FAROUK ALKALI MOHAMMED

INVESTIGATING THE FACTORS THAT INFLUENCE UNIVERSITY STUDENTS' INTENTION TO USE CRYPTOCURRENCY

NEU 2020

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A THESIS SUBMITTED TO THE GRADUATE SCHOOL OF APPLIED SCIENCES OF NEAR EAST UNIVERSITY

By
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In Partial Fulfillment of the Requirements for the Degree of Master of Science in Computer Information Systems

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Approval of Director of Graduate School of Applied Sciences

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I hereby declare that all the information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare, as required by these rules and conduct, I have fully cited and referenced all materials and results that are not original to this work.

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ACKNOWLEDGMENTS

I would like to express my sincere gratitude to my advisor, Prof. Dr. Nadire Cavus, for the continuous support of my research, for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped me in all the time of research and writing of this thesis.

I would also like to thank all the staff of the Computer Information Systems Department for contributing immensely to my knowledge during my stay at Near East University.

I am extremely grateful to my parents and siblings for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without them.

Finally, I would like to thank my friends who helped me through the sharing of my questionnaires and data collection as it would have been very stressful without their help.

To my family…

ABSTRACT

Technological growth has contributed to a recent finance market innovation which is cryptocurrency. Cryptocurrency is positioned in a unique role as a successor to the traditional finance system. By virtue of being a peer-to-peer network, it can address weaknesses in existing financial technology and overcome the usual banking challenges. As a rising financial technology, its success can only be judged by whether it is accepted. Thus, this study aims to investigate the factors influencing university students' intention to use cryptocurrency. The study utilized the UTAUT model in order to investigate the factors. The data for the study was collected from 380 students in Near East University, North Cyprus using the snowball sampling technique. A questionnaire was used as the data collection tool. The data for the study was analyzed using descriptive statistics, pearson correlation and multiple linear regression techniques. Six hypotheses were tested and four of them were supported. The results showed performance expectancy, social influence and effort expectancy had a positive and statistically significant influence on the intention to use cryptocurrency. Perceived risk was found to have a negative and statistically significant impact on the intention to use cryptocurrency, while facilitating conditions and financial literacy had no impact on the intention to use cryptocurrency. We hope that this study will help technology companies know the important factors to concentrate on to ensure the success of a cryptocurrency as well as enlightening students and retailers regarding the use of cryptocurrencies.

***Keywords*:** Cryptocurrency; blockchain; ethereum; bitcoin; acceptance; UTAUT

ÖZET

Teknolojik büyüme, finans piyasasındaki yenilik olan kripto paraya katkı sağlamaktadır. Kripto para, geleneksel finans sisteminin halefi olarak benzersiz bir rolde konumlandırılmıştır. Eşler arası bir ağ olması sayesinde mevcut finansal teknolojideki zayıflıklara yön verebilir ve bankacılığın var olan zorluklarının üstesinden gelebilir. Büyüyen bir finansal teknoloji olarak kripto paranın başarısı, sadece kabul edilip edilmediğine göre değerlendirilebilir. Bu nedenle bu çalışma, üniversite öğrencilerinin kripto para birimi kullanma niyetlerini etkileyen faktörleri araştırmayı amaçlamaktadır. Faktörlerin araştırılması için çalışmada UTAUT modeli kullanılmıştır. Araştırmanın verileri, Kuzey Kıbrıs Yakın Doğu Üniversitesi'ndeki 380 öğrenciden kartopu örnekleme tekniği kullanılarak toplandı. Veri toplama aracı olarak anket kullanılmıştır. Çalışmanın verileri, tanımlayıcı istatistikler, Pearson korelasyonu ve çoklu doğrusal regresyon teknikleri kullanılarak analiz edildi. Altı hipotez test edilmiş ve bunlardan dördü desteklenmiştir. Çalışma sonuçları performans beklentisi, sosyal etki ve çaba beklentisi faktörlerinin, kullanıcıların kripto para birimi kullanma niyeti üzerinde olumlu yönde ve statistiksel açıdan anlamlı bir etkisi olduğunu gösterdi. Algılanan riskin, kripto para birimi faktörlerinin kullanıcıların kullanma niyeti üzerinde olumsuz yönde ve statistiksel açıdan anlamlı bir etkiye sahip olduğu, kolaylaştırıcı koşullar ve finansal okuryazarlığın ise kripto para birimi kullanma niyeti üzerinde hiçbir etkisinin olmadığı sonucuna varılmıştır. Bu çalışma, teknoloji şirketlerinin bir kripto para biriminin başarısını sağlamak için odaklanmaları gereken önemli faktörler hakkında bilgi sahibi olmalarına yardımcı olmakla birlikte, kullanıcıların ve perakendecilerin de kripto para birimlerinin kullanımıyla ilgili aydınlanmalarına yardımcı olunacağı ümit edilmektedir.

***Anahtar kelimeler*:** Kripto para; blok zinciri; ethereum; bitcoin; kabul; UTAUT

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LIST OF ABBREVIATIONS

ANOVA: Analysis of Variance

ASIC: Application-specific integrated circuit

BTC: Bitcoin

EE: Effort Expectancy

ETH: Ether

FC: Facilitating Conditions

FL: Financial Literacy

FPGA: Field programmable gate arrays

GPU: Graphics processing unit

ICO: Initial coin offering

IT: Information Technology

ITU: Intention to Use

LTC: Litecoin

PE: Performance Expectancy

PR: Perceived Risk

SI: Social Influence

SPSS: Statistical Package for Social Sciences

TAM: Technology acceptance model

UTAUT: Unified Theory of Acceptance and Use of Technology

XRP: Ripple

ZEC: Zcash

CHAPTER 1

INTRODUCTION

This chapter presents the background, the problem statement, the significance and the limitations of the study.

1.1 Background

As technology keeps on advancing, consumer demand for flexible, simple, reliable and time efficient transactions continues to push the evolvement of payment systems. The development of digital assets like cryptocurrencies and their systems built on a peer-to-peer platform called blockchain is among the newest and most interesting technological innovations throughout the financial world (Al-Amri et al., 2019). Hussain et al. (2018) defined cryptocurrencies as virtual assets developed to serve as an exchange medium that uses a powerful cryptographic network to encrypt financial transfers, monitor the development of the new unit and validate the movement of properties. Cryptocurrencies are a kind of alternative currency and digital currency. As compared to centralized digital money and central banking systems, cryptocurrencies are decentralized. An inventive computing design called the blockchain allowed this process. It supported the development of a transparent e-payment network which can generally be entrusted, without the need for all the servers of the network to be trusted directly (Nakamoto, 2010). The blockchain consists of blocks, specifically lots of transaction history that have been authenticated chained with each other. They are logically connected meaning that any effort to modify or ruin the history is either extremely costly or futile (Gurguc and Knottenbelt, 2018).

Currency is a crucial element in the creation of secure, intelligent contracts between individuals around the world. Development in financial economics as well as other technological innovations also raised the market for cryptocurrencies to make quick money transfers of electronic background in real time (Brezo and Bingaz, 2016). Hays and Kirilenko (2019) affirmed that one of the reasons that has led to an increase in the attractiveness of cryptocurrencies is the designed limited supply. The limited supply factor removes the probability of inflation. Government-controlled currencies are sometimes prone to excessive inflation, particularly in developing countries. Owing to the lack of control by external powers, cryptocurrencies are not subjected to inflation. The innovation

of cryptocurrencies has pushed the finance sector a phase ahead by making a decentralized asset and freeing it from bureaucratic power systems. Consumers and companies remotely execute purchases on a peer-to-peer network using it as an alternative (Al-Amri et al., 2019).

In recent years, cryptocurrencies have drawn the interest of businesses, academics and the general public, the most popular one being bitcoin. Bitcoin, the most popular cryptocurrency in the world was developed during the worldwide financial crash and the unorthodox financial regulations which emerged. Bitcoin was introduced as a worldwide virtual currency beyond the control of a central bank and governments during that unstable moment (Hays and Kirilenko, 2019). Bitcoin's success has resulted in a drastic rise of cryptocurrencies. There are loads of cryptocurrencies, most of which operate on extensive and reliable decentralized computing networks. The use of cryptocurrency has increased largely because of its attractiveness to people looking to use alternative money. Due to the decentralized and private nature of cryptocurrencies, they have been labelled the currency of the future (Giudici et al., 2020). Cryptocurrencies have been proposed as a modern and common method of alternative investing. They have some major advantages over conventional currency models, such as freedom, security and market transparency, which can lead to something like the Bitcoin rise which resulted in a huge spike in cryptocurrency interest. At the end of 2017, anyone who possessed Bitcoin became really wealthy immediately. Bitcoin soared in price, and needless to say, in case it happened again, anyone who wasn't a part of it wanted to invest in it (Almeda, 2019).

According to DeVries (2016) the adoption of cryptocurrencies will be an interesting development to monitor over the next few years, because they may be genuinely influential assets which impact how money is traded globally. Bitcoin's rapid popularity was closely linked to worldwide market changes. The new world economy which is driven by the Internet is as well linked. Similar to conventional fiat currency like the dollar, cryptocurrencies can travel easily through several country borders, generating an ecosystem that facilitates worldwide commerce. Gurguc and Knottenbelt (2018) affirmed that the universal usage of cryptocurrencies will inevitably become unavoidable. The evolution cycle which money has gone through from paper money to contactless payments services suggests universal cryptocurrency acceptance is the next smart choice in the cycle, since it has the ability to reduce uncertainty throughout the worldwide economies. The existence of this monetary system and its reliance on internet usage made it more widespread among

internet users, who are mainly young people. The aim of the study therefore is to investigate the factors that influence university students' intention to use cryptocurrency.

1.2 Problem Statement

With the rapid growth of cryptocurrencies such as Bitcoin and Ethereum, the crypto-currency industry appears to be rising in prominence every day. Cryptocurrencies create several benefits, like quick, reliable, identifiable and safe transactions, however they have disadvantages, like its associated risks, the technical and financial challenge of utilizing them, as well as the unclear cultural presumptions of having it (Arias-Oliva et al., 2019). The dynamics and implications of the cryptocurrency movement renders it important to examine its impacts and challenges.

According to Gagarina et al. (2019) young people invest in cryptocurrencies than every age category. Younger people regularly exhibit stronger curiosity, understanding, and enthusiasm for cryptocurrencies. In other terms, they are more likely to embrace the risk of dealing with a comparatively new cryptocurrency network than to retain the existing status quo.

Most research has been focused mainly on the purpose of a cryptocurrency (Chuen et al, 2017; Rice, 2019; Giudici, 2020; Ahmed et al, 2019). Although some studies have been carried out on the acceptance of bitcoin, as it is most commonly utilized and significant cryptocurrency presently (Walton and Johnston, 2017; Putra and Darma, 2019; Leung and Dickinger, 2017; Mehilli, 2018), the research on the factors influencing the intention to use cryptocurrency in general among university students is limited, primarily due to its newness. As university students seem to be more acquainted with innovative technologies as they first surface on the internet. This study therefore seeks to address the research gap highlighted.

1.3 Aim of the Study

The aim of the study is to investigate the factors that influence university students' intention to use cryptocurrency.

1.4 Importance of the Study

The usage of cryptocurrencies by young people has been a rising trend. However, few studies have been identified to analyse the factors that influence university students' intention to use cryptocurrency. The study is important to understand the factors that influence university student's intention to use cryptocurrency. Evaluating important factors for user acceptance of cryptocurrencies will enable current technology companies to concentrate on the really essential aspects that a cryptocurrency must have in order to be successful. The study would also be important for future cryptocurrency adoption related research amongst university students. Furthermore, it will raise the awareness of students and retailers regarding the uses of cryptocurrencies. Government agencies awareness regarding the regulation of cryptocurrencies would also be raised.

1.5 Limitations of the Study

The following limitations have been found from this study:

- The data used for this study was collected only from students in Near East University**.**
- The study was carried out within a limited period of time, a longitudinal study would be ideal in the future for different data to be analysed.
- The study focused on Near East University. If other universities are examined, further understanding of the subject will be obtained.

1.6 Overview of the Thesis

This study is divided into the following six major chapters:

Chapter 1 discussed the summary of cryptocurrency and the problem of the study, the purpose of the study, the significance of the study and the limitations of the study were further established. The chapter gives the context of the study.

Chapter 2 presented literature review on cryptocurrency. It focused on the previous research related to cryptocurrency acceptance among individuals, retailers and the impact of social media on cryptocurrency.

Chapter 3 presented the theoretical framework where blockchain, cryptocurrency, various types of cryptocurrency, issues and risks associated with using cryptocurrency, key features of cryptocurrency and legal regulation of cryptocurrencies were discussed.

Chapter 4 presented the research methodology of the study in which the research model, the participants, the data collection process, the data analysis methods utilized and the research schedule were addressed.

Chapter 5 discussed the results of the study and comparisons with previous research were identified.

Chapter 6 presented the study's conclusion focused on findings of the research. The chapter further goes on to give recommendations for future research.

CHAPTER 2

RELATED RESEARCH

This chapter introduces previous cryptocurrency related research that have been carried out. They are reviewed to learn more about the findings of previous studies as well as the research gaps.

2.1 Cryptocurrency Acceptance Among Individuals

Arias-Oliva et al. (2019) carried out a survey on 402 university-educated adults in Spain to analyse the main reasons for the success of cryptocurrencies from the viewpoint of consumers. Data was analysed using regression analysis. Interestingly, risk was not a big factor due to the fact many respondents found it dangerous to deal with cryptocurrencies. They found performance expectancy to be the most significant factor for a cryptocurrency to be successful.

Walton and Johnston (2017) conducted a study on Bitcoin adoption in South Africa. They sampled 237 people for the study. The study analysed data with regression analysis. They found the subjective norms, presumed benefits, attitudes toward Bitcoin and presumed behavioural regulation significantly impacted their intention to adopt Bitcoin. It was found that presumed usefulness, presumed risks and ease impacted the intention to adopt it but not significantly. In addition, they found the challenges to the acceptance of Bitcoin were the dynamic existence of it and the extreme level of price uncertainty.

Alaeddin and Rana (2018) conducted a study on factors affecting intention to use cryptocurrency among students in Malaysia. They used a quantitative method and collected data from 230 students. Data was analysed using regression analysis. They found a high level of trust as the key indicator of attitudes that may be triggered by governments lack of regulation. Technology awareness was found to be significant and to have a beneficial impact on attitudes. They also found that ensuring consumer loyalty is another aspect that has a significant effect on the intentions of students in Malaysia to adopt cryptocurrency.

Putra and Darma (2019) conducted a study on the factors that are affecting the adoption of bitcoin in Indonesia. 98 respondents took part in the study, data was analysed using regression analysis. The use of bitcoin in the country has become a problem due to lack of

laws that regulate the use of cryptocurrencies in depth. They found social influence, data protection, and government control have a major beneficial impact on intention to use it. Facilitating conditions had a beneficial impact but not a major one.

Hutchison (2017) carried out a survey on 100 IT security personnel's using the UTAUT model to analyse bitcoin acceptance among them. Data was analysed using regression analysis. Performance and effort expectancy were found to be the major beneficial factors for the acceptance of bitcoin amongst them. He found use of bitcoin was affected by the facilitating condition and intention to use but not significantly.

Shahzad et-al (2018) conducted a study using a survey on the factors that are affecting the adoption of bitcoin with the TAM in mainland China. 376 respondents took part in the study, data was analysed using regression analysis. They found that awareness and perceived trust played an important role in determining respondents' decisions to be using Bitcoin. They also found perceived ease of use was significantly influenced by perceived usefulness regarding the intention to use bitcoin.

Novendra and Gunawan (2017) conducted a survey with the UTAUT model to analyse bitcoin acceptance in Indonesia. They sampled 49 people who were bitcoin users between the ages of 20-30, data was analysed using regression analysis. They found the intentions to adopt bitcoin were affected by performance expectancies and facilitating conditions. The factors were significantly beneficial on the behavioural intention. It wasn't beneficially or significantly impacted by effort expectancies while social influence impacted it beneficially only.

Won-Jun (2018) carried out an online survey on 224 bitcoin users using the TAM to better understand bitcoin acceptance. 163 were male and 61 were female. The study analysed data with regression analysis. He found that perceived security and usefulness significantly influenced intention to use bitcoin. While perceived ease of use also influenced it but not significantly.

Leung and Dickinger (2017) examined the use of bitcoin among 138 tourists who frequently travel using a survey, they found that perhaps the adoption of Bitcoin in online travel transactions by tourists is reluctantly not popular. Participants stated, though, they're open to buying certain travel goods and, in particular, online food supplies utilizing Bitcoin in the future.

2.2 Cryptocurrency Acceptance Among Retailers

Jonker (2019) indicated that service companies serving as middlemen in e-commerce assumed a pivotal function as coordinators of competitiveness and growth through increased acceptance. Lack of customer interest was described as the key challenge for cryptocurrency adoption. It also suggested that many who have cryptocurrencies don't use it purchase things on the internet.

Hoeven (2019) examined the factors affecting cryptocurrency acceptance as a payment method using a survey on 113 Dutch retailers. Surprisingly, he found perceived risk to not be a negative factor in cryptocurrency adoption at the organizational level. It's worth noting that the perceived risk was modified, resulting in reduced perceived risk contributing to higher acceptance. Perceived innovation characteristic was found to not have a major effect. Social influence was found to not have major effects on the acceptance at the individual level.

Mehilli (2018) affirmed that not all of the retailers have adopted Bitcoin due to their faith and idea of it, they have accepted it as a means of payment due to wanting to give their customers the best services possible. It wouldn't make sense for them to not give services that were accessible and functioning efficiently. He further stated it also isn't preferred by the public on the grounds of the moral values that one appears to uphold, rather mainly due to it being a simple and efficient-to-use process that eases the day-to-day activities of individuals, rendering it superior to other methods.

According to Luther (2016) for processing digital payments, the cryptocurrency platform would be broadly embraced. cryptocurrency's advancement in technology is its potential to manage transfers across a global network without the need for a centralized server that acts like a bank. Currently, cryptocurrency processing tends to be less expensive to handle than conventional method. In so far as cryptocurrencies decrease processing costs, digital payments would possibly be processed using them.

Mukabi and Vu (2019) examined the use of bitcoin, as a payment system. They conducted a study on Bitreefill, a large retailer. They found that bitcoin's acceptance largely depends on favourable perceived benefits over other payment systems, functionality and user-friendliness, whilst negative features that stops its acceptance involve the difficulty of knowing the technologies around it and the harmful effects that might come from it.

Polasik et al. (2015) conducted a study on bitcoin's payments and investments capabilities and benefits for ecommerce. They found bitcoin dividends were guided mainly by its success, the sentiments conveyed in cryptocurrency media stories, as well as the overall number of transactions. They also found that a company's characteristics, usage of other payment systems, consumer awareness of cryptocurrency and scale of both public and private economies are key factors.

2.3 Cryptocurrency and Social Media

Mai et al. (2018) affirmed that social media impacts on bitcoin are powered mainly by passive crowd, 95% of consumers that are less involved and their contribution are fewer than 40% of overall posts on social media. Moreover, posts on online forums, compared to tweets, have a greater effect on potential bitcoin value. They further stated social medias opinion are a significant indicator of bitcoin's value, however not all of the posts have equivalent effect.

The study conducted by Mendoza-Tello et al. (2018) indicated that social media plays a role in the use of cryptocurrency as a form of electronic payment. Social commerce utilizes content created on social networks to draw new customers and affect their behaviour. Furthermore, the study summarized that social media enhances the trust and intentions to use cryptocurrencies but it does not generate enough trust to support the presumed usefulness of cryptocurrencies.

Wokke and Rodenrijs (2018) carried out a survey to understand social media influence towards intention to use cryptocurrency. 402 people who regularly use social media between the ages of 18-37 took part in the study. Regression analysis was used in analysing data. They found social media indirectly impacted the intention and attitudes to use cryptocurrency through the process of social influence.

Anser et al. (2020) carried out a survey using the TPB model in China to ascertain the relationship between social media and bitcoin. 433 people were sampled for the study. Regression analysis was used to analyse data. They found the use of social media is significantly linked to individuals' decisions to accept Bitcoin due to their behaviours, subjective norm, and behavioural influence. Their intentions were also found to be directly

correlated with their actual behaviour towards bitcoin acceptance, although perceived risks linked with it acted as mediator on the interaction between both of them.

According to Lynn et al. (2018) bitcoin reflected a financially strong and technical development. Given its immense popularity so far, marketing companies and authorities have challenged its validity. Bitcoin's existence depends on gaining credibility and acceptance. They further stated that while there is a larger amount of IT companies and companies engaged in cryptocurrency legitimization discussions on social media platforms, finance service companies and consultancy companies are much more involved in the discussion.

CHAPTER 3

CONCEPTUAL FRAMEWORK

This chapter presents the conception about Cryptocurrency. The chapter carries on to define the blockchain, the various types of cryptocurrency, the key features of cryptocurrency, the issues and risks associated with cryptocurrency, legal resolution of cryptocurrency and the reasons for using cryptocurrency.

3.1 Blockchain

The undoubtably genius innovation of the 21st century is the blockchain. Originally identified by a group of researchers in 1991, Blockchain was originally designed to time-stamp digital records so that they could not be backdated or tampered with. It is thus viewed as a ground-breaking technology with the ability to transform the world with cryptocurrencies gaining more and more attention both technically and economically (Ghimire and Selvaraj, 2018). A blockchain is a distributed ledger that keeps a steadily expanding collection of data record that mining nodes validate. The data is documented inside a public ledger containing details for any transaction that has ever been done (Mahmoud et al., 2019). The concept of blockchain initially appeared with the Bitcoin peer to peer in the public domain, it is bitcoin's decentralized management strategy developed to issue and transfer money for bitcoin's clients. It facilitates all bitcoin transfers, without the oversight of third-parties (Yli-Huumo et al., 2016). Blockchain was developed to provide a decentralized ecosystem where transactions and data are not governed by third parties. Figure 3.1 shows the blockchain technology process. The Blockchain is more accessible than the usual centralized transactions concerning third parties owing to this characteristic (Al-Amri et al., 2019). Its implications reach well beyond the finance field. Primarily, through smart contracts, the blockchain is applied to the wider scope. A smart contract utilizes blockchain's decentralized consensus property to establish enforceable contracts on every digital asset. A smart contract is basically a small software that all parties on the blockchain network implement and carry out consequential acts depending on the smart contract’s execution (Mahmoud et al., 2019). Nofer et al. (2017) suggested that this creative solution may substitute lawyers and banks who are usually engaged in contracts for assets transactions, based on predetermined circumstances. The use of smart contracts may also be

applied in controlling property rights. These assets can be physical (e.g., homes, cars) as well as non-physical (e.g., stocks, bonds).

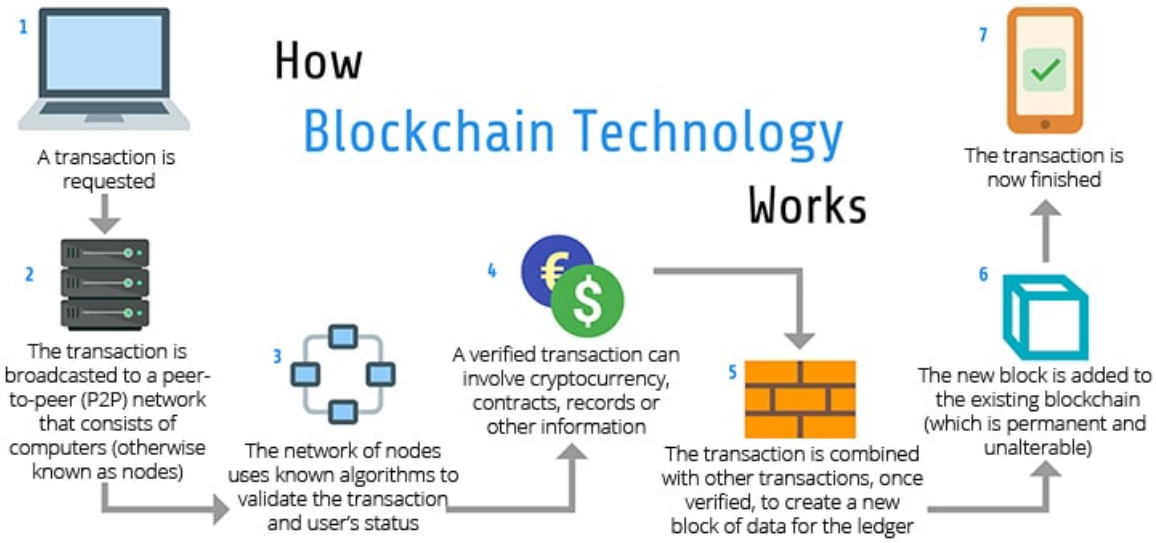


Figure 3.1: Overview of blockchain technology (Al-Amri et al., 2019)

It is a series of blocks that are back-linked. The details contained on the block is the block's size in bytes, its header, which includes many fields, and the total amount of transactions. Block headers are important metadata for the structure of the block. The block header hash is the specific block recognition. The hash value is special and fraud is easily avoided as a consequence. Changing a chain block will adjust the required hash value automatically (Ghimire and Selvaraj, 2018). A new block may only be added to the chain when most of the network nodes approve the authenticity of a transaction inside the block. Thus, a new transaction isn't immediately entered into the ledger. The consensus method instead guarantees the transaction is kept for a fixed duration in a block (Nofer et al., 2017). Table 3.1 below illustrates a block structure.

Table 3.1: Block structure

Item	Description
Block Size	The size of the block in bytes
Block Header	Block Header with several fields in it
Counter	The total number of transactions
Transactions	Transactions in the block

3.2 Cryptocurrency

Cryptocurrency, reflects a modern virtual currency invention. The advantages of acting as a peer-to-peer means of trade and a store of assets and value are offered by cryptocurrencies (Bohr and Bashir, 2014). Cryptocurrency utilizes cryptographic techniques to guarantee the authenticity of transactions for the transfer of digital knowledge (Chuen et al., 2015). The purpose of cryptocurrencies is to allow consumers without the requirement for a central authority to perform business and payments. Bitcoin was the first decentralized cryptocurrency developed in 2009. There have been numerous cryptocurrencies that have also been developed since then. These are called the altcoins which means alternative coins (DeVries, 2016). Transactions using cryptocurrencies are enabled using crypto wallets. Every wallet has a public key that is generally known and necessary for verification, and a private key that is held confidential and used to authenticate and encrypt. It is used to keep, transfer and receive cryptocurrencies (Karantias, 2020). Cryptocurrencies have become part of the landscape of digital commerce, going past their initial affiliation with the black market, illegal trafficking and intrusion, and their fundamental innovations pledge to deliver solutions in several categories of business operations (Raymaekers, 2015).

The current financial structure has been challenged by this development and its widespread recognition and acceptance. The 2008 global recession prompted the people to doubt the stability and lose faith in the traditional financial institutions and to search for an option such as electronic banking systems (Zhang et al., 2018). Since 2013 it is noticeable the improvement of market cap of all cryptocurrencies, especially during 2017 and getting to the point where there's currently upwards of 1300 different cryptocurrencies available in different trading platforms (Hu et al., 2019). The overall stock valuation has risen from the

beginning of 2016 with a total market value of $20B to hit, according to coinmarketcap.com, to a market value of more than $398.75B as of August 2020. Bitcoin is at the top of the chart, with a market capitalization of around $250B.

The cryptocurrency network is safeguarded by people named miners. Any computer will function as a miner in the cryptocurrency network (Ghimire and Selvaraj, 2018). Over time, consumers have used various hardware forms to mine crypto blocks. Commonly used hardware for crypto mining is processor mining, graphics processing unit (GPU) mining, field programmable gate arrays (FPGA) mining and application-specific integrated circuit (ASIC) mining. Both hardware mining has to contend with poor benefit, high energy costs and excess heat (Chang and Wuthier, 2020). Another alternative to these concerns is cloud mining, as it does not have to struggle with unnecessary heat or high energy costs. Yet there are few other barriers to it. The miner uses its computing capacity to solve the mystery on the network and relay it. The method of applying transaction history to a cryptocurrency's public database of past transactions or blockchain is crypto mining (Ghimire and Selvaraj, 2018). Mining is performed by miners who are actively monitoring and attempting to validate the crypto transaction. When more miners are introduced to the network, the task is actually becoming tougher and tougher, such that a fresh block of a transaction is added to the blockchain on the network in an average of ten minutes (Gandotra et al., 2019). Only when there is proof of work is a block validated. The first miner to verify a new transaction effectively is rewarded. Miners collect the fresh cryptocurrencies as an incentive as well as the transaction cost paid from all the transactions used in the block. This helps motivate the miners to fight endlessly in the race for a suitable block to be located (Chang and Wuthier, 2020).

3.3 Types of Cryptocurrency

There are various types of cryptocurrencies, the ones listed below are amongst the more well-known cryptocurrencies.

3.3.1 Bitcoin

Bitcoin (BTC) is the world's most recognizable and used cryptocurrency. It was invented by Satoshi Nakatomo in 2009 and it is centred on the blockchain technology. Bitcoin has risen to control and represent cryptocurrency's space, influencing a multitude of altcoin

supporters and providing for plenty people a substitute to fiat currencies. It enables transactions to happen freely under a transparent network without a third party. Bitcoin depends on two basic cryptographic techniques: public key encryption for digital signature generation and hash function for verification (Ølnes, 2016). Bohr and Bashir (2014) state that with the last bitcoin scheduled to be in existence by 2140, the overall number of bitcoins is limited. Out of the 21 million bitcoins made, only 12.5 million are in existence. While critics recognize that its finite nature renders bitcoin vulnerable to depreciation, it was meant to defend against inflationary factors. Bitcoin's valuation over its brief existence has been highly unpredictable due to investors buying it as an investment instead of as a realistic currency. Bitcoin's blockchain is officially restricted to a potential cap of 7 transaction per second, and thus, for large quantity transactions, it is not yet optimal. It is suitable, however, for reliable storage of assets (Ølnes, 2016). Figure 3.3 shows the Bitcoin blockchain.

Transactions with Bitcoin include changing of ownership which is then submitted to the transactions public log (it doesn't contain any private data information). It is then packed into blocks that are joined onto chains. By utilizing the proof of work process, bitcoin fixed the problem of maintaining trust amongst different individuals involved in transactions over the internet. The bitcoin security is based on the idea that the risk of breaching the network would exceed the benefit of doing it again (Bohr and Bashir, 2014).

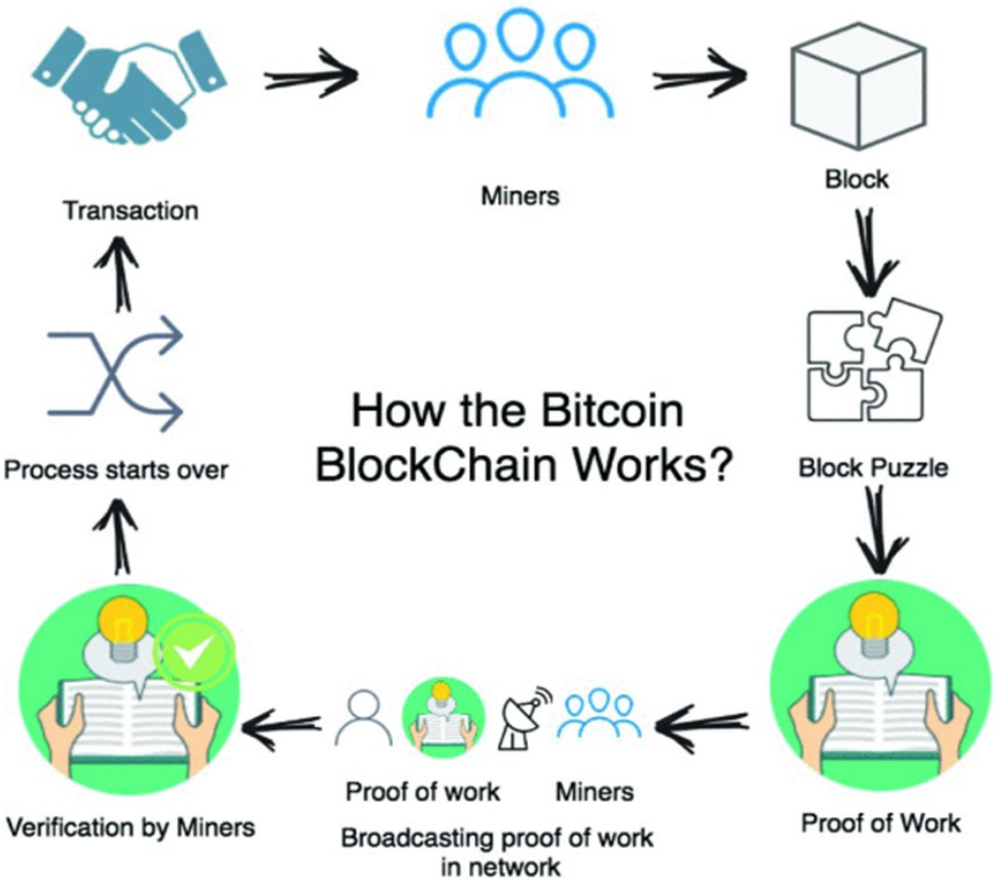


Figure 3.2: Bitcoin blockchain (Ølnes, 2016)

3.3.2 Litecoin

Litecoin (LTC) is a cryptocurrency released by Charlie Lee in 2011. He replicated the Bitcoin code to build Litecoin, expanded the overall supply, and modified the velocity at which new blocks were introduced to the network. Litecoin is able to generate more coins than Bitcoin with a quicker transfer pace, yet these variables are mainly psychological advantages for the investor and may not influence the currency's worth or usability**.** The total number of Litecoin's produced is 84 million, four times the whole number of bitcoins (Reed, 2017).

3.3.3 Ether

Ethereum is a smart contract network that enables members to utilize blockchain technologies to produce various separate distributed ledgers that can be used to build other cryptocurrencies that operate on top of their blockchain. The cryptocurrency developed over the Ethereum network is called Ether (ETC). In contrast to bitcoin, that is intended to be a currency unit, it serves as a catalyst that helps smart contracts to operate. The quantity of

Ether and its distribution timeline is decided by representatives of the Ethereum group (Vujičić et al., 2018). One contract inside the Ethereum network can transmit a message to the other. The message is like a deal, except it is created by a contract. The notification activates the receiver account to run its code, just as with transactions. The Ethereum network is identical to the bitcoin blockchain. The key distinction is that the Ethereum blocks involve the amount of the block, problems, nonce, etc., as well as the transaction list and the newest state. For each transaction in the transaction list, adding the previous state produces the current state (Wood, 2014). According to coinmarketcap.com, as of August 2020, Ether has a market capitalization of $44B.

3.3.4 Ripple

Ripple (XRP) is the name of a payment platform and payment network. It was created and published in 2012 by a company with the same name in order to facilitate safe, instant and virtually free worldwide financial transactions (Takashima, 2018). It is based on ideals close to that of Bitcoin, and it is considered a cryptocurrency by majority of people. However, the root code of Ripple 's technology is privately held by the firm, unlike Bitcoin, that ensures that it wouldn't be able to be validated by any outsider (Kucheryavenko et al., 2019). Instead of the mining method used for bitcoin, which depends on blockchain ledgers, it is a digital money network where transactions are validated for agreement among network participants. Therefore, this latest iteration of the Ripple method was planned to eliminate the dependency of Bitcoin on centralized markets, consume fewer power than Bitcoin, and transact even quicker than Bitcoin (Takashima, 2018). According to coinmarketcap.com, as of August 2020, Ripple has a market value capitalization of $11B.

3.3.5 Zcash

Zcash (ZEC) is an alternate cryptocurrency created as a bitcoin clone that aims to break the connection in a transaction between senders and receivers. Zcash does not need all transactions to take place on its network, it allows so-called open transactions. In essence, they are very much like Bitcoin transactions because they disclose the pseudonymous addresses of both senders and recipients and the amount sent. However, it does demand that all freshly created coins are moved into the shielded pool before using it, guaranteeing that the coins are protected at least once (Kappos et al., 2018). According to coinmarketcap.com, as of August 2020, Zcash has a market value capitalization of $500M.

3.4 Key features of Cryptocurrency

Every technology comes along with its key features. The most notable key features of cryptocurrency are listed down below.

3.4.1 Decentralized and No Central Authority

The financial system has traditionally been regulated in fiat currencies, by the government and banks. A cryptocurrency on the other hand handles and verifies transactions through a global and transparent network that nobody owns (Lee, 2019). According to Ahmad et al. (2018) unlike traditional financial networks, a cryptocurrency is decentralized to distributed computing networks scattered across the globe, often called nodes. A transaction is validated by cryptographic network nodes and registered inside a public ledger named blockchain. It is then distributed around the peer network and repeated by each node, hitting a significant proportion of nodes in seconds (Miraz and Ali, 2018).

3.4.2 Anonymous

Users don't have to identify their selves while engaging with cryptocurrencies because a central figure isn't required. The decentralized network validates the transaction whenever a transaction request is made, verifies it and documents it on the blockchain appropriately (Rezaeighaleh and Zou, 2019). Cryptocurrencies make use of a private key and a public key process to validate these transactions (Das et al., 2019). This ensures that users can anonymously make digital identities and digital wallets to run on a shared basis and also be able to safely validate their transactions (Mahmoud et al., 2019).

3.4.3 Irreversible and Immutable

A transaction using cryptocurrencies is permanent and immutable. According to Seiferling et al. (2019) these characteristics indicate that it is difficult for anybody except the holder of the particular private key to transfer their asset, and that once it is registered on the blockchain, transactions can't be modified. They further state although changing the transaction is not impossible, strong encryption renders it very hard to alter since it needs you to change most nodes within the blockchain. Every transaction is openly documented on the blockchain and available to the public in order to stop fraudulent transactions (Marella et al., 2020).

3.5 Reasons for using Cryptocurrency

There are various reasons why people chose to use cryptocurrencies. Some of the reasons are discussed below.

3.5.1 Security and privacy

The fact that transactions are recorded on a distributed ledger makes sure that there aren't points of failure or weakness. Everybody on the network does have a copy of the ledger, so a centralized system is not needed since it is possible to verify any transaction within the ledger (Ghimire and Selvaraj, 2018). This allows a transaction to be less vulnerable (as opposed to a single and controlled system) to hacking, glitches and system failure. Therefore, a transaction is strongly secured via the blockchain infrastructure that empowers cryptocurrencies (Miraz and Ali, 2018; Lee, 2019).

3.5.2 Ease of payment

Taken into account that setting up a bank account can be quite stressful and you might not even be allowed to open one for no reason. The use of cryptocurrencies as a means of payment makes them very appealing to the users (Almeda, 2019). A crypto wallet takes less than five minutes to set up and you can start using it immediately. The crypto payment system is peer to peer so that makes it easy for users in sending and receiving payments without the need for third party to approve it (Al-Amri et al., 2019). The transactions are also very quick, regardless of the location of the recipient or sender (Karantias, 2020).

3.5.3 Investment

The bitcoin boom in 2017 has made cryptocurrencies a very wanted commodity for people interested in investing their money and wanting to get rich quick (Almeda, 2019). He further suggested many people support cryptocurrencies because it promises greater returns than almost any commodity. It is at a smaller risk of inflation, and its rate of acceptance is also increasing worldwide. Cryptocurrencies are really useful; they come with profitable uses and allow investors easy accessibility to it. They have some significant advantages over the conventional fiat currencies, such as freedom, security and market liquidity (Chuen et al., 2015).

3.5.4 Cost-Efficiency

Cryptocurrency acts as tangible cash, incorporating the process of e-commerce (Raymaekers, 2015). There is no reason to offer commissions and payments to banks and other organisations. Bunjaku et al. (2017) stated mathematics, which does not require capital, is the key part of this method. Under this framework, the commissioned fee is smaller than in most other. It corresponds to 0.1 per cent of transactions value. Operation interest payments head to the accounts of the crypto miner. This makes it different from traditional banking systems where you have to pay lots of banking fees (DeVries, 2016).

3.6 Issues and risks associated with using Cryptocurrency

Along with economic gains, a certain number of issues often occurs with any emerging technology. Cryptocurrencies aren't different**.** Various issues and risks associated with using cryptocurrency are discussed below.

3.6.1 Theft

Since cryptocurrencies are effectively cash money, a significant amount of the criminal population has been lured; they can hack into crypto exchanges, empty crypto wallets and compromise individual machines with cryptocurrency-stealing malware (Rice, 2019). As they have for decades, criminals are also discovering different methods on how to deceive cryptocurrency investors each day. This latest wave of fraudsters has discovered ways to conduct Ponzi schemes, make false initial coins offerings, carry out exit schemes and formulate several other strategies to rob investors ‘’cryptocurrency right underneath their nose (Baum, 2018).

Khatwani (2017) affirmed that the most glaring cryptocurrency scam the cryptocurrency community has ever witnessed was the hacking of Mt. Gox. The platform was what the cryptocurrency industry referred to as an exchange. A platform for cryptocurrency exchange serves like a trading place whereby cryptocurrencies may be kept and exchanged. The exchanges store vast volumes of the world's cryptocurrencies and are entrusted by their users to have a secured trading platform. Mt. Gox was compromised two times. The first hack emerged in 2011 when the hackers received entry to the exchange with the use of an auditor's credential, which was meant to be private. 2600 bitcoins were stolen after the first hack and it was a small amount relative to the second one. In the second hack, that happened in 2014 an amount of 750,000 bitcoins were stolen which was equal to $350M (Wu et al., 2019). A

sum comparable to more than 7% of the Bitcoins actually in existence (Popper and Abrams, 2014). After that, Mt. Gox's users had lost all confidence in the platform and the platform applied for bankruptcy soon afterward. The second largest theft was on a similar platform called Bitfinex where 120,000 bitcoins were stolen (Rice, 2019). Hackers took advantage of the vulnerability of Bitfinex's verification controls to hack the platform.

According to Baum (2018) another strategy used by fraudsters is the exit scheme which is when marketers of cryptocurrencies disappear with the money of investors during or after the initial coin offering. Often, they begin off as legitimate companies. He further stated nevertheless, owing to unfavourable economic circumstances, bad business strategies or a mixture of both, possible exit scheme participants could try to disappear in an attempt to avoid the repercussions of managing a struggling business, making off with all the funds of the investors in the process. For crypto start-ups, this kind of scheme is becoming common since confidentiality is easier to keep because all the actions of a company are online.

3.6.2 Money Laundering

The use of cryptocurrency is very popular among the black market and dark web. The black market and the dark network are huge consumers of cryptocurrency. Criminals enjoy their privacy as much as they value the opportunity to transfer large amounts of money all over the globe by merely using their smartphone, which has rendered cryptocurrency to be linked to the possibility of money laundering and other illegal activities (Rice, 2019). An example of the usage of the cryptocurrency for illegal activities is the effective functioning of the Silk Road website. It was the largest virtual drug trade market in the world (Christin, 2013). According to Dyntu and Dycki (2018) all purchases through this website were performed using Bitcoin, and privacy for users was been provided via the Darknet operation, the effectiveness of which had been realized with the usage of the TOR browser. It operated as a strange Bitcoin bank, in which users needed an account for a transaction on the platform, it was necessary to have at least one bitcoin inside the user's account on the website and deposited on a server managed by the Website. For purchase, users send Bitcoin to the websites Bitcoin address, which was linked to their account on the platform. When the order is confirmed, it is then moved to the escrow account till the exchange finishes, the user's/customer's Bitcoin is then sent from the escrow account to the seller's Bitcoin address.

3.6.3 Loss of Wallets

Every wallet has a private and public key. The public key is used as your address in order to receive payment from other parties. The private key is the one used to gain access to the wallet and serves as a digital signature to validate transactions. If the “private key” to a wallet is misplaced or stolen and eventually withheld from the owners, access to the coins in the wallet will almost definitely not be recovered (Das et al., 2019).

3.6.4 Price Instability

The first factor to be discussed is public awareness. It is of the great importance in all aspects of risk-based financial choices, and is probably the largest single explanation for the volatility of cryptocurrencies. Anytime a huge amount of investors act in the face of bad press or industry uncertainty about their investments, that takes its toll on the valuation (Mahmoud et al., 2019).

Secondly, plenty ups and downs in cryptocurrencies value rely directly on government statements from various countries. This uncertainty causes problems in the short-run challenge. Ametrano (2016) affirmed that monetary policy is normally assigned to central banks or government officials. Given that the government could control the money supply to support their temporary motives against the popular welfare offered by market stability, this allows them to be systematically structured to be autonomous, at least in most established countries, in order to restrict potential misuse of money supply. The fundamental goal of a central bank is to protect the stability of its currency. They commit much to hold inflation within balance at a relatively steady pace.

3.6.5 Lack of Acceptance

The relatively recent rise of cryptocurrencies come with a lack of acceptance. Many financial companies don't accept cryptocurrencies as real money (Mehilli, 2018). A lack of recognition is followed by the inability to purchase everyday things such as groceries, meals or clothes. The reality that many individuals are also not aware of cryptocurrencies is a recognized fact. People need to taught and informed about cryptocurrency and how to use it in order for them to incorporate it into their everyday life. Because of the incentives, some companies embrace cryptocurrencies, however the list is comparatively short compared to fiat currency (Knežević et al., 2020). This is probably going to require both time and commitment to change.

3.6.6 Limited Scaling

Blockchain technology is capable of processing transactions nearly instantaneously, but it does not facilitate upwards of a few transactions happening at the same time (Ghimire and Selvaraj, 2018). It implies that cryptocurrencies have minimal scaling capability for the now. A far more efficient infrastructure is required to improve the daily commercial usage of cryptocurrencies. According to Hileman and Rauchs (2017) indeed, some claim that perhaps the future of cryptocurrency could be entirely clear of the blockchain. Platforms such as Biteball and IOTA don't utilize blocks at all, but rather, newer transfers are liable for verifying previous purchases. Supporters claim this may be the solution to solving the pace, stability, scalability, safety and sustainability problems affecting blockchain based currencies.

3.7 Legal Regulation of Cryptocurrency

The law system is typically unable to keep up to date with the most technological advancements and it comes with struggling to understand and regulate their most inventive concepts. In dealing with cryptocurrency, the lack of adequacy of some of these systems is obvious. According to Bolotaeva et al. (2019) several governments around the world are seeking to control and resolve cryptocurrency associations, concentrating primarily on problems relating to cryptocurrency licensing, taxes and combating the legality of profits from illegal transactions and terrorist funding. Around the same period, state officials also struggle to take a strong stance on the legal existence of cryptocurrencies and instead continue to control their turnover blindly.

The European Union (EU) has given little clarification and still hasn't developed a legislative policy, though some jurisdictions can offer guidance (Gikay, 2018). The European Central Bank have affirmed that cryptocurrency regulation falls beyond its mandate. These have contributed to concerns about which agency will have a legislative policy whenever it is eventually placed in motion. As it remains, it is uncertain what path European regulators would take; They haven't been afraid about insisting that cryptocurrencies aren't smart investments, a lack of clarity has been given to provide guidance on their plans going forward (Jackson, 2018).

Hill (2014) acknowledged that the existence of cryptocurrencies appears to be simultaneously limitless and unpredictable. There're many assumptions regarding the potential of cryptocurrencies as well as what awaits. economic and finance analysts claim that cryptocurrencies would not only have government participation, it is almost inevitable, but that it would be the mainstream currency in the next 15 to 20 years. Through the support of governments, the currency would be adopted almost everywhere and would theoretically establish a sort of universal currency. Government interference includes varied responses and side consequences. The consequences of government interference will provide a variety of possible outcomes in the future and are practically unpredictable (Jackson, 2018). This may be associated with how much the euro had quite the impact on the EU, allowing trading and other forms of company purchases a smoother operation, leading to improved ease of purchasing on a regular basis and a unified economy.

3.8 Technology Acceptance Model

Since the implementation of information systems into institutions, the adoption of user technologies has gained quite a lot of publicity. Researchers have made extensive study efforts to establish the variables influencing the user's values and perceptions regarding the choice to adopt technology. The Technology Acceptance Model (TAM), developed by Davis (1989), has become a dominant model in the research of factors impacting the acceptance of technology by end-users. TAM has taken a leading position in defining the behaviours of end-users towards technology, stemming from the psychology-based theory of reasonable action (TRA) and planned activity theory (TPB) (Marangunić and Granić, 2015). The TAM is a foundation for this research to understand whether university students intend to use cryptocurrency.

TAM plays the moderating link of two constructs called perceived ease-of-use (PEU) and perceived usefulness (PU) in a dynamic partnership between external variables and actual system use. The remaining factors in the TAM include behavioural intention to use and attitude toward using. Davis (1989) described PU as the extent to which an individual feels that utilizing a specific device will increase the efficiency of his / her work. PEU was described as the extent to which an individual feels that the use of a specific method will be effortless (Sharp, 2006).

Behavioural intention to use is described as the degree to which an individual has devised intentional arrangements to conduct, or not to conduct, a stated future behaviour (Brezavšček et al., 2016). It is influenced by the perceived ease-of-use and perceived usefulness. The attitude to use is the extent to which an individual's attitude towards the system determines whether he/she uses or rejects it (Marangunić and Granić, 2015). Figure 3.4 below depicts the technology acceptance model.

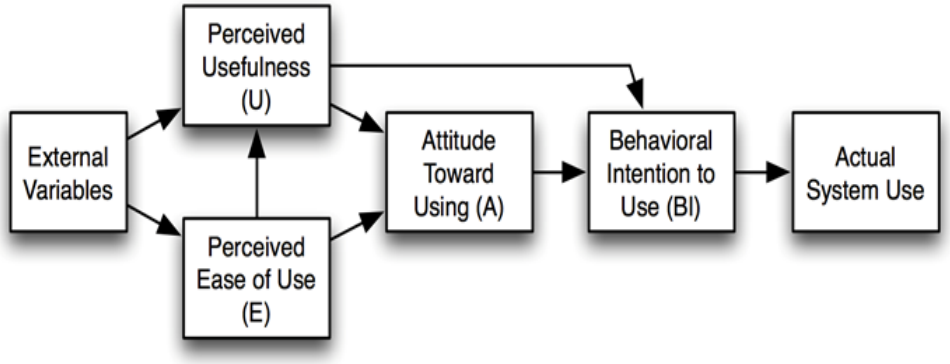


Figure 3.3: Technology acceptance model (Davis, 1989)

3.9 Unified Theory of Acceptance and Use of Technology

In an attempt to resolve the issues of interpreting TAM constructs, it has been expanded by adding additional parameters and constructs with major influences. Venkatesh et al. (2003) introduced one of the most significant extensions of the TAM which is the UTAUT. The UTAUT model explains the clear and beneficial effect of social influence (SI), facilitating condition (FC), performance expectancy (PE) and effort expectancy (EE) for the usage of technology (Arias-Oliva et al., 2019).

SI is the extent to which an individual thinks other believes the individual should use a certain technology. FC is the extent to which an individual believes they have the technical and organizational resources required to use a particular technology. PE is the extent to which an individual assumes that it will be beneficial to use a particular technology to boost their performance. EE is the extent of ease linked with using a particular technology (Venkatesh et al., 2003). The four factors proposed by UTAUT impact the study of

cryptocurrency acceptance through the mediator role of the intention to use. Figure 3.5 below depicts the UTAUT model.

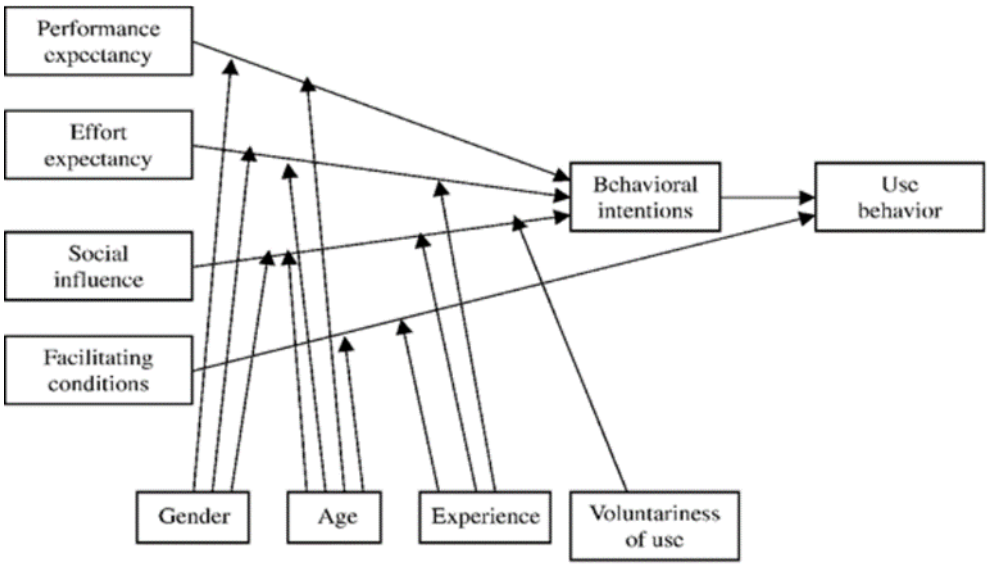


Figure 3.4: Unified theory of acceptance and use of technology (Venkatesh et al., 2003)

CHAPTER 4

RESEARCH METHODOLOGY

This chapter presents a thorough description of the methodology used. The research model, the participants information, the data collection process, the data analysis methods utilized and the research schedule were addressed.

4.1 Research Model

The model proposed for the research is an extended UTAUT model developed by (Arias-Oliva et al., 2019) in their study to find factors influencing cryptocurrency use. The variables adopted in addition to the four UTAUT model variables were perceived risk and financial literacy which are primarily utilized in the analysis of financial technology acceptance. Perceived risk is defined as an individuals' presumption of the level of uncertainty and potential unwanted effects of using or purchasing a product (Xie et al., 2016). Financial Literacy is defined as an individual's level of understanding of key financial principles and their ability to make financial decisions based on this information (Safeena et al., 2012). The research model for the study is shown by Figure 4.1.

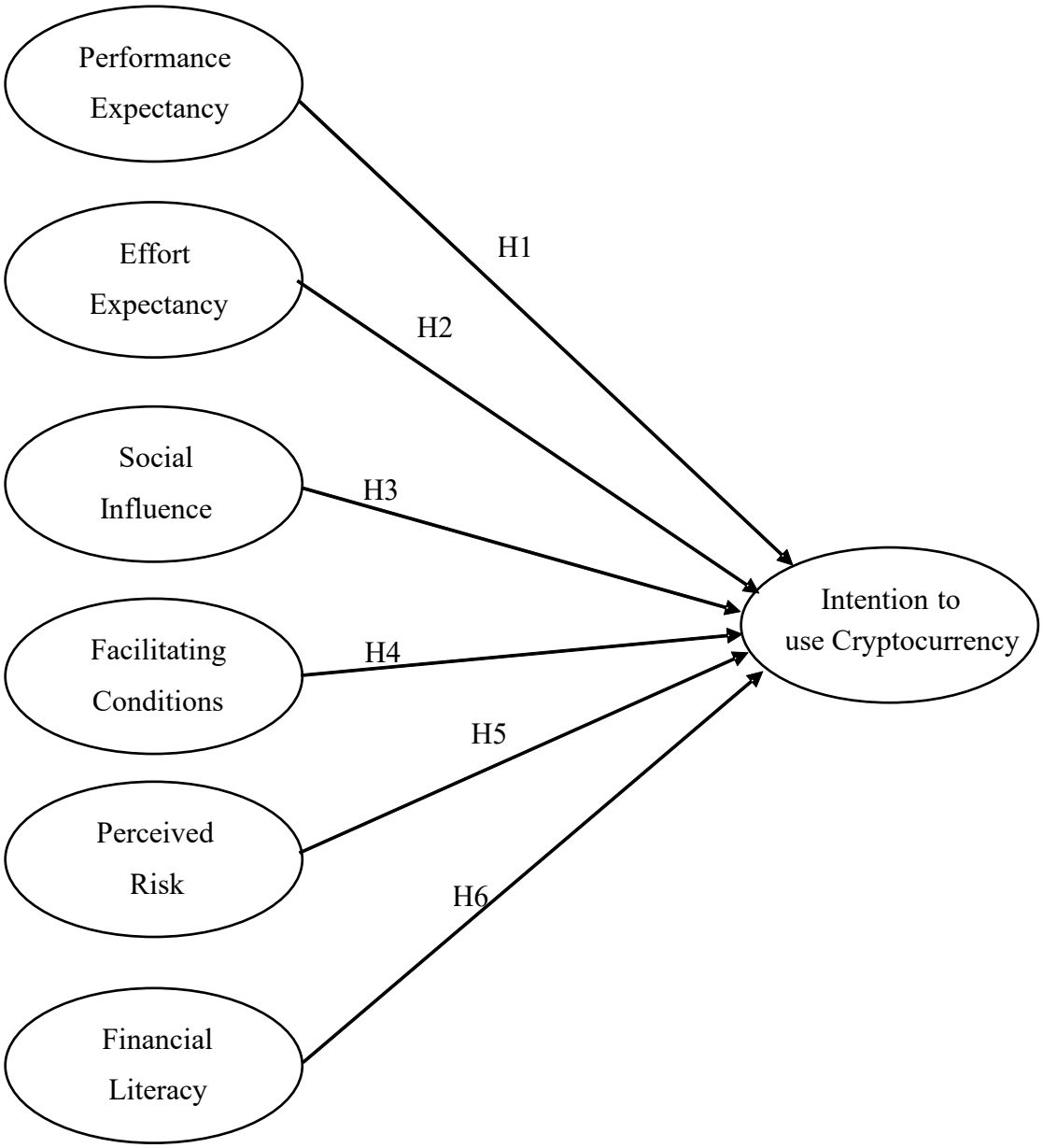


Figure 4.1: Research model of the study

4.2 Research Hypothesis

In order to investigate the factors that influence university students to use cryptocurrency, six hypotheses were tested:

The first hypothesis is to examine whether there is a relationship between performance expectancy and intention to use cryptocurrency. Performance expectancy is the first factor discovered to influence intention to use cryptocurrency. A study conducted by Arias-Oliva et al. (2019) investigated the factors influencing cryptocurrency use among university-

educated adults. They found performance expectancy to be the most significant factor for cryptocurrency success. Thus, this hypothesis aims to test the relationship between performance expectancy and intention to use cryptocurrency.

H1: *Performance Expectancy will have a positive and significant impact on intention to use cryptocurrency*

The second hypothesis is to investigate whether there is a relationship between effort expectancy and intention to use cryptocurrency. Effort expectancy is the second factor discovered to influence intention to use cryptocurrency. A study conducted by Hutchinson (2017) investigated the factors influencing bitcoin use among IT security personnel. He found effort expectancy to be majorly beneficial factor towards bitcoin acceptance among them. Thus, this hypothesis aims to test the relationship between effort expectancy and intention to use cryptocurrency

H2: *Effort Expectancy will have a positive and significant impact on intention to use cryptocurrency*

The third hypothesis is to examine whether there is a relationship between social influence and intention to use cryptocurrency. Social influence is another factor discovered to influence intention to use cryptocurrency. A study conducted by Putra and Darma (2019) investigated the factors influencing bitcoin use in Indonesia. They found social influence to be a majorly beneficial factor towards the intention to use bitcoin. Thus, this hypothesis is stated to test the relationship between social influence and intention to use cryptocurrency.

H3: *Social Influence will have a positive and significant impact on intention to use cryptocurrency*

The fourth hypothesis is to examine whether there is a relationship between facilitating conditions and intention to use cryptocurrency. Facilitating conditions is the fourth factor discovered to influence intention to use cryptocurrency. A study by Novendra and Gunawan (2017) examined the factors influencing bitcoin acceptance. They found facilitating conditions to be a majorly beneficial factor towards the intention to use bitcoin. Thus, this

hypothesis intends to test the relationship between facilitating conditions and intention to use cryptocurrency.

H4: *Facilitating Conditions will have a positive and significant impact on intention to use cryptocurrency*

Another factor found to influence the intention to use cryptocurrency is perceived risk. The hypothesis is to investigate whether there is a relationship between perceived risk and intention to use cryptocurrency. A study by Hoeven (2019) examined the factors affecting cryptocurrency acceptance as a payment method. He found perceived risk to not be a negative factor in cryptocurrency adoption. Thus, this hypothesis intends to test the relationship between perceived risk and intention to use cryptocurrency.

H5: *Perceived Risk has a negative and significant impact on intention to use cryptocurrency*

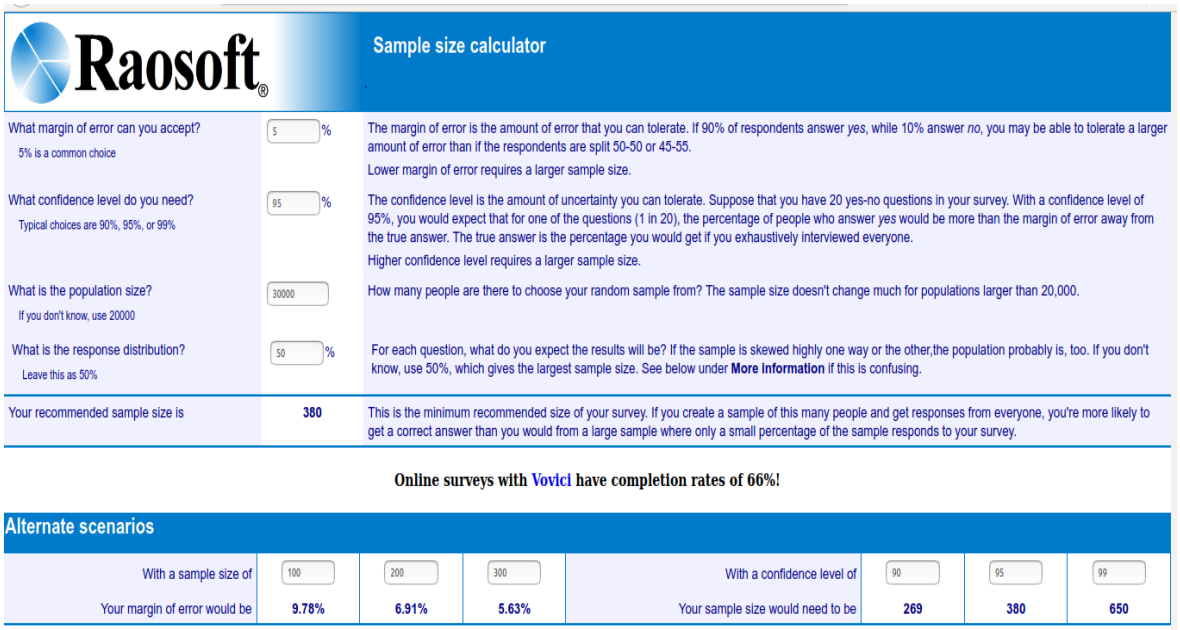
The final hypothesis is to examine whether there is a relationship between financial literacy and intention to use cryptocurrency. Financial literacy is the final factor discovered to influence intention to use cryptocurrency. A study by Williams (2019) examined the connection between financial literacy and cryptocurrency users. She found financial literacy to be a beneficial factor towards the intention to use bitcoin. Thus, this hypothesis aims to test the relationship between financial literacy and intention to use cryptocurrency

H6: *Financial Literacy will have a positive and significant impact on intention to use cryptocurrency*

4.3 Research Participants

The study collected data from students based in Near East University only. Participants from various faculties in the postgraduate and undergraduate level were involved. Participants from various faculties were selected to have inclusive data for all students. The sample size for the study was 380 which was calculated using the web survey software Rao soft sample size calculator which is shown in Figure 4.2. To obtain the required data for the study the researcher used snowball sampling, the survey was distributed to the participants through

social media platforms using a link. The data obtained from 380 students was included in the analysis for this study.



Raosoft®

Sample size calculator

What margin of error can you accept? 5% is a common choice	5 %	The margin of error is the amount of error that you can tolerate. If 90% of respondents answer *yes*, while 10% answer *no*, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size.
What confidence level do you need? Typical choices are 90%, 95%, or 99%	95 %	The confidence level is the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer *yes* would be more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size.
What is the population size? If you don't know, use 20000	30000	How many people are there to choose your random sample from? The sample size doesn't change much for populations larger than 20,000.
What is the response distribution? Leave this as 50%	50 %	For each question, what do you expect the results will be? If the sample is skewed highly one way or the other,the population probably is, too. If you don't know, use 50%, which gives the largest sample size. See below under **More information** if this is confusing.
Your recommended sample size is	**380**	This is the minimum recommended size of your survey. If you create a sample of this many people and get responses from everyone, you're more likely to get a correct answer than you would from a large sample where only a small percentage of the sample responds to your survey.

Online surveys with Vovici have completion rates of 66%!

Alternate scenarios

With a sample size of	100	200	300	With a confidence level of	90	95	99
Your margin of error would be	**9.78%**	**6.91%**	**5.63%**	Your sample size would need to be	**269**	**380**	**650**

Figure 4.2: Rao soft calculator (Retrieved 30th July 2020 from http://www.raosoft.com/samplesize.html)

4.3.1 Demographic data of research participants

Participant's demographic information are illustrated in Table 4.1. The gender distribution of the participants showed 58.2% were male and 41.8% were female. The nationality distribution of the participants showed 34.7% were from Nigeria, 17.6% from Zimbabwe, 12.1% from Kenya, 8.4% from Iraq, 3.4% from TRNC, 6.5% from Gambia, 5.5% from Sudan, 7.3% from Ethiopia and 4.2% from Turkey. The age distribution of participants showed 4.2% were 18 years old, 6.8% were 19 years old, 10.7% were 20 years old, 10.1% were 21 years old, 13.4% were 22 years old, 21.3% were 23 years old, 16.8% were 24 years old and 16.5% were 25 years old and above. The faculty distribution of the participants showed 32.2% were from the engineering faculty, 25.2% were from the applied sciences faculty, 14.1% were from the education faculty and 29.4% were from other faculties. 66% of the participants were from undergraduate level while 34% were from the postgraduate level.

Table 4.1: Demographic information of the research participants (n=380)

Demographic Variables		Number	Percentage (%)
Gender	Male	221	58.2
	Female	159	41.8
Nationality	Nigeria	132	34.7
	TRNC	13	3.4
	Turkey	16	4.2
	Zimbabwe	67	17.6
	Iraq	32	8.4
	Kenya	46	12.1
	Ethiopia	28	7.3
	Gambia	25	6.5
	Sudan	21	5.5
Age	18	16	4.2
	19	26	6.8
	20	41	10.7
	21	38	10.1
	22	51	13.4
	23	81	21.3
	24	64	16.8
	25+	63	16.5
Faculty	Applied Sciences	96	25.2
	Engineering	123	32.2
	Education	52	14.1
	Others	114	29.4
Level	Undergraduate	252	66
	Postgraduate	130	34

4.4 Data Collection Tools

A questionnaire was used as the data collection tool for the study. The questionnaire was created using Google Forms and it was administered entirely online by distributing the Google Forms Address on social media to participants. The questionnaire contained two sections.

Section I: Demographic Information: The first was used to collect personal information of the participants. Personal information is essential to determine whether the chosen participants meet the needed data collection criteria. The gender, nationality, age, faculty and level of participants were the personal information retrieved in this section.

Section II: Factors That Influence Intention to Use Cryptocurrency: This section was aimed at understanding the factors that influence university students' intention to use cryptocurrency. The questionnaire utilized in the study was developed by Mario-Oliva et al. (2019). This section contains various factors that influence university students' intention to use cryptocurrency. This section contains 7 sub-sections with 21 items. A five-point Likert scale was utilized for every item with responses varying from 1 (strongly disagree) to 5 (strongly agree).

Dimension 1: Intention to use (2 items): The first-dimension deals with the intention to use cryptocurrency. Intention to use is the desire or motive to use cryptocurrencies. This dimension is significant for the study as it examines cryptocurrency use which is the main focus of this study.

Dimension 2: Performance expectancy (3 items): The second-dimension deals with performance expectancy as a factor that influences university students' intention to use cryptocurrency. Performance expectancy is the extent to which an individual assumes that it will be beneficial to use a particular technology to boost their performance. It asks students if they think using cryptocurrencies will boost their performance. This dimension is essential because it examines if the performance expectancy of using cryptocurrencies influences student's intention to use it.

Dimension 3: Effort expectancy (4 items): The third-dimension deals with effort expectancy as a factor that influences university students' intention to use cryptocurrency. Effort expectancy is the extent of ease linked with using a particular technology. It asks students if they feel it is easy to use cryptocurrencies. This dimension is essential because it

investigates if the effort expectancy of using cryptocurrencies influences student's intention to use it.

Dimension 4: Social Influence (3 items): The fourth-dimension deals with social influence and how it influences university students' intention to use cryptocurrency. Social Influence is the extent to which an individual thinks other believes the individual should use a certain technology. It asks whether students think others around them believe they should use cryptocurrencies. This dimension is needed to investigate if social influence impacts students' intention to use cryptocurrency.

Dimension 5: Facilitating conditions (4 items): The fifth-dimension deals with facilitating conditions and how it influences university students' intention to use cryptocurrency. Facilitating conditions is the extent to which an individual believes they have the technical and organizational resources required to use a particular technology. It asks whether students believe they have the needed resources in order to use cryptocurrency. This dimension is essential because it examines facilitating conditions, that is a factor assumed to influence university students' intention to use cryptocurrency.

Dimension 6: Perceived risk (3 items): The sixth-dimension deals with perceived risk and how it influences university students' intention to use cryptocurrency. Perceived risk is defined as an individuals' presumption of the level of uncertainty and potential unwanted effects of using or purchasing a product. It asks about the level of risk students think are linked with using cryptocurrencies. This dimension is essential because it examines whether the risk attached to using cryptocurrencies influences students' intention to use it.

Dimension 7: Financial literacy (2 items): The last dimension deals with financial literacy and how it influences university students' intention to use cryptocurrency. Financial literacy is defined as an individual's level of understanding of key financial principles and their ability to make financial decisions based on this information. It asks about students' level of financial knowledge. This dimension is essential because it examines whether financial literacy influences students' intention to use cryptocurrency.

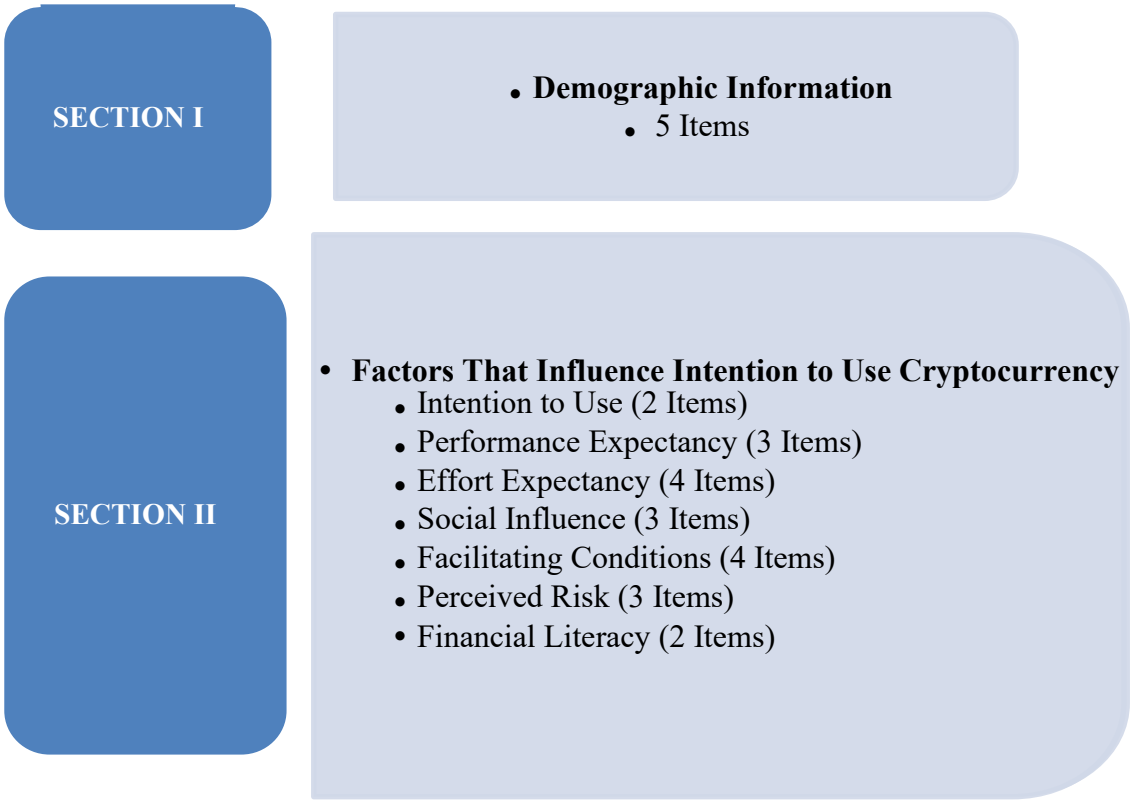


Figure 4.3: The structure of the questionnaire

4.4.1 Reliability

The Cronbach's alpha of the scale was tested to analyse the inner consistency of the items. It is used as a measurement of scale reliability. Table 4.2 below shows the scale's stability as the total reliability level for the 21 items is 0.925. According to Table 4.2 below, the dimension with the highest Cronbach alpha is social influence with a total of .928, proceeded by perceived risk with a total of .922, performance expectancy with a total of .917, then facilitating conditions and effort expectancy with the same total of .913. Lastly, financial literacy had a total of .902. Tavakol and Dennick (2011) affirmed that reliability level shouldn't be lower than .70 and reliability level lower than .50 is not acceptable. They further stated to measure the reliability of information collected in a study, high quality testing is necessary. Based on the results, the measured Cronbach alpha of all the dimensions is greater than 0.7. Hence, it was determined that the scale can be used as the reliability is excellent.

Table 4.2: Questionnaire construct and reliability test results

Construct	Number of items	Cronbach Alpha
Intention to Use	2	.906
Performance Expectancy	3	.917
Effort Expectancy	4	.913
Social Influence	3	.928
Facilitating Conditions	4	.913
Perceived Risk	3	.922
Financial Literacy	2	.902
Total	21	.925

4.5 Data Analysis Methods

The researcher used descriptive statistics for demographic data of students, carried out reliability tests to verify the accuracy of the data and Pearson correlation to test relationship between variables. Multiple linear regression was also utilized to estimate the research model. For the study, the researcher used SPSS 20.

4.6 Research Procedure

The following steps were followed by the researcher in carrying out this study:

1. Previous literature on cryptocurrency was carefully studied to gain information on the topic and to find the missing gaps of the literature.
2. The thesis proposal was written outlining the study and submitted to the supervisor.
3. The adopted questionnaire was submitted to the supervisor for it to be reviewed.
4. Ethical committee application form including the questionnaire was filled and submitted to the committee for review.
5. After the application was approved, the questionnaire was then distributed to the participants.
6. After data collection was finished, the retrieved data from the participants was inputted into SPSS and the data was analysed.

7. After data analysis was done, chapters 4,5 and 6 were written respectively.

8. The thesis was submitted to the supervisor for review.

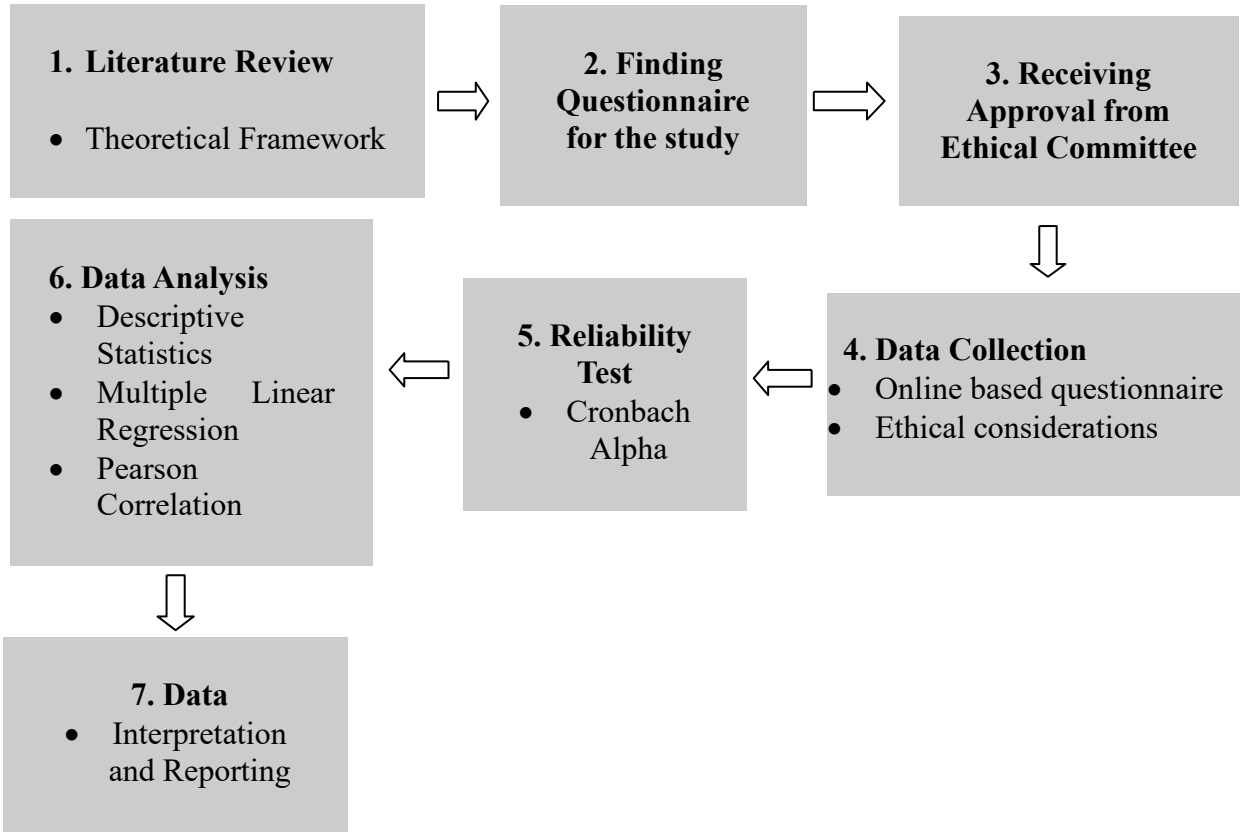


Figure 4.4: Research procedure

4.6.1 Ethical consideration

Ethical considerations are essential for undertaking a safe, open, and impartial study. Ethical approval for the study was gotten from the Near East University Ethics Committee, which monitors all school research, reviews and approves them. The approval letter with application number YDÜ/FB/2020/92 is included in the appendix section of the study. The researcher assured that the study was explained to participants and their permission was taken prior to their involvement in the study. The researcher also assured that no participants were coerced or pressured to engage in the study in any way. Lastly, the researcher assured that all participants involved in the research were kept as anonymous.

4.7 Research Schedule

The study schedule is the most critical aspect to acknowledge during the thesis. It's the time needed from the first step to the last step of writing the thesis. It has to be planned efficiently in order to finish the thesis on time. The thesis started late June 2020 and finished in December 2020. A time of completion was allocated to every stage to allow the work be carried out in time. Some stages were carried out simultaneously. Table 4.3 below illustrates the thesis schedule:

Table 4.3: Research schedule

Procedure	**Durations (Weeks)**
Literature review	8
Thesis proposal	3
Drafting questionnaire	2
Testing questionnaire on a sample	1
Analysing sample data and feedback	1
Drafting final questionnaire and distributing to students	2
Data collection and data analysis	10
Writing chapter 4, 5 and 6	4
Thesis submission for review	1
Correction and amendment of the Thesis	1
Jury and final corrections	1
Total	33 Weeks

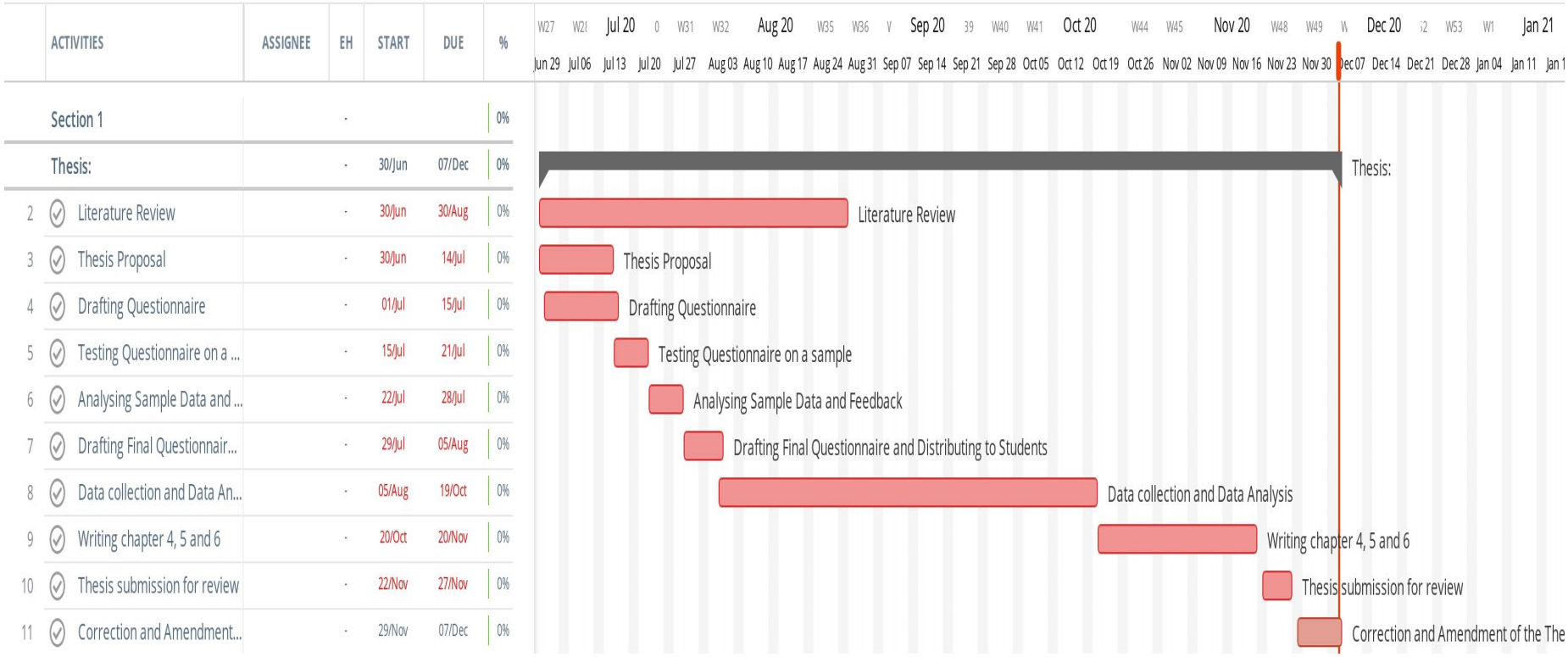


Figure 4.5: Gantt chart of the research study

CHAPTER 5

RESULTS AND DISCUSSIONS

The results of the data analysed from this study is presented in this section. In addition, the results of this analysis are also compared with previous studies in the research area to identify similarities and dissimilarities with them.

5.1. Dependencies between the Constructs

For the purpose of examining the relationship between the constructs of the model, correlation analysis was utilized to determine the relation between them. Table 5.1 below shows the correlation between the constructs.

Table 5.1: Correlation matrix

Constructs	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Intention to Use	1						
Performance Expectancy	.843**	1					
Effort Expectancy	.637**	.732**	1				
Social Influence	.544**	.501**	.498**	1			
Facilitating Conditions	.606**	.346**	.591**	.633**	1		
Perceived Risk	.321**	.487**	.453**	.295**	.478**	1	
Financial Literacy	.486**	.331**	.422**	.366**	.421**	597**	1

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

As shown by the results of the analysis in Table 5.1, the correlation between all the constructs was significantly positive. It indicates that an increase in one construct will also result in an increase for the accompanying construct.

The strongest correlation was identified to be between intention to use and performance expectancy(coefficient=0.843) proceeded by performance expectancy and effort expectancy (coefficient= 0.732) in that sequence. These values show there's a high level of dependency amongst the pairs. This means a high degree of increase in intention to use would result in a high degree of increase likewise for performance expectancy, the same goes for the pair of performance expectancy and effort expectancy.

It is evident from the correlation's matrix above that the paths of the dependences are known through considering the scale and the indications of the correlation coefficients. A definition of the observable linear dependency between any two different constructs is that it may either be strong or weak and positive or negative. Nonetheless, it isn't sufficient to disprove the proposed hypotheses, we have to look at all potential influences on relationships from the independent variables (i.e., Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Perceived Risk and Financial Literacy) to the dependent variable (i.e., Intention to Use). Therefore, in section 5.3 the researcher utilized multiple regression analysis.

5.2. The Students' Intentions towards using Cryptocurrency

A descriptive analysis was done in order to better grasp the intention of university students to use cryptocurrency. The results received from each of the constructs was average as most constructs were within 4.0. Table 5.2 below displays the standard deviations and means of the obtained responses from students based on a 5-point Likert scale used in the questionnaire.

Table 5.2: The mean and standard deviation of each item

Constructs	Items	Mean	SD
Intention to Use	1. I intend to use cryptocurrencies	4.07	.78
	2. I predict I will use cryptocurrencies.	4.05	.79
	Sub-Total	**4.06**	**.78**
Performance Expectancy	3. Using cryptocurrencies will increase opportunities to achieve important goals for me.	4.15	.73
	4. Using cryptocurrencies will help me achieve my goals more quickly.	4.18	.71
	5. Using cryptocurrencies will increase my standard of living	4.12	.75
	Sub-Total	**4.15**	**.73**
Effort Expectancy	6. It will be easy for me to learn how to use cryptocurrencies.	4.15	.76
	7. Using cryptocurrencies will be clear and understandable for me.	4.10	.78
	8. It will be easy for me to use cryptocurrencies	4.08	.79
	9. It will be easy for me to become an expert in the use of cryptocurrencies	3.76	1.02
	Sub-Total	**4.02**	**.84**
Social Influence	10. The people who are important to me will think that I should use cryptocurrencies	4.02	.82
	11. The people who influence me will think that I should use cryptocurrencies.	4.05	.81
	12. People whose opinions I value would like me to use cryptocurrencies	4.09	.78
	Sub-Total	**4.05**	**.80**
Facilitating Conditions	13. I have the necessary resources to use cryptocurrencies	4.13	.77
	14. I have the necessary knowledge to use cryptocurrencies	3.55	1.06
	15. Cryptocurrencies are compatible with other technologies that I use	3.87	1.02
	16. I can get help if I have difficulty using cryptocurrencies	3.89	1.02
	Sub-Total	**3.86**	**.96**
Perceived Risk	17. Using cryptocurrencies is risky	4.14	.74
	18. There is too much uncertainty associated with the use of cryptocurrencies	4.16	.73
	19. Compared with other currencies/investments, cryptocurrencies are riskier	4.14	.74
	Sub-Total	**4.14**	**.73**
Financial Literacy	20. I have a good level of financial knowledge	4.06	.82
	21. I have a high capacity to deal with financial matters	4.03	.84
	Sub-Total	**4.04**	**.83**
	Total	**4.07**	**.79**

The mean and standard deviation for the constructs were shown in Table 5.2. Most of the results were significantly positive.

Table 5.2 revealed the item with the highest mean was item 4 “Using cryptocurrencies will help me achieve my goals more quickly.” (M = 4.18). This means university students believe the use of cryptocurrencies would allow them to reach their objectives at a faster rate than

normal. Table 5.2 revealed the item with the second highest mean was item 18 “There is too much uncertainty associated with the use of cryptocurrencies.” (M = 4.16). This means university students believe the use of cryptocurrencies is too risky due to its uncertainty. Table 5.2 revealed the item with the third highest mean was a tie between item 3“Using cryptocurrencies will increase opportunities to achieve important goals for me.” (M = 4.15) and item 6 “Using cryptocurrencies will be clear and understandable for me” (M = 4.15). This means university students believe the use of cryptocurrencies enables them to have better opportunities at achieving important goals. Furthermore, it means they also believe it would not be hard for them to learn how to use cryptocurrencies.

On the other hand, Table 5.2 revealed the item with the lowest mean was item 14 “I have the necessary knowledge to use cryptocurrencies.” (M = 3.55). This means university students don’t think they have the necessary knowledge required in order to use of cryptocurrencies. Table 5.2 revealed the item with the second lowest mean was item 7 “It will be easy for me to become an expert in the use of cryptocurrencies” (M = 3.76). This means university students don’t believe they can become experts in using cryptocurrencies easily. Table 5.2 revealed the item with the third lowest mean was item 15 “Cryptocurrencies are compatible with other technologies that I use” (M = 3.87). This means university students don’t use other technologies that would be considered compatible with cryptocurrencies.

Furthermore, Table 5.2 showed the construct with the highest mean to be performance expectancy (M=4.15). This showed that university students believe that the benefits that comes with using cryptocurrencies increases their intention to use it. This is also evident in the study by Mario-Oliva et al. (2019) which found performance expectancy to be the most important factor for a cryptocurrency to be successful.

Table 5.2 showed the construct with second highest mean to be Perceived Risk (M=4.14). This showed that university students that believe the use of cryptocurrencies are too risky and volatile compared to other technologies. However, Walton and Johnston (2018) did not find perceived risk to be a factor in cryptocurrency acceptance. They found it to be a factor in the preadoption process instead.

Table 5.2 showed the construct with the third highest mean to be Intention to Use (M=4.06). This showed that the university students intend to adopt the use of cryptocurrencies either presently or in the near future. Mario-Oliva et al. (2019) reported a similar result.

Table 5.2 showed the construct with the fourth highest mean to be Social Influence (M=4.05). This showed that university students believe other people around them think they should start using cryptocurrencies. This is also evident with Putra and Darma (2019).

Table 5.2 showed the construct with the fifth highest mean to be Financial Literacy (M=4.04). This showed that university students believe they have a high level of financial knowledge and know how to act on financial information. Mario-Oliva et al. (2019) reported that people with greater financial awareness are careful with their financial choices.

Table 5.2 showed the construct with the sixth highest mean to be Effort Expectancy (M=4.02). This showed that university students believe it will not be hard for them to learn how to use cryptocurrencies and using it would be clear and understandable for them. This is evident in Hutchison (2017) as effort expectancy was found to be significant in cryptocurrency acceptance.

Table 5.2 showed the construct with the lowest mean to be Facilitating Conditions (M=3.86). This showed that university students do not believe they have the required knowledge and resources in order to use cryptocurrencies. However, Novendra and Gunawan (2017) found a contrary result.

5.3. Relationships between the Constructs of the Proposed Research Model

In order to estimate the model outcomes, multiple linear regression analysis was utilized as illustrated in the following sections:

The researcher formulated hypotheses centred on the theory that Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Perceived Risk and Financial Literacy would function as measures of university students' opinion that these constructs would influence their intention to use. The (R2=.682) for the analysis model means that the above-mentioned independent variables can explain 68.2 percent of the variance in university students' intention to use cryptocurrency.

The following findings were reported after the computation of a regression analysis model:

5.3.1 Influence of Performance Expectance on the Intention to Use

Hypothesis 1 was supported after examining the coefficients in Table 5.3 (F=223.414; R2=.682; p<.05). The findings identified the regression model to be significant. Performance

expectancy reflects 37.2 per cent of the variability of intention to use (β=.372). (p<.05) implies that performance expectancy has a positive and significant influence on university students' intention to use cryptocurrency. This shows that university students believe the use of cryptocurrencies will bring about many benefits for them. This result is in line with other studies conducted by Arias-Oliva et al. (2019) and Novendra & Gunawan (2017).

Table 5.3: Influence of performance expectancy on intention to use

Dependent Variable: Intention to Use			
Model	**B**	**T**	**P**
Performance Expectancy	.372	7.513	.000
Model F 223.414 R2 .682			

5.3.2 Influence of Effort Expectancy on the Intention to Use

Hypothesis 2 was supported after evaluating the coefficients in Table 5.4 (F=223.414; R2=.682; p<.05). The findings identified the regression model to be significant. Effort expectancy reflects 30.9 per cent of the variability in the intention to use (β=.309). (p<.05) implies that effort expectancy has a positive and significant influence on university students' intention to use cryptocurrency. Thus, this hypothesis is supported. This shows that university students' presumption about cryptocurrencies is that it's easy to learn how they work and use them therefore that urges them to adopt it. This result is in line with the study conducted by Hutchinson (2017).

Table 5.4: Influence of effort expectancy on intention to use

Dependent Variable: Intention to Use			
Model	**B**	**T**	**P**
Effort Expectancy	.309	7.105	.000
Model F 223.414 R2 .682			

5.3.3 Influence of Social Influence on the Intention to Use

Hypothesis 3 was supported after evaluating the coefficients in Table 5.5 (F=223.414; R2=.682; p<.05). The findings identified the regression model to be significant. Social

influence reflects 11.7 per cent of the variability in the intention to use (β=.117). (p<.05) implies that social influence has a positive and significant influence on university students' intention to use cryptocurrency. Thus, the hypothesis was supported. This shows the presumption that others believe they should use cryptocurrencies urges university students to adopt cryptocurrencies. This result is in line with the study conducted by Putra and Darma (2019).

Table 5.5: Influence of social influence on intention to use

Dependent Variable: Intention to Use			
Model	**B**	**t**	**P**
Social Influence	.117	2.724	.007
Model F 223.414 R2 .682			

5.3.4 Influence of Facilitating Conditions on the Intention to Use

Hypothesis 4 was not supported after evaluating the coefficients in Table 5.6 (F=223.414; R2=.682; p>.05). The findings identified the regression model to not be significant. Facilitating conditions reflects 2.7 per cent of the variability in the intention to use (β=.027). (p>.05) implies that facilitating conditions doesn't have a significant influence on university students' intention to use cryptocurrency. Thus, the hypothesis was not supported. A contrary result was found in the study conducted by Novendra and Gunawan (2017).

Table 5.6: Influence of facilitating conditions on intention to use

Dependent Variable: Intention to Use			
Model	**B**	**t**	**P**
Facilitating Conditions	.027	.746	.456
Model F 223.414 R2 .682			

5.3.5 Influence of Perceived Risk on the Intention to Use

Hypothesis 5 was supported after examining the coefficients in Table 5.7 (F=223.414; R2=.682; p<.05). The findings identified the regression model to be significant. Perceived risk reflects 12.1 per cent of the variability in the intention to use (β=-.121). (p<.05) implies

that perceived risk has a negative and significant influence on university students' intention to use cryptocurrency. Thus, the hypothesis is supported. This shows the presumption that using cryptocurrencies is risky urges university students to not adopt it. This result is not similar to the one found in the study conducted by Hoeven (2019).

Table 5.7: Influence of perceived risk on intention to use

Dependent Variable: Intention to Use			
Model	**B**	**t**	**P**
Perceived Risk	-.121	-2.079	.038
Model F 223.414 R2 .682			

5.3.6 Influence of Financial Literacy on the Intention to Use

Hypothesis 6 was not supported after examining the coefficients in Table 5.8 (F=223.414; R2=.682; p>.05). The findings identified the regression model to not be significant. Financial Literacy reflects 0.2 per cent of the variability in the intention to use (β=.002). (p>.05) implies that financial literacy does not have a significant influence on university students' intention to use cryptocurrency. Thus, the hypothesis was not supported. This shows that having a high level of financial knowledge does not urge university students to use cryptocurrencies. This result is in line with the study conducted by Arias-Oliva et al. (2019).

Table 5.8: Influence of financial literacy on intention to use

Dependent Variable: Intention to Use			
Model	**B**	**t**	**P**
Financial Literacy	.002	.035	.872
Model F 223.414 R2 .682			

5.4 Summary of the Study

The summary of the study in relation to the hypotheses tested and the decisions based on the findings are illustrated in Table 5.9 below.

Six independent variables (i.e., Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Perceived Risk and Financial Literacy) were tested in order to estimate their influence on the dependent variable (i.e., Intention to Use). The ($p<0.5$) of performance expectancy, effort expectancy, social influence and perceived risk showed they had a statiscally significant influence on the intention to use. The ($p>0.5$) of facilitating conditions and financial literacy showed they had no statistically significant influence on the intention to use. Therefore, four out of the six hypotheses were supported.

Table 5.9: Summary of findings

Hypothesis	**IV**	**DV**	**Supported**	**p Values**	**Standardized coefficient (β)**
H1	Performance Expectancy	Intention to Use	Yes	$p<0.05$	.372
H2	Effort Expectancy	Intention to Use	Yes	$p<0.05$	.309
H3	Social Influence	Intention to Use	Yes	$p<0.05$	.117
H4	Facilitating Conditions	Intention to Use	No	$p>0.05$	.027
H5	Perceived Risk	Intention to Use	Yes	$p<0.05$	-.121
H6	Financial Literacy	Intention to Use	No	$p>0.05$	.002

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

This chapter outlines the study's conclusion focused on the findings of the research. The chapter further goes on to give recommendations for future research.

6.1 Conclusion

The use of cryptocurrency has recently gained enormous popularity. It offers an alternate to the existing financial structures with a great degree of flexibility. The study examined various factors that influenced university students' intention to use cryptocurrency. A UTAUT model was used in order to investigate the factors. Six hypotheses were tested and four of them were supported. Findings showed performance expectancy had a positive and significant influence on university students' intention to use cryptocurrency. Effort expectancy and social influence were also found to have a positive and significant influence on the intention to use. Financial literacy and facilitating conditions had no significant influence on the intention to use while perceived risk had a negative and significant influence on the intention to use.

It can be inferred, from the findings, that performance expectancy and effort expectancy are the most important factors for the acceptance of cryptocurrency as they had had the highest degree of variance among the factors. This shows the need for cryptocurrencies to become a high value product for users, and major advertising attempts should be made to ensure that its value is seen by prospective users. The more benefits provided by cryptocurrencies, the more probable they are going to be utilized. Concentrating on utility will be a useful approach for the cryptocurrency industry. Advancements in the usability of cryptocurrencies would also increase acceptance.

6.2 Recommendations

The study makes these suggestions for future research based on the findings of the study:

- This research focused on investigating the factors that influence the intention to use cryptocurrency among university students from Near East University in North

Cyprus using the UTAUT model. Future research can focus on expanding this research to universities from other countries and conducting comparative studies on the intention to use cryptocurrency.

- The UTAUT model was used in this study to investigate the factors influencing intention to use cryptocurrency. Future research can focus on using other models to investigate the factors.
- Another element of future research is assessing intention to use cryptocurrency from the viewpoint of retailers.

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APPENDICES

APPENDIX 1

ETHICAL APPROVAL LETTER

YAKIN DOĞU ÜNİVERSİTESİ

BİLİMSEL ARAŞTIRMALAR ETİK KURULU

14.05.2020

Dear Farouk Alkali Mohammed

Your application titled **"Investigating Factors That Influence University Students' Intention to Use Cryptocurrency"** with the application number YDÜ/FB/2020/92 has been evaluated by the Scientific Research Ethics Committee and granted approval. You can start your research on the condition that you will abide by the information provided in your application form.

Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

Direnc Kanol

Note: If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this document.

APPENDIX 2
QUESTIONNAIRE

INVESTIGATING FACTORS THAT INFLUENCE UNIVERSITY STUDENTS' INTENTION TO USE CRYPTOCURRENCY

Dear Student,

The aim of this questionnaire is to understand the factors that influence the intention to use cryptocurrency among university students. Please answer each question to the best of your knowledge, all information you provide will be kept confidential. The results of this questionnaire will be used for analysis of educational research report only and not be made available to other institutions.

Thank you for your time and cooperation

Farouk Alkali Mohammed

Masters Student

Department of Computer Information Systems

Near East University

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Prof. Dr. Nadire ÇAVUŞ

Thesis Supervisor

Department of Computer Information Systems

Near East University

E-mail: nadire.cavus@neu.edu.tr

SECTION I: Demographic Information

1. **Gender** a) Male b) Female
2. **Nationality** a) Nigeria b) TRNC c) Turkey d) Zimbabwe e) Iraq f) other, please specify-------
3. **Age** a) 18 b) 19 c) 20 d) 21 e) 22 f) 23 g) 24 h) 25+
4. **Faculty** a) Applied Science b) Engineering c) Education d) Others
5. **Level** a) Undergraduate b) Postgraduate

SECTION II: Factors That Influence Intention to Use Cryptocurrency

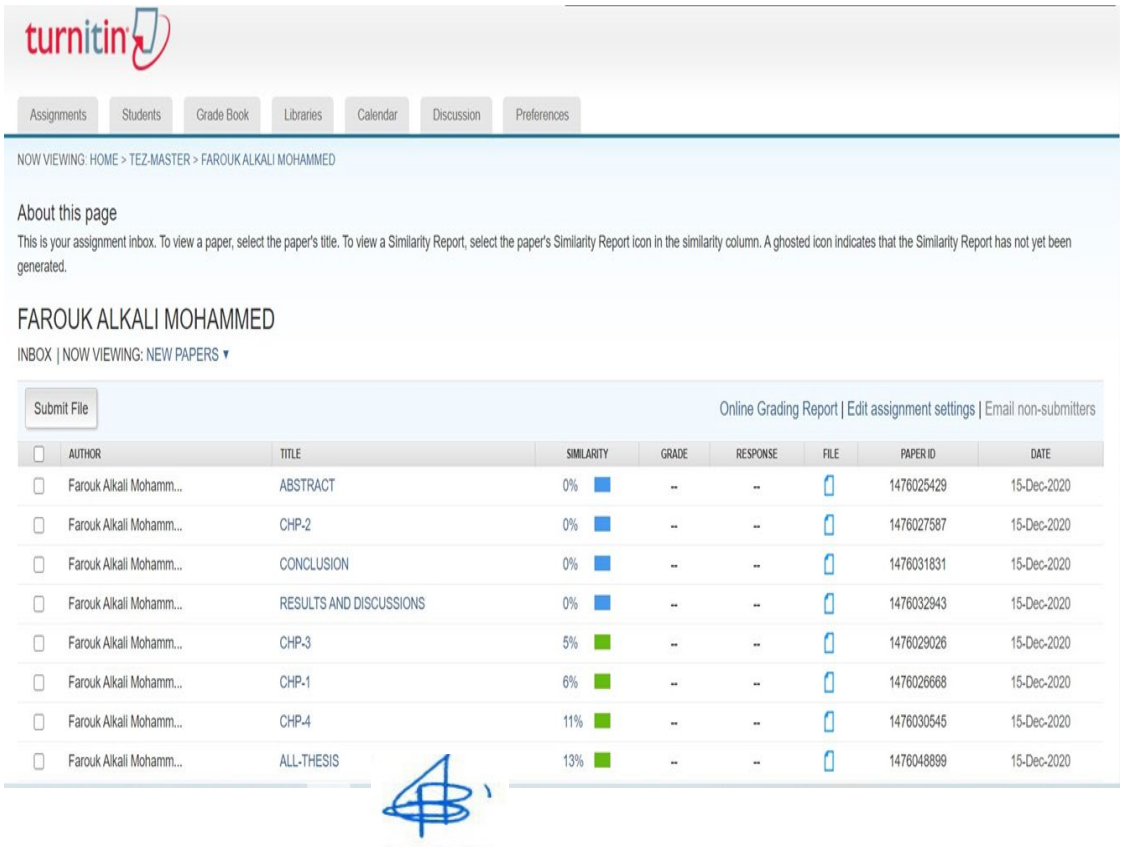
Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Intention to use					
1. I intend to use cryptocurrencies					
2. I predict I will use cryptocurrencies					
Performance expectancy					
3. Using cryptocurrencies will increase opportunities to achieve important goals for me					
4. Using cryptocurrencies will help me achieve my goals more quickly					
5. Using cryptocurrencies will increase my standard of living					
Effort expectancy					
6. It will be easy for me to learn how to use cryptocurrencies					
7. Using cryptocurrencies will be clear and understandable for me					
8. It will be easy for me to use cryptocurrencies					
9. It will be easy for me to become an expert in the use of cryptocurrencies					
Social Influence					
10. The people who are important to me will think that I should use cryptocurrencies					
11. The people who influence me will think that I should use cryptocurrencies					
12. People whose opinions I value would like me to use cryptocurrencies					

Facilitating conditions					
13. I have the necessary resources to use cryptocurrencies					
14. I have the necessary knowledge to use cryptocurrencies					
15. Cryptocurrencies are compatible with other technologies that I use					
16. I can get help if I have difficulty using cryptocurrencies					
Perceived risk					
17. Using cryptocurrencies is risky					
18. There is too much uncertainty associated with the use of cryptocurrencies					
19. Compared with other currencies/investments, cryptocurrencies are riskier					
Financial literacy					
20. I have a good level of financial knowledge					
21. I have a high capacity to deal with financial matters					

Thank you for your time

APPENDIX 3

SIMILARITY REPORT



Farouk Alkali Mohammed