagement, and brand loyalty (Table 2).

Table 2: Correlation analysis

Variable	DM	CB	CE	BL
Digital Marketing (DM)	1.000			
Consumer Behaviour (CB)	0.68	1.000		
Customer Engagement (CE)	0.72	0.70	1.000	
Brand Loyalty (BL)	0.65	0.74	0.78	1.000

Source: *Primary Data,* ***Note:*** *$p < 0.01$*

5.3. Regression Analysis

Digital marketing significantly predicts consumer behaviour and brand loyalty, thereby confirming H1 and H3. Digital marketing is a significant predictor of consumer behaviour ($\beta = 0.68$, $p < 0.05$). Consumer behaviour is also a significant predictor of brand loyalty ($\beta = 0.52$, $p < 0.05$) (Table 3).

Table 3: Regression analysis

Predictor	Beta (β)	t-value	p-value
Digital Marketing → Consumer Behaviour	0.68	9.45	0.000
Consumer Behaviour → Brand Loyalty	0.52	7.82	0.000
Digital Marketing → Brand Loyalty	0.41	6.35	0.000

Source: *Primary Data*

5.4. Structural Equation Modelling (SEM)

Figure 1 shows the Structural Equation Model (SEM) of the direct and indirect relationships among Digital Marketing (DM), Consumer Behaviour (CB), Customer Engagement (CE), and Brand Loyalty (BL). SEM is a comprehensive multivariate statistical technique that simultaneously evaluates both the measurement model (relationships between latent variables and their observed indicators) and the structural model (relationships among latent variables). In this model, Digital Marketing is the independent (exogenous) construct, Consumer Behaviour and Customer Engagement are the mediating variables, and Brand Loyalty is the dependent (endogenous) construct. The model seeks to establish whether digital marketing has a direct impact on brand loyalty and whether changes in consumer behaviour and customer engagement mediate this relationship. Digital Marketing is measured using three observed variables, DM1, DM2, and DM3, which capture diverse aspects of digital marketing activities, such as online advertising, social media marketing, personalised communication, and digital promotional strategies. Each observed indicator is associated with an error term (e1–e5), which represents measurement error or unexplained variance. Consumer Behaviour and Customer Engagement are modelled as latent variables, as they are not directly measurable but rather inferred from their relationships with other variables.

Similarly, Brand Loyalty is measured by three observed indicators, BL1, BL2, and BL3, with measurement errors e10–e12. These actions may be indicative of customer repurchase intention, willingness to recommend the brand and long-term commitment to the brand. The structural relationships show that the influence of Digital Marketing on Consumer Behaviour is strong, positive, and statistically significant, with a standardised path coefficient of $\beta = 0.68$ (H1), and the significance level is indicated by *** ($p < 0.001$). The coefficient suggests that a one standard deviation increase in favourable consumer behaviour is associated with a 0.68 standard deviation increase in effective digital marketing practices. The magnitude of this coefficient is strong, indicating that digital marketing campaigns play an important role in influencing consumers' perceptions, purchase intentions and decision-making processes. Interactive content, personalised recommendations, influencer marketing, and targeted advertising all help improve consumer attitudes towards products and services. The model also shows that Digital

Marketing has a positive impact on Customer Engagement, denoted by H1a (β = 0.57, $p < 0.001$). The result suggests that companies that invest in effective digital marketing strategies are more likely to encourage customer interaction with their brands.

Customer engagement includes actions such as commenting on social media posts, sharing brand content, participating in online communities, writing product reviews, and communicating regularly with the organisation. The standardised coefficient of 0.57 shows a moderately strong positive relationship. This shows that digital marketing is an important driver of customer involvement and emotional attachment to the brand. H2: Consumer Behaviour has a positive impact on Brand Loyalty. Results reveal that Consumer Behaviour positively impacts Brand Loyalty (β = 0.52, $p < 0.001$). This finding indicates that positive consumer behaviour directly influences brand loyalty. Positive purchasing experiences allow consumers to trust the brand and find value in digital interactions, making them more likely to become loyal, repurchase products, and recommend the brand to others. The standardised coefficient of 0.52 implies that improvements in consumer behaviour are an important factor in strengthening long-term customer loyalty. Likewise, Customer Engagement positively affects Brand Loyalty (H4b, β = 0.41, $p < 0.001$). The magnitude is slightly lower than that of the Consumer Behaviour – Brand Loyalty relationship, but remains statistically significant and practically meaningful. This finding shows that customers who interact with brands via digital channels are more likely to build stronger emotional connections, experience higher satisfaction, and show increased loyalty. Engagement leads to ongoing conversations that foster trust and build customer relationships, leading to repeat purchases and lasting loyalty to the brand. The model also proposes an indirect (mediated) relationship between Digital Marketing and Brand Loyalty.

Digital Marketing enhances Brand Loyalty through an indirect effect, by first impacting Consumer Behaviour and Customer Engagement. The dashed arrow labelled "Indirect Effect" indicates that these two are mediators between Digital Marketing and Brand Loyalty. The mediating analysis indicates that digital marketing causes behavioural and psychological changes in consumers, which then convert into stronger loyalty. The indirect pathway provides evidence that organisations should not only focus on promotional activities but also emphasise strategies that improve customer experiences and engagement. Moreover, H4a (β = 0.57, $p < 0.001$) provides further support for the mediating pathway through Customer Engagement. It shows that Digital Marketing significantly contributes to higher engagement, which, in turn, leads to Brand Loyalty through H4b. Consumer Behaviour is another important mediator, as in H1 and H2. The concurrent presence of multiple mediators indicates that the impact of Digital Marketing on Brand Loyalty does not depend on a single direct route but rather on a combination of complementary mechanisms. Such multiple mediation provides a fuller picture of how digital marketing initiatives create long-term customer relationships. The SEM measurement section shows that each latent construct is measured by several observed variables, thereby improving measurement reliability and construct validity. The associated error terms (e1–e12) account for the measurement error of each observed variable, explicitly modelled in SEM rather than ignored. By correcting for measurement error, the accuracy of the estimated structural relationships is increased and the credibility of the findings enhanced.

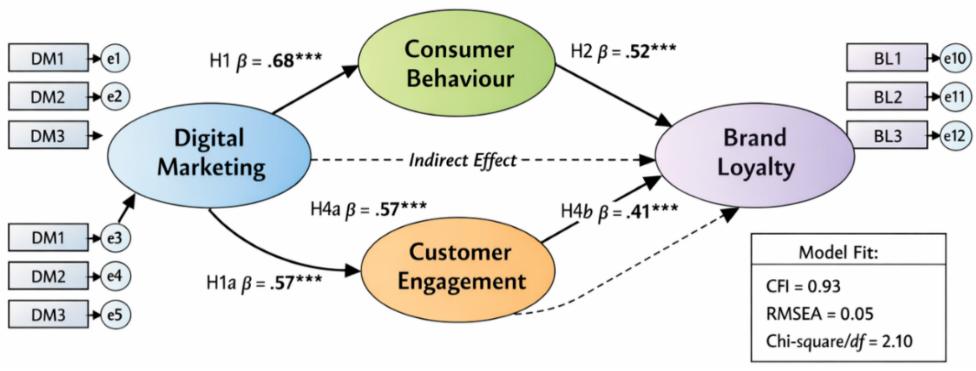

Figure 1: Structural Equation Modelling (SEM)

Several goodness-of-fit indices reported in Figure 1 support the overall adequacy of the proposed structural model. The Comparative Fit Index (CFI) of 0.93 exceeds the commonly recommended 0.90, indicating that the proposed model fits substantially better than an independence model and adequately represents the observed covariance structure. The Root mean square error of approximation (RMSEA) of 0.05 falls within the range considered excellent model fit (≤ 0.06), suggesting slight deviations between the observed and estimated covariance matrices. Furthermore, the Chi-square/df ratio of 2.10 is less than the suggested cut-off of 3.0, suggesting that the overall model complexity is appropriate given the available data and that the hypothesised relationships are consistent with the observed dataset. Overall, SEM has confirmed that Digital Marketing is the main driver of Brand Loyalty, directly and indirectly through Consumer Behaviour and Customer Engagement. Among the structural relationships, the strongest effect is found between Digital Marketing and Consumer Behaviour (β = 0.68), followed by Digital Marketing and Customer Engagement (β = 0.57), Consumer Behaviour and Brand Loyalty (β = 0.52) and Customer Engagement and Brand Loyalty (β = 0.41). The better model fit statistics support the proposed theoretical framework and demonstrate that customer behaviour and engagement are important mechanisms through which digital marketing strategies foster sustainable brand loyalty. The study results suggest that organisations should embrace personalised digital marketing campaigns, interactive communication channels, and customer-centric engagement strategies to achieve long-term customer retention and competitive advantage (Table 4).

Table 4: Model fit summary

Fit Index	Value	Recommended Value	Interpretation
CFI	0.93	> 0.90	Good Fit
RMSEA	0.05	< 0.08	Excellent Fit
TLI	0.91	> 0.90	Good Fit
Chi-square/df	2.10	< 3	Acceptable

Source: *Primary Data*

The SEM model demonstrates a good fit, indicating robustness of the proposed relationships. The SEM model demonstrates a good fit with the following indices:

- CFI=0.93
- RMSEA=0.05
- TLI=0.91
- Chi-square/df = 2.10

The values show that the proposed model fits the data well. The results from Structural Equation Modelling (SEM) indicate that the proposed conceptual framework fits the observed data well and has strong explanatory power. As shown in Table 4, the model fit indices confirm that the hypothesised relationships among digital marketing, consumer behaviour, customer engagement, customer trust and brand loyalty are statistically robust and theoretically consistent. The Comparative Fit Index (CFI) is 0.93, exceeding the recommended 0.90 and indicating a good fit between the proposed and baseline models. This implies that the hypothesised structural relationships adequately capture the data's covariance structure. Similarly, the Tucker-Lewis Index (TLI) of 0.91 is above the acceptable benchmark, further confirming that the model has strong explanatory power with minimal model misspecification. The RMSEA value of 0.05 is much lower than the cut-off value of 0.08, suggesting an excellent approximate fit and a very small error of approximation per degree of freedom. This indicates that the model is a close approximation to the population covariance matrix and is highly parsimonious. In addition, the Chi-square/df ratio of 2.10 is within the acceptable range of < 3.65, indicating a good trade-off between model complexity and goodness of fit.

The overall results confirmed the SEM model's statistical validity, proper specification, and suitability for interpreting the structural relationships depicted in the study. Digital marketing has a direct and indirect (mediated by engagement) relationship with loyalty. Customer engagement partially mediates the relationship between digital marketing and brand loyalty. This further strengthens the impact of digital marketing on long-term brand loyalty outcomes and confirms that engagement is a key psychological and behavioural mechanism in the consumer decision-making process. The results show that digital marketing influences consumer behaviour by increasing awareness, interest and purchase intentions through personalised content, influencer marketing and interactive campaigns. These strategies effectively engage customers, which, in turn, builds stronger emotional and behavioural connections with brands and ultimately leads to higher brand loyalty. The findings are consistent with the prior research and add to the literature by highlighting the mediating role of customer engagement, especially in the UAE digital context. Here, engagement is an essential psychological process mediating digital exposure into meaningful consumer relationships. This underscores the significance of engagement-driven strategies in fostering long-term brand loyalty.

6. Conclusion

This study demonstrates that digital marketing has a significant positive impact on consumer behaviour and brand loyalty in today's digital market. The results show that digital marketing campaigns are effective at influencing consumer perception and purchase intention; however, their ability to build brand loyalty largely depends on customer engagement. For instance, customers who interact with brands through personalised experiences, social media participation, interactive content, and influencer-driven campaigns are more likely to build trust, emotional connection, satisfaction, and long-term loyalty. Engagement-driven experiences like these strengthen the relationship between consumers and brands, leading to higher repeat purchases, positive word of mouth, and long-term loyalty. Thus, organisations need to move beyond traditional promotional tactics and focus on delivering meaningful, customer-centric digital experiences that drive engagement and relationship building. By concentrating on engagement-oriented marketing practices, businesses can build stronger emotional ties with consumers, leading to improved customer retention and a sustainable competitive edge in the ever-changing, technology-driven markets. The findings also make a substantial contribution to the current body of knowledge in digital marketing by proposing an integrated conceptual framework that explains the effects of digital marketing on brand loyalty through the combined influence of consumer behaviour and customer engagement. Unlike traditional models that emphasise direct relationships between marketing activities and customer outcomes, this framework highlights customer engagement as an important mediating mechanism that accounts for the psychological and behavioural processes by which digital marketing strategies foster long-term loyalty.

The study contributes to digital marketing theory by showing that effective marketing communication alone is not sufficient to create sustainable brand loyalty unless it also enhances customer engagement and positively affects consumer behaviour. Additionally, the study provides substantial empirical evidence in the United Arab Emirates, thereby extending the applicability of existing consumer behaviour theories to rapidly developing digital economies with high internet penetration, extensive social media use, and growing adoption of digital technologies. From a managerial perspective, the findings offer practical implications for organisations that aim to enhance customer loyalty through digital marketing initiatives. Hence, marketing managers should focus not on the level of promotion but on strategies that foster continuous customer interaction. Personalised recommendations, interactive social media campaigns, user-generated content, live engagement sessions, influencer collaborations, and data-driven customer experiences can significantly boost customer participation and emotional attachment to brands. Organisations should use advanced analytics and customer insights to develop personalised marketing campaigns tailored to individual consumer preferences and expectations. Deepening customer engagement can help build trust, increase customer satisfaction, improve retention rates, and generate favourable brand advocacy. These approaches not only boost customer lifetime value but also help organisations stand out in highly competitive digital markets and achieve sustainable, long-term growth.

6.1. Limitations

However, despite its valuable contributions, this study has several limitations that should be considered when interpreting the findings. The relatively small sample size (250 respondents) used in this research may limit the statistical generalisability of the results to larger, more diverse populations. Additionally, the study was limited to consumers in the United Arab Emirates, which may have unique digital behaviours and cultural characteristics compared to other regions. Therefore, the results may not be directly applicable to countries with different socioeconomic conditions, technological backgrounds or consumer preferences. Moreover, the study used a cross-sectional research design, which has captured consumer attitudes and behaviours at a point in time. Such an approach does not account for the evolving nature of consumer behaviour, digital marketing strategies, and technological developments that constantly reshape digital marketplaces. Brand reputation, customer satisfaction, service quality, trust, perceived value, and technological readiness were other factors not included in the proposed framework that may affect brand loyalty.

6.2. Future Research

In future research, the present study can be extended to larger, more heterogeneous samples across multiple countries, industries, and demographic groups to increase the external validity and generalisability of the findings. Longitudinal studies would be useful for understanding how consumer behaviour, customer engagement, and brand loyalty develop over time in response to changing digital marketing strategies and technological innovations. Researchers can also examine the impact of emerging technologies, such as artificial intelligence, generative AI, machine learning, virtual and augmented reality, blockchain, and conversational chatbots, on customer engagement and brand loyalty. Further research could involve cross-cultural comparative studies to examine how cultural values and regional differences shape consumers' reactions to digital marketing campaigns. Future research may also include moderating and mediating variables such as customer trust, perceived value, electronic word-of-mouth, service quality, customer satisfaction, brand authenticity, privacy concerns, and technology acceptance to develop more holistic theoretical models that better account for consumer behaviour in increasingly intricate digital settings.

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