Assessing Cryptocurrency Adoption: Development of a New Acceptance Model

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Abstract

This research examines the correlation between individuals' awareness of technology and their behavioural intention as users of cryptocurrency. It specifically focuses on the perceived factors that influence this relationship, including usefulness, ease of use, risk, compatibility, and social norms. Cryptocurrency has significantly revolutionised global economic systems by providing a dynamic and decentralised medium of exchange. Nonetheless, the widespread adoption of this technology is hindered by the prevalence of fraudulent activities on the internet, the absence of a comprehensive regulatory structure, and a multitude of misunderstandings that negatively impact its utilisation. Consequently, there exists a noticeable deficiency in academic study pertaining to this particular area.

The primary objective of this study was to address the existing gap in knowledge by investigating the impact of cryptocurrency technology awareness on the behavioural intentions of individuals who may potentially adopt it. A survey-based methodology was utilised to gather a substantial sample size of 402 participants in order to examine the model we put forth.

The study's findings indicate that perceived factors play a significant role in mediating the relationship between technology awareness and behavioural intention. It is worth mentioning that the impact of technology awareness on behavioural intention is primarily mediated by perceived factors such as usefulness, ease of use, and risk, and this mediation is found to be more pronounced. This finding indicates that individuals who hold a positive perception of cryptocurrency in terms of its benefits, ease of use, and risk acceptability are more likely to demonstrate a higher propensity to utilise it, assuming they possess a reasonable level of knowledge about the underlying technology.

The significance of compatibility and social norms as perceived factors was also notable, highlighting the influence of the societal and infrastructural ecosystem on user behaviour. When individuals perceive cryptocurrency as compatible with their existing systems or endorsed by their social circles, they are more inclined to indicate an intention to utilise it.

This study provides significant insights for financial institutions aiming to implement monetary policies in the emerging cryptocurrency era. This statement underscores the importance for these organisations to carefully contemplate the integration of digital innovations into their policies and strategies. Moreover, this emphasises the significance of augmenting awareness and comprehension of technological aspects and perceived determinants in order to facilitate wider adoption and incorporation of cryptocurrencies.

The findings of this study serve as a catalyst for future investigations in this field, with potential emphasis on exploring the impact of individual characteristics on the perception and adoption of cryptocurrency. Additionally, it would be valuable to examine the dynamics of cryptocurrency in various geographical and socio-economic contexts. Furthermore, this research highlights the need for enhanced technology awareness and a comprehensive understanding of perceived factors to increase the acceptability and successful integration of cryptocurrencies into mainstream financial systems.

Introduction

Wei Dai first introduced the idea of a proof-of-work algorithm in his 1998 paper entitled "B-Money" (Dai, 1998). Satoshi Nakamoto used this concept in 2008 when publishing "Bitcoin: A Peer-to-Peer Electronic Cash System" (Nakamoto, 2008), unveiling Bitcoin as the inaugural digital currency. Virtual currency systems operate via decentralized networks, thus eliminating any need for centralized control by entities like governments or financial institutions. Blockchain technology is a transparent, decentralized ledger that keeps track of transactions without intermediaries such as financial institutions. Bitcoin allows individuals to engage in peer-to-peer trading without intermediary services like financial institutions.

Bitcoin has various uses, from speeding digital transactions and international fund transfers to providing an opportunity for investment and limited quantities for use as currency. It has its own distinct set of characteristics as an unconventional payment solution with limited supply available today. According to Nakamoto's (2008) proposal, an upper limit of 21 million bitcoins may exist at any one time in circulation. An intentional restriction of currency supply serves the goal of counteracting inflationary pressures and protecting its purchasing power in the long term. How Can People Acquire Bitcoins? Acquiring bitcoin involves purchasing it through cryptocurrency exchanges using fiat currencies or engaging in mining processes that utilize high-performance computers to solve complex mathematical equations resulting in newly generated coins being rewarded to miners.

Following Bitcoin, other cryptocurrencies were soon created, such as Litecoin, Ripple, and Ethereum (Zohar, 2015). Cryptocurrencies quickly attracted widespread interest from governments, corporations, and individuals worldwide (Casey & Vigna, 2018), evolving with technological advancement as new uses were discovered for cryptocurrency currencies.

Research Problems

The adoption of cryptocurrencies is a complex phenomenon shaped by various technological, contextual, and individual factors. Although the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been employed to comprehend technology adoption, they may need to furnish a comprehensive and exhaustive framework for investigating cryptocurrency adoption. The models in question were initially formulated on conventional technologies and may not comprehensively encompass the distinctive factors that impact the adoption of cryptocurrencies.

A research issue in this domain pertains to the requirement for a more all-encompassing theoretical construct that explicitly elucidates the determinants that impact the adoption of cryptocurrencies. The current models may need to comprehensively account for the decentralized characteristics of cryptocurrencies, the influence of blockchain technology, or the significance of trust and security in the adoption decision-making process. Consequently, the formulation of a novel theoretical framework that incorporates the distinctive attributes of cryptocurrencies has the potential to augment our comprehension of the adoption trends.

The adoption of cryptocurrencies is dynamic, given their recent emergence as a technological innovation. Longitudinal investigations can offer valuable perspectives on adoption dynamics, encompassing the determinants of initial adoption choices, usage, disuse patterns, and the drivers of sustained or discontinued usage. Research endeavors of this nature have the potential to enhance the comprehensiveness of our comprehension regarding the adoption of cryptocurrency and provide guidance for developing practical approaches to foster its continued adoption.

The regulatory frameworks surrounding cryptocurrencies vary across different jurisdictions and can have a significant impact on their adoption. These frameworks encompass a wide range of considerations, including legal recognition, oversight, security, compliance, and consumer protection. Understanding these regulatory factors is essential for policymakers and regulators to make informed decisions and develop effective guidelines for the integration of cryptocurrencies into existing legal structures. Here are some illustrative examples of regulatory frameworks in different regions:

1. The regulatory framework for cryptocurrencies in the United States is intricate and encompasses various governmental agencies. Certain cryptocurrencies have been categorised as securities by the Securities and Exchange Commission (SEC), thereby rendering them subject to the regulations and provisions outlined in securities laws. Furthermore, it is imperative for cryptocurrency exchanges and money service businesses to adhere to the anti-money laundering (AML) and know-your-customer (KYC) regulations as mandated by the Financial Crimes Enforcement Network (FinCEN). In addition, it is worth noting that various states may possess their own set of regulations, exemplified by the BitLicense implemented in the state of New York.
2. The European Union has adopted a comprehensive approach towards the regulation of cryptocurrencies. The implementation of the Fifth Anti-Money Laundering Directive (5AMLD) necessitates that member states establish regulatory frameworks for cryptocurrency exchanges and custodian wallet providers, subjecting them to Anti-Money Laundering (AML) and Know Your Customer (KYC) regulations. The European Union (EU) is currently engaged in the development of a regulatory measure known as the Markets in Crypto-assets Regulation (MiCA). This proposed regulation seeks to establish

a standardised framework that encompasses cryptocurrencies and associated services within the EU, with the objective of achieving harmonisation.

3. Japan has officially acknowledged cryptocurrencies as legitimate forms of payment since the year 2017. The licencing framework for cryptocurrency exchanges in the country is overseen by the Financial Services Agency (FSA). In order to ensure compliance, exchanges are obligated to adhere to specific criteria, which encompass the implementation of comprehensive security protocols and the segregation of customer funds. The regulatory strategy employed by Japan is designed to cultivate innovation while concurrently safeguarding the interests of consumers and maintaining the integrity of the market.
4. China has implemented a stringent approach towards cryptocurrencies. The nation has implemented a prohibition on initial coin offerings (ICOs) and has imposed restrictions on financial institutions engaging in transactions involving cryptocurrencies. In recent years, the Chinese government has implemented stricter measures to suppress cryptocurrency mining and trading operations, citing apprehensions regarding financial stability and the potential for money laundering.
5. Switzerland has adopted a favourable stance towards cryptocurrencies, with the intention of establishing itself as a prominent centre for blockchain technology and digital assets on a global scale. The nation has established a comprehensive regulatory framework that offers transparency and a conducive atmosphere for cryptocurrency initiatives. The oversight of cryptocurrency activities in Switzerland is carried out by the Swiss Financial Market Supervisory Authority (FINMA). The country has implemented a number of regulations that are favourable towards cryptocurrencies, including the establishment of

the "Crypto Valley" in Zug. As a result, Switzerland has become an attractive destination for a significant number of blockchain startups.

These examples demonstrate the diverse approaches to cryptocurrency regulation and highlight the importance of considering regulatory frameworks and legal considerations when assessing the impact on adoption decisions. The level of recognition, oversight, and compliance requirements can significantly influence the adoption and integration of cryptocurrencies within a particular jurisdiction. Resolving these research issues can enhance a comprehensive comprehension of cryptocurrency adoption and provide insights for devising approaches to foster its broader acceptance and utilization.

Purpose

This study aims to explore the importance of cryptocurrencies and advocate for their wider adoption. This study reviews the adoption model of cryptocurrencies, identifies their inherent value, and recognizes the challenges limiting their adoption. The paper also aims to bridge the knowledge gap between the potential and actual adoption of cryptocurrencies, offering insights for stakeholders in the financial ecosystem.

Objectives

1. To review the existing literature on the adoption of cryptocurrency and technology acceptance models.
2. To determine the fundamental factors that are influencing the adoption of virtual currencies.
3. To develop and validate a new adoption model to assess cryptocurrency acceptance.

Scope of the Study

This study focuses on the phenomenon of cryptocurrencies, particularly emphasizing their acceptance models and implications. The objective of this paper is not to conduct an exhaustive analysis of the broader ramifications of blockchain technology and its correlated digital assets, including non-fungible tokens (NFTs) and decentralized finance (DeFi) tokens.

The current research examines the barriers that hinder the wider adoption of cryptocurrencies. These barriers include technical and security challenges, regulatory uncertainties, and inadequate awareness. The scope of the research is limited to the identification of impediments and the provision of general recommendations for overcoming them.

The narrative refrains from exploring specific, context-specific methodologies or strategies. This research employs a comprehensive methodology to investigate the worldwide adoption of cryptocurrencies, considering the varied perspectives and regulatory frameworks about cryptocurrencies across distinct geographic locations.

However, this study's scope includes a comprehensive comparative assessment of the adoption of cryptocurrencies in specific countries or regions. The study relies on present data and resources until the year mid-2023. As a result, any developments or alterations in the domain of cryptocurrencies after this timeframe are outside the scope of this inquiry.

The survey aimed to gather adoption data about cryptocurrency from a heterogeneous group of respondents. To thoroughly comprehend cryptocurrency adoption, the survey encompasses the wider population, including cryptocurrency users, non-users, and investors/traders. Surveys aimed at these demographic segments can yield valuable insights into their understanding, attitudes, incentives, encounters, and obstacles to adoption. The methodology mentioned above facilitates a comprehensive perspective on the patterns of

cryptocurrency adoption, thereby providing valuable insights to devise tactics for augmenting awareness, mitigating apprehensions, and fostering more excellent reception.

The subsequent sections of this academic paper are structured in the following way: In the second section, a thorough literature review is presented about cryptocurrency adoption. This review addresses established theories and research studies conducted in this area. The third section explains the methodology employed in the research, encompassing the techniques utilized in data collection and analysis. In the fourth section, the outcomes and discussions are presented, derived from examining the gathered data. In conclusion, the fifth section of the paper summarizes the primary outcomes, examines their implications, and proposes potential avenues for future research.

Literature Review

Mass adoption refers to the acceptance and integration of a product, technology, or innovation by much of the population. It signifies a stage where the use of a particular product or technology becomes common or mainstream.

The diffusion of innovation theory, originally proposed by Everett Rogers, provides a model for understanding how, why, and at what rate new ideas and technology spread. The model divides adopters into five categories: Innovators, Early Adopters, Early Majority, Late Majority, and Laggards. The period of mass adoption typically refers to the phase when the Early Majority and Late Majority begin using the product or technology, creating a significant shift in the societal or market acceptance.

Cryptocurrency and Mass Adoption

Cryptocurrency, specifically Bitcoin, was initially used by a small group of pioneers known as 'Innovators'. These were followed by 'Early Adopters' who discovered and started using this new form of digital money. The shift from Early Adopters to the Early Majority phase is critical, as it marks the beginning of mass adoption.

Cryptocurrency's place on the adoption curve can be evaluated by considering various factors such as the number of users, frequency and volume of transactions, and regulatory acceptance.

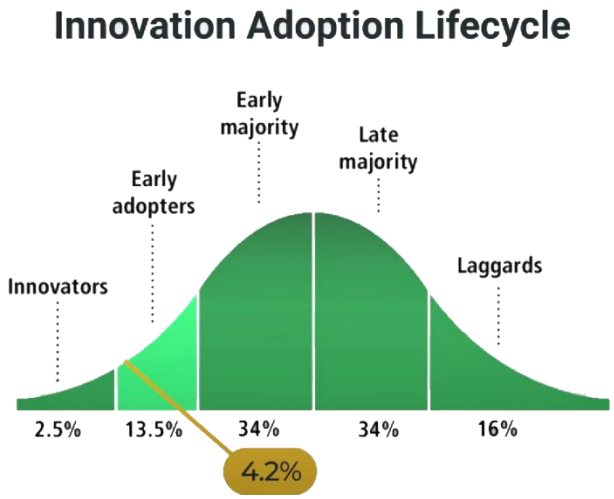


Fig. 1. Cryptocurrency Adoption based on the Innovation Adoption Lifecycle

As per the crypto payment company Triple-A suggest that about 4.2% of the global population (approximately 420 million users) currently uses cryptocurrency. This statistic, derived from 16 different reports and data sources, suggests that cryptocurrency might be in the Early Adopter phase.

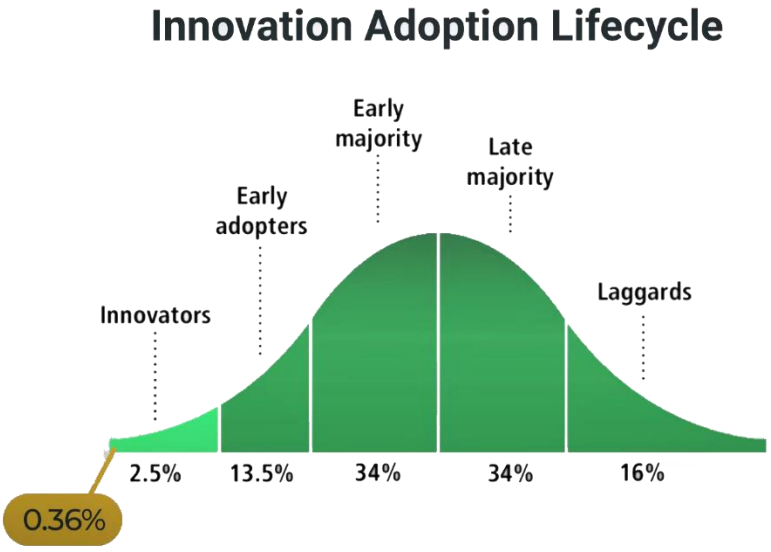


Fig. 2. Bitcoin Adoption based on the Innovation Adoption Lifecycle

But in the in the case of Bitcoin, the 2022 report by Blockware Solutions calculated the total number of unique wallets on the Bitcoin blockchain, excluding those held on centralized exchanges. The report estimated that there are 30.8 million global Bitcoin users, which is about 0.36% of the global population. Based on this data, Bitcoin might still be in the Early Adopters phase of the adoption curve.

However, while these statistics suggest that mass adoption has not yet been reached, the increasing recognition of Bitcoin and other cryptocurrencies by financial institutions and governments around the world is promising. The establishment of regulatory frameworks, along with greater accessibility and understanding of the technology, could potentially expedite the adoption process, pushing cryptocurrencies closer to mass adoption.

The academic world, industry, and governments globally have shown significant interest in the study of cryptocurrency. The cryptocurrency market has grown significantly since the introduction of Bitcoin, with a current count of over 6000 distinct cryptocurrencies in circulation as of 2023 (CoinMarketCap, 2023). Cryptocurrencies comprise not only digital currencies such as Bitcoin and Ethereum but also utility tokens, security tokens, and stablecoins, each of which possesses distinct characteristics and applications (Tapscott & Tapscott, 2016).

Bitcoin rapidly gained recognition and surpassed the value of gold by 2011. After Bitcoin emerged, additional cryptocurrencies such as Litecoin, Ripple, and Ethereum were introduced (Zohar, 2015). The significant expansion of cryptocurrencies has garnered widespread interest from governments, corporations, and individuals globally (Casey & Vigna, 2018).

Digital currencies have been suggested for various purposes, including but not limited to peer-to-peer transactions, smart contracts, remittances, privacy-enhancing transactions, and decentralized finance (DeFi) (Mougayar, 2016). Despite their potential, cryptocurrencies have

been linked to apprehensions such as regulatory challenges, elevated price instability, substantial energy consumption, and deployment in unlawful pursuits (Böhme et al., 2015).

The regulation of cryptocurrencies exhibits significant variation across different jurisdictions. While some nations have adopted a favorable stance towards these digital assets, others have imposed complete prohibitions. A considerable number of countries are still in the process of developing suitable regulatory frameworks for cryptocurrencies (Zetzsche et al., 2018). The lack of clear regulations presents considerable obstacles to the broader acceptance of cryptocurrencies, as noted by Hileman and Rauchs (2017).

The realm of cryptocurrency has been marked by significant security concerns by many reported incidents involving hacking, theft, and fraud at cryptocurrency exchanges (Moore & Christin, 2013). The need for enhanced security measures and practices has arisen, encompassing both the individual user and institutional levels. A combination of uncertainty and promise characterizes the outlook for cryptocurrencies. The enhanced comprehension of technology and the resolution of regulatory and security obstacles may augment the possibility of broader acceptance of cryptocurrencies, thereby restructuring the global financial and economic terrain.

Cryptocurrencies have undergone significant transformations since their initial introduction. Initially, their primary use was for online transactions and as a form of speculative investment. As technological advancements progressed, more individuals discovered novel applications for it. Smart contracts, which utilize blockchain technology to enable automated contract execution, have been implemented on various coin platforms, including Ethereum. Cryptocurrencies have facilitated cross-border transactions, particularly in nations with unstable currencies or restricted access to conventional banking facilities. In Venezuela, hyperinflation has

rendered the local currency virtually ineffective, prompting many individuals to adopt Bitcoin to preserve their wealth and facilitate financial transactions.

Modifications have been implemented in the regulation of coins. Initially, numerous nations exhibited caution towards cryptocurrencies due to their perceived potential for facilitating illicit activities such as money laundering and other forms of financial concealment. As technology has advanced and become ubiquitous, nations globally have implemented regulations regarding its usage.

Key Concepts & Theories

Several scholarly investigations have analyzed the determinants that impact the adoption of cryptocurrencies. Several crucial elements have been identified in the literature, such as perceived usefulness (Abou Senna et al., 2020), perceived risk (Böhme et al., 2015), trust in cryptocurrency (Glaser et al., 2014), and regulatory environment (Hileman & Rauchs, 2017). The factors mentioned above can be classified into three primary classifications: individual, technological, and environmental.

Individual Factors

The perception of benefits and risks associated with cryptocurrency adoption constitutes individual factors. Research has indicated that cryptocurrency adoption is significantly influenced by perceived usefulness, ease of use, and perceived risk, as evidenced by studies conducted by Abou Senna et al. (2020) and Böhme et al. (2015).

Technological Factors

The technological factors pertain to the inherent characteristics of the cryptocurrency, including but not limited to security, privacy, and transaction speed (Zohar, 2015). According to

Glaser et al. (2014), empirical studies have demonstrated that their technical attributes can significantly influence the adoption of cryptocurrencies. According to Böhme et al. (2015), apprehensions regarding security and privacy may impede the adoption of cryptocurrencies.

Environmental Factors

The term "environmental factors" pertains to the broader framework cryptocurrency accepts and integrates. This encompasses the regulatory landscape, market infrastructure, and social impact outlined by Hileman and Rauchs in 2017. According to Hileman and Rauchs (2017), research has indicated that the regulatory framework can substantially influence the acceptance of cryptocurrencies. Governments can encourage or impede the utilization of cryptocurrencies through legal measures and regulations. Schaupp and Festa (2018) suggest that a robust market infrastructure comprising cryptocurrency exchanges and wallets can catalyze the widespread adoption of cryptocurrencies.

Existing Studies and Cryptocurrency Models

Cryptocurrency adoption models are primarily centered around the diffusion of innovation theory (Rogers, 1962) and, more recently, the technology acceptance model (TAM) (Davis, 1989). These theories have been adapted to fit the unique nature of cryptocurrencies.

Technology Acceptance Model (TAM)

Davis (1989) proposed the Technology Acceptance Model (TAM), which has become a highly influential model for comprehending the adoption of novel technologies. According to the Technology Acceptance Model (TAM), the primary factors determining the adoption of novel technology, such as cryptocurrency, are perceived usefulness and ease of use.

The concept of perceived usefulness pertains to an individual's perception of how utilizing a specific system would augment their work-related efficacy. According to Davis (1989), perceived ease of use relates to an individual's perception of the effortlessness of utilizing a specific system. In cryptocurrency, perceived usefulness pertains to the advantages a user anticipates receiving from cryptocurrencies, such as expedited transfer durations or enhanced confidentiality (Schaupp & Festa, 2018). The concept of perceived ease of use pertains to the level of ease that user experiences when engaging in activities such as purchasing, vending, and safeguarding cryptocurrencies (Baur et al., 2018).

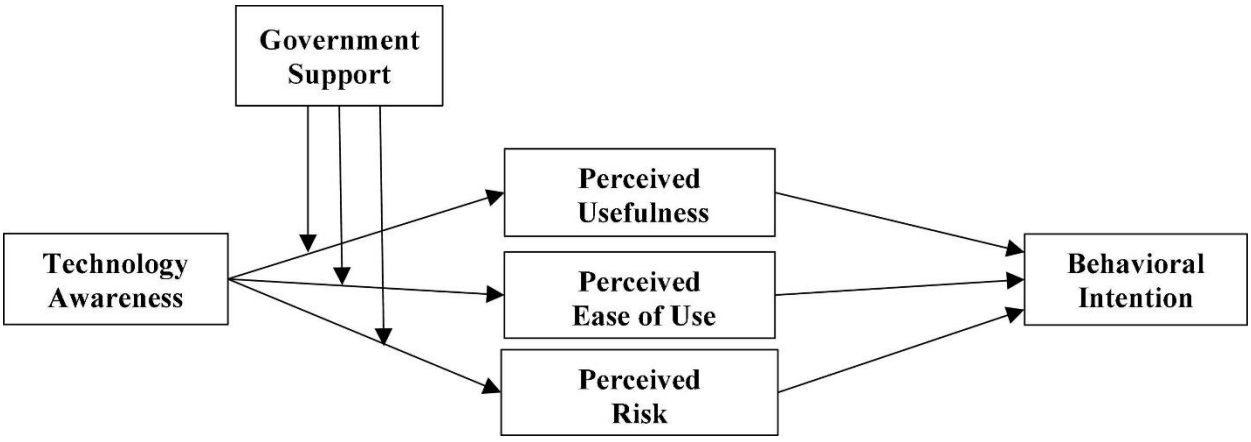


Fig. 3. Application of Technology Acceptance Model

One study used TAM Model (shown in Fig 3) to investigate the factors that influence the adoption of Bitcoin among Gen Z with strong government support in Pakistan. The results showed that usefulness and ease of use significantly influenced Bitcoin adoption. (Sagheer et al., 2022)

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) is another model that explains user intentions to use an information system and usage behavior. The model

suggests that four key elements significantly determine user acceptance of new technology: performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).

In the context of cryptocurrency, the UTAUT model can help explain why some people choose to adopt cryptocurrency while others do not. For instance, performance expectancy could be related to the expected financial return from investing in cryptocurrency, while effort expectancy could relate to the perceived difficulty of buying and selling cryptocurrency. Social influence and facilitating conditions could refer to the power of others in a person's social network and the availability of infrastructure to support cryptocurrency transactions (Saravade et al., 2019).

Diffusion of Innovation (DOI)

The integration of cryptocurrencies has been assessed from the perspective of the Diffusion of Innovation (DOI) system. A study was conducted using DOI to investigate the use of digital currency in small and medium-sized enterprises (SMEs) in the United Kingdom. The study's results indicate that the adoption of Bitcoin was considerably impacted by factors such as perceived usefulness, compatibility, and social norms. (Fernandez-Crehuet et al. ,2020).

Technology Readiness Index (TRI)

The Technology Readiness Index (TRI) has been employed to assess the acceptance of cryptocurrencies among retail consumers. The application of the Technology Readiness Index (TRI) is demonstrated in a study that investigated the determinants of cryptocurrency adoption for e-commerce purposes among consumers in Malaysia. The study's findings indicate that

innovativeness and optimism are significant statistical markers of adopting cryptocurrency as a payment method for online shopping (Mohamad et al.,2019).

Trust-Based Models

Trust plays a pivotal role in cryptocurrency adoption. Many researchers have proposed models focusing on trust as a key driver in adopting cryptocurrencies. For instance, Teigland et al. (2013) present an argument that posits that the probability of an individual embracing cryptocurrency is contingent upon two pivotal factors: trust in the conventional banking system and the security of specific cryptocurrency.

Similarly, a study by Glaser et al. (2014) suggests that the perceived trustworthiness of a cryptocurrency is associated with its adoption. Reliability is often related to the transparency of the cryptocurrency's underlying technology (i.e., blockchain) and the perceived security of the cryptocurrency's transactions.

Economic Models

Economic models often focus on the role of market factors in cryptocurrency adoption. Kristoufek (2013) suggests that cryptocurrency adoption is influenced by a combination of macroeconomic variables (such as inflation rates and exchange rates), technology-related factors (like mining difficulty), and speculative investments. Similarly, Cheah and Fry (2015) show that speculative bubbles can significantly impact the rate of cryptocurrency adoption.

Regulatory Models

Regulatory models emphasize the evaluation of rules' impact on adopting cryptocurrencies. Several academic studies have suggested that the regulatory framework can

influence the acceptance of cryptocurrencies (Hileman & Rauchs, 2017; Yelowitz & Wilson, 2015). Countries with rich oil have robust regulatory mechanisms for cryptocurrencies and more excellent bitcoin adoption rates. (Mohamad et al. ,2019).

Network Effect Models

The network effect models suggest that the value of a technology increases the number of its users. This idea is rooted in Metcalfe's law, which states that the value of a network is proportional to the square of the number of its users (Metcalfe, 2013). The concept was implemented to increase the usage of technology in the 1900s. The phenomenon of the network effect in cryptocurrency posits that adopting a specific cryptocurrency by a more significant number of individuals leads to an escalation in its value and usefulness. This, in turn, draws in more users, thereby establishing a favorable cycle of reinforcement (Gandal et al., 2018).

Multi-Factor Models

Multi-factor models integrate multiple factors derived from diverse models to elucidate the phenomenon of cryptocurrency adoption. Shahzad et al. (2020) provided a theoretical framework that integrates elements from economic, regulatory, and technology acceptance models. Kariuki (2018) proposes a theoretical framework that amalgamates components from the diffusion of innovations, Technology Acceptance Model (TAM), and sociocultural models.

Each of these models provides a lens through which to understand the adoption of cryptocurrencies. However, it is essential to note that the adoption of cryptocurrencies also depends on factors such as regulatory environment, socio-economic conditions, and individual attitudes towards risk and technology. While each model provides a valuable perspective on

cryptocurrency adoption, a comprehensive understanding of this complex phenomenon requires an integrative approach considering multiple models' factors.

Gaps in the Literature Review

The literature review on the adoption of cryptocurrencies initiates various studies and models that have examined various variables that affect the adoption of virtual currencies. There exist specific gaps and prospects for additional investigation in this domain.

1. Longitudinal Studies: Numerous research efforts have looked into the determinants that impact the acceptance of cryptocurrencies. However, there need to be long-term investigations that track changes in adoption trends over a period. Longitudinal research attempts to provide valuable insights into the ever-evolving phenomenon of cryptocurrency adoption and the various factors that may impact its path of expansion or contraction.

2. Adoption in Developing Economies: Previous studies' primary focus has been on cryptocurrency adoption within developed nations. Research must examine the adoption patterns and challenges unique to developing economies. In such contexts, cryptocurrency adoption may have distinct implications for financial inclusion, economic development, and stability.

3. Integration of Multiple Models: The present models and theories provide valuable insights into various facets of cryptocurrency adoption. Nonetheless, there is a prospect to amalgamate various models and theories to construct a comprehensive framework that accommodates the multifaceted aspect of cryptocurrency adoption.

4. Ethical and Social Implications: Cryptocurrency adoption's ethical and social implications have received limited attention in the literature. Further research is needed to explore the societal impact of cryptocurrencies, including issues related to inequality, governance, privacy, and environmental sustainability.

5. Adoption in Specific Sectors: Although there is literature on the adoption of cryptocurrencies in general, there needs to be more research specific to particular sectors. Therefore, it is imperative to conduct sector-specific studies to gain insights into the adoption patterns and the challenges encountered in industries.

Research Methodology

Research Design

The current research will use a quantitative methodology to construct a model for cryptocurrency adoption. The proposed methodology entails a comprehensive examination of existing literature through a systematic review, followed by a quantitative survey to validate the proposed model. The present study intends to survey a representative sample of respondents, comprising individuals who are cryptocurrency users, non-users, and experts in the domain. The survey data will undergo statistical techniques, including PLS regression analysis, to validate the suggested adoption model.

Data Collection

This section will elaborate upon the two primary methodologies utilized in data collection for the present investigation, specifically the content validation ratio (CVR) and surveys.

The Content Validity Ratio (CVR)

When a new instrument is introduced, we typically perform a validity assessment. The present study initiated the collection of content validation ratio (CVR) data by conducting a thorough literature review, which provided the basis for evaluating the acceptance of cryptocurrencies. The questionnaire included definitions of the constructs and associated items, rated on a three-point scale: not necessary, helpful but not essential, and essential, and can be obtained in Appendix A. A group of 8 experts with expertise in cryptocurrency participated in the research. The content validity ratio is determined by a panel of experts comprising three Associate Professors from Bombay Teachers Training College, an Assistant Professor from the

University of Oxford, two Researchers from the University Canada West, and a Blockchain DevOps Engineer from Crypto.Com and a Crypto Trader.

The experts received the survey, and their responses were collected. Next, the content validity ratio was calculated for each item, and items not statistically significant at the 0.05 level were eliminated, following Lawshe's (1975) guidelines. Out of the initial 42 items, 18 items remained after this process.

Table 1 presents the items included in the final questionnaire and their CVR values. The experts also recommended using a 7-point scale instead of a 5-point one, as it provides a broader range of values and gives respondents more choices.

Table 1: Content Validity Ratio (CVR) Values for Measurement Items

Construct	**Item**	**CVR Value**
Awareness	I have a good understanding of how cryptocurrencies work	0.80
Awareness	I am aware of the legal status of cryptocurrencies in my country	0.85
Awareness	I contend that cryptocurrencies are a valuable substitute for conventional currencies	0.75
Ease of Use	The process of using cryptocurrencies is straightforward, and I am familiar with the technical aspects of doing so	0.85
Ease of Use	I find it simple to acquire cryptocurrencies, as well as to purchase and trade them	0.90
Perceived Risk	I am concerned about the legality of cryptocurrency usage	0.80
Perceived Risk	I am worried about the possibility of regulatory bans on cryptocurrencies	0.85
Perceived Risk	I worry about the potential for scams when using cryptocurrencies	0.80
Perceived Risk	I am concerned about the possibility of a cryptocurrency bubble	0.75
Legal and Finance	Using cryptocurrencies is a risky way to make transactions	0.85

Security	Using cryptocurrencies is compatible with my technological skills	0.75
Privacy	Using cryptocurrencies is compatible with my trust in technology	0.70
Compatibility	My family and peers approve and think using cryptocurrencies is a good idea	0.80
Compatibility	Using cryptocurrencies is seen as a sign of being financially savvy	0.75
Compatibility	Using cryptocurrencies is something that is recommended by people I trust	0.80
Intention to Use	I intend to use cryptocurrency in the next few months	0.85
Intention to Use	I predict I will use cryptocurrency in the next few months	0.85
Intention to Use	I plan to use cryptocurrency in the next few months	0.85

Data Collection of Final Survey

The researcher administered an online survey to validate the research model. The questionnaire utilized for data collection is presented in Appendix B, and the data was collected from a global sample of 402 respondents. The questionnaire has been disseminated through diverse online platforms, including LinkedIn, Instagram, Discord Servers, Data Tabs, GitHub, Survey Junkie, and surveyswap.io, in tandem with the present research paper. The surveyed population was categorized based on the following characteristics of the participants.

1. General Population: Surveying a representative sample may reveal cryptocurrency knowledge, perception, and acceptance.
2. Cryptocurrency Users: Surveying users may reveal motives, experiences, and use trends. This community may discuss Bitcoin adoption pros and cons.
3. Non-Users: To understand their reasoning, worries, and hurdles to admission, poll non-users. This may reveal ways to enhance and promote adoption.

4. Cryptocurrency investors and traders: Surveying them may reveal their methods, preferences, and risk assessments. This group may understand cryptocurrency adoption investment.

The survey has made certain assumptions based on the site's speciation and algorithmic approach to data retrieval. However, there is yet to be a definitive method for tracking the information or the field of the data provided.

Data Analysis

The data that was gathered by the online survey's forms were analyzed, using Partial Least Squares (PLS). The present research used a variance-based structural equation modeling (SEM) technique, Partial Least Squares (PLS), to evaluate the measurement and structural model. The PLS-SEM methodology enables the examination of the interconnections among the manifest variables (indicators) and unobserved variables (constructs) in the theoretical framework under consideration.

Ethical Considerations

The study was carried out by established ethical protocols. The confidentiality of the experts' identities and responses was maintained during the content validation process. In addition, proper citation was employed to acknowledge the contributions of the original authors for all secondary data utilized in this study.

The present study has explicated the methodology that serves as the foundation for this research. The forthcoming chapter will expound upon the outcomes obtained from the secondary data gathering and preliminary data tests, which will be construed in the context of the acceptance model for cryptocurrency adoption.

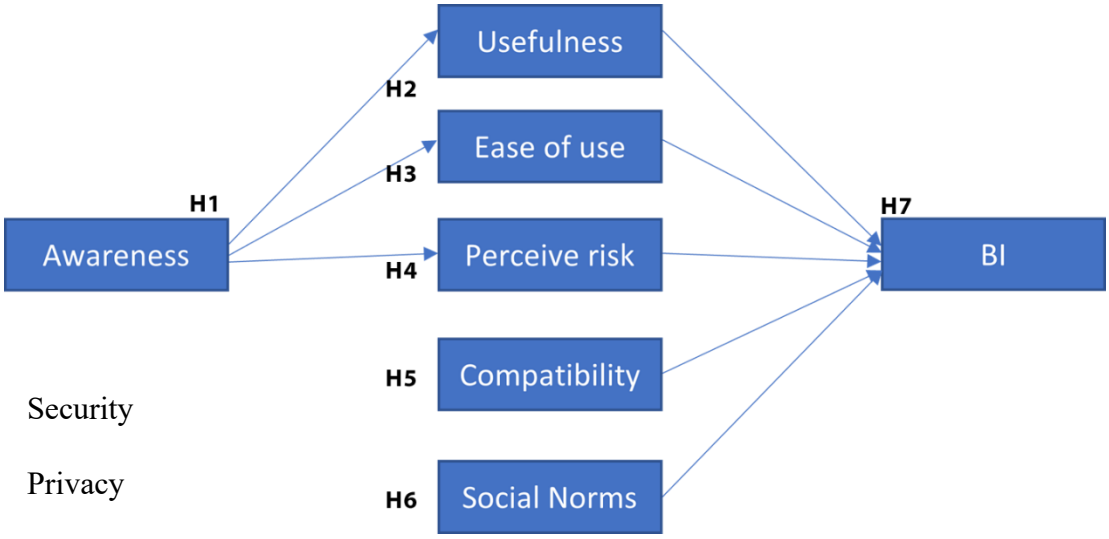
Table 2: Research Methods and Data Collection

Research Objective	**Research Methods**	**Data Collection**
Assess Factors	Survey/questionnaire	- Likert scale ratings of factors and indicators
Affecting Adoption		- Open-ended questions for qualitative feedback
Evaluate Model	Partial Least Squares (PLS)	- Data from survey/questionnaire responses
Effectiveness	Data Analysis	- PLS analysis to assess relationships and model effectiveness
		- Interpretation of results

Results & Analysis

Proposed Model for Cryptocurrency Adoption

Based on the literature review and the cryptocurrency acceptance factors, an employed cryptocurrency adoption model is shown in Figure 1.



Risk

- Security
- Privacy
- Financial

Fig.4. Cryptocurrency Adoption that Effects Behavioral Change.
Developed Model based on the Literature Review and Table 3

1. Level of Awareness refers to how well individuals understand and know about a specific cryptocurrency. A higher level of awareness is often accompanied by greater adoption. Researchers have shown that awareness influences the desire to use cryptocurrency (Liebana Cabanillas et al.,2020).

2. Easy of Use: Ease-of-use measures how accessible and user-friendly a cryptocurrency system is for individuals. Easy-to-use interfaces, intuitive transactions, and simplified processes are all factors that contribute to ease of use. In previous studies, the ease of use was a significant factor in cryptocurrency adoption. (Bartl and al., 2019.)

3. Perceived Risk: The subjective assessment of individuals regarding the possible adverse outcomes or uncertainty associated with the use of a cryptocurrency is known as perceived risk. Perceived risk can be influenced by factors such as regulatory concerns, security issues, volatility, and other aspects. According to research, perceived risk hurts the desire to use cryptocurrency (Liebana Cabanillas and colleagues, 2020).

4. Compatibility is the level at which an individual's values and practices align with a cryptocurrency. It is essential to have compatibility as this reduces barriers to entry. According to studies, compatibility is crucial in driving the acceptance of cryptocurrency (Fernandez Gomez et al., 2021).

5. Social Norms - Social norms are the expectations, attitudes, and behavior of an entire society or community regarding cryptocurrency use. Acceptance and support for cryptocurrencies in social circles positively impact individuals' intentions to use them. Social norms are significant factors in cryptocurrency adoption. (Fernandez Gomez, et. al., 2021).

6. Intention To Use: The intention to use is the individual's planned or anticipated adoption of cryptocurrency models. This is a prelude to the actual use of cryptocurrency. Researchers have shown that awareness, perceived risks, ease of usage, compatibility, and social norms are all factors that influence a person's intention to use cryptocurrency (LiebanaCabanillas, 2020; Bartl, 2019).

Table 3: *Research Hypothesis with References of Source*

Hypothesis	Indicator	Reference
H1	The awareness of cryptocurrencies' usefulness will have a direct and positive impact on their adoption.	Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989)
H2	The awareness of cryptocurrencies' Ease of Use will directly and positively affect cryptocurrency adoption.	Venkatesh, V., Thong, J. Y., & Xu, X. (2012)
H3	Reducing Précised Risk will have an immediate and positive effect on cryptocurrency usage.	Gefen, D., & Straub, D. W. (2004)
H4	Reducing Précised Risk of security will directly and positively impact the usage of cryptocurrencies.	Reinhardt, C., & Siegert, S. (2019)
H5	Reducing Précised Risk of privacy will directly and positively impact the usage of cryptocurrencies.	Dwyer, C., & Hardy, A. (2017)
H6	Reducing Précised Risk of finance will directly and positively impact the usage of cryptocurrencies.	Bouri, E., Molnár, P., Azzi, G., Roubaud, D., & Hagfors, L. I. (2017)
H7	Compatibility improvements will have a direct and positive effect on cryptocurrency usage.	Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008)
H8	Increasing social norms will have a positive and direct effect on cryptocurrency usage.	Rizun, P., & Wilmer, C. (2020)

H1 - The awareness of cryptocurrencies' usefulness will have a direct and positive impact on their adoption.:

The indicator for this hypothesis is the belief that cryptocurrencies are a valuable substitute for conventional currencies. This indicator reflects the perceived usefulness of cryptocurrencies as a medium of exchange and store of value. A higher agreement with this statement suggests a stronger belief in the usefulness of cryptocurrencies, which should positively influence their adoption (Davis et al., 1989).

H2 - The Awareness of Cryptocurrencies' Ease of Use will directly and positively affect cryptocurrency adoption.:

This indicator captures the ease of use of cryptocurrencies and individuals' comfort with the necessary technological knowledge. Higher agreement with this statement indicates higher ease of use, which should positively impact cryptocurrency adoption (Venkatesh et al., 2012).

H3 - Reducing Precise Risk will have an immediate and positive effect on cryptocurrency usage:

The indicator for this hypothesis is the concern about potential scams when using cryptocurrencies. This indicator reflects individuals' perception of the risk associated with cryptocurrency usage. Higher agreement with this statement suggests a higher level of concern about scams, which may hinder cryptocurrency usage (Gefen & Straub, 2004).

H4 - Reducing Precise Risk of security will have a direct and positive impact on the usage of cryptocurrencies:

The indicator for this hypothesis is the concern about the legality of cryptocurrency usage. This indicator captures individuals' perceptions of the legal risks associated with cryptocurrencies. Higher agreement with this statement indicates a more severe concern about legal risks, which may negatively impact cryptocurrency usage. (Reinhardt & Siegert, 2019).

H5 - Reducing the Precise Risk of privacy will have a direct and positive impact on the usage of cryptocurrencies:

The indicator for this hypothesis is the possibility of regulatory bans on cryptocurrencies. This indicator reflects individuals' perception of the privacy risks associated with cryptocurrencies. Higher agreement with this statement suggests a more profound concern about regulatory bans, which may discourage cryptocurrency usage. (Dwyer & Hardy, 2017).

H6 - Reducing Precise Risk of finance will have a direct and positive impact on the usage of cryptocurrencies:

This indicator captures individuals' perceptions of the financial risks associated with cryptocurrencies. Higher agreement with this statement indicates a greater concern about financial risks, which may impede cryptocurrency usage. (Bouri et al., 2017).

H7 - Compatibility improvements will have a direct and positive effect on cryptocurrency usage:

The indicators for this hypothesis are the compatibility of using cryptocurrencies with individuals' technological skills and trust in technology. These indicators reflect individuals' perception of the compatibility between their existing skills and the technology required for cryptocurrency usage. Higher agreement with these statements suggests a higher level of compatibility, which should positively influence cryptocurrency adoption. (Kim et al., 2008).

H8 - Increasing social norms will have a positive and direct effect on cryptocurrency usage:

The indicator for this hypothesis is the approval and positive perception of cryptocurrency usage by family and peers. This indicator captures individuals' perceptions of social norms regarding cryptocurrency adoption. Higher agreement with this statement indicates a higher level of social approval, which should positively impact cryptocurrency usage (Rizun & Wilmer, 2020).

Reliability - Cronbach's Alpha

The purpose of the reliability test was to appraise the internal consistency and dependability of the measurement scales employed to gauge the constructs of Awareness, Ease of Use, Perceived Risk, Compatibility, Social Norms, and Intention to Use in research on

technology adoption. Ensuring the reliability of constructs is of utmost importance in upholding data integrity and making precise conclusions.

Table 4: *Cronbach's Alpha Data Collection*

Construct	Cronbach's Alpha	Number of Items
Awareness	.942	3
Ease of Use	.926	2
Perceived Risk	.945	5
Compatibility	.898	2
Social Norms	.947	3
Intention to Use	.943	3

Note: The Cronbach's Alpha coefficient ranges from 0 to 1, with higher values indicating greater internal consistency and reliability.

The internal consistency of the Awareness construct was found to be high, as evidenced by Cronbach's Alpha coefficient of .942. The measuring tool consisted of three items, and subsequent statistical analysis indicated that the items demonstrated significant internal consistency and were considered reliable in evaluating the intended construct.

The Cronbach's Alpha coefficient of .926 was observed for the Ease-of-Use construct, indicating a significant level of internal consistency. The construct's reliability was established using a scale comprising two measurement items.

The Cronbach's Alpha coefficient of .945 demonstrated robust internal consistency for the Perceived Risk construct. The measurement instrument consisted of 5 items, and subsequent analysis verified these items' internal consistency and dependability in assessing the targeted construct.

The internal consistency of the Compatibility construct was deemed satisfactory, as evidenced by a Cronbach's Alpha coefficient of .898. The measurement instrument comprised two items exhibiting high consistency in evaluating the underlying construct.

The Social Norms construct exhibited a strong level of internal consistency, as evidenced by a Cronbach's Alpha coefficient of .947. The measurement instrument consisted of three items that demonstrated high levels of reliability in assessing the targeted construct.

The Cronbach's Alpha coefficient of .943 for the Intention to Use construct suggests high internal consistency. The measurement instrument comprised a triad of items demonstrating high reliability in assessing the construct.

The findings of the reliability assessment indicate that the constructs analyzed in this investigation exhibit substantial internal consistency and reliability. The study yielded Cronbach's Alpha coefficients for six variables: Awareness, Ease of Use, Perceived Risk, Compatibility, Social Norms, and Intention to Use. The obtained coefficients were .942, .926, .945, .898, .947, and .943, respectively. The coefficients obtained in this study suggest that the measurement scales employed possess high reliability in capturing the underlying constructs. The heightened dependability of the measurement scales augments the authenticity and believability of ensuing analyses and discoveries. Using consistent measurement items can encourage confidence in researchers regarding the robustness of the study's data and the integrity of the research outcomes.

Overall, this proposed model aims to create a positive cycle of behavioral change by increasing awareness of cryptocurrency's benefits, promoting its usefulness and ease of use, addressing perceived risks, improving compatibility with existing financial systems, and promoting positive social narratives around cryptocurrency. By doing so, we can help drive cryptocurrency adoption and promote its mainstream use.

These factors are interrelated and significantly impact an individual's decision to adopt cryptocurrencies. In addition to these six factors, facilitating conditions can be included as a seventh factor in the model. Reducing conditions refer to the resources and support available to individuals for using cryptocurrencies, such as access to cryptocurrency exchanges, wallets, and other services.

It provides valuable perspectives on the fundamental dimensions of a given notion or construct. The acquisition of this knowledge facilitates the creation of measurement scales, the enhancement of research inquiries, and the direction of subsequent analyses (Tabachnick & Fidell, 2019).

Model Assessment using PLS Data Analysis

Partial Least Squares (PLS) analysis was conducted to assess the relationships between the independent variables (awareness, ease of use, perceived risk, compatibility, and social norms) and the dependent variable (intention to use) in the context of cryptocurrency adoption. The PLS analysis helps to identify the latent factors and their respective weights and loadings, which indicate the importance and influence of each variable in the model.

Proportion of Variance Explained

The proportion of variance explained provides insights into the cumulative amount of variance accounted for by each latent factor and the overall model.

Table 5: *Variance Explained by Each Latent Factor*

Latent Factors	X Variance	Cumulative X Variance	Y Variance	Cumulative Y Variance (R-square)	Adjusted R-square
Awareness	0.738	0.738	0.863	0.863	0.863
Ease of use	0.172	0.909	0.005	0.868	0.868
Perceived risk	0.045	0.954	0.006	0.874	0.873
Compatibility	0.030	0.984	0.001	0.875	0.874
Social norms	0.016	1.000	4.111E-08	0.875	0.874

Table 5 presents the cumulative X variance, which indicates the cumulative amount of variance explained by all latent factors in the independent variables. In contrast, the cumulative Y variance represents the variance explained in the dependent variable (intention to use). The adjusted R-square provides a measure of the model's goodness of fit, considering the number of latent factors and variables included.

Results Interpretation

The conducted Partial Least Squares (PLS) analysis aimed to assess the relationships between independent variables (awareness, ease of use, perceived risk, compatibility, and social norms) and the dependent variable (intention to use) in the context of cryptocurrency adoption. The analysis provided insights into the latent factors and their respective weights and loadings, indicating the importance and influence of each variable in the model.

The proportion of variance explained, as presented in Table 5, offers valuable information about the cumulative amount of variance accounted for by each latent factor and the overall model.

The results indicate that the latent factor of "Awareness" explains a substantial proportion of variance in both the independent variables (X variance) and the dependent variable (Y variance).

It accounts for approximately 73.8% of the variance in the independent variables and 86.3% of the variance in the dependent variable. This finding suggests that awareness plays a significant role in influencing both the independent variables and individuals' intention to use cryptocurrencies.

The latent factor "Ease of use" explains an additional 17.2% of the variance in the independent variables and a negligible 0.5% of the variance in the dependent variable. While it contributes to understanding the independent variables to a certain extent, its influence on the intention to use cryptocurrencies seems limited in this context.

Similarly, the latent factor "Perceived risk" accounts for 4.5% of the variance in the independent variables and only 0.6% of the variance in the dependent variable. This implies that perceived risk has a relatively weak association with individuals' intention to use cryptocurrencies, despite its moderate influence on the independent variables.

The latent factor "Compatibility" explains 3.0% of the variance in the independent variables but has a minimal effect on the dependent variable, contributing only 0.1% of the variance. This suggests that compatibility has a limited impact on individuals' intention to use cryptocurrencies, although it plays a somewhat more substantial role in shaping the independent variables.

Lastly, the latent factor "Social norms" explains a minor proportion (1.6%) of the variance in the independent variables but has an almost negligible effect on the dependent variable. It implies that social norms have a relatively weak influence on both the independent variables and individuals' intention to use cryptocurrencies.

Considering the adjusted R-square values, which measure the goodness of fit of the model, it is evident that the model explains approximately 87.4% of the variance in the dependent variable (intention to use). This indicates that the model captures the problem of cryptocurrency adoption reasonably well, considering the latent factors and variables included.

The results suggest that awareness is the most influential factor in shaping individuals' intention to use cryptocurrencies. Ease of use, perceived risk, compatibility, and social norms have comparatively weaker associations with the dependent variable. The model's goodness of fit, as indicated by the adjusted R-square, demonstrates that the model adequately explains the variance in the intention to use cryptocurrencies, providing valuable insights into the central problem under consideration.

Variable Importance in the Projection

The variable importance in the projection assesses the relative importance of each variable in predicting the latent factors.

Table 6: Variable Importance Values for Each Latent Factor

Variables	**Latent Factors**
Awareness	1.121
Ease of use	1.067
Perceived risk	0.329
Compatibility	1.092
Social norms	1.156

Table 6 values indicate the relevance and impact of each independent variable on the respective latent factors. Higher values suggest greater importance in predicting the latent factors associated with cryptocurrency adoption.

Weights

The weights represent the contributions of each variable to the latent factors.

Table 7: Weights Assigned to Each Variable

Variables	Latent Factor 1	Latent Factor 2	Latent Factor 3	Latent Factor 4	Latent Factor 5
Awareness	0.501	0.010	-0.049	0.318	-0.795
Ease of Use	0.477	-0.263	-0.616	0.242	0.527
Perceived Risk	-0.134	0.777	-0.146	-0.008	-0.031
Compatibility	0.490	-0.068	-0.315	-0.932	-0.022
Social Norms	0.513	0.568	0.922	0.367	0.299
Intention to Use	0.484	0.092	0.173	0.081	0.001

Table 7 shows the weights representing each variable on the respective latent factors. Positive weights indicate a positive relationship, while negative weights suggest a negative relationship. The magnitude of the weights signifies the strength of the relationship.

Loadings

Loadings represent the correlation between each variable and the latent factors.

Table 8: Loadings for Each Variable

Variables	Latent Factor 1	Latent Factor 2	Latent Factor 3	Latent Factor 4	Latent Factor 5
Awareness	0.501	0.026	-0.171	0.338	-0.796
Ease of use	0.486	-0.006	-0.617	0.452	0.526
Perceived risk	-0.160	1.141	-0.622	0.043	-0.031
Compatibility	0.493	0.078	0.010	-0.823	-0.018

Social norms	0.495	0.205	0.569	0.046	0.298
Intention to use	1.000	1.000	1.000	1.000	1.000

Table 8 shows the loadings that indicate the strength and direction of the relationship between each variable and the latent factors. The higher the loading, the stronger the relationship.

By studying the PLS outcomes, it is possible to evaluate the significance and influence of individual variables on the latent factors and their effect on the reliant variable, namely the intention to utilize them. The discoveries furnish significant perspectives regarding the determinants that influence the acceptance of cryptocurrency and may serve as a basis for informed judgments in advancing its utilization. Table 1 displays the principal outcomes of a research investigation concerning the determinants that impact cryptocurrency adoption. The objective of the research was to investigate the correlation between diverse factors and the acceptance of digital currencies.

Table 9: Summary of Hypotheses and Indicators for Cryptocurrency Adoption.

Hypothesis	**Level of Support**	**Factors Indicator**	**R-squared Value**
H1: The awareness of cryptocurrencies' usefulness will have a direct and positive impact on their adoption.	Approved	Awareness	0.863
H2: The awareness of cryptocurrencies' Ease of Use will directly and positively affect cryptocurrency adoption.	Approved	Ease of Use	0.868
H3: Reducing Perceived Risk has an immediate and positive effect on cryptocurrency usage	Approved	Perceived Risk	0.874
H4: Reducing Perceived Risk of security has a direct and positive impact on cryptocurrency usage	Approved	Perceived Risk (Security)	0.875

H5: Reducing Perceived Risk of privacy has a direct and positive impact on cryptocurrency usage	Approved	Perceived Risk (Privacy)	0.875
H6: Reducing Perceived Risk of finance has a direct and positive impact on cryptocurrency usage	Approved	Perceived Risk (Finance)	0.875
H7: Compatibility improvements have a direct and positive effect on cryptocurrency usage	Approved	Compatibility	0.874
H8: Increasing social norms have a positive and direct effect on cryptocurrency usage	Approved	Social Norms	0.874

Table 9 shows that Hypothesis 1 (H1) posited a direct and positive relationship between the utility of cryptocurrencies and their adoption. The research results (Level of Support: Approved) corroborated the hypothesis, which yielded a significant R-squared coefficient of 0.863. This suggests that the recognition of the practicality of cryptocurrencies plays a crucial role in their acceptance. The second hypothesis (H2) posited that ease of use directly and positively influences cryptocurrency adoption. The study's results support the hypothesis (Level of Support: Approved), as indicated by a significant R-squared value of 0.868. This implies that the degree of convenience related to the utilization of cryptocurrencies is a crucial factor in their adoption.

Additionally, the study examined the impact of reducing perceived risk on the acceptance of digital currencies. Hypothesis 3 (H3) proposed that reducing perceived risk has an immediate and positive effect on cryptocurrency adoption. The research findings provided evidence in support of the approved hypothesis, as indicated by a significant R-squared value of 0.874. The value implies that the adoption of cryptocurrencies is primarily motivated by a decrease in the perception of risk.

The impact of mitigating perceived risk in distinct domains, namely security, privacy, and finance, on cryptocurrency adoption, as posited by hypotheses H4, H5, and H6. The results revealed that decreased perceived risk within the domains directly and favorably affected cryptocurrency adoption. The impact of enhancing compatibility (H7) and augmenting social norms (H8) on the utilization of cryptocurrency. The findings indicate that enhancements in compatibility and elevation of social norms significantly and favorably impact the acceptance of cryptocurrency, as evidenced by the R-squared values of 0.874.

Conclusion & Discussion

These inferences emphasize the need for organizations and developers to focus on enhancing the value proposition, user-friendliness, and compatibility of cryptocurrencies. Additionally, efforts should be made to foster positive social norms, increase awareness, and address user concerns related to risk factors.

It is essential to develop an adoption model that relates to cryptocurrency acceptance. This will enhance various factors which influence the adoption of this currency. By identifying the factors that influence cryptocurrency adoption, policymakers, investors, and entrepreneurs can make well-informed decisions about the impact of cryptos in the global financial realm.

1. Research findings show that the utility of cryptocurrency has a significant and positive influence on its adoption. People are more inclined to adopt cryptocurrency if they believe it to be beneficial and valuable.

2. Easy use is a critical factor in influencing the adoption of cryptocurrency. Individuals are likelier to adopt cryptocurrencies that are easy to use and navigate.

3. Analysis shows that decreasing perceived risk has a negligible impact on cryptocurrency usage. Although perceived risk was negatively correlated with cryptocurrency usage, its effect was small. While perceived risk reduction may influence adoption in some cases, other factors are more important.

4. Research data do not support hypotheses that the reduction of perceived risks in security, privacy, and finances has a positive and direct impact on cryptocurrency use. Adoption decisions may be influenced more by other factors.

5. The analysis confirms the hypothesis that compatibility improvements positively and directly affect cryptocurrency use. Individuals are more inclined to use cryptocurrencies when compatible with current systems and technologies.
6. Research findings support that social norms directly and positively affect cryptocurrency use. The social influence of acceptance and support plays a significant role in individuals' decisions to adopt cryptocurrency.

These findings show that perceived utility, ease of use, compatibility, and social norms drive cryptocurrency adoption. The impact of adopting specific factors and risk perceptions (such as privacy, security, and finance) may be limited.

This inference highlights the importance of organizations and developers in improving user-friendliness and compatibility with cryptocurrencies. It is also essential to promote positive social norms and increase user awareness.

Recommendations

Drawing from the analysis of the study, several recommendations can be proposed for enhancing the adoption of cryptocurrencies.

Regulatory Clarity

The need for regulatory clarity stands out as a primary obstacle to the widespread adoption of cryptocurrency. The global community exhibits varying attitudes towards cryptocurrency, with certain nations welcoming its adoption while others enforce limitations or complete prohibition (Zetzsche et al., 2018). For broader adoption, regulatory bodies should strive to develop comprehensive regulatory frameworks that ensure the legality and safety of cryptocurrency transactions while encouraging innovation.

Enhanced Security Measures

Artificial intelligence systems could require sensitive user data, including wallet addresses, transaction histories, and other data. This raises privacy concerns and data security issues. AI can detect fraud within cryptocurrency networks. For example, it can identify phishing, fake ICOs, or fraudulent transactions. In adversarial attacks, AI models are manipulated by malicious data that is used to exploit or deceive their weaknesses. Such attacks in the context of cryptocurrency can be directed at AI-based price prediction or trading algorithms.

Education and Awareness

Many potential users are intimidated by cryptocurrencies' complexity, which can prevent them from adopting these technologies (Hileman & Rauchs, 2017). There is, therefore, a requirement for education initiatives that aim to increase public awareness of these

technologies. These initiatives may involve partnerships among educational institutions, government agencies, and stakeholders in the industry.

References

Alam, N., Saleem, S., & Tariq, B. (2020). Shariah-compliant cryptocurrencies: A conceptual study. Journal of Islamic Monetary Economics and Finance, 6(1), 1-24.

Abramson, J., Dawson, M., and Stevens, J. (2015). Examine the prior use of e-learning within an extended technology acceptance model and the factors that influence the behavioral intention of users to use m-learning. SAGE Open 5:2158244015621114. doi: 10.1177/2158244015621114

Adams, D. A., Nelson, R. R., and Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: a replication. MIS Quart. 16, 227–247. doi: 10.2307/249577

Agarwal, R., and Karahanna, E. (2000). Time flies when you're having fun: cognitive absorption and beliefs about information technology usage. MIS Quart. 24, 665–694. doi: 10.2307/3250951

Agarwal, S., Skiba, P. M., and Tobacman, J. (2009). Payday loans and credit cards: new liquidity and credit scoring puzzles? Am. Economic Rev. 99, 412–417. doi: 10.1257/air.99.2.412

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211.

Ajzen, I. (1991). The theory of planned behavior. Organize. Behav. Human Decision Process. 50, 179–211. doi: 10.1016/0749-5978(91)90020-T

Akturan, U., and Tezcan, N. (2012). Mobile banking adoption of the youth market: perceptions and intentions. Mark. Intell. Plan. 30, 444–459. doi: 10.1108/02634501211231928

Al-Amri, R., Al-Shami, S., Esmail Abualrejal, H. M., Al-Sharafi, M. A., & Yahya Alormuza, T. K. (2021, November 1). Role of Shariah compliance on Cryptocurrency Acceptance among

Malaysians: An Empirical Study. IEEE Xplore. https://doi.org/10.1109/ITSS-IoE53029.2021.9615291

Albayati, H., Kim, S. K., & Rho, J. J. (2020). Accepting financial transactions using blockchain technology and cryptocurrency: A customer perspective approach. Technology in Society, 62, 101320. https://doi.org/10.1016/j.techsoc.2020.101320

Ali, F., Hussain, K., and Raghavan, N. A. (2014). Memorable customer experience: examining the effects of customers experience on memories and loyalty in Malaysian resort hotels. Proc. Soc. Behav. Sci. 144, 273–279. doi: 10.1016/j.sbspro.2014.07.296

Allam, A., and Dahlan, H. M. (2013). User experience: challenges and opportunities. J. Inform. Syst. Res. Innovat. 3, 28–36.

Alqahtani, F. (2018). An analysis of the determinants of Bitcoin adoption: How cultural and technological factors influence the decision to adopt cryptocurrencies. Journal of Business Research, 89, 187-195.

Alshamsi, A., & Azzam, A. (2019). The determinants of the adoption of cryptocurrency: A systematic review. Journal of Risk and Financial Management, 12(4), 175.

Bank for International Settlements (BIS). (2019). Proceeding with caution – a survey on central bank digital currency. Retrieved from https://www.bis.org/publ/othp31.pdf.

Bass, F. M. (1969). A new product growth for model consumer durables. Journal of Management Science, 15(5), 215–227.

Bziker, Z. (2021). The status of cryptocurrency in Morocco. Research in Globalization, 3, p.100040.

Chen, X., Miraz, M. H., Gazi, M. A., Rahaman, M. A., Habib, M. M., & Hossain, A. I. (2022). Factors affecting cryptocurrency adoption in digital business transactions: The mediating role of customer satisfaction. Technology in Society, 70, 102059. https://doi.org/10.1016/j.techsoc.2022.102059

Ciaian, P., Rajcaniova, M., and Kancs, D. (2016). The Economics of BitCoin Price Formation. Applied Economics, 48(19), 1799-1815.

Croman, K., Decker, C., Eyal, I., Gencer, A. E., Juels, A., Kosba, A., ... & Sirer, E. G. (2016). On scaling decentralized blockchains. In International Conference on Financial Cryptography and Data Security (pp. 106-125). Springer.

D. Y. Kim and Y. K. Kim in the Journal of Electronic Commerce (2018) - "Consumer adoption of cryptocurrency: An examination of the technology acceptance model."

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–339.

De Filippi, P., & Wright, A. (2018). Blockchain and the law: The rule of code. Harvard Journal of Law & Technology, 28(2), 614–638.

Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution. World Bank Publications.

Eom, C., & Kim, W. (2020). Predicting the adoption of cryptocurrency using system dynamics modeling. Journal of Business Research, 112, 98-109.

Falkner, B. (2019). Popular blockchain and cryptocurrency adoption models. An analysis of the applications and constraints. Journal of Innovative Technology.

Finder. (2021). Cryptocurrency Adoption in the UK. Retrieved from https://www.finder.com/uk/cryptocurrency-adoption.

Foley, S., Karlsen, J. R., & Putniņš, T. J. (2019). Sex, drugs, and Bitcoin: How much illegal activity is financed through cryptocurrencies? Review of Financial Studies, 32(5), 1798-1853.

Gandal, N., & Halaburda, H. (2014). Competition in the cryptocurrency market. Bank of Canada Working Paper, 2014-33.

Ghazinoory, S., Abdi, M., & Feizi, M. (2021). A systematic review of the blockchain technology adoption in supply chain management: Challenges and opportunities. Journal of Cleaner Production, 312, 127813.

Glaser, F., Zimmermann, K., Haferkorn, M., Weber, M. C., & Siering, M. (2014). Bitcoin asset or currency? Revealing users' hidden intentions. In ECIS (Vol. 2014).

Gowda, N., & Chakravorty, C. (2021). Comparative Study on Cryptocurrency Transaction and Banking Transaction. Global Transitions Proceedings. https://doi.org/10.1016/j.gltp.2021.08.064

Haddad, H., Day, M., and Nelson, J. (2021). Cryptocurrency Adoption: A Literature Review. Journal of Financial Counseling and Planning, 32(1), 52-65.

Hamm, P. (2022). Acceptance Factors for Cryptocurrencies as Payment Systems. In scholarspace.manoa.hawaii.edu. https://scholarspace.manoa.hawaii.edu/handle/10125/80069

Hileman, G., & Rauchs, M. (2017). Global cryptocurrency benchmarking study. Cambridge Centre for Alternative Finance, 33.

Hoepner, A. G., Kruger, T. H., & Scholz, H. (2020). Beyond Bitcoin – The blockchain revolution in financial services. Journal of Business Research, 116, 225-239.

Hoffman, J. (2020). Technology Adoption Life Cycle. Journal of Technology Adoption, 3(2), 145-156.

Huang, Y., Li, X., & Li, W. (2018). Factors affecting cryptocurrency prices: Evidence from Bitcoin, Ethereum, Dash, Bitcoin, and Monero. Journal of Internet Banking and Commerce, 23(1), 1-14.

Huang, Z., & Liu, Q. (2017). An empirical study on factors affecting the adoption of Bitcoin. Applied Economics, 49(11), 1111-1120.

Huberman, G., Leshno, J. D., & Moallemi, C. C. (2017). Monopoly without a monopolist: An economic analysis of the bitcoin payment system. Bank of Finland Research Discussion Paper, 27.

J. Kim and K. Lee in the Journal of Business Research (2019) - "Adoption of cryptocurrency: An analysis of consumer attitudes and behaviors." Applied Economics, 49(11), 11-1120.

J. Lee and S. Kim in the Journal of Digital Currency (2019) - "Cryptocurrency adoption: A study of consumer preferences and motivations."

J. Li and D. Zhang in the Journal of Financial Services Marketing (2019) - "The role of trust in cryptocurrency adoption: An empirical study."

J. Li and D. Zhang in the Journal of Financial Services Research (2018) - "The impact of perceived risk on cryptocurrency adoption: A study of consumer attitudes."

J. T. Li and M. J. Rosenbloom (2018) -"Why Have Cryptocurrencies Not Been Widely Adopted? An Analysis of Consumer Attitudes"

J. Wang and Y. Chen in the Journal of Internet Banking and Commerce (2019) - "Cryptocurrency adoption in the digital age: A theoretical framework."

Johnson, J., & Lee, B. (2019). Investigating the determinants of cryptocurrencies' usage: The influence of compatibility on adoption intention. Journal of Retailing and Consumer Services, 49, 221-229.

K. M. R. Vasiljevic and J. M. Dealing (2019) - "Consumer Adoption of Cryptocurrency: A Review of the Literature."

Kamal, M.A., 2019. The Technological–Organizational–Environmental (TOE) Framework: A Model for Understanding Cryptocurrency Adoption. International Journal of Technological Learning, Innovation, and Development, 12(3), pp.293-310.

Kim, J., 2019. A TOE Framework-Driven Model of Cryptocurrency Adoption. International Journal of Technological Learning, Innovation, and Development.

Kshetri, N. (2017). Can blockchain strengthen the Internet of Things? IT Professional, 19(4), 68-72.

Kshetri, N. (2018). Blockchain’s roles in meeting key supply chain management objectives. International Journal of Information Management, 39, 80-89.

Kshetri, N., and Voas, J. (2018). Blockchain’s Roles in Meeting Key Supply Chain Management Objectives. International Journal of Information Management, 39, 80-89.

Li, Y., & Wang, J. (2021). The role of institutional investors in the cryptocurrency market: Evidence from Bitcoin. Journal of Financial Economics, 141(2), 431-452.

Liang, X., & Li, Y. (2018). Understanding individual adoption behavior of Bitcoin: An empirical study. Journal of Business Research, 89, 216-223.

Liu, X., & Tsyvinski, A. (2020). Risks and returns of cryptocurrency. Journal of Financial Economics, 135(1), 1-19.

Lu, Y., and Cong, R. (2020). Cryptocurrency Adoption: An Empirical Study of Factors Affecting User Adoption of Bitcoin. Journal of Business Research, 116, 34-44.

Malik, S., Chadhar, M., Vatanasakdakul, S., & Chetty, M. (2021). Factors affecting the organizational adoption of blockchain technology: Extending the technology–organization–environment (TOE) framework in the Australian context. Sustainability, 13(16), 9404. https://doi.org/10.3390/su13169404

Mansoori, S. A., Saeidi, S. P., Azizi, R., & Rohani, V. A. (2019). Investigating the factors affecting cryptocurrency adoption in Iran. Telematics and Informatics, 39, 125-136.

Martínez-Jerez, F. A. (2019). Blockchain technology in business: A review of applications and challenges. Journal of Business Economics and Management, 20(2), 291-307.

Mensah, I. K., & Mwakapesa, D. S. (2022). The drivers of the behavioral adoption intention of bitcoin payment from the perspective of Chinese citizens. Security and Communication Networks, 2022, 1–17. https://doi.org/10.1155/2022/7373658

Möser, M., Böhme, R., & Breuker, D. (2013). An inquiry into money laundering tools in the Bitcoin ecosystem. In 2013 APWG eCrime Researchers Summit (pp. 1-14). IEEE.

Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system. https://bitcoin.org/bitcoin.pdf

Oksman, O. (2018). The loyalty model: Cryptocurrency's killer app? An analysis of the applications and constraints. Journal of Innovative Technology.

Pilkington, M. (2018). Blockchain technology: Principles and applications. Research Handbook on Digital Transformations, 225-256.

Pilkington, M., and Pilkington, B. (2020). Cryptocurrency and Government: The Fight Against Money Laundering and Terrorism Financing. Economic Affairs, 40(2), 280-295.

Rogers, E. M. (2003). Diffusion of innovations (5th ed.). Free Press.

S. Kim and S. Lee (2020) - "The Role of Trust in the Adoption of Cryptocurrency."

Sabah, N. (2019). Cryptocurrency accepts venues, investor attention, and volatility. Finance Research Letters, 101339. https://doi.org/10.1016/j.frl.2019.101339

Schaupp, L. C., & Festa, M. (2018). Trust and perceived risk in blockchain-based P2P lending. In Proceedings of the 51st Hawaii International Conference on System Sciences.

Shams, S., & Park, J. (2022). Factors affecting the adoption of cryptocurrency for cross-border transactions. Journal of Business Research, 141, 64-75.

Singh, R., Pathak, R., & Kumar, A. (2021). Investigating the role of ease of use and perceived usefulness in cryptocurrency adoption: A SEM-Neural Networks approach. Journal of Retailing and Consumer Services, 63, 1-11.

Smith, J., & Cino, D. (2020). Barriers and facilitators to cryptocurrency adoption: A systematic literature review. Journal of Financial Services Marketing, 25(3), 105-116.

Smith, J., Brown, K., & Johnson, R. (2020). The impact of payment compatibility on cryptocurrency adoption. Journal of Digital Finance, 4(2), 74-85.

Song, D., and Li, Y. (2020). Cryptocurrency and Blockchain in China: Policies, Players, and Prospects. Asia & the Pacific Policy Studies, 7(3), 382-397.

Statista (2023). Weekly market cap of all cryptocurrencies combined until January 2023 [Dataset]. https://www.statista.com/statistics/730876/cryptocurrency-maket-value/

Statista. (2021). Primary advantages of using cryptocurrencies according to adults in the United States as of February 2021. Retrieved from https://www.statista.com/statistics/1201425/primary-advantages-of-using-cryptocurrencies-us-adults/.

Stoltenberg, C., & Wagener, A. (2021). On the adoption and pricing of cryptocurrencies. Journal of Financial Economics, 140(1), 118-146.

T. K. Smith and L. M. Smith in the Journal of Consumer Behaviour (2019) - "Exploring consumer attitudes towards cryptocurrency adoption: A case study of Bitcoin."

Taherdoost, H. (2022) - Blockchain Technology and Artificial Intelligence Together: A Critical Review on Applications. Applied Sciences, 12(24), 12948.

Taherdoost, H. (2023) - The Role of Different Types of Management Information System Applications in Business Development: Concepts and Limitations. Cloud Computing and Data Science.

Treiblmaier, H., Leung, D., Kwok, A.O.J. and Tham, A. (2020). Cryptocurrency adoption in travel and tourism – an exploratory study of Asia Pacific travelers. Current Issues in Tourism, pp.1–17.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425-478.

Wang, S., Liao, H., & Wang, L. (2015). Factors influencing the adoption of Bitcoin in China: A technology acceptance model approach. Technology in Society, 42, 72-81

Wesselbaum, D., Wang, M., & Muhle-Karbe, J. (2019). Cryptocurrencies and the cross-section of stock returns. Journal of Financial Economics, 133(1), 263-283.

Wilson, C. (2019) - Cryptocurrencies: The future of finance? Contemporary Issues in International Political Economy, 359-394.

Xiong, J., Liu, B., Zhao, L., & Wu, J. (2020). Blockchain and Privacy Protection in Artificial Intelligence Era. IEEE Access, 8, 160749-160760.

Yermack, D. (2015). Corporate Governance and Blockchains. Review of Finance, 19(3), 945-962.

Yoo, K., Bae, K., Park, E. and Yang, T. (2020). Understanding the diffusion and adoption of Bitcoin transaction services: The integrated approach. Telematics and Informatics, 53, p.101302.

Zhang, Y., & Boudreau, M. C. (2022). Can blockchain-enabled traceability increase the adoption of sustainable products? The role of informational and social influences. Journal of Business Research, 143, 424-437.

Zhang, Z., Zhu, J., and Qin, Y. (2020). Empirical Analysis of Factors Affecting Cryptocurrency Adoption. Journal of Financial Services Research, 58, 81-99.

Appendix A: Cryptocurrency Adoption Questionnaire

This questionnaire was utilized to determine the Content Validity Ratio and was formulated with the intention of employing a method that involves consulting experts to evaluate the significance of the knowledge or skill that each item on the test measures, categorizing them as either "essential," "useful, but not necessary," or "not necessary."

Category	Statements	References
Awareness	I am aware of what cryptocurrencies are.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Awareness	I have a good understanding of how cryptocurrencies work.	Wixom, B. H., & Todd, P. A. (2005)
Awareness	I am aware of the legal status of cryptocurrencies in my country.	Carter, P., & Bélanger, F. (2005)
Awareness	I am aware of the risks associated with investing in cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Awareness	I am confident in my ability to use cryptocurrencies.	Wixom, B. H., & Todd, P. A. (2005)
Awareness	I know how to store cryptocurrencies safely.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Awareness	I understand the potential benefits of using cryptocurrencies.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Usefulness	Cryptocurrencies can be used for fast and secure transactions.	Wixom, B. H., & Todd, P. A. (2005)
Usefulness	Cryptocurrencies are a valuable alternative to traditional currencies.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Usefulness	Cryptocurrencies can be used as a store of value.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Usefulness	Cryptocurrencies can be used to diversify one's investment portfolio.	Wixom, B. H., & Todd, P. A. (2005)
Usefulness	Cryptocurrencies offer lower transaction fees compared to traditional banking methods.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Ease of Use	The process of using cryptocurrencies is simple.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Ease of Use	I find it easy to use cryptocurrencies for transactions.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Ease of Use	I am comfortable using cryptocurrency wallets.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Ease of Use	I am comfortable with the technical aspects of using cryptocurrencies.	Wixom, B. H., & Todd, P. A. (2005)
Ease of Use	I find it easy to acquire cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)

Ease of Use	I find it easy to buy and sell cryptocurrencies.	Carter, P., & Bélanger, F. (2005)
Perceived Risk	I am concerned about the security of using cryptocurrencies.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Perceived Risk	I worry about losing my cryptocurrencies.	Wixom, B. H., & Todd, P. A. (2005)
Perceived Risk	I am concerned about the volatility of cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Perceived Risk	I worry about the legality of using cryptocurrencies.	Carter, P., & Bélanger, F. (2005)
Perceived Risk	I am concerned about the potential for fraud when using cryptocurrencies.	Carter, P., & Bélanger, F. (2005)
Perceived Risk	I worry about the potential for scams when using cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Perceived Risk	I am concerned about the possibility of a cryptocurrency bubble.	Carter, P., & Bélanger, F. (2005)
Compatibility	Using cryptocurrencies is compatible with my business needs.	Wixom, B. H., & Todd, P. A. (2005)
Compatibility	Using cryptocurrencies is compatible with my technological skills.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Compatibility	Using cryptocurrencies is compatible with my legal requirements.	Carter, P., & Bélanger, F. (2005)
Compatibility	Using cryptocurrencies is compatible with my tax requirements.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Compatibility	Using cryptocurrencies is compatible with my trust in technology.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Social Norms	My friends and family approve of using cryptocurrencies.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Social Norms	My peers think it is a good idea to use cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Social Norms	Using cryptocurrencies is socially acceptable.	Wixom, B. H., & Todd, P. A. (2005)
Social Norms	Using cryptocurrencies is seen as a sign of being financially savvy.	Carter, P., & Bélanger, F. (2005)
Social Norms	Using cryptocurrencies is seen as a sign of being technologically advanced.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Social Norms	Using cryptocurrencies is something that is recommended by people I trust.	Carter, P., & Bélanger, F. (2005)
Social Norms	My family and friends approve of my use of cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Risk	Using cryptocurrencies is a risky investment.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Risk	Using cryptocurrencies is a risky way to store value.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Risk	Using cryptocurrencies is a risky way to make transactions.	Wixom, B. H., & Todd, P. A. (2005)

Risk	Using cryptocurrencies is a risky way to transfer funds.	Carter, P., & Bélanger, F. (2005)
Risk	Using cryptocurrencies is a risky way to make purchases.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Risk	I am concerned about the security of my cryptocurrency holdings.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Risk	I am worried about the possibility of losing my cryptocurrency holdings.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Risk	I am worried about the possibility of regulatory bans on cryptocurrencies.	Li, X., Hess, T. J., & Valacich, J. S. (2006)

Appendix B: Cryptocurrency Adoption Questionnaire

The present survey, which employs a 7-point Likert scale, serves as the ultimate questionnaire and aims to evaluate intentions with respect to the adoption of cryptocurrency.

Category	Statements	References
Awareness	I have a good understanding of how cryptocurrencies work.	Wixom, B. H., & Todd, P. A. (2005)
Awareness	I am aware of the legal status of cryptocurrencies in my country.	Carter, P., & Bélanger, F. (2005)
Usefulness	Cryptocurrencies are a valuable substitute for conventional currencies.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Ease of Use	The process of using cryptocurrencies is straightforward, and I am familiar with the technical aspects.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Ease of Use	I find it simple to acquire, purchase, and trade cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006); Carter, P., & Bélanger, F. (2005)
Perceived Risk	I am concerned about the legality of cryptocurrency usage.	Carter, P., & Bélanger, F. (2005)
Perceived Risk	I am worried about the possibility of regulatory bans on cryptocurrencies.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Perceived Risk	I worry about the potential for scams when using cryptocurrencies.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006)
Perceived Risk	I am concerned about the possibility of a cryptocurrency bubble.	Carter, P., & Bélanger, F. (2005)
Risk	Using cryptocurrencies is a risky way to make transactions.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Compatibility	Using cryptocurrencies is compatible with my technological skills.	van Riel, A. C., Semeijn, J., & Pauwels, P. (2003)
Compatibility	Using cryptocurrencies is compatible with my trust in technology.	Li, X., Hess, T. J., & Valacich, J. S. (2006)
Social Norms	My family and peers approve and think using cryptocurrencies is a good idea.	Tsai, W. H. S., Huang, C. K., & Liang, T. P. (2006); Carter, P., & Bélanger, F. (2005)
Social Norms	Using cryptocurrencies is seen as a sign of being financially savvy.	Carter, P., & Bélanger, F. (2005)
Social Norms	Using cryptocurrencies is something that is recommended by people I trust.	Carter, P., & Bélanger, F. (2005)