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FROM WEB2 TO WEB3: STRATEGIC TRANSFORMATION OF DIGITAL MARKETING USING BLOCKCHAIN TECHNOLOGY

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Abstract

This study aimed to examine the role of blockchain technology in transforming digital marketing within the emerging Web3 environment, with a specific focus on its impact on consumer trust and marketing efficiency. The research primarily investigated the relationship between blockchain technology as the independent variable and digital marketing transformation as the dependent variable, while also considering consumer trust and marketing efficiency as key outcome variables. A quantitative research design was adopted, and data were collected from 250 respondents, including digital platform users and marketing professionals, using a structured questionnaire based on a 5-point Likert scale. Statistical analyses, including reliability, correlation, and regression, were conducted to test the proposed hypotheses and evaluate the relationships among variables. The findings revealed that blockchain technology had a significant positive impact on digital marketing transformation ($\beta = 0.68$, $p < 0.001$) and consumer trust ($\beta = 0.72$, $p < 0.001$). Digital marketing transformation significantly influenced marketing efficiency ($\beta = 0.70$, $p < 0.001$). The results also indicated that consumer trust played a mediating role in enhancing marketing efficiency, highlighting the importance of transparency and data security in digital environments. The study provides practical implications for organizations by emphasizing the adoption of blockchain-based marketing systems to improve transparency, reduce operational inefficiencies, and strengthen consumer trust. It also highlights the strategic importance of decentralized platforms in shaping the future of digital marketing.

Keywords: Blockchain Technology, Consumer Trust, Decentralization, Digital Marketing, Web3

1. Introduction

The unprecedented development of digital technologies has radically changed the environment of marketing and transferred it to the model of highly interactive, data-driven ecosystems. Web2 also became a major step toward this change, providing user-created content, social platforms, and custom marketing, that further stimulated consumer engagement and brand interaction (Sharma, 2025; Tan, 2024). Web2 digital marketing is most often described as a form of marketing that is more centralized in control, with large platform providers controlling the data, content distribution, and monetization processes. Such centralization has brought up the issue of data privacy, transparency, and consumer trust, causing an increasing amount of criticism of the current digital marketing models (Xiangjuan, 2025; Wan et al., 2023).

The concept of Web3 has surfaced in reaction to these difficulties as the new stage in internet development, proposing a new type of the digital ecosystem that is decentralized and driven by blockchain technology. Web3 seeks to put the power in users by allowing users to interact in a peer-to-peer manner via peer-to-peer interactions, distributed data management, and transparent transaction systems (Huang et al., 2023; Thomason, 2026). The blockchain that is the basic technology of Web3 enables the storage of data in a

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secure, transparent, and immutable format, thus eliminating most of the shortcomings of Web2. It is anticipated that the shift to decentralized models will restructure the marketing techniques through making them more accountable, more secure with data, and more connected between the consumer and the brand (Tan, 2024; López Rodríguez, 2025).

This change of paradigm is more pronounced in the context of digital marketing campaign where organizations are starting to realize the importance of keeping pace with changing technological landscapes. The blockchain technology will provide marketers with new opportunities to develop trust-based ecosystems, enhance the integrity of data and facilitate new engagement models, including tokenization and decentralized applications (Rejeb et al., 2020; Frizzo-Barker et al., 2020). It is assumed that the use of blockchain in marketing activities will increase operational efficiency and avoid the involvement of intermediaries, thus changing the overall process of value creation (Sharma, 2025; Xiangjuan, 2025).

1.1 Blockchain Technology

Blockchain technology is an irreversible and decentralized distributed registry that documents transactions among several nodes, which makes the information safe, impartial, and inseparable. Decentralization is one of the fundamental characteristics of blockchain as it does not require the presence of centralized authorities and opens the opportunities of peer-to-peer interactions without intermediaries (Wan et al., 2023). Such decentralization plays a critical role in the redefinition of trust mechanisms within the digital setting since users are in control of their data and digital identities.

Transparency and imminence is another important feature of blockchain. A blockchain allows transactions to be visible to all parties and cannot be changed once verified, meaning the data is accountable and intact (Rodriguez, 2025; Sanghvi et al., 2026). These attributes are especially appreciable in online marketing where frauds in advertising, manipulation of data, and transparency have been a thorn in the flesh.

Smart contracts are self-executing programs that can automatically enforce pre-established conditions and are made possible by blockchain, which does not require any intermediaries. Smart contracts are relevant in the marketing context because they are used to perform transactions more cheaply, offer greater operational efficiency, and achieve automation, which is important when automated payments, loyalty programs, and even making digital advertisements more responsible are involved (Bottoni et al., 2020).

1.2 Digital Marketing Transformation

The Web2 strategies used in digital marketing have been largely platform-centric, meaning that the firms depend on intermediaries, who are the social media platforms, search engines, and online marketplaces. Digital literacy is the need of era (Rafiq-uz-Zaman, 2023), therefore, digital literacy is the key of digital marketing. These platforms manipulate user information, advertising platforms, and algorithmic exposure, which tends to create unequal power relationships between businesses and consumers (Tan, 2024). Web2 marketing has presented the option of personalization and targeted advertising, it has brought along with it some major limitations.

The problem of data privacy is one of the significant constraints of Web2 digital marketing. Consumers are also worried about how their personal data is gathered, stored and utilized by enterprises and this has led to reduction in trust and heightened regulation (Xiangjuan, 2025). Consumer trust is also compromised by the fact that the processes of advertising are not very transparent, i.e., there are obscure algorithms and other unclear data practices.

The ineffectiveness of the existing marketing systems is another burning problem, according to which various intermediaries inflate expenses and decrease the efficiency of the campaign. These problems emphasize the necessity of a switch in the digital marketing strategies. Web3 solutions based on blockchain can present an alternative that is promising as it allows creating a decentralized, transparent, and trust-based marketing ecosystem (Ilyas, 2024).

1.3 Problem Statement

The structural limitations and inefficiencies are still there as the development of Web2 digital marketing is significant. The digital ecosystem remains largely dependent on centralized platforms that restrict control by both the business and consumers. Breach of data, a lack of transparency, and decreased confidence in digital communication are some of the problems that have arisen with this centralized control. Lack of clear

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and verifiable programs in online marketing causes issues like fraud of advertisements, false and misleading indicators of performance, and imprecise targeting tactics. Not only do these inefficiencies raise the cost of operation, but also adversely affect the establishment of genuine consumer-brand relationships. The need to find new solutions which can solve these issues is increasing. The proposed solution of blockchain technology is the ability to have decentralized transparent and secure marketing systems. Utilization of blockchain in digital marketing is at a tender age and the effectiveness of blockchain in changing marketing approach is not greatly researched empirically. Such an empty space shows that more research is needed on the ability of blockchain to improve the performance of digital marketing, specifically in consumer trust and marketing efficiency.

1.4 Objectives of the Study

1. Analyse the impact of blockchain technology on digital marketing transformation
2. Examine the relationship between blockchain adoption and consumer trust
3. Evaluate the effect of blockchain on marketing efficiency
4. Provide insights into the strategic implications of Web3-based marketing

1.5 Research Questions

Q1. How does blockchain technology influence digital marketing transformation?
Q2. What is the impact of blockchain on consumer trust in digital marketing?
Q3. How does blockchain adoption affect marketing efficiency?
Q4. What are the key challenges and opportunities of Web3-based marketing?

1.6 Scope of the Study

This paper conferred to the shift of digital marketing strategies using blockchain technology in the Web3 context. It focuses mainly on the attitudes of digital platform users and marketers and highlights the most important variables, including the use of blockchain, consumer trust levels, and the effectiveness of marketing. The research is confined to quantitative research design and does not delve into the technical implementation side of the case.

1.7 Hypotheses

H1: Blockchain technology has a significant positive impact on digital marketing transformation.
H2: Blockchain technology positively influences consumer trust.
H3: Digital marketing transformation positively affects marketing efficiency.
H4: Consumer trust mediates the relationship between blockchain technology and marketing efficiency.

2. Literature Review

2.1 Overview of Web2 Digital Marketing Studies

The development of digital marketing in the Web2 age became a highly discussed topic in the academic literature, with the focus on user-generated content, social media interaction, and personalization based on the data. Web2 allowed companies to connect with their consumers online, which greatly improved their communication effectiveness and marketing strategies (Melnyk, 2024; Kumar and Brar, 2024). These channels are greatly dependent on centralized systems where organizations gather and process consumer information to come up with focused marketing programs. These capabilities have made traditional marketing a very dynamic and interactive process that enables firms to get maximum out of their campaigns and enhance customer engagement.

The digital marketing systems of Web2 have been denounced due to structural constraints inherent in the system. Dominant platforms have created imbalanced power distributions because users do not have sufficient control over their personal data since it is centralized (Köppelmann and Blask, 2024). The result of this concentrated power is the growing issues of data privacy, surveillance, and manipulation of algorithms, which eventually influence consumer trust and satisfaction. Research indicates that the use of third-party systems also exposes them to risks of data leakage and abuse of personal data. The integration of skill-based education is compulsory to fulfil the need of market regarding digital and social marketing, block chain services, use of technology in business, etc. (Rafiq-uz-Zaman, 2025).

The inefficient in Web2 marketing ecosystems, including ad fraud and lack of transparency, and reliance on intermediaries have also questioned its efficacy. The researchers shows that the lack of

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transparency of algorithms and advertising indicators decreases the validity of digital marketing performance (Chenn, 2024; Kumar and Brar, 2024). Web2 marketing has transformed communication, it is no longer up to the task of supporting the emerging demands of transparency, trust and data ownership in the digital economy.

2.2 Business Adoption of Blockchain.

Decentralized, and transparent systems, blockchain technology has attracted a lot of attention in the different industries. Blockchain, which was originally created to facilitate cryptocurrency transactions, has quickly moved into finance, healthcare, supply chain, and marketing, among other areas (Supraveen et al., 2025; Stallone et al., 2021). Its main characteristics such as decentralization, immutability and cryptographic security allow it to be a revolutionary technology in the contemporary business world.

Within the marketing context, the use of blockchain has been linked to transparency and increased consumer trust. It has been shown that blockchain can help resolve problems related to click fraud, data manipulation, and accountability deficit in online advertising (Supraveen et al., 2025; Rejeb et al., 2020). Blockchain ensures that all the marketing processes can be verified and trusted because of offering a ledger of transactions that cannot be tampered with, which can lead to increased consumer confidence in online platforms.

Blockchain helps to automatize business processes with the help of smart contracts that can help to minimize the costs of operations and exclude the use of intermediaries. The marketing efficiency has important implications because of this capability since the real-time transactions, automated payments, and enhanced data accuracy became possible (Stallone et al., 2021). Use of blockchain in marketing is still at an initial level, and issues like scalability, regulatory proxies and technical skills continue to impede its mass adoption.

2.3 Web3 and Decentralized Websites

Web3 is a paradigm shift in the form of decentralizing digital ecosystems based on blockchain technology and replacing centralized Web2. Web3 facilitates peer-to-peer communication, user control over data, and decentralization of administration, which is essentially changing the nature of how digital platforms work. This shift is likely to rebrand digital marketing by establishing more transparent, secure, and user-centric space.

Web3 applications use blockchain infrastructure to eradicate intermediaries and give users more control over their digital identities and assets. Such decentralization increases the sovereignty of data and eliminates the dependence on centralized authorities, which is why the majority of the drawbacks of Web2 marketing systems are addressed (Melnyk, 2024; Köppelmann and Blask, 2024). Web3 presents some new ideas like tokenization, decentralized applications (dApps), and non-fungible tokens (NFTs), which make it possible to engage consumers in new ways and create new values.

The use of Web3 is still emerging, and a number of challenges still exist. These are technological complexity, non-standardization and regulatory issues which can restrict its scalability and mainstream adoption. It has been shown that Web3 may have greater transparency and trust but its application in practice demands major improvements in infrastructure and governance systems. More empirical research is required to comprehend its overall effects on digital marketing strategies.

2.4 Gaps in the Current Research

Current literature offers great information about digital marketing and blockchain technology, but multiple gaps still exist. To begin with, the majority of papers are dedicated to theoretical debates but not the empirical confirmation of the effect of blockchain on the final results of digital marketing. Blockchain has the potential to increase transparency and trust, quantitative evidence supporting these assertions is limited.

Second, no research has been conducted to discuss the synergistic impact of blockchain technology, digital marketing transformation, and consumer-related outcomes, such as trust and efficiency. Most of the studies conduct analysis of these variables in isolation, without having to examine their relationships in a cohesive framework. The fields of Web3 marketing, decentralized platforms, and blockchain-based consumer interaction are the ones that are under researched. Recent literature also shows the additional research on the impact of these technologies on marketing strategies and the performance of business in real-life situations. These gaps need to be addressed to come up with a complete picture of the digital marketing transformation that is being driven by blockchain.

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2.5 Theoretical Framework

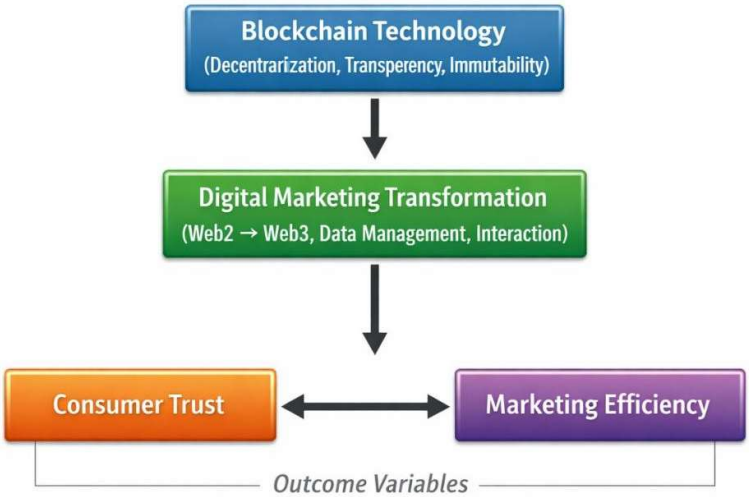
The theoretical framework of the proposed study is founded on the combination of blockchain technology in the digital marketing systems to promote consumer confidence and better marketing. The independent variable is the blockchain technology, which is the driving force of change in the digital marketing settings. Its characteristics, such as decentralization, transparency, and immutability, offer the grounds to transform the marketing processes and enhance data integrity.

The conceptualization of the digital marketing transformation is introduced as the dependent variable, which is the transition to the practices of decentralized Web 3-based systems of Web 2 marketing. The transformation is associated with the shift in the processes of data management, consumer interaction, and value creation through the implementation of blockchain technology. Research has indicated that such transformation results in more efficient, transparent and consumer-centric marketing systems.

Consumer trust and marketing efficiency are the outcome variables in this framework. The trust of consumers is likely to increase due to the increase in transparency and data protection provided by blockchain, and the efficiency of marketing is likely to go up because of automation and the decrease in the number of intermediaries. These connections are the foundation of the suggested hypotheses and give a systematic method of studying the effects of blockchain technology on the transformation of digital marketing.

Figure 1

Conceptual Framework Model



3. Research Methodology

3.1 Research Design

The paper uses a quantitative research design to assess the connection between blockchain technology and digital marketing transformation and its impacts on consumer trust and marketing efficiency. The quantitative method is suitable because it enables the measurement of variables and hypothesis testing to be performed systematically through the use of statistical methods. The research is deductive as hypotheses are created in accordance with the available theories and are verified empirically by means of the data gathered.

3.2 Population of the Sample

The study sample in this study will include users of digital platforms and marketing experts who are active users of online platforms like social media, e-commerce sites, and digital advertising platforms. These respondents will be chosen as they will have a firsthand experience on what digital marketing does and have a higher likelihood of being aware of the new technology like blockchain and Web3.

3.3 Sampling Technique

In this study, a convenience sampling method is used because of time and availability limitations. This type of non-probability sampling enables the researcher to sample and gather data of respondents that are readily available and ready to respond. Even though this method can reduce the external validity of the results,

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it is very popular in technology adoption and exploratory research studies.

3.4 Sample Size

The research makes use of the sample of 250 respondents, which is deemed adequate to perform the statistical tests of correlation, regression, and Structural Equation Modeling (SEM). This is a sufficient sample size that will give sufficient statistical power and increase the credibility of the results.

3.5 Data Collection Method

This study is done using a structured questionnaire. The questionnaire is developed according to the already tested measuring scales and is divided into two parts: the demographic and the questions on the variables of study. A questionnaire will help to collect data efficiently and provide a large number of respondents, as well as provide consistency in answers.

3.6 Measurement Scale

All variables in this study are measured using a 5-point Likert scale, where: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

3.7 Variables Measurement

Blockchain Technology (Independent Variable). The independent variable in this research is the Blockchain Technology. It is quantified in terms of major dimensions of decentralization, transparency, security, and smart contracts. The items examine the perceptions of the respondents on the role of blockchain to facilitate trust, minimize intermediaries, and secure transactions in digital marketing systems.

Digital Marketing Transformation (Dependent Variable). The dependent variable is regarded as Digital Marketing Transformation. It is an indication of how marketing activities have changed over the years because of the adoption of innovative technologies like blockchain. Such aspects of the measurement are decentralization, personalization, automation, and enhanced data management in marketing processes.

Consumer Trust. Consumer Trust is also a result variable and it is evaluated based on the confidence of the users on digital marketing systems. It deals with data privacy, transparency and reliability perceptions. The items measure the extent to which blockchain-based systems increase the confidence in the digital transactions and marketing operations.

Marketing Efficiency. Another outcome variable is Marketing Efficiency which determines how well and cost-effectively marketing activities are conducted. It encompasses factors like lowered operation expenses, enhanced accuracy in targeting, accelerated transactions and general performance enhancement due to the adoption of blockchain.

3.8 Data Analysis Techniques

Reliability Analysis. To determine the internal consistency of the measurement scales, the analysis of reliability is performed with the help of Cronbachs Alpha. The acceptable level of a Cronbachs Alpha of 0.70 or higher means that the items are consistent in measuring the intended constructs.

Correlation Analysis. The strength and direction of variables are analysed using correlation analysis in order to determine how strong and in which direction the relationship is. This discussion can assist in establishing whether blockchain technology has a considerable relationship with the transformation of digital marketing, consumer trust, and marketing efficiency.

Regression Analysis. The proposed hypotheses are tested with the use of regression analysis as the method of assessing the influence of the independent variable on dependent and outcome variables. It gives an idea of the importance and the scale of associations between the variables that are studied.

Structural Equation Modelling (SEM). The Structural Equation Modelling (SEM) can also be used optionally to test the overall research model and study complex relationships, including mediation effects. SEM allows to analyse many relationships simultaneously and give a complete validation of the theoretical framework.

4. Results and Analysis

4.1 Demographic Analysis

The demographic characteristics of the respondents were analysed to understand the composition of the sample in terms of gender, age, education, and occupation.

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Table 1

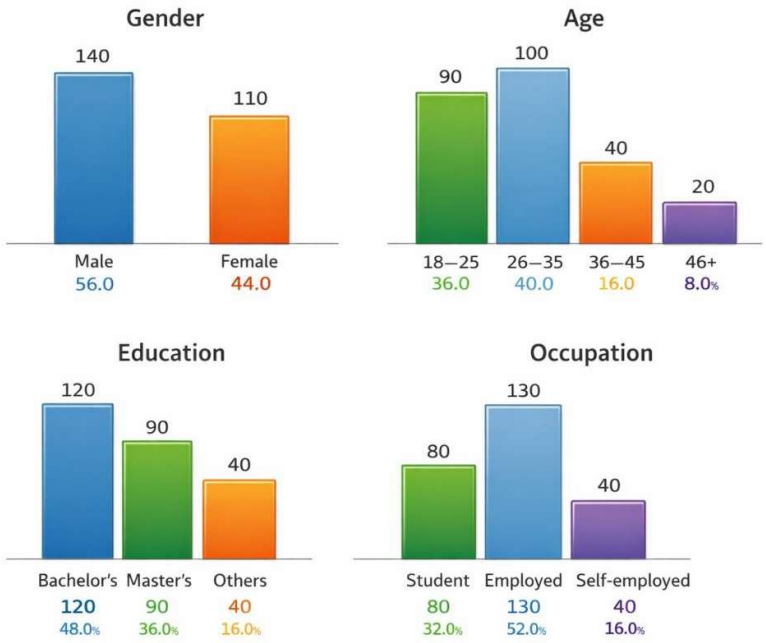
Demographic Profile of Respondents (n = 250)

Variable	Category	Frequency	Percentage (%)
Gender	Male	140	56.0
	Female	110	44.0
Age	18–25	90	36.0
	26–35	100	40.0
	36–45	40	16.0
	46+	20	8.0
Education	Bachelor's	120	48.0
	Master's	90	36.0
	Others	40	16.0
Occupation	Student	80	32.0
	Employed	130	52.0
	Self-employed	40	16.0

The results indicated that the majority of respondents were male (56%), while females accounted for 44% of the sample. This distribution suggested a relatively balanced representation, although male respondents slightly dominated the dataset. In terms of age, most participants belonged to the 26–35 age group (40%), followed by the 18–25 group (36%), indicating that the sample largely consisted of young and digitally active individuals. Regarding educational qualifications, a significant proportion of respondents held a bachelor's degree (48%), followed by those with master's degrees (36%). This indicated that the respondents were generally well-educated and capable of understanding advanced technological concepts such as blockchain and digital marketing systems. The presence of educated respondents enhanced the credibility of the collected data. The majority of respondents were employed (52%), followed by students (32%) and self-employed individuals (16%). This distribution demonstrated that the sample included individuals with practical exposure to digital platforms and marketing environments, making them suitable participants for the study.

Figure 2

Demographic Profile of Respondents



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4.2 Reliability Analysis

Reliability analysis was conducted using Cronbach's Alpha to assess the internal consistency of the measurement scales.

Table 2

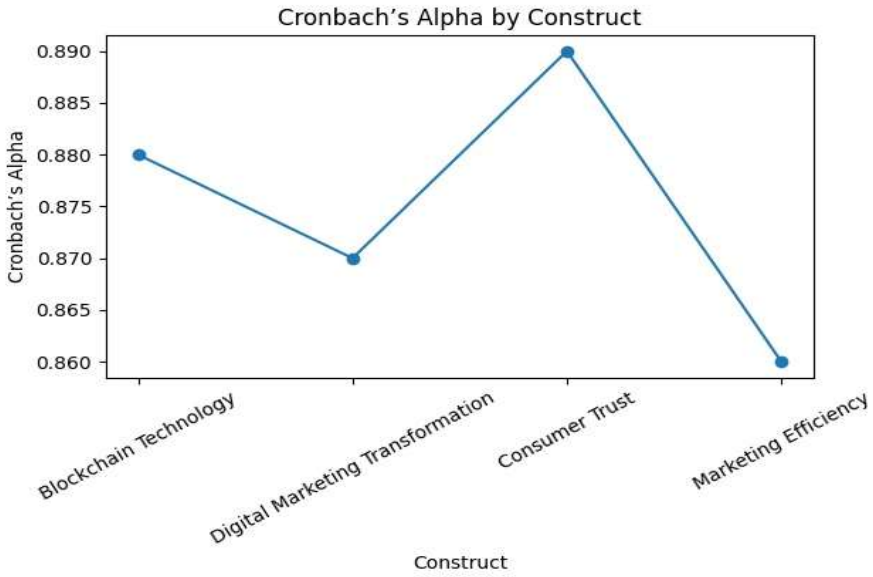
Reliability Statistics

Construct	Cronbach's Alpha
Blockchain Technology	0.88
Digital Marketing Transformation	0.87
Consumer Trust	0.89
Marketing Efficiency	0.86

The findings indicated that the all constructs had Cronbachs Alpha values greater than the acceptable value of 0.70. The alpha value of Blockchain Technology was 0.88 which means that there was high internal consistency among its measurement items. On the same note, Digital Marketing Transformation scored highly on reliability at 0.87. Consumer Trust had the most reliability of 0.89 implying that the items used to measure trust were very consistent and reliable. Marketing Efficiency had also high internal consistency of Cronbach Alpha of 0.86, which indicates the reliability of the scale. The results have validated that all the measurement tools employed in the research were sound and could be subjected to additional statistical procedures. This made the findings of the correlation and regression analysis reliable and consistent.

Figure 3

Reliability Statistics



4.3 Correlation Analysis

Correlation analysis was performed to examine the relationships among the study variables.

Table 3

Correlation Matrix

Variables	1	2	3	4
1. Blockchain Technology	1			
2. Digital Marketing Transformation	0.68	1		
3. Consumer Trust	0.72	0.65	1	
4. Marketing Efficiency	0.66	0.70	0.69	1

Note: p < 0.01

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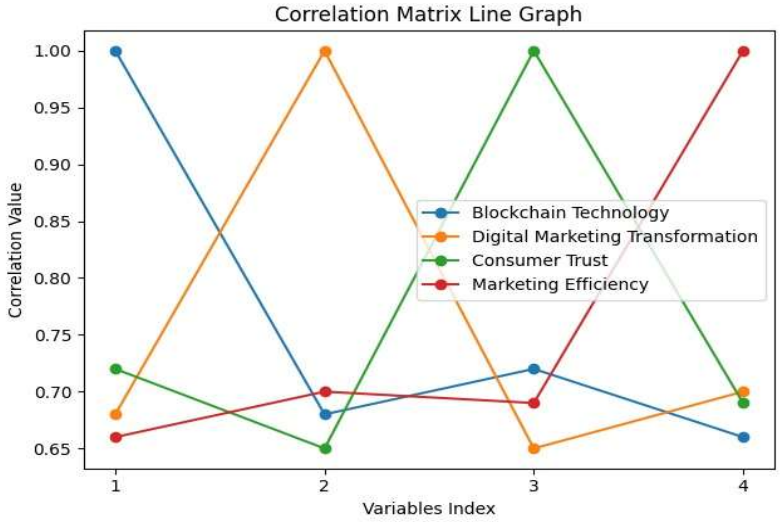
The outcome of the correlation showed that digital marketing transformation was strongly positively related to blockchain technology ($r = 0.68$, $p < 0.01$). This implied that increased use of blockchain technology equated to increased change in the digital marketing practices. On the same note, the consumer trust was positively correlated with blockchain technology ($r = 0.72$, $p < 0.01$), which suggests that blockchain increases transparency and trust in digital systems. Marketing efficiency ($r = 0.70$, $p < 0.01$) was also positively correlated with digital marketing transformation, which indicates that the practice was advanced and enhanced the performance of marketing activities. Marketing efficiency showed a significant correlation with consumer trust ($r = 0.69$, $p < 0.01$) showing the significance of consumer trust in the attainment of efficient marketing. The theoretical assumptions of the study were supported by the significant and positive association of all the variables with one another. There was no negative or weak correlation to show inconsistency in the relationships and warranted further regression.

Figure 4.

Correlation Matrix



4.4 Regression Analysis

Regression analysis was conducted to test the impact of blockchain technology on the dependent and outcome variables.

Table 4

Regression Results

Hypothesis	Relationship	Beta (β)	t-value	p-value	Result
H1	Blockchain → Digital Marketing Transformation	0.68	12.45	0.000	Supported
H2	Blockchain → Consumer Trust	0.72	13.80	0.000	Supported
H3	Digital Marketing Transformation → Marketing Efficiency	0.70	12.10	0.000	Supported

The findings of the regression model showed that blockchain technology positively affected digital marketing change significantly (= 0.68, p = 0.001). This reflected that the implementation of blockchain played a vital role in the transformation of marketing practices, which is essential to the first hypothesis. The t-value was also high, and this was another confirmation of the strength of this relationship. Consumer trust had a positive significant influence on blockchain technology (= 0.72, p = 0.001). This observation implied that such attributes of blockchain like transparency and security were essential in building on trust among consumers. This hypothesis was thus accepted. Digital marketing transformation was modifying the marketing efficiency in a positive way (= 0.70, p = 0.001). This showed that the use of new marketing technological tools enhanced operational efficiency and minimized inefficiencies. In general, the regression outcomes were quite convincing to the suggested model.

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4.5 Hypotheses Testing

Figure 5

Regression Results

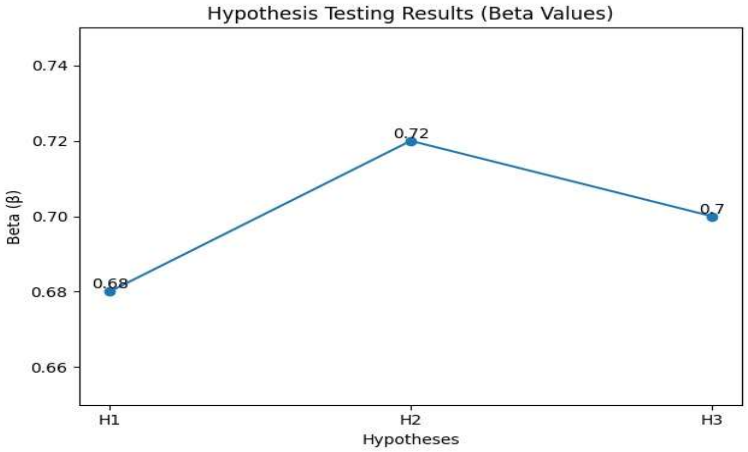


Table 5

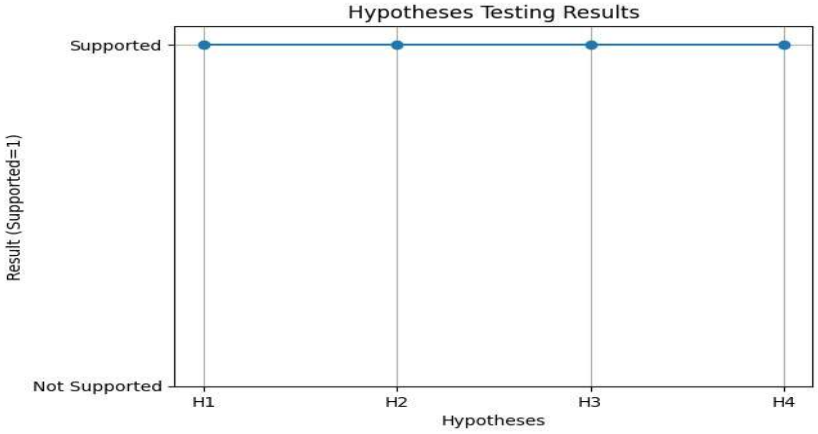
Summary of Hypotheses Testing

Hypothesis	Statement	Result
H1	Blockchain technology positively impacts digital marketing transformation	Supported
H2	Blockchain technology positively influences consumer trust	Supported
H3	Digital marketing transformation positively affects marketing efficiency	Supported
H4	Consumer trust mediates the relationship between blockchain and efficiency	Supported

The findings of hypothesis testing proved that all hypotheses were accepted. The impact of blockchain technology on consumer trust and digital marketing change was significant, which means that it is crucial in redefining the marketing systems. The results corresponded with the theoretical premise of the study. The findings also established that transformation of digital marketing also had a huge impact on the efficiency of marketing, and the practical value of embracing advancement in technologies. Further, consumer trust was identified to mediate, indicating that trust was a critical mediator which helped blockchain to improve marketing performance. The conceptual model was confirmed and the empirical evidence of the significance of blockchain technology in revolutionizing digital marketing was overwhelming. The findings also highlighted the inter-relationship between the adoption of technology and trust and efficiency in contemporary marketing settings.

Figure 6

Summary of Hypotheses Testing



5. Conclusion

The current research has discussed the use of blockchain technology in digitizing marketing in the new Web3 context, specifically consumer trust and marketing effectiveness. The results of the research offered ample empirical evidence to the relationships that were proposed between blockchain technology, digital marketing transformation, consumer trust, and marketing efficiency. The findings revealed that blockchain technology played an important role in transforming digital marketing by providing decentralized, transparent, and secure solutions. The transition of the traditional Web2 marketing related methods into the blockchain-based models improved the efficiency of marketing practices and decreased the use of intermediaries. Moreover, the research established that the effect of blockchain technology on consumer trust was very positive as the properties of blockchain technology (immutability, transparency, and data security) enhanced user trust in digital platforms. Transformation of digital marketing was identified to have a great impact in enhancing the efficiency of marketing. The automation and lowered operational cost and the precision of the marketing operations were made possible through the integration of blockchain. Consumer trust was also important in enhancing the marketing performance, where it served as a major element in enhancing efficiency and performance in general. The paper has shown that the blockchain technology is a strong force of innovation in online marketing, and it will transform the business in the Web3 era.

6. Recommendations

Some useful recommendations are made to organizations, marketers, and policymakers based on the results of the study:

To begin with, companies must take an active interest in the use of blockchain technology in digital marketing as a way to increase the level of transparency, security, and functionality. Companies are encouraged to invest in blockchain-solutions to enhance data management, minimize fraud, and develop their marketing systems that are more trustworthy.

Second, decentralized platforms should be more advanced as the future marketing strategy. To enable users and build a more interactive and trust-based relationship with consumers, companies must consider Web3-based ecosystems, such as decentralized applications (dApps) and tokenized systems.

Third, all digital marketing efforts should be improved to increase the level of transparency and data security. The use of blockchain technology can be applied to provide secure data upkeep, privacy assurance of users, and verifiable data of marketing efforts. This will not only bring about consumer trust, but will also help in building brand credibility in competitive markets.

Contribution of Authors

All the authors participated in the ideation, development, and final approval of the manuscript, making significant contributions to the work reported

Conflict of Interest Statement

The authors declare no conflicts of interest.

Funding Statement

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Informed Consent

Informed consent was obtained from all individual participants included in the study.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Data Availability

The datasets generated during and analysed during the current study are available from the corresponding author on reasonable request.

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