

# **The Impacts of Awareness and Attitude on the Willingness to Adopt Blockchain Technology in the Field of Marketing**

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## **ABSTRACT**

This study aims to investigate the relationship between attitude and awareness towards blockchain technology and its adoption in the field of marketing. The study provides a literature review of the applications of blockchain technology in various sectors, including finance, healthcare, supply chain management, and energy. The paper discusses the potential impacts of blockchain technology on marketing. The study proposes three hypotheses and uses a descriptive research design to analyze the data collected through a researcher-made questionnaire from 150 to 200 participants. The proposed analysis will use descriptive statistics to support a logical regression model to measure the awareness and attitude towards blockchain technology. The study's findings may provide insights into the factors affecting the adoption of blockchain technology in the marketing industry.

**Keywords:** Blockchain Technology, Marketing, Awareness, Attitude, and Adoption.

## ÖZ

Bu çalışmanın amacı, blockchain teknolojisi hakkındaki tutum ve bilgilerin pazarlamadaki kullanımıyla nasıl ilişkili olduğuna bakmaktır. Rapor, tedarik zinciri yönetimi, sağlık hizmetleri ve enerji dahil olmak üzere bir dizi sektörde blockchain teknolojisinin kullanımına ilişkin bir literatür araştırması sunuyor. Makale, blockchain teknolojisinin pazarlamayı nasıl etkileyebileceğini inceliyor.

Çalışma, üç hipotez önerir ve 150 ila 200 katılımcıdan araştırmacı tarafından yapılan bir anket yoluyla toplanan verileri analiz etmek için tanımlayıcı bir araştırma tasarımı kullanır. Önerilen analiz, blockchain teknolojisine yönelik farkındalığı ve tutumu ölçmek için mantıksal bir regresyon modelini desteklemek için tanımlayıcı istatistikleri kullanacaktır. Çalışmanın sonuçları, pazarlama sektöründe blockchain teknolojisinin benimsenmesini etkileyen değişkenlere ışık tutabilir.

**Anahtar Kelimeler:** Blockchain Teknolojisi, Pazarlama, Farkındalık, Tutum ve Benimseme.

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# Chapter 1

## INTRODUCTION

Blockchain is a disruptive and breakthrough technology that has enough potential to erect new foundations for economic and social systems around the globe. It is a catalyst for industrial transformation in the coming decades by aiming at replacing networks with markets that allows all business activities like transactions to be conducted in a trusted and transparent manner (Iansiti and Lakhani 2017). Blockchain technology is drawing the attention of practitioners, lawmakers, and academicians around the world due to its potential to transform the way both private and public will operate in the coming years (Nowinski & Kozma, 2017).

According to (Nakamoto, 2008), Blockchain technology is a virtual currency and payment system that ensures trading on a peer-to-peer network without any interference of a middleman like banks or other financial institutions. Blockchain technology has a variety of definitions; it may be referred to as a data system, an algorithm or may be generally used as an umbrella term for a decentralized peer-to-peer network system (Treiblmaier, 2019; Drescher, 2017). The technology organizes transactions and groups them together in "blocks", which is a constrained-size structure, along with timestamps. The blocks are linked together in chronological order by miners, which are the nodes of the network, and these chronologically linked blocks create a blockchain, which contains a robust and transparent register for all the transactions recorded (Crosby et al., 2016).

Blockchain is being regarded as one of the highly acclaimed technologies that carries the potential to transform the entire business landscape in a wide array of industries which may include supply chain management, human resource management, finance, marketing etc. (Saliminaz, 2021).

Authors like (Ertemel, 2018) have studied the implications of Blockchain technology for marketers and have reached to the conclusion that in a rapidly evolving marketing environment, Blockchain technology brings about new hopes and hurdles to marketers, as the customers can become value creators and brand ambassadors themselves as a result of network ownership effects. They also caution brands to cope with the pace of technological evolution by changing their perspective and adopting new strategies.

## **Chapter 2**

### **LITERATURE REVIEW**

Ever since the inception of Bitcoin in 2009, Blockchain has gained considerable popularity over the years. While it was initially applicable in the realm of digital currencies, attempts are being made to extend its applicability across various sectors. Blockchain technology is a decentralized and distributed ledger that enables the secure and transparent recording of transactions (Nakamoto, 2008; Swan, 2015). The purpose of this literature review is to explore the various applications of blockchain technology and the challenges that arise with its implementation.

Blockchain technology has found applications in various sectors, including finance, healthcare, supply chain management, and energy. In finance, blockchain technology has been used to create digital currencies such as Bitcoin and Ethereum (Nakamoto, 2008; Buterin, 2014). The blockchain provides a decentralized and secure platform for the transfer of value without the need for intermediaries. The blockchain technology also allows for the creation of smart contracts, which are self-executing contracts that eliminate the need for intermediaries (Szabo, 1997).

Despite the potential benefits of blockchain technology, there are several challenges that arise with its implementation. One of the main challenges is scalability. Blockchain technology is based on a distributed ledger, which requires a large amount of computing power to process transactions. This can lead to slow transaction times

and high transaction fees (Swan, 2015).

Another challenge is interoperability. There are various blockchain platforms, and they are not interoperable. This means that transactions between different blockchain platforms are not possible, which limits the potential applications of blockchain technology (Swan, 2015).

Security is also a major challenge with blockchain technology. Although the blockchain is secure, there have been instances of hacking and theft of digital currencies (Swan, 2015). This highlights the need for robust security measures to protect blockchain platforms from attacks.

Even though Blockchain technology has found significant applications in finance, healthcare, marketing supply chain management, and energy, there are numerous challenges that are associated with its implementation, some of which include scalability, interoperability, and security (Swan, 2015).

## **2.1 Awareness Level towards Blockchain Technology**

### **2.1.1 Components of Blockchain Technology**

According to (Nakamoto, 2008; Wood, 2014), Following are the primary components ofBlockchain technology.

#### **Node**

Nodes are the main components of the blockchain network that maintain the integrity of the network and ensure its functionality. They can be defined as any device or computer that participates in the blockchain network. Each node maintains a single distributed ledger on theblockchain and is responsible for verifying and validating transactions. Gateways can be classified into different types, such as full nodes,

hotspots, or mining nodes, depending on their level of participation in the network.

### **Distributed Ledger**

A distributed ledger is a digital record of transactions or data distributed among multiple nodes or computers in an asynchronous manner. It serves as the foundation of the blockchain system by maintaining a clear and transparent record of all transactions. Distributed ledger is often built using cryptographic techniques and consensus algorithms, to ensure the security and immutability of stored data. Examples of distributed ledger technologies include the Bitcoin blockchain and the Ethereum blockchain.

### **Asset**

In the context of blockchain technology, assets refer to digital representations of value or property rights that can be stored, transferred, or traded on the blockchain network. Assets can vary widely and include cryptocurrencies, digital tokens, smart contracts, and other digital representations of real or virtual assets. Blockchain technology provides a secure and transparent platform to manage and exchange these assets without relying on intermediaries, such as banks or financial institution.

### **Verification Algorithm**

A consensus is a process that the blockchain network uses to reach an agreement between different nodes for the correctness and order of transactions. It helps to make decisions without trust where the participants may not fully trust each other. The consensus process plays an important role in maintaining the integrity and security of the blockchain network. Some of the most commonly used proof of concept algorithms include Proof of Work (PoW), which is used by Bitcoin, and Proof of Stake (PoS), which is used by Ethereum

### **2.1.2 Marketing Platforms that Utilize Blockchain Technology**

There are various marketing platforms that use blockchain technology right now. Some of the platforms that integrate blockchain technology are mentioned below:

AdEx: AdEx is a decentralized advertising platform that leverages blockchain technology to address the transparency and efficiency of digital advertising. It allows advertisers and publishers to connect and exchange media products without intermediaries. AdEx uses smart contracts to manage transactions and provide insight into the impact of advertising and payments (Zhekova, 2022).

Basic Attention Token (BAT): The Basic Attention Token (BAT) is a blockchain-based digital token developed by the Brave browser. BAT seeks to improve the efficiency and integrity of the digital media ecosystem by allowing users to get paid for viewing ads and allowing publishers to earn BAT tokens in exchange for displaying ads to users. The platform also provides increased user privacy protection (Eich, 2017).

### **2.1.3 Blockchain Technology as an Open and Independent Network**

Blockchain as an open network:

Blockchain technology is often characterized by its open and transparent nature. The decentralized nature of the blockchain network allows anyone to participate and verify transactions without the need for central authority. This openness promotes trust and ensures that the blockchain works independently of any company or organization (Nakamoto, 2008).

Governance and accreditation:

An open blockchain network is based on a consensus system that allows agreements between network participants. The consensus process, such as proof of work (PoW) or proof of stake (PoS), ensures that many nodes in the network achieve a shared

agreement on the validity of transactions in the context of the blockchain. Because of this decentralized trust, the blockchain network works independently, eliminating the need for intermediaries and improving security (Castro & Liskov, 1999).

Permission less Participation:

One of the key features of blockchain technology is its permission less nature, allowing anyone to participate in the network. This open source encourages inclusivity by allowing individuals or companies to interact with the blockchain without requiring explicit permission. By eliminating the need for centralized gatekeepers, blockchain networks provide a level playing field for innovation, collaboration, and value exchange (Buterin, 2014).

Trust and distrust:

Blockchain networks work on the principles of trust and distrust. By using cryptographic methods, consensus algorithms, and transparent, immutable records, blockchain technology ensures that network participants can independently verify transactions and data. This trustless environment allows users to interact and interact with confidence, even in the absence of a trusted agent (Swan, 2015).

## **2.2 Attitude Towards Blockchain Technology**

Research shows that there is a growing positive trend in blockchain technology. Many studies point to its potential to transform various industries, including finance, supply chain management, healthcare and others. Blockchain features are considered to be transparent, immutable, and cost effective which can improve efficiency, security, and trust in business processes (Swan, 2015; Tapscott, 2016).

Despite the positive outlook, there are also challenges and doubts surrounding

blockchain technology. Some researchers point to concerns related to scalability, energy consumption, regulatory compliance, and interoperability between different blockchain platforms. In addition, it is seen that the complexity of blockchain implementation and security protection can cause skepticism and reluctance to adopt the technology (Yli-Huumo et al., 2016; Cross & Bearman, 2018).

Many factors can influence attitudes toward blockchain adoption. Lack of awareness and understanding of technology, regulatory uncertainty, financial issues, and the need for collaboration among stakeholders are seen as barriers to implementation. However, studies also show that as blockchain knowledge increases and successful use emerges, attitudes improve, paving the way for wider adoption (Bohme et al., 2015; Fanning & Centers, 2016).

Trends for blockchain technology are changing as it continues to grow and find practical applications. Ongoing research, collaboration and pilot projects explore the potential benefits and solutions to blockchain-related issues. As technology advances, practices are expected to improve, leading to increased adoption and improvement across organizations (Beck et al., 2016; Tasca & Tessone, 2017).

### **2.2.1 Blockchain Technology and Smart Contracts**

Overall, blockchain technology has the potential to change the way smart contracts are executed, making them more efficient, secure, and transparent. However, there are some legal, technical, and security challenges that need to be addressed before smart contracts can be widely implemented. Further research is necessary to overcome these challenges and fully utilize the potential of smart contracts in the future. Smart contracts have the potential to revolutionize various industries, including finance, healthcare, supply chain management, and energy, among others. The use of

blockchain technology in smart contracts can enhance transparency, reduce transaction costs, eliminate the need for third-party intermediaries, and increase efficiency. For example, in supply chain management, smart contracts can be used to track and verify the authenticity of products, reduce fraud, and improve the traceability of goods. In healthcare, smart contracts can improve the security and privacy of patient data, streamline the billing process, and improve the accuracy of medical records. In finance, smart contracts can automate financial transactions and reduce the risk of fraud in the financial industry.

Furthermore, the potential applications of smart contracts are not limited to these industries. Smart contracts can be used in any scenario where traditional contracts are used, including real estate, insurance, and legal agreements. The use of smart contracts in these industries can improve the speed, efficiency, and accuracy of transactions, while also reducing costs and the risk of fraud.

As the potential of smart contracts becomes more widely recognized, more research is being conducted to address the legal, technical, and security challenges associated with their implementation. For example, some researchers are exploring ways to address the issue of scalability in blockchain technology, which can limit the speed and efficiency of smart contract execution. Additionally, there is a need to develop standardized legal frameworks for smart contracts to ensure their enforceability in different jurisdictions.

In conclusion, smart contracts have the potential to revolutionize the way contracts are executed in various industries. The use of blockchain technology in smart contracts can improve efficiency, transparency, and security, while also reducing costs and the

need for intermediaries. However, more research is needed to overcome the challenges associated with their implementation and to fully realize their potential benefits.

### **2.2.2 Blockchain Technology and Hedge Funds**

The hedge fund industry is a highly regulated sector that has traditionally relied on intermediaries such as brokers and custodians to manage transactions and ensure compliance with regulatory requirements. However, the emergence of blockchain technology has the potential to transform the hedge fund industry by increasing transparency, reducing fraud, and improving security.

Blockchain technology can revolutionize the hedge fund industry by reducing the need for intermediaries and increasing transparency. By using blockchain technology, hedge funds can create a secure and tamper-proof ledger of all transactions, which can be accessed and verified by all parties involved in the transaction. This can significantly reduce the risk of fraud, as all transactions are recorded and cannot be altered once they have been added to the blockchain.

Several studies have highlighted the potential benefits of blockchain technology in hedge fund management. For instance, a study by Barber et al. (2018) suggests that blockchain technology can be used to improve the efficiency of trade settlement, reduce the risk of fraud, and enhance the overall security of the hedge fund industry. In addition, blockchain technology can help hedge funds comply with regulations more effectively.

Another study by Liu et al. (2018) explored the potential of blockchain technology in the hedge fund industry and found that it can increase transparency, enhance security, and improve efficiency. By using blockchain technology, hedge funds can create a

transparent and auditable record of all transactions, which can be used to demonstrate compliance with regulatory requirements.

Despite the potential benefits of blockchain technology in the hedge fund industry, there are also significant challenges that need to be addressed. Legal and regulatory challenges associated with the use of blockchain technology in the financial industry include the need for standardized legal frameworks and the need to ensure compliance with regulatory requirements. Technical challenges associated with the scalability of blockchain technology can limit the speed and efficiency of smart contract execution.

In conclusion, blockchain technology has the potential to revolutionize the hedge fund industry and create a more efficient, transparent, and secure financial system. However, more research is needed to fully understand the potential of blockchain technology in hedge fund management and to address the legal and regulatory challenges associated with its implementation.

### **2.2.3 Blockchain Technology and Cryptocurrency**

Several cryptocurrencies have emerged as a result of the development of blockchain technology, including Bitcoin, Ethereum, and Ripple. These cryptocurrencies are decentralized and operate independently of any central authority. They use blockchain technology to create a transparent and secure ledger of all transactions, which can be accessed and verified by anyone on the network (Kantarcioglu et al., 2022).

Bitcoin is the most well-known cryptocurrency and has been hailed as a revolutionary technology that has the potential to change the way we think about money. The technology behind Bitcoin is based on a decentralized ledger system that allows for fast, secure, and anonymous transactions. The use of Bitcoin has increased

significantly in recent years, with many businesses and individuals adopting it as a form of payment.

Ethereum is another cryptocurrency that is based on blockchain technology. The Ethereum platform allows developers to create decentralized applications and smart contracts that can be executed on the blockchain. The use of smart contracts on the Ethereum platform has the potential to revolutionize the way we conduct financial transactions, as it allows for the automation of complex financial agreements.

The Ripple network uses blockchain technology to create a transparent and secure ledger of all transactions, which can be accessed and verified by anyone on the network. The use of Ripple has increased significantly in recent years, with many financial institutions adopting it as a form of payment.

Despite the potential benefits of blockchain technology as a form of money, there are also significant challenges that need to be addressed. One of the primary challenges is the lack of regulatory clarity surrounding the use of cryptocurrencies. The regulatory landscape for cryptocurrencies is still in its infancy, and there is a need for standardized legal frameworks to ensure that cryptocurrencies can be used in a compliant manner.

Another challenge associated with the use of blockchain technology as a form of money is the issue of scalability. Blockchain technology is still in its early stages of development, and there is a need for further research to improve the scalability of the technology to handle the large volume of transactions processed by financial institutions.

Blockchain technology has the potential to make us rethink money and financial transactions. The use of blockchain technology, as a form of money, has the potential to disrupt traditional financial systems, and reduce the costs associated with financial transactions.

#### **2.2.4 Potential of Blockchain Technology to Revolutionize Marketing**

Blockchain has the potential to revolutionize supply chain management, which has direct implications for marketing activities. By leveraging blockchain technology, organizations can create transparent and traceable supply chains, providing customers with real-time access to information about the origin, authenticity, and quality of products (Meng et al., 2018).

Blockchain can also transform customer relationship management (CRM) practices by providing a secure and decentralized platform for managing customer data. With blockchain, customers can maintain ownership and control over their personal information, granting selective access to businesses based on consent (Li et al., 2018).

The decentralized nature of blockchain eliminates the need for a central authority, making it difficult for malicious actors to tamper with or manipulate data. The immutability of blockchain records ensures that transactional data remains secure and transparent, reducing the risk of fraud and unauthorized access (Ozkan, 2018). This feature has significant implications for marketing, where the collection and management of customer data play a crucial role. Blockchain technology enables the direct peer-to-peer exchange of value without the need for intermediaries. This has the potential to disrupt traditional marketing channels by enabling customers to directly transact and engage with each other (Peterson et al., 2018).

### **2.2.5 Blockchain as a Medium of Exchange**

Blockchain technology is a digital ledger system that has the potential to transform the way we conduct financial transactions. The technology is based on a decentralized, tamper-proof database that allows users to exchange value securely and transparently without the need for intermediaries such as banks or other financial institutions (Faturahman et al., 2021).

The development of digital tokens on blockchain platforms has enabled the creation of alternative mediums of exchange within specific ecosystems or industries (Buterin, 2014). These tokens facilitate value exchange and enable innovative business models, such as tokenized assets and decentralized finance (DeFi) protocols.

Blockchain's potential as a medium of exchange has raised regulatory and legal challenges. Governments and regulatory bodies are grappling with issues such as anti-money laundering (AML) compliance, taxation, and consumer protection in the context of cryptocurrencies and blockchain-based transactions (Clohessy et al., 2020).

The evolving regulatory landscape introduces uncertainties and compliance burdens that need to be addressed for wider adoption of blockchain as a medium of exchange.

### **2.2.6 Adoption of Blockchain Technology at a Rapid Pace**

Technological advancements have played a crucial role in accelerating the adoption of blockchain technology. The development of scalable blockchain platforms, improved consensus mechanisms, and interoperability protocols has addressed previous limitations and expanded the possibilities for blockchain applications (Dagher et al., 2018). These innovations have increased the confidence and interest of businesses, governments, and organizations in adopting blockchain at a faster pace.

Different industries are adopting blockchain technology at an accelerated pace due to its sector-specific applications. For example, in finance, blockchain is being used for cross-border payments, remittances, and digital asset (Meng et al., 2018). Supply chain management is leveraging blockchain for traceability and transparency (Kshetri, 2018). Healthcare is exploring blockchain for secure health records and data interoperability (Agboet al., 2019). These sector-specific use cases contribute to the rapid adoption of blockchain technology within respective industries.

### **2.3 Impact of Blockchain Technology on Marketing**

Blockchain technology is a revolutionary innovation that has the potential to transform marketing in significant ways. In this section, the paper discusses some of the ways the latest blockchain technology can impact marketing.

#### **Improved Data Security and Privacy:**

As technology rapidly advances, and the concern for data breaches and hacking rises, marketers are specially concerned for any potential security and privacy breaches. In an era of uncertainty, customer data can be safely secured, stored, managed, and shared on platforms that utilize blockchain technology. Blockchain technology allows sensitive data of customers to be protected by restricting the interference of unauthorized parties, and so that the customers have greater control over their private information. As a result, the technology can increase customer loyalty and trust, and therefore improve customer retention rates.

Blockchain technology can also help to address the issue of data ownership, which is becoming increasingly important as consumers become more aware of the value of their data. By using blockchain, marketers can provide customers with greater control

over their data, including the ability to decide who has access to it, and how it is used. This can help to build trust and improve customer loyalty.

Blockchain technology has the potential to enhance data security through its decentralized and immutable nature. The technology uses cryptographic algorithms to secure transactions, making it virtually impossible to tamper with data once it has been added to the blockchain (Deloitte, 2018). Additionally, the decentralized nature of the technology means that there is no central point of failure, making it more resilient to attacks. Furthermore, the use of smart contracts can also enhance data security by automating the execution of transactions and eliminating the need for intermediaries.

Blockchain technology can also enhance privacy by enabling secure and private transactions without the need for central authority. The technology uses cryptographic algorithms to ensure that transactions are anonymous and cannot be traced back to individual users (IAPP, 2018). Additionally, the decentralized nature of the technology means that there is no central point of control, reducing the risk of unauthorized access to personal data.

However, the use of blockchain technology can also pose challenges to privacy. For instance, the immutable nature of the blockchain means that once data has been added to the blockchain, it cannot be deleted or modified. This can pose a challenge to individuals who may want to delete their personal data from the blockchain. Additionally, the anonymous nature of blockchain transactions can also be used for illicit activities such as money laundering and terrorism financing.

In conclusion, blockchain technology has the potential to enhance data security and

privacy through its decentralized and immutable nature. Technology can be particularly useful in industries such as healthcare and finance, where data security and privacy are of utmost importance. However, the use of blockchain technology can also pose challenges to privacy, and more research is needed to address these challenges. Overall, the benefits of blockchain technology in enhancing data security and privacy outweigh the challenges, and the technology is poised to play a significant role in enhancing data security and privacy in the future.

#### More Transparent and Trustworthy Advertisements:

Ad fraud is a significant problem in the advertising industry, with estimates suggesting that advertisers lose billions of dollars each year to fraudulent ad practices. Blockchain technology can help to address this problem by providing a transparent and secure platform for advertising transactions. By using blockchain, advertisers can ensure that their ads are being viewed by real people, rather than bots, and that their ad spend is being used effectively.

One of the ways blockchain can be used to address ad fraud is by providing a tamper-proof record of ad impressions. This can help to ensure that advertisers are only paying for ads that are actually viewed by real people, rather than bots or fraudulent traffic. Blockchain can also be used to track the distribution of ads across various platforms, which can help to ensure that ad spend is being used effectively.

Fraud is a major issue in the advertising industry, with an estimated \$19 billion lost annually to ad fraud (Association of National Advertisers, 2018). Blockchain technology can provide a solution to this problem by creating an immutable ledger of all advertising transactions. This can help to eliminate fraudulent activities such as bot

traffic and click fraud, which are prevalent in the advertising industry. According to a report by the World Economic Forum (WEF), blockchain technology can increase trust and transparency in the advertising industry by providing a secure and transparent method of tracking ad impressions and clicks (WEF, 2019).

Blockchain technology can also enhance transparency in the advertising ecosystem by enabling a decentralized and tamper-proof record of all transactions. The technology can help to eliminate the opacity and lack of transparency that exist in the advertising industry, particularly regarding data ownership and usage. By using blockchain technology, advertisers can have greater control over their data and ensure that it is being used for legitimate purposes. A report by Deloitte (2018) suggests that blockchain technology can enable greater transparency and accountability in the advertising industry by providing a secure and transparent method of tracking ad impressions and clicks.

Blockchain technology can also enhance ad targeting by enabling advertisers to access accurate and transparent data about their target audience. The technology can enable users to own and control their data, thereby allowing advertisers to access data directly from users.

This can help to eliminate the need for intermediaries and data brokers, reducing costs and improving the accuracy of ad targeting. A report by Gartner (2019) suggests that blockchain technology can enable advertisers to create targeted advertising campaigns that are more effective and efficient than traditional advertising methods.

The adoption of blockchain technology in advertising faces several challenges, such

as the lack of standardization in the industry and high transaction costs. There are numerous blockchain solutions in the market, each with its own set of protocols and standards, making it difficult for advertisers to adopt the technology. Additionally, the high transaction costs associated with blockchain technology may also hinder its adoption. A report by eMarketer (2019) suggests that the adoption of blockchain technology in advertising will require significant investment and collaboration between advertisers, publishers, and technology providers.

#### Enhanced Targeting and Personalization:

Blockchain technology can enable marketers to access more accurate and reliable data about their customers, which can help to improve targeting and personalization efforts. By utilizing blockchain technology, marketers can access more comprehensive and up-to-date customer profiles, which can help them increase their targeted, and personalized campaigns.

Blockchain can also be used to incentivize customers to share their data with marketers. By providing customers with rewards for sharing their data, marketers can create a more engaged and loyal customer base. This can help to improve customer retention rates and increase the effectiveness of marketing campaigns.

Blockchain technology is increasingly being recognized as a transformative force in the field of marketing, with potential benefits for targeting and personalization. Blockchain's ability to store data in a secure and transparent manner is a key advantage for marketers who are looking to collect and use consumer data for more personalized and targeted marketing campaigns (Dennis, 2018).

One of the main benefits of blockchain technology for targeting and personalization is its ability to facilitate the sharing of consumer data between multiple parties, while maintaining privacy and security. Blockchain-based data sharing platforms allow consumers to control their data and decide who has access to it, while also enabling advertisers to access the data they need to deliver more targeted ads (Broumandi et al., 2019).

Another potential benefit of blockchain technology for targeting and personalization is its ability to create more accurate and reliable consumer profiles. By using blockchain-based smart contracts to collect and verify data, marketers can ensure that the data they are using is accurate and up to date. This, in turn, can lead to more effective targeting and personalization of marketing campaigns (Hussain et al., 2021).

Increased Efficiency and Cost Savings:

Blockchain technology can drive efficiency up and cut costs in the marketing industry. Blockchain Technology can help enable marketers streamline their business processes such as ad buying, payment processing, and data sharing, which can lead to considerable reduction in administrative costs and improve efficiency.

Blockchain-based data sharing platforms can streamline the process of data collection and analysis, reducing the time and resources required for traditional data sharing methods (Bicen and Goksel, 2019).

Another way that blockchain can improve efficiency in marketing is by reducing the amount of fraudulent activity that occurs in the industry. Blockchain's ability to create secure and immutable records of transactions makes it a powerful tool for reducing ad

fraud and ensuring that advertising budgets are spent in the most effective way possible (Buchmann and Gu, 2019).

Blockchain can also help to reduce costs in the marketing industry by eliminating the need for intermediaries in the advertising supply chain. By using blockchain-based smart contracts, advertisers can directly connect with publishers and other stakeholders, reducing the need for intermediaries and the associated costs (Christidis and Devetsikiotis, 2016).

However, there are also challenges associated with the use of blockchain technology in marketing. One challenge is the need for standardization and interoperability of blockchain-based platforms, to ensure that data can be easily shared between multiple parties. Another challenge is the need for education and training to ensure that marketers and advertisers are able to effectively use blockchain technology (Li et al., 2020).

Despite these challenges, the potential benefits of blockchain technology for efficiency and cost reduction in marketing are significant. By enabling secure and transparent data sharing, reducing fraudulent activity, and eliminating the need for intermediaries, blockchain can help to create a more efficient and cost-effective marketing industry.

#### Improved Customer Engagement:

Blockchain technology can help to improve customer engagement by providing customers with more control over their data and enabling them to interact with brands in new and innovative ways. By using blockchain, marketers can create more engaging and interactive experiences for customers, such as loyalty programs, rewards systems,

and social media Campaigns.

One of the ways blockchain can be used to improve customer engagement is by providing customers with greater control over their data. By using blockchain, marketers can provide customers with a transparent and secure platform for storing and sharing their data, which can help to build trust and improve customer loyalty.

Enhanced Brand Transparency:

Blockchain technology can also help to enhance brand transparency, which is becoming increasingly important in today's business environment. By using blockchain, brands can provide customers with a transparent and secure platform for tracking the provenance of products and verifying the authenticity of claims.

One of the ways blockchain can be used to enhance brand transparency is by providing a tamper-proof record of the supply chain. By using blockchain, brands can track the movement of products from production to delivery, which can help to ensure that products are authentic and have not been tampered with.

In conclusion, blockchain technology has the potential to revolutionize the way marketing is conducted. By providing a secure, transparent, and decentralized platform for storing and sharing data, blockchain can help to improve data security and privacy, reduce ad fraud, enhance targeting and personalization, increase efficiency and cost savings, improve customer engagement, and enhance brand transparency. While blockchain technology is still in its early stages of adoption in the marketing industry, it has the potential to be a game-changer. As blockchain technology continues to evolve and become more widely adopted, it will be interesting to see how it impacts

the marketing landscape in the coming years.

## **Chapter 3**

### **METHOD**

#### **3.1 Questionnaire**

The paper is based on a descriptive research design. The study used a researcher-made questionnaire of four parts. The first part inquires the demographic profile of the respondents in terms of age, gender, employment status, country, and role in the industry. The first part also provides a hint whether the respondent truly belongs to the marketing industry, as the study aims to understand the applicability of blockchain technology in the marketing field.

However, no such filter was applied as mentioned above, and individuals from different professions were invited to answer the survey. The second part of the instrument consists of 5 items, all of which measure the level of awareness of the respondents of the blockchain technology, using the 5-point Likert Scale. The fourth part of the instrument consists of 10 items, all of which aim to understand the perception of respondents regarding the potential application of blockchain technology in marketing. The fourth part includes a diverse set of question types including simple 'yes' or 'no' questions, descriptive, multi-select questions etc. The instrument used in the method aims to determine whether there is a positive relation of both attitude, and awareness level towards blockchain technology with adoption of blockchain technology, and its application in marketing.

### 3.1.1 Consistency and Reliability of the Questionnaire

Cronbach's Alpha value is determined to determine the internal consistency and reliability of the questionnaire. Cronbach's alpha measures the internal consistency reliability used to determine the reliability or consistency of a set of related items or variables within a research paper study. It helps researchers quantify the limit to which multiple items in a scale or test assess the same underlying construct or concept in a research study.

Table 1: Consistency and reliability of the questionnaire

Independent Variables	Cronbach's Alpha
Awareness level towards Blockchain Technology	0.7087923517
Attitude towards Blockchain Technology	0.9843447286

The figures in the table above indicate that the independent variables "Awareness level towards Blockchain Technology" and "Attitude towards Blockchain Technology" are internally consistent and reliable. The closer the value to 1, the higher the internal consistency and reliability of the set of items used to measure the underlying concept or construct.

The awareness independent variable showed an internal consistency of 0.709, while the Attitude variable showed Cronbach's Alpha value greater than 0.9. Both results above suggest that the set of items used in the questionnaire appropriately measure the underlying concept and have a high internal reliability and consistency.

### 3.2 Design

In this study, we have 2 independent variables: Awareness towards blockchain technology, and attitude towards blockchain technology. Moreover, we have a

dependent variable (blockchain technology adoption). Model equation is presented below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Y= represents the dependent variable, which is the “Adoption of Blockchain Technology” in this research study

X1= represent the independent variable “Awareness level towards Blockchain Technology”

X2= represents the independent variable “Attitude level of Blockchain Technology”

$\beta_0$ = Intercept represents the expected value of Y when X1 and X2 are both zero.

$\beta_1$  and  $\beta_2$ = represent the coefficients or slopes

$\varepsilon$ = represent the error term or residual

### **3.3 Hypothesis**

(H1): There is a direct relationship between attitude towards blockchain technology and adoption of blockchain technology.

(H2): There is a direct relationship between awareness towards blockchain technology and adoption of blockchain technology.

(H3): Attitude towards blockchain technology and awareness towards blockchain technology have a joint effect on the adoption of blockchain technology.

### **3.4 Participants**

We are provided with a survey (questionnaire) to the participants by different means of communication including online etc. Our sample size is between 150 and 200 people. The study focuses preferably on employed or unemployed, people who are/have been associated with the marketing domain throughout their professional

career. Professionals from other industries have not been excluded or given differential weightage in our analysis.

### **3.5 Materials / Apparatus**

The results and data have been gathered through a survey (questionnaire) that begins with demographic questions about age, gender, employment status, country of residence, and role in the industry. It includes 13 5-point Likert questions. The remaining 14 questions are of different types which include descriptive, multi-select etc.

### **3.6 Proposed Analysis**

This study will use descriptive statistics to support a logical regression model, which will help measure awareness and attitude towards the blockchain technology. The proposed analysis will be conducted using SPSS software and MS Excel.

## Chapter 4

### RESULTS AND FINDINGS

The chapter 4 aims to discuss the results and findings obtained after analyzing data using different statistical techniques, primarily logical regression analysis which includes descriptive statistics, correlation analysis, graphical analysis, and also chart analysis. The Analysis would begin by assessing the profile of the respondents first, and then move on towards further analysis which includes examining the relationship between the 3 variables and providing useful insights accordingly.

#### 4.1 Profile of the Respondents

This section will particularly examine the profile of the respondents. The sample size consists of 167 respondents belonging to different age groups, nationality, gender, and employment status. The paper will begin by first examining the respondents in terms of their age group.

##### 4.1.1 Age (Years)

Five age groups have been used to divide the respondents according to their particular age. The table below explains the frequency of respondents belonging to each age group:

Table 2: Frequency of Respondents (age)

Age (years)	COUNTA of age (years)
	0
16-21	16
21-30	68
30-40	47
40-50	23

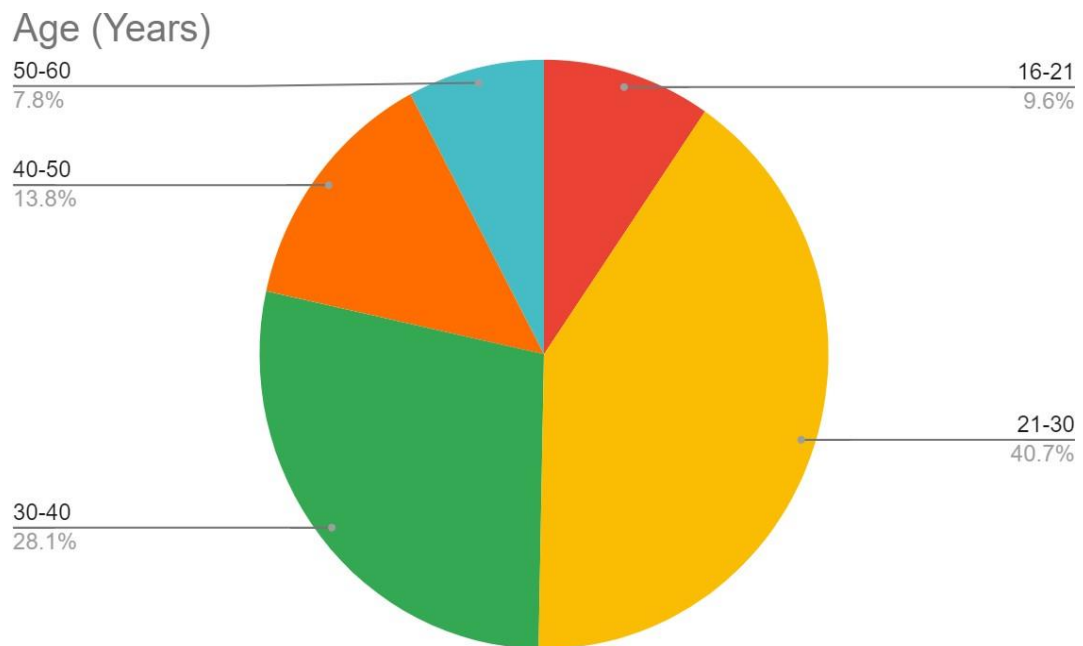


Figure 1: Pie chart (years)

Figure 1 is a pie-chart that summarizes the age groups of the total respondents who willingly participated in this questionnaire. The questionnaire included 5 age groups mostly with a difference of 10 years, except for the group (16-21). Analysis reveals that approximately 41% of the total respondents belong to the age group (21-30), major share of respondents belongs to this age group. The second largest share of respondents belong to the group (30-40), approximately 29%. Moreover, around 14% of the total respondents belong to the group.

(40-50). Only around 8% of the respondents were above 50, and almost 10% below 21.

### 4.1.2 Gender

This section aims to assess the profile of the respondents in terms of gender. The table below represents the frequency of respondents in terms of their gender (male or female).

Table 3: Frequency of Respondents (gender)

Gender	COUNTA of gender
Female	80
Male	87

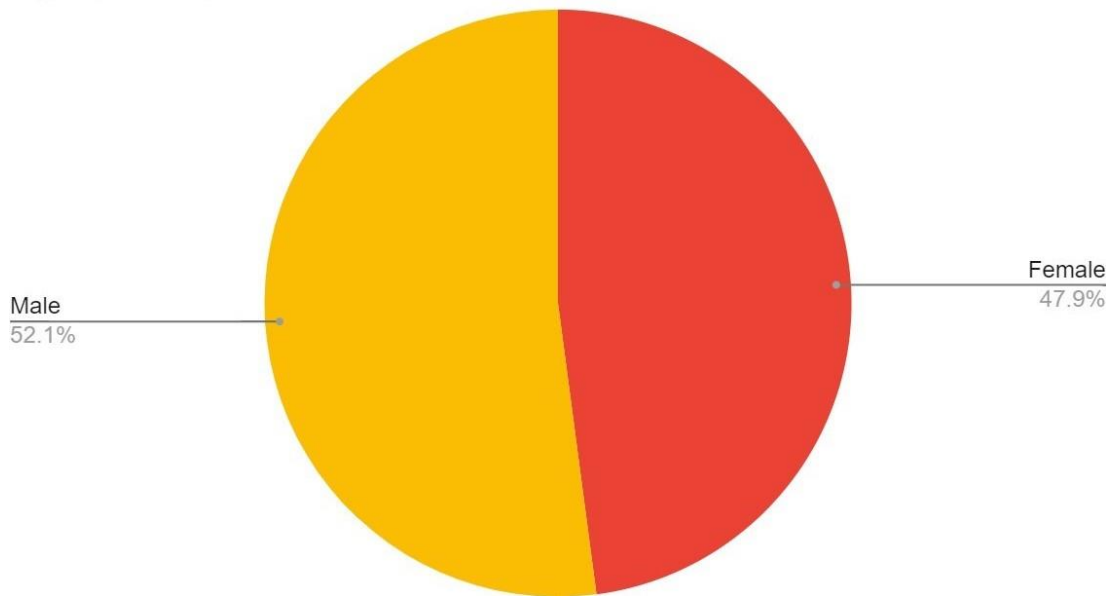


Figure 2: Pie chart (Gender)

Figure 2 is a pie chart that categorizes the respondents in terms of gender. Approximately 52% of the total respondents are male, that is 87 males, making them greater than the femalerespondents (approx. 48%).

### 4.1.3 Employment Status

Table 4: Employment Status

Employment Status	COUNTA of employment status
Employed	40
Self-employed	34
Student	73
Unemployed	0

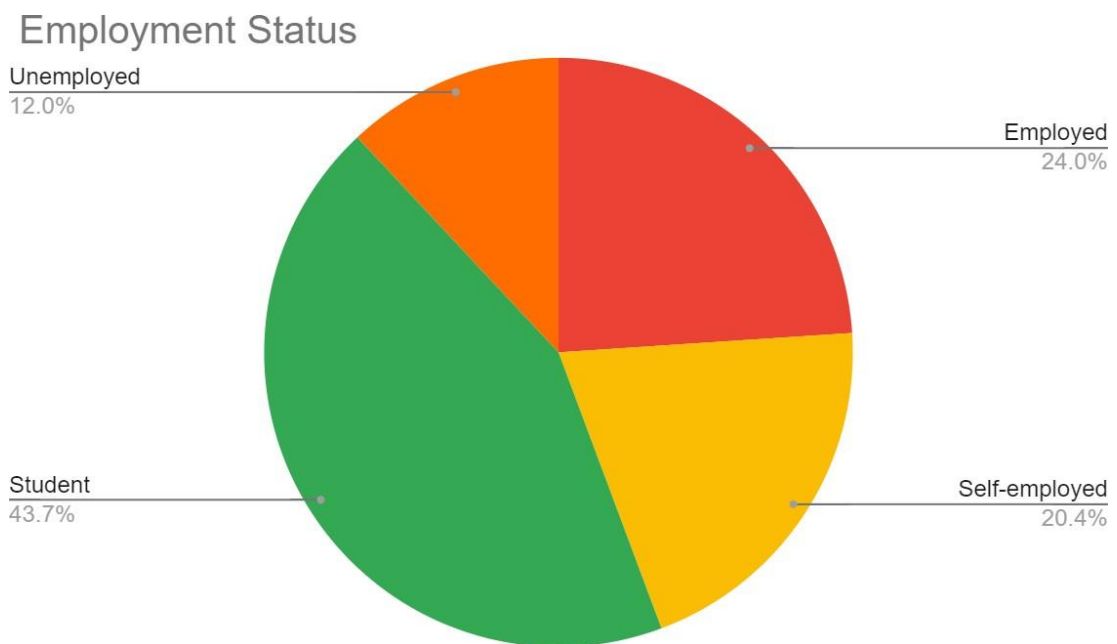


Figure 3: Employment status pie chart

Figure 3 is a pie chart that summarizes the respondents in terms of their employment status. It includes 4 categories: Unemployed, employed, self-employed, and student. Analysis reveals that almost 44% of the respondents are students, making it the largest share of the total respondents. Moreover, 24% of the total respondents are employed, working in different occupations. Furthermore, the third largest share of respondents are self-employed, almost 21%. Only 12% of the total respondents are unemployed.

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#### 4.1.4 Nationality

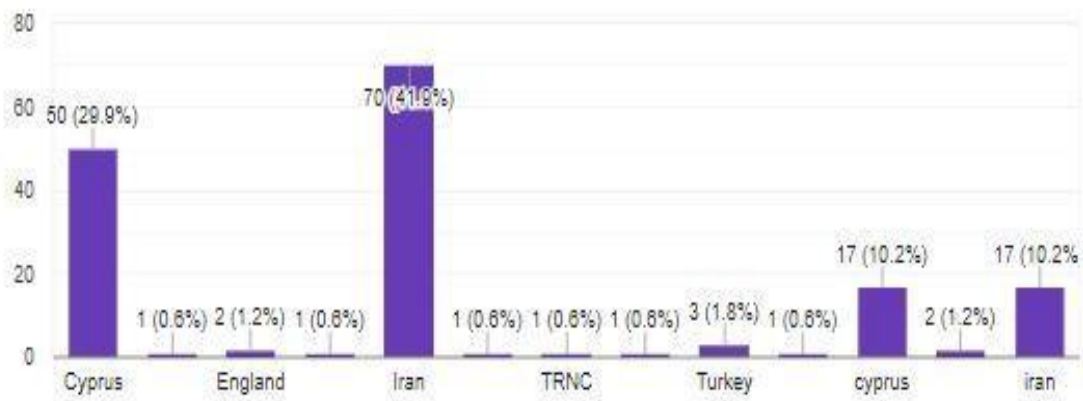


Figure 4: Nationality

The questionnaire has been answered by multiple nationalities, figure 4 estimates the percentage of respondents involved in the research in terms of their nationality. Most respondents belonged to Iran and Cyprus, with almost 42% of the respondents belonging to Iran, and 30% from Cyprus. Nationals from England also answered the research questionnaire. The diversity based on nationality is a good indicator that the results obtained from the questionnaire would likely not show any biases.

## 4.2 Assessing the Two Independent Variables

### 4.2.1 Awareness Level Towards Blockchain Technology

Table 5: Awareness Level Towards Blockchain Technology

	S. D	X	Description
Do you agree that you are well aware of the basic components of Blockchain technology like nodes, a distributed ledger, an asset, and a consensus algorithm?	0.9996752954	3.233532934	Acceptable level of Awareness
Are you aware that blockchain technology operates in an open and independent network?	0.9080000847	4.151515152	High Level of awareness
You are well aware of different platforms (like Ethereum) that utilize blockchain technology, do you agree?	0.9620157756	3.526946108	high level of Awareness
Do you agree that there can be various applications of blockchain technology in marketing? Y	0.9607024941	3.556886228	High level of Awareness
You are well aware of different marketing platforms (Like AdEx, Bat) that utilize blockchain technology, do you agree?	1.013045276	3.125748503	Mediocre level of Awareness
Overall	0.9686877852	3.518925785	High level of Awareness

Table 5 shows the awareness level of the total respondents towards Blockchain Technology. According to the results obtained in the table, the overall awareness level assessed towards Blockchain Technology among the respondents is found to be high ( $\bar{x}=3.52$ , S. D= 0.97). The results also suggest that the respondents are highly aware of blockchain technology, and its potential applications in marketing. They are quite aware that blockchain technology operates in an open and independent network. Also, the respondents are aware of different platforms like Ethereum etc. that utilize blockchain technology. An acceptable level of awareness exists among the respondents regarding the different components of Blockchain Technology that includes: nodes, distributed ledger, asset, and consensus algorithm. The respondents were also found to be highly aware of the potential applications of Blockchain Technology in Marketing. Moreover, a mediocre level of awareness was found among respondents regarding different marketing platforms that utilize Blockchain Technology like AdEX, BAT etc.

#### 4.2.2 Attitude Towards Blockchain Technology

Table 6: Attitude Towards Blockchain Technology

	S. D	x	Description
I recognize that blockchain technology (cryptocurrency) can be used as a medium of exchange.	1.056276652	3.443113772	Positive
Do you agree that blockchain technology can be used to make smart contracts	1.042872892	3.323353293	Positive
Do you agree that blockchain technology can be used in hedging	0.9183144065	2.922155689	Negative

funds			
Do you agree that blockchain technology can be used as a store of value, and serve other money functions as well?	0.9979056056	3.167664671	Positive
With blockchain technology, do you agree that it is possible that we might not need a monetary regulator like a central bank?	0.9671018842	2.850299401	Negative
Do you agree that Blockchain technology should be adopted at a rapid pace?	0.9910136593	3.299401198	Positive
Blockchain technology has the potential to revolutionize the marketing world. Do you agree that marketers should make a rapid transition towards it?	1.107327484	3.341317365	Positive
Overall	1.011544655	3.192472198	Positive

Table 6 shows the attitude of the respondents towards Blockchain Technology. The results obtained in table 2 reveal an overall mean of ( $x=3.19$ ), and a Standard Deviation ( $S. D= 1.01$ ), suggesting the respondents generally have a positive attitude towards Blockchain Technology. Most of the respondents are positive regarding the ability of Blockchain Technology in making smart contracts, depicting an overall positive attitude. The respondents also showed a positive attitude regarding the use of blockchain technology as a form of money which can store value and be used as a medium of exchange. Furthermore, most of the respondents showed a positive attitude

when asked whether blockchain technology should be adopted at a rapid pace or not. The same positive attitude was observed among the respondents when asked whether Blockchain Technology has the potential to revolutionize the marketing world. However, the respondents were skeptical, and showed a negative attitude regarding its usage in Hedging funds, and also in the technology's ability to replace the central banking system.

### 4.3 Descriptive Statistics

Table 7: Descriptive Statistics

	Descriptive Statistics									
	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Variance Statistic	Skewness		Kurtosis	
							Statistic	Std. Error	Statistic	Std. Error
Awareness	167	1.80	5.00	3.5090	.65884	.434	.085	.188	-.159	.374
Adoption	167	1.60	5.00	3.8922	.91170	.831	-.619	.188	-.576	.374
Attitude	167	1.30	4.70	3.1904	.70062	.491	-.135	.188	.146	.374
Valid N (listwise)	167									

Table 7 discusses the skewness, Kurtosis and other indicators estimated from the given primary data. The Skewness found for the independent variables (Awareness, and Attitude) is (-0.085) and (-0.135) respectively. Meanwhile, the skewness found for the dependent variable is (-0.619). The negative values suggest that the overall data is slightly leftward skewed. Kurtosis estimates the degree of peakedness or flatness of the distribution of scores obtained from each individual variable. The Kurtosis value for both the independent variables (Awareness level towards Blockchain Technology, and Attitude towards Blockchain Technology) are -0.159 and 0.146. Meanwhile, the

dependent variable showed a Kurtosis value of -0.576. The results suggest that the Kurtosis value for Attitude variable indicates a roughly normal distribution, and a slightly flatter distribution for Awareness and Adoption variables.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Selection Criteria				Durbin-Watson
					Akaike Information Criterion	Amemiya Prediction Criterion	Mallows' Prediction Criterion	Schwarz Bayesian Criterion	
1	.618 <sup>a</sup>	.382	.374	.72112	-106.226	.641	3.000	-96.872	1.423

a. Predictors: (Constant), Awareness, Attitude

b. Dependent Variable: Adoption

Table 8 presents a model summary obtained after conducting a logical regression analysis on the available data with two independent variables, and one dependent variable. The results reveal that the Pearson correlation coefficient R, which describes the relationship between two or more variables, is 0.618. The R-value of 0.618 suggests that there is a strong and positive correlation among the three variables.

R<sup>2</sup> (R-squared) is another measure that helps determine the goodness of fit or the explanatory power of a model. It provides the proportion or percentage of the total variation observed in the value of the dependent variable because of the independent variable(s). The R-squared value of 0.382 suggests that about 38.2% changes in the dependent variable (Adoption of Blockchain Technology) can be explained by the two independent variables jointly: (Attitude towards Blockchain Technology) and (Awareness level towards Blockchain Technology). Value of 0.382 can be considered

as a moderate value for R-square.

Moreover, the Adjusted R-squared value 0.374 reveals that 37.4% changes in the dependentvariable (Adoption) can be explained by the two independent variables (and Attitude Awareness).

Table 9: Correlations

		<b>Correlations</b>		
		Awareness	Attitude	Adoption
<b>Awareness</b>	Pearson Correlation	1	.694**	.562**
	Sig. (2-tailed)		<.001	<.001
	N	167	167	167
<b>Attitude</b>	Pearson Correlation	.694**	1	.575**
	Sig. (2-tailed)	<.001		<.001
	N	167	167	167
<b>Adoption</b>	Pearson Correlation	.562**	.575**	1
	Sig. (2-tailed)	<.001	<.001	
	N	167	167	167

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results obtained in table 9 reveal that there is a good relation between the Awareness level and Attitude towards Blockchain Technology depicted by the Pearson Correlation valueof 0.694. The relation is found to be significant as the p-value found is less than 0.05.

Moreover, the Pearson Correlations value of 0.563 indicates that there is a good correlationbetween the dependent variable (Adoption of Blockchain Technology) and the two independent variables (Attitude and Awareness Level towards Blockchain Technology).

Table 10: Coefficients

<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.883	.311		2.843	.005
	Attitude	.463	.111	.356	4.171	<.001
	Awareness	.437	.118	.316	3.705	<.001

a. Dependent Variable: Adoption

Table 10 provides a detailed analysis on the three variables and reveals how the unit changes in the two independent variables (Attitude and Awareness towards Blockchain Technology) have an effect on the Dependent Variable (Adoption of Blockchain Technology). The coefficient value of the independent variable Attitude towards Blockchain Technology was found to be 0.463. The value indicates that a unit increase in Attitude towards Blockchain Technology, that is welcoming attitude, results in the increase in the dependent variable by 0.463 units.

Moreover, the Awareness towards Blockchain Technology coefficient was found to be 0.437 units. The value indicates that a unit increase in the Awareness level towards Blockchain technology on the average, increases the Willingness to Adopt Blockchain Technology by 0.437 units.

#### **4.4 T-statistics and p-value**

##### **Awareness**

The estimated t-value for the relationship between “Awareness level towards Blockchain technology” and “Willingness to Adopt Blockchain Technology” is 3.705, with an associated p-value less than 0.001. Since the p-value is less than 0.05 at 5% level of significance, we can easily conclude that Awareness level towards Blockchain

Technology has a positive and significant impact on the willingness to Adopt Blockchain Technology.

Research underscores the critical role of awareness in technology adoption. Awareness refers to individuals' understanding and knowledge of a particular technology and its potential benefits. Studies suggest that awareness plays an important role in shaping attitudes, perceptions, and intentions towards adopting new technologies (Kar & Gupta, 2015; Venkatesh et al., 2012).

### **Attitude**

The estimated t-value for the relationship between the Attitude towards Blockchain Technology and willingness to Adopt Blockchain Technology was found to be 4.171, with an associated p-level less than 0.05 at 5% level of significance. We can easily deduce that Attitude towards Blockchain Technology has a positive and significant impact on the willingness to Adopt Blockchain Technology.

Attitudes play an important role in technology adoption. It refers to the trial judgment, belief and emotion of individuals towards a particular technology. Research shows that positive attitudes towards technology positively influence the intention to adopt and use it. Attitudes are formed based on perceived usefulness, ease of use, compatibility with existing practices, and risks associated with the technology (Davis, 1989; Venkatesh & Davis, 2000).

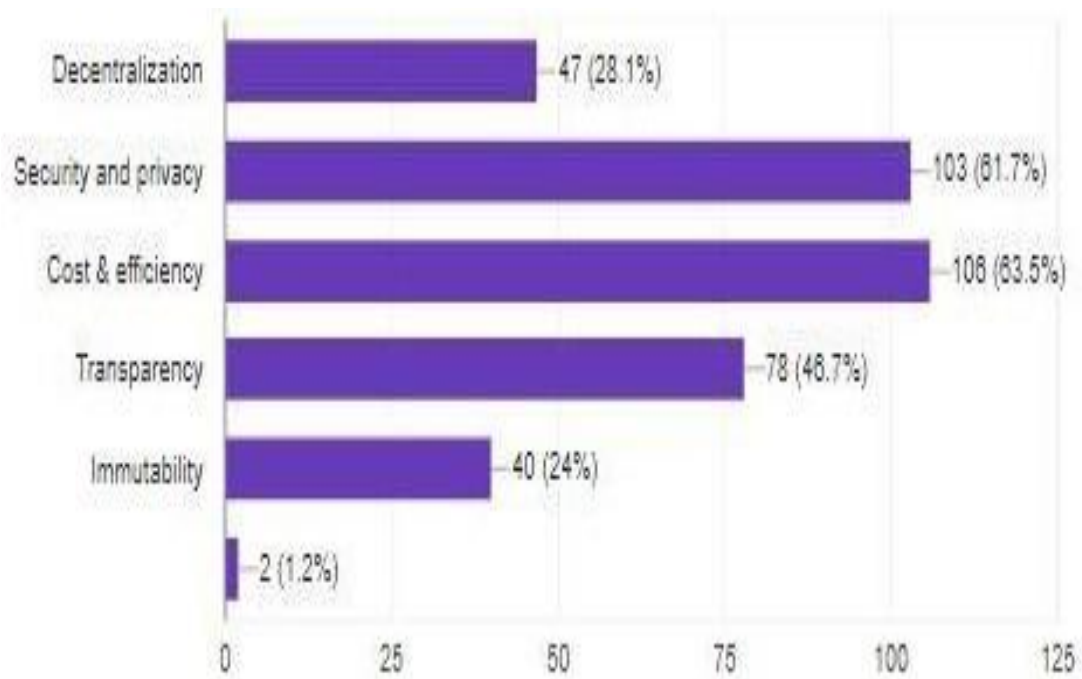


Figure 5: Design aspects respondents found the most compelling

Figure 5 explains the respondents' appeal towards different design aspects of the blockchain technology. Respondents had the freedom to choose multiple options as their responses. Five aspects have been generally covered: Decentralization, Security and Privacy, Cost Efficiency, Transparency, Immutability. When asked from the respondents about their favorite design aspect of Blockchain Technology, most of them found the cost efficiency, and Security and Privacy, as the most compelling features of the technology.

The Cost Efficiency scored 106, followed by Security and Privacy at 103. Transparency is another design aspect under discussion in this study. Results reveal that Transparency feature of Blockchain Technology was found compelling by over 40% respondents along with Security, and cost efficiency feature. The Transparency feature scored 78. Decentralization showed low results (47) as compared to other indicators, this might be due to the fact that the general awareness about the

decentralized system of Blockchain is comparatively low. Immutability scored the Lowest at 40 checks only.



Figure 6: Number of Responses and their (%) regarding the Blockchain Technology's Potential to bring Positive Results

Figure 9 reveals how respondents believe that Blockchain Technology can bring about positive results in marketing. The respondents were allowed to choose multiple options in this part. The options included: Increased Transparency, Greater Data Privacy, Enhanced Security Framework, Greater Ease to Conduct Transactions, Higher Accountability and Better Tracking. Among the 167 responses, Enhanced Security Framework scored the highest (104), followed by Greater Data Privacy (91), Greater Ease to Conduct Transactions (77), and others. Better Tracking scored the lowest (18). The results may suggest that most of the people keep the security aspect of Blockchain

Technology as quite compelling. They also appreciate the level of privacy that is incorporated within the Blockchain System.

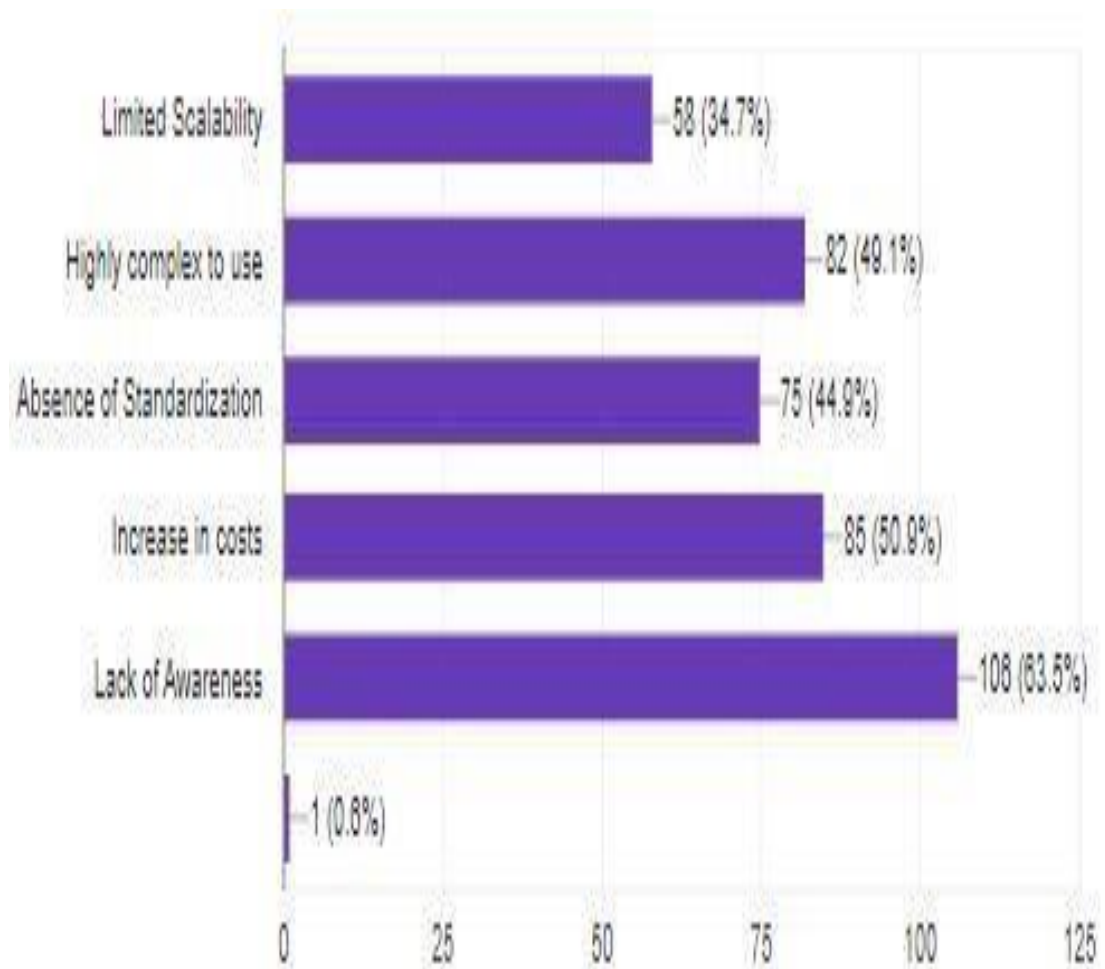


Figure 7: Perception regarding significant hurdles in the Adoption of Blockchain Technology

Figure 10 is a line chart that summarizes the most significant hurdles in the adoption of Blockchain Technology as perceived by the respondents who participated in this research study. The respondents were given the freedom to choose multiple answers. Five main significant hurdles highlighted are: Limited Scalability, Complexity, Absence of Standardization, Increase in Costs, and Lack of Awareness.

Most of the respondents believe that the Lack of Awareness is one of the most significant hurdles people face in the adoption of Blockchain Technology. Complexity, and high cost (Related to mining etc.) are other factors that may delay the adoption of Blockchain Technology at a rapid pace. The Lack of Awareness scored 106 points, Increase in Costs scored 85, Complexity scored 82.

On the other hand, considerable respondents believe that limited scalability, and absence of standardization were not really significant hurdles in the adoption of Blockchain Technology. Absence of Standardization scored a low of 75 points, followed by limited scalability, at the lowest (58) score.

## **Chapter 5**

### **CONCLUSION**

The use of a descriptive research design allows for the collection of comprehensive data on the awareness, attitude, and adoption of blockchain technology in the marketing field. This design facilitates the exploration of relationships between variables and provides insights into the current state of knowledge in the area of study. The questionnaire includes a mix of demographic questions, Likert scale items, and various question types. This design enables the collection of both quantitative and qualitative data, providing a comprehensive understanding of respondents' profiles, awareness levels, attitudes, and perceptions. The proposed use of descriptive statistics, logical regression, and tools such as SPSS and MS Excel enhance the rigor and validity of the analysis. These statistical techniques provide a systematic way to examine the relationships between variables and identify significant associations.

The aim of this thesis was to investigate the impact of blockchain technology on marketing, with a specific focus on the role of awareness and attitude in the adoption of this transformative technology. By analyzing data obtained from a sample of 167 respondents, this study sought to uncover the relationship between awareness, attitude, and the adoption of blockchain technology in the marketing context. The majority of respondents fell within the age group of 21-30, indicating that younger individuals are more actively engaged in the study of blockchain technology and its implications for marketing. This finding suggests a potential positive trend in the adoption of

blockchain technology in the marketing field, as younger generations tend to be more open to technological innovations. Furthermore, the gender distribution revealed a slightly higher proportion of male respondents compared to females. While this difference may not have significant implications for the adoption of blockchain technology, it highlights the need for further research to explore potential gender-related factors influencing technology adoption in marketing.

The employment status of the respondents indicated a considerable number of students, suggesting that blockchain technology is gaining attention and interest among the younger generation, including those pursuing marketing-related studies.

The analysis revealed a high level of awareness among respondents regarding blockchain technology and its potential applications in marketing. This indicates that the majority of respondents were knowledgeable about the fundamental aspects of blockchain, including its decentralized nature and platforms such as Ethereum. Additionally, respondents exhibited awareness of various components of blockchain technology, including nodes, distributed ledgers, assets, and consensus algorithms. This high level of awareness is a positive indicator for the potential adoption of blockchain technology in marketing. The findings suggest that marketers and professionals in the field are well-informed about the capabilities and benefits offered by blockchain technology. Such awareness can lay the groundwork for the successful integration of blockchain into marketing strategies, enabling greater transparency, security, and efficiency in various marketing activities.

The study also examined respondents' attitudes towards blockchain technology in the marketing context. The results demonstrated an overall positive attitude towards

blockchain technology, with respondents expressing optimism about its ability to facilitate smart contracts and serve as a form of value storage and exchange. This positive attitude implies a willingness to explore and embrace blockchain technology as a valuable tool in the marketing field. Moreover, the majority of respondents agreed that blockchain technology has the potential to revolutionize the marketing world. This finding highlights the perception that blockchain can bring transformative changes to marketing practices, enhancing trust, customer engagement, and data security.

The statistical analysis provided significant insights into the relationship between awareness, attitude, and the adoption of blockchain technology in the marketing context. The Pearson correlation coefficient indicated a strong positive correlation between awareness and attitude, suggesting that individuals with higher awareness levels also tend to exhibit more positive attitudes towards blockchain technology. The regression analysis revealed that both awareness and attitude significantly influenced the willingness to adopt blockchain technology in marketing. Specifically, higher levels of awareness and positive attitudes were associated with a greater inclination to adopt blockchain technology in marketing practices.

In conclusion, this study highlights the importance of awareness and attitude in the adoption of blockchain technology in marketing. The findings demonstrate a high level of awareness among respondents, coupled with a generally positive attitude towards blockchain technology. This positive attitude, combined with awareness, significantly influenced the willingness to adopt blockchain technology in marketing. These results indicate a promising future for the integration of blockchain technology in marketing practices. As awareness and positive attitudes continue to grow, marketers and organizations should leverage the potential of blockchain to enhance customer

experiences, improve data security, and increase trust in marketing transactions. However, further research is needed to delve deeper into the specific mechanisms and challenges of adopting blockchain technology in various marketing contexts, allowing for a more comprehensive understanding of its impact on marketing practices.

The findings of this research hold significant implications for the field of marketing and contribute to the existing knowledge in several ways. Firstly, this study sheds light on the profile of respondents in terms of age, gender, and employment status, providing valuable insights into the potential adopters of blockchain technology in the marketing context. By identifying that younger individuals and students show a higher level of engagement and awareness, this research highlights the importance of targeting and tailoring blockchain-based marketing strategies to appeal to these demographics.

Secondly, the study reveals a high level of awareness among respondents regarding blockchain technology and its potential applications in marketing. This finding underscores the growing recognition among marketing professionals of the transformative nature of blockchain and its relevance to various marketing activities. It adds to the existing literature by providing empirical evidence of the awareness levels within the marketing field and the potential for the integration of blockchain technology.

Furthermore, the positive attitudes exhibited by respondents toward blockchain technology in marketing highlight the acceptance and optimism regarding its adoption. This research expands on the existing knowledge by indicating that marketers perceive blockchain technology as a valuable tool that can revolutionize the industry. However, the skepticism observed in specific areas, such as hedging funds and replacing the

central banking system, emphasizes the need for further exploration and understanding of the practical limitations and implications of blockchain in these contexts. By establishing a significant positive correlation between awareness and attitude, and their joint impact on the willingness to adopt blockchain technology in marketing, this study provides insights into the psychological factors that influence adoption decisions. This understanding can assist marketers in designing targeted awareness campaigns and fostering positive attitudes toward blockchain technology, ultimately driving its adoption and implementation in marketing practices.

The originality and novelty of this work lie in its specific focus on blockchain technology's impact on marketing. While previous research has explored blockchain in various domains, such as finance and supply chain management, the investigation of its implications for marketing is relatively limited. This study bridges that gap by specifically examining awareness, attitude, and the adoption of blockchain technology in the marketing field. By doing so, it offers unique insights and contributes to the theoretical and practical understanding of blockchain's potential within marketing strategies.

Practically, the findings of this research provide guidance to marketing professionals and organizations seeking to leverage blockchain technology. By understanding the profile of potential adopters, the level of awareness, and the factors that influence attitude and adoption, marketers can tailor their strategies and communication efforts. This research emphasizes the importance of educating marketing professionals about blockchain technology, its benefits, and its practical applications in marketing activities. It also highlights the need for campaigns that address potential concerns or skepticism related to specific use cases, such as hedging funds.

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## **APPENDICES**

## Appendix A: Questionnaire



This academic project is concerned with The Impacts of Awareness and Attitude on the Willingness to Adopt Blockchain Technology in the Field of Marketing. Taking the time to complete the questionnaire is vitally important and your contribution is highly appreciated. Your responses will remain anonymous and be treated in the strictest of confidence. There are no right or wrong answers; what really matters is your honest opinion. Thank you very much for your help.

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Q1: Please answer the following questions:

Q1.1) Gender

- 1. Male
- 2. Female
- 3. Other

Q1.2) Age

- 16-21
- 21-30
- 30-40
- 40-50
- 50-60

Q1.3) Employment status

- 1. Employed
- 2. Unemployed
- 3. Self-employed
- 4. student

Q1.4) Nationality:

Your answer

Q1.5) What is your role (if any) in the marketing industry? (e.g. Content marketing specialist etc.)

Your answer

Q2: Please read the following paragraph and then indicate the extent to which you agree or disagree with the related statements. (Please tick only one box per line)

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1 Do you agree that you are well aware of the basic components of Blockchain technology like nodes, a distributed ledger, an asset, and a consensus algorithm?					
2 You are well aware of different platforms (like Ethereum) that utilize blockchain technology, do you agree?					
3 You are well aware of different marketing platforms (like AdEx, BAT) that utilize blockchain technology, do you agree?					
4 Blockchain technology operates in an open and independent network, do you agree?					
5 Do you agree that there can be various applications of blockchain technology in marketing?					

Q3: Please read the following paragraph and then indicate the extent to which you agree or disagree with the related statements. (Please tick only one box per line)

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1 I recognize that blockchain technology (cryptocurrency) can be used as a medium of exchange.					
2 Do you agree that blockchain technology can be used to make smart contracts?					
3 Do you agree that blockchain technology can be used in hedging funds?					
4 Do you agree that blockchain technology can be used as a store of value, and serve other money functions as well?					
5 With blockchain technology, do you agree that it is possible					

5	With blockchain technology, do you agree that it is possible that we might not need a monetary regulator like a central bank					
6	Do you agree that the Blockchain technology should be adopted at a rapid pace?					
7	Blockchain technology has the potential to revolutionize the marketing world. Do you agree that marketers should make a rapid transition towards it?					

4.1 Have you ever used blockchain technology? If yes, then kindly specify the reason behind using it in the next question. \*

Yes

No

Continued\* (If yes above)

|

Your answer

4.2 Are you aware of any potential application of the blockchain technology in marketing? \*

Yes

No

4.3 There are several design aspects of blockchain technology, which do you find the most compelling? \*

Decentralization

Security and privacy

Cost & efficiency

Transparency

Immutability

Other: \_\_\_\_\_

|

4.4 How do you think that blockchain can bring about positive results in marketing? (Select any top 3) \*

Increase Transparency

Greater Data Privacy

Enhanced Security Framework

Greater Ease to Conduct Transactions

Higher Accountability

Better Tracking

4.5 What nature of implications can blockchain technology bring about for consumer privacy and data protection?

Positive  
Negative  
Neutral

4.6 What nature of implications can blockchain technology in marketing bring about for consumer trust and Brand confidence?

Positive  
Negative  
Neutral

4.7 What effects could blockchain technology in marketing have on the role of intermediaries? (Like ad agencies, retailers, and wholesalers)

Increase their Role  
Disrupt the Role  
Neutral Effect

4.8 Do you believe that the Application of Blockchain technology in Marketing can help combat Ad Fraud in the marketing industry? \*

Highly believe  
Slightly believe  
Not Sure  
Slightly disagree  
Highly disagree

4.9 What do you believe are the most significant hurdles in the adoption of blockchain technology in marketing?

Limited Scalability  
Highly complex to use  
Absence of Standardization  
Increase in costs  
Lack of Awareness  
Other: