

UNIVERSITY OF KYRENIA INSTITUTE OF GRADUATE STUDIES FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES

CRYPTOCURRENCY: OVERVIEW, LEGAL STATUS, AND FUTURE: CASE OF THE TURKISH REPUBLIC OF THE NORTHERN CYPRUS

MASTER OF BANKING AND FINANCE THESIS

FRÉDÉRIC FIDA SHINDA

KYRENIA JANUARY 2025



UNIVERSITY OF KYRENIA INSTITUTE OF GRADUATE STUDIES FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES

CRYPTOCURRENCY: OVERVIEW, LEGAL STATUS, AND FUTURE: CASE OF THE TURKISH REPUBLIC OF THE NORTHERN CYPRUS

MASTER OF BANKING AND FINANCE THESIS

FRÉDÉRIC FIDA SHINDA

KYRENIA JANUARY 2025

UNIVERSITY OF KYRENIA INSTITUTE OF GRADUATE STUDIES FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES

CRYPTOCURRENCY: OVERVIEW, LEGAL STATUS, AND FUTURE: CASE OF THE TURKISH REPUBLIC OF THE NORTHERN CYPRUS

MASTER OF BANKING AND FINANCE THESIS

FRÉDÉRIC FIDA SHINDA

KYRENIA JANUARY 2025

GİRNE ÜNİVERSİTESİ UNIVERSITY OF KYRENIA

Juri Üyeleri/Jury Members				İmza/Signature		
Prof. Dr. Salih Katirciaglu						
Assec. Prof. Dr. Setareh Katircioglu				2		
Asst. Prof. Dr. Baris Memduh Eren			32			
Karar	Kabul/Accepted Düzeltilmesi/To be		revised	☐ Ret/Rejected		
Decision	Oybirliği/Unanimous		☐ Oyçokluğu/Majority			

ONAY/APPROVAL Enstitü Müdürü/Director of the Graduate School

İmza/Signature _

Tarih/Date 14. 01. 2025

DECLARATION

I hereby declare that this is my original work and has never been presented for a degree or any award in any university or any academic institution of higher learning. It is all the result of my own effort and under the supervision of Assoc. Prof. Dr. Setareh KATIRCIOGLU.

ACKNOWLEDGMENT

I am thankful to my supervisor Assoc. Prof. Dr. Setareh KATIRCIOGLU for her endless advice, excellent ideas, and constant assistance while I was working on my dissertation. Her advice has been crucial in determining the process and quality of this research. Furthermore, my thanks go to the University of Kyrenia for providing an adequate learning atmosphere.

My family has been an unconditional source of support throughout my academic journey. I am eternally grateful to my parents for their patience, love, support, and care.

Finally, I would like to thank everyone who assisted and supported me during this study.

ABSTRACT

This study explores the cryptocurrency world by examining the fundamental principles

of cryptocurrency, its legal status, and its future in the Turkish Republic of Northern Cyprus.

This text examines the benefits and limitations of cryptocurrencies, specifically investigating

the legal status of cryptos globally and the potential regulations that may be implemented in

Northern Cyprus.

The research uses quantitative methods to collect participant data via currency and

cryptocurrency exchange businesses in chosen locations. Additionally, it analyzes current

literature on cryptocurrencies. The SPSS Program is used to apply statistical techniques by

combining all surveys and obtaining data via frequency and descriptive tests. The findings

demonstrate a significant influence of cryptocurrencies on the participants and underscore the

crucial need for authorities to take regulatory measures to safeguard both cryptocurrency users

and investors in the cryptocurrency sector.

This study contributes to the current understanding of cryptocurrency, particularly by

introducing innovative approaches specific to Northern Cyprus, where information is scarce.

The study shows the necessity of establishing a legislative framework and platforms to govern

cryptocurrency in Northern Cyprus, following the example of nations that have successfully

built a safe environment for crypto users and investors.

Keywords: Cryptocurrency; Legal Status; Survey; The Turkish Republic of Northern Cyprus

iii

ÖZET

Bu çalışma, kripto paranın temel ilkelerini, yasal durumunu ve Kuzey Kıbrıs Türk

Cumhuriyeti'ndeki geleceğini inceleyerek kripto para dünyasını araştırmaktadır. Araştırma,

kripto paraların faydalarını ve sınırlamalarını incelemekte olup, özellikle kripto paraların

küresel olarak hukuki boyutunu ve Kuzey Kıbrıs'ta uygulanabilecek potansiyel düzenlemeleri

araştırmaktadır.

Araştırma, seçilen yerlerdeki döviz ve kripto para borsa işletmeleri aracılığıyla katılımcı

verilerini toplamak için nicel yöntemler kullanmaktadır. Ayrıca, kripto paralarla ilgili güncel

literatürü analiz etmektedir. Çalışmada kullanılan SPSS Programı, tüm anketleri birleştirerek,

frekans ve tanımlayıcı testler aracılığıyla veri elde ederek istatistiksel teknikleri uygulamak için

kullanılır. Bulgular, kripto paraların katılımcılar üzerindeki önemli etkisini göstermekte ve

yetkililerin hem kripto para kullanıcılarını hem de kripto para sektöründeki yatırımcıları

korumak için düzenleyici önlemler alınması gerektiğinin altını çizmektedir.

Bu çalışma, özellikle literatürde eksiklikleri olan Kuzey Kıbrıs'a özgü yenilikçi

yaklaşımlar sunarak kripto para birimlerinin mevcut anlayışına katkıda bulunmaktadır.

Çalışma, Kuzey Kıbrıs'ta kripto para birimlerini yönetmek için yasal bir çerçeve ve platformlar

oluşturulmasının gerekliliğini, kripto kullanıcıları ve yatırımcıları için güvenli bir ortam

oluşturmayı başaran ülkelerin örneklerini takip ederek göstermektedir.

Anahtar Kelimeler: Kripto Para; Yasal Durum; Anket; Kuzey Kıbrıs Türk Cumhuriyeti

iv

TABLE OF CONTENTS

DECL	ARATION	i
ACKI	NOWLEDGMENT	ii
ABST	TRACT	iii
ÖZET	·	iv
TABL	LE OF CONTENTS	v
LIST	OF TABLES	vii
LIST	OF FIGURES	viii
LIST	OF ABBREVIATIONS	ix
CHAI	PTER 1	1
INTR	ODUCTION	1
1.1.	Research Questions	4
1.2.	Objectives	4
1.3.	Aim of Thesis	4
1.4.	Structure of Thesis	5
CHAI	PTER 2	6
LITE	RATURE REVIEW	6
2.1.	Theoretical Framework: Overview of Cryptocurrency and Blockchain Technology	11
2.2.	Benefits and Challenges of Cryptocurrency	13
2.2.1.	Benefits of Cryptocurrency	13
2.2.2.	Constraints of Cryptocurrency	14
2.3.	Types of Cryptocurrencies	16
2.4.	Legal Status of Cryptocurrency in the World	19
2.5.	Legal Status of Cryptocurrency in the Turkish Republic of Northern Cyprus	22
CHAI	PTER 3	24
RESE	ARCH METHODOLOGY	24
CHAI	PTER 4	26
RESU	JLTS AND DISCUSSION	26
4.1. F	requency Distribution	26
СНАІ	PTER 5	33
CONG	CLUSION AND RECOMMENDATIONS	33

5.1. Limitations and Recommendations for Future Research	35
REFERENCES	37
APPENDICES	41

LIST OF TABLES

Table 2.1: Summary Indicators of the Top 5 Cryptocurrencies by Trading Volume	27
Table 4.1: Gender Distribution	35
Table 4.2: Location Distribution	36
Table 4.3: Education Distribution	36
Table 4.4: Knowledge Distribution	37
Table 4.5: Holding Crypto Distribution	37
Table 4.6: Regulating Crypto Distribution	38
Table 4.7: Crypto Illegal Activities Distribution	38
Table 4.8: Summary of frequency Table	39
Table 4.9: Descriptive Distribution	40
Table 4.10: Descriptive Distribution based on gender, location, and education (summary)	41

LIST OF ABBREVIATIONS

5ALMD: The EU's Fifth Anti-Money Laundering Directive

AIG: American International Group, Inc.

ALM: Anti-Money Laundering

BNB: Binance Coin

BTC: Bitcoin

CBDC: Central Bank of Digital Currencies

CDD: Customer Due Diligence requirements

CFTC: Commodity Futures Trading Commission

CTF: Capture The Flag

Defi: Decentralized Finance

ETH: Ethereum

EU: The European Union

FATF: The Financial Action Task Force

ICOs: Initial Coin Offerings

JVCEA: Currency Exchange Association

KYC: Know Your Customer's Requirement

NFTs: Non-Fungible Tokens

PSA: The Payment Services Act

SEC: Securities and Exchange Commission

SFC: The Superintendencia Financiera de Colombia

SOL: Solana

STOs: Security Token Offerings

TRNC: The Turkish Republic of Northern Cyprus

US: The United States of America

USDT: United States Devise Tether

CHAPTER 1

INTRODUCTION

A cryptocurrency is a digital currency based on a crypto network distributed across many computers secured by cryptography, making it almost difficult to fake and double-spend (Azman M. et al., 2020). Most cryptocurrencies are decentralized networks built on blockchain technology, with a distributed ledger enforced by a diverse network of computers. The essential aspect of decentralized currencies is that any central body does not issue them. That is why it is outside the control of the banks and not backed by a central government. The Cryptocurrency world is immune to the old methods of government to control transactions and interference.

Cryptocurrencies, a new digital currency on decentralized networks, have shaken up established monetary institutions. Due to its increased use by individuals and businesses, cryptocurrency has recently become a hot topic in the financial sector. Cryptocurrency's potential and its effects on the global financial system are becoming more apparent (Finance Magnates Staff, 2023).

The term "cryptocurrency" can refer to various digital currencies that are decentralized and not controlled by a single entity like a bank or government. These currencies function as a means of exchange through a computer network. By removing the need for centralized third parties like banks, this decentralized approach ensures that all participants in a transaction possess the monetary assets they claim to. A digital ledger is a database that uses strong encryption to secure transaction records, authenticate coin transfers, control the generation of extra currencies, and keep individual coin ownership records. Although they have been categorized as commodities, securities, and currencies, cryptocurrencies are typically seen as a separate asset class in practice, despite their name suggesting otherwise. Therefore, cryptocurrencies are not traditional currencies. Certain crypto schemes employ validators to keep the coin running (Azman M.et al., 2020).

Cryptocurrency is digital money neither printed nor minted by a central bank or government. Unlike the Central Bank of Digital Currencies (CBDC), which are digital currencies issued and controlled by a central bank, cryptocurrencies are often decentralized. It

is a centralized cryptocurrency that refers to digital currencies that are either minted their coins or generated by a single entity before they are issued.

In a decentralized system, all cryptocurrencies function by way of a public database of financial transactions recorded using distributed ledger technology, usually a blockchain (Deutsche Bundesbank, 2020).

David Chaum, an American cryptographer, first presented a model for anonymous cryptographic electronic money in 1983. The concept was to use decentralized, immutable money that could avoid banks and other controlled financial systems. Digicash, Chaum's protocryptocurrency that built upon his prior concepts, was released in 1995. Bit Gold is a worldwide payment system that was founded in 1998 by Nick Szabo and is regarded as the direct progenitor of Bitcoin. By completing cryptographic tasks, users might earn points in this incentive system. Nonetheless, Szabo was unable to resolve the issue of double expenses and the absence of a controlling authority. In a white paper titled "Bitcoin - A Peer-to-Peer Electronic Cash System," released ten years later, a group under the pseudonym of Satoshi Nakamoto established the foundation for Bitcoin and other cryptocurrencies. (Nakamoto, S. (2008).

The principle of all currency is based on the people's confidence in the currency and the authorities who issue this currency. Fiat currency has gained confidence over the years based on the people's confidence in the government which sets the monetary value and the banks which are the issuers of this currency. Cryptos deviate from the rule of centralization of currency by a government authority or a currency-issuing entity, it is independent of any control hence the basis of trust is subjective. Banks are controlled and supervised by the government, but Cryptocurrencies are decentralized and not backed by any government. Sometimes Bank faces a single point of failure, and cryptocurrency does not meet any single point of failure, which is why many prefer crypto transactions over average bank transactions (Baek H. et al., 2019).

One significant advantage is that Cryptocurrency is a peer-to-peer transaction method and will not have intermediary services like banks. In bank transactions, the government has some supervision to restrict some of the trade, and cryptocurrency does not come under government supervision. Cryptocurrencies enable peer-to-peer transactions with no intermediary, allowing users to transfer funds instantly without incurring transaction fees

(Wang et al., 2020). Transactions are connected to the transaction ID on the blockchain rather than being identified by an individual bank account through a financial institution.

There is a growing need to examine the implications and challenges of using cryptocurrencies as the primary medium of exchange for banking transactions as cryptocurrency's popularity and technological breakthroughs continue to rise. Policymakers, financial institutions, and individuals need to know the potential outcomes of such a change.

With regards to the utilization and acceptance of cryptocurrency, Northern Cyprus, with its one-of-a-kind political environment and monetary hardships, is at a junction. In light of the political situation in the region, which is characterized by a complicated and unresolved geopolitical scenario, it is necessary to conduct a comprehensive analysis of the potential advantages and disadvantages of cryptocurrency applications. The need for a comprehensive examination is featured by the benefits and impediments connected to cryptographic money use in Northern Cyprus. The popularization of cryptocurrency and people's perception of cryptocurrency leads us to ask questions about crypto investments, the use and acceptance of crypto payments, and its future in Northern Cyprus for days to come. This problem statement emphasizes the current state of cryptocurrency in Northern Cyprus by investigating the effects and constraints of cryptocurrency, Northern Cyprus's legal status, and its future with cryptocurrency.

This study is significant because it might reveal insight into what Northern Cyprus' one-of-a-kind international climate means for the use of digital money. In a region that is still struggling with unresolved economic and political issues, the investigation into the adoption of cryptocurrency has far-reaching implications for numerous parties, including politicians, businesses, and the general public.

The primary focus of the research is understanding the crypto world by analyzing its advantages and constraints, types of cryptocurrencies, the global legal status of crypto, and Northern Cyprus's position toward cryptocurrency.

Furthermore, through investigating and gathering people's views on cryptocurrency, we will determine how crypto can have an impact on the economy in the future. The outcomes can assist policymakers with creating a legal framework to protect crypto users and investors from the potential downfall of the utilization of these digital forms of money.

1.1. Research Questions

- What are the benefits and constraints of using cryptocurrency?
- What is the legal status of Northern Cyprus toward the use of cryptocurrency?
- What are factors that impact the popularity of the use of cryptocurrency in Northern Cyprus?
- What is the people's perception toward the utilization of cryptocurrency in Northern Cyprus?
- How does the particular political and economic environment of Northern Cyprus influence the utilization of cryptocurrency?
- In Northern Cyprus, how should policymakers and government regulate this sector?
- What is the future of cryptocurrency in Northern Cyprus?

1.2. Objectives

- Examine the guiding principles and essential ideas behind cryptocurrency.
- Investigating the potential advantages and obstructions of cryptocurrency, Northern Cyprus's position, and the future of cryptocurrency in its economy are the principal goals of this study.
- Another goal is to determine people's knowledge about cryptocurrency and their willingness to use and invest in it. Also, gives policymakers an interest in regulating this sector which is decentralized and out of control of anybody to protect users and investors from potential market risks.
- Find out how Northern Cyprus is doing in terms of crypto acceptance right now.
- Help as possible to determine Northern Cyprus's position toward cryptocurrencies by shedding light on the regulations and structures that are required to protect the crypto market, users, and investors.

1.3. Aim of Thesis

This study will tend to fill the gap in the lack of comprehension about blockchain technology by understanding the landscape of cryptocurrency and blockchain technology, analyzing the pros and constraints, and talking about the legal status of Northern Cyprus on a global scale toward this technology; also talking about its probable future by setting a legal framework to protect crypto users and investors from the risks of the crypto market.

1.4. Structure of Thesis

The thesis has five chapters. The first chapter provides an overview of the study, including the research questions, goals, aim, and thesis format.

The second chapter establishes the foundation of the study through an analysis of the existing literature on cryptocurrency. It provides a comprehensive overview of cryptocurrency and block chain technology, highlighting the advantages and difficulties associated with crypto. Additionally, it examines the various types of cryptocurrencies and explores the legal status of crypto both globally and specifically in the Turkish Republic of Northern Cyprus.

The third chapter focuses on the technique used in this investigation. The research design, sampling, data collecting, and analytic processes will be addressed.

The fourth chapter provides an exposition of the results obtained from several tests conducted using the SPSS Program.

The fifth chapter provides a summary of findings, offers ideas for further study, and presents recommendations. It also discusses various limits encountered throughout the research.

CHAPTER 2

LITERATURE REVIEW

There was an absence of confidence in conventional financial frameworks after the worldwide monetary emergency of 2008. In particular, the bankruptcy filings of Lehman Brothers and Bear Stearns on March 16, 2008, marked the beginning of economic trouble (Wilson, 2019). Not only did these institutions feel the effects of the shock, but the debt crisis also spread to other big banks like AIG, Bank of America, Citigroup, JPMorgan Chase, Goldman Sachs, and Morgan Stanley. The world financial crisis didn't just affect the US; it also hit Europe and Asia. As an example, Finland's industrial output, private investments, and exports all went down after the crisis. As of 2010, most Chinese banks and other financial institutions were shut down and stopped hiring staff (Marquez-Velazquez, 2010).

Banks faced a big problem with liquidity after the global financial crisis of 2008, someone, a group, or an organization going by the name "Satoshi Nakamoto" created an electronic peer-to-peer system built on the cryptocurrency Bitcoin (Nakamoto, 2008). Bitcoin is an open-source digital currency that was first released in 2008 and started to be used in early 2009. It happened because of how financial institutions often kept profits to themselves while sharing losses with everyone else (Lerer & McGarrigle, 2018).

The main reason behind cryptocurrencies was to make it possible to send and receive money quickly and cheaply without using banks or other trusted third parties (Yli-Huumo et al., 2016). Also, a lot of researchers, fans, and futurists see Bitcoin as a possible option for government-issued money in the future (Bouri et al., 2018). More than 1,600 cryptocurrencies have been used since Bitcoin was first released (Wilson, 2019). The truth is that people use cryptocurrencies to buy real things and services in the real world right now. Cryptocurrencies have changed the way financial systems have been designed, managed, and regulated in the past (Shahzad et al., 2018). It is blockchain technology that has led to the rise of cryptocurrencies.

Treiblmaier (2018) says that blockchain technology is "a digital, decentralized, and distributed ledger in which transactions are logged and added in chronological order to create permanent and unchangeable records." Blockchain technology is built on peer-to-peer connectivity and cryptographic security.

Instead of being centralized and opaque like traditional money systems, it allows for a decentralized approach with more trust and transparency. Briere et al. (2013) believed that cryptocurrencies, especially Bitcoin, are new financial tools and alternative investments that can help people spread their risk. Lots of cryptocurrencies are used as daily payment methods, and they naturally have some traits in common with other financial markets, especially valuable metals. International retail banks and central banks alike have taken a keen interest in blockchain technology. Numerous financial institutions have used blockchain technology to launch FinTech firms. These startups use blockchain technology to provide financial services and support digital currencies.

The literature on using cryptocurrencies in financial dealings has blossomed in recent years. The possible benefits, risks, and other possibilities of integrating cryptocurrencies into existing financial infrastructure have all been investigated by researchers and experts. From the extant literature, we can glean the following significant insights.

One of the key benefits of using cryptocurrencies is the increased security they provide during financial transactions. To prevent forgery, counterfeiting, and identity theft, cryptocurrencies employ cryptographic procedures (Cong et al., 2021). Blockchain's distributed ledger design makes transaction manipulation harder and more secure than conventional financial systems. Efficiency is also another significant benefit. By eliminating the need for intermediaries and the fees they often charge, cryptocurrencies have the potential to revolutionize international trade. Systems built on the blockchain have the potential to reduce friction, increase visibility, and shorten settlement times. Particularly for overseas remittances, this may lead to faster and cheaper transfers (Roubini, 2019).

Another advantage of cryptocurrency is that it offers low transaction fees. Unlike traditional banking systems, which often charge high transaction fees, cryptocurrency transactions are typically inexpensive. Additionally, cryptocurrency provides a high level of flexibility and accessibility. It can be used for various transactions, from buying goods and services to investing in other cryptocurrencies. Finally, cryptocurrency is a borderless currency that can be used anywhere. This makes it an attractive choice for people who travel frequently or do business internationally. Overall, cryptocurrency has many advantages, and it is becoming an increasingly popular choice for people looking for a secure, flexible, and accessible form of digital currency with various risks before investing in or using cryptocurrency (Garcia-Monléon F. et al., 2023).

A significant difficulty is the absence of universally applicable legislation for cryptocurrencies. As a result of these differences, financial institutions face regulatory uncertainty, which slows the widespread use of cryptocurrencies. Solid and transparent rules need to be developed to solve issues with consumer safety, anti-money laundering, taxation, and investor confidence. Researchers have also brought up the issue of security threats. Cryptocurrencies provide a higher level of security due to their reliance on cryptographic processes, but they are still vulnerable to theft, fraud, and hacking. Wallets, exchanges, and smart contracts can all have security flaws that endanger users and compromise the legitimacy of financial transactions. (Zohuri B. et al., 2021).

Another difficulty with cryptocurrencies is their volatility. The volatility in their prices threatens the security of monetary transactions. Cryptocurrency price swings can disrupt established financial institutions and discourage regular people and businesses from using them. In response, stablecoins cryptocurrencies tied to a stable asset like a fiat currency have arisen as a possible solution. When deciding whether or not to use cryptocurrencies in everyday financial dealings, scalability is an essential factor to weigh. Most cryptocurrencies cannot compare in transaction volume to traditional financial systems. To facilitate widespread adoption, the technical barrier of scaling up blockchain networks to handle more enormous transaction volumes without compromising efficiency or security must be overcome (Zohar, A., 2015).

To reduce these dangers, it is essential to implement stringent security measures and raise cybersecurity knowledge. The increasing use of cryptocurrency in financial transactions could pose challenges for existing financial institutions. To guarantee the safety and security of monetary systems, it is necessary to implement strict regulatory frameworks covering topics like consumer protection, anti-money laundering, and taxation. Finding a middle ground between innovation and regulation requires input from regulators, legislators, and industry players.

The general public's impression and confidence in cryptocurrencies are also essential (Gowda N. et al., 2021). Building public trust in cryptocurrencies as a medium for monetary transactions requires resolving security, privacy, and volatility concerns. More widespread adoption and use of cryptocurrencies can be achieved by raising awareness of their potential benefits and concerns.

Hence, looking forward, the digital currency market is continuously changing and adjusting. The proceeded with preliminary examination of new monetary standards is exemplified by San Salvador's hug of Bitcoin. The consequences for worldwide financial frameworks will develop as countries like the US and Türkiye manage the subtleties of cryptographic money guidelines. What lies ahead is dependent upon how much people, enterprises, and specialists cooperate to handle impediments and capably use the progressive force of cryptographic forms of money (Antonopoulos, 2014).

However, the literature on using cryptocurrencies in financial dealings illustrates the potential benefits and problems of integrating cryptocurrencies into existing financial infrastructure. Challenges linked to legislation, volatility, scalability, and security must be met, notwithstanding benefits like increased security, efficiency, and financial inclusion. To successfully negotiate the intricacies and fully realize the promise of cryptocurrencies in banking transactions, more study and collaborative efforts are needed among legislators, banking institutions, and the cryptocurrency community (Prasard, 2021).

Research on cryptographic money legitimate structures has enlightened the complicated exchange between administrative guidelines and the broad utilization of computerized cash. To determine what rules, mean for the utilization of digital currencies, Narayanan et al. (2016) researched the subject. The administrative climate significantly impacts how digital forms of money are seen and acknowledged in a specific purview. The crypto environment might thrive in a climate of trust made by straightforward and empowering arrangements that draw in clients, organizations, and financial backers. Conversely, regulations that are either too dubious or prohibitive could slow reception since they lead to disarray and forestall the structure of the fundamental foundation. To find a center ground between safeguarding residents from hurt and empowering development, they should have a solid handle on the perplexing connection between crypto reception and administrative structures.

The reasons and components that affect individuals' decisions to embrace advanced monetary standards can be better perceived through examinations of client reception and conduct in the digital currency space. Yli-Huumo et al. (2016) explored client activities and tracked down a wide assortment of reasons, from philosophical connections to a requirement for monetary namelessness. Organizations, legislators, and engineers should understand these intentions assuming they are to make techniques that enticement for imminent individuals.

Clients' impression of the framework's convenience, security of exchanges, and generally speaking experience all assume a part in significantly shaping their way of behaving. User adoption, age, and technical literacy are two additional demographic factors that are frequently investigated. With a deeper understanding of the mechanisms driving cryptocurrency adoption, stakeholders can now target specific user segments.

Past the activities of people, ordinary monetary organizations, and financial arrangements are additionally moved by the gradually expanding influences of crypto reception, which has sweeping financial outcomes. Exploring these financial consequences, Catalini and Gans (2016) pointed out the progressive capability of computerized monetary forms. Since they don't depend on banks, computerized monetary standards can stir up the financial business. Crypto's decentralized, distributed exchange model undermines conventional monetary organizations' revenue streams by getting rid of go-betweens. National banks are worried about potential changes in charge and supply of money, and the decentralized idea of digital currencies adds one more layer of intricacy. Monetary policies may be impacted by this uncertainty. Monetary incorporation is one more part of financial aspects that ought to be thought of since digital currency could permit people who can't utilize conventional financial frameworks to get the monetary administrations they need. By the by, it is urgent to have a definite understanding of the financial elements moving because of stresses concerning administrative responses, foundational dangers, and market security.

In light of everything, the crypto climate is significantly more grasped thanks to these three lines of request. The administrative scene influences the elements of the market and the pace of digital money reception. There are various justifications for why individuals utilize advanced monetary standards, and concentrating on client reception and conduct can reveal insight into these reasons. At last, the financial consequences examination uncovers how digital currency represents a danger to laid-out banking and money-related strategies. Scientists, organizations, and legislators all depend on this group of data to help them comprehend and explore the always-changing digital currency scene.

2.1. Theoretical Framework: Overview of Cryptocurrency and Blockchain Technology

Cryptocurrency is a form of digital currency that is created and secured using cryptographic techniques. Cryptocurrencies work as a safe and anonymous digital currency system that enables transfers between users without the requirement of a central government (Nakamoto, 2008: 3). The document "Bitcoin: A Peer-to-Peer Electronic Cash System," written by Satoshi Nakamoto, provides an explanation of the basic ideas and operations of cryptocurrencies. This source is regarded as a key reference for developing the notion of cryptocurrency. However, several definitions clarify the concept and properties of cryptocurrency. According to Narayanan et al. (2016), cryptocurrency is digital money that operates without the need for a centralized authority and uses cryptography to assure security.

Cryptographic money is a huge step forward in the world of money because it creates a new type of computerized or virtual cash that is safe and free, built on top of block chain technology. The main idea behind digital money is to question established financial systems by offering a decentralized, borderless, and safe alternative.

Cybersecurity for digital money relies on cryptography, a field that uses numbers to scramble messages and stop unauthorized people from getting to data. Cryptographic calculations are used in digital forms of money to make sure that transactions are safe, to control the release of extra units, and to accept the exchange of resources. The cryptographic spine increases trust in an autonomous system by making sure that transactions are honest, correct, and private (Narayanan et al. 2016).

Numerous coins are based on a technology called Block chain. It's a new kind of global ledger system. Block chain is a shared ledger technology that keeps track of transactions on a network of computers in a lasting and tidy way network (Merriam-Webster, 2018). When each exchange in a block is cryptographically linked to the one before it, there is a permanent chain of trades. This setup makes it possible for every hub in the company to see the full trade history, which makes everything clear. While block chain's decentralized structure eliminates the need for a single authority, it also lowers the risk of fraud and a weak link.

Block chain innovation relies on three basic things: being able to keep things the same, being safe, and being honest. Everyone can see the trades, so there is more responsibility and less room for abuse. Because the ledger is spread out and not centralized, it is too hard for one person or group to change the past of transactions.

Because changing in one block changes all blocks across the network. Changelessness creates a record of financial tasks that can't be changed by making transactions last longer. Block chain is a sequential arrangement of data units called "blocks," which are interconnected. Blocks are data entries stored in a distributed ledger, spread over numerous computer nodes, and available to all network participants.

The "block" is created by the software, which then "hashes" it after adding a header and a timestamp. The "hash" is a cryptographically encoded identifier for the underlying data message, which remains within the block, while the data itself is relocated outside of the block. This ensures a robust level of security, as any breach of the hash within the block will not expose the underlying data (Pike, 2017). The peer-to-peer network rejects blocks because they are not similar to the rest of the system, therefore any attempt to hack or change a single block within the chain would be ineffective due to this security measure because it would not match to the rest of the chain. This is a secure method of preventing double spending or counterfeit money. Bitcoin, Ethereum, and Tether are examples of cryptocurrencies that operate using block chain technology. The new software is a distributed network designed to facilitate decentralized trade. It can be used to share any type of information. It helps by removing intermediaries such as businesses, banks, and other third parties. To fully grasp how digital forms of money work, you need to be familiar with important ideas such as shared trades, agreement systems, and decentralized control.

Decentralized control means that coin networks are not fully run by a single group, like a government or bank. To make a fairer and complete monetary biological system, control is being shared among the members of the group. The sharing of goods between network hubs is shown by shared exchanges. This is one reason why go-betweens are already too high. It speeds up the flow of resources and lowers the cost of trade. There will be more people who can access and use banking services because participants can do transactions without the help of banks (Merriam-Webster, 2018).

Agreement tactics like verification of work and confirmation of stake are very important for keeping the block chain's reputation safe. The way that trades are confirmed and added to the record is shown by these cycles. In proof-of-work, members (called "diggers") have to solve complicated math puzzles to approve transactions. In confirmation of stake, on the other hand, people's digital money holdings determine their ability to approve transactions.

These agreement parts keep the system from double spending and keep it running as planned by making sure that all members of the group agree on the truth of transactions. Bitcoin is a revolutionary mix of autonomous technologies and cryptographic ideas (Treiblmaier, 2018). A decentralized, open, and safe banking system that uses blockchain technology, peer-to-peer transactions, and encryption could be the future of cryptocurrency. To get around in the constantly changing world of digital currencies, consumers, businesses, and governments need to understand the basic ideas behind this new area.

2.2. Benefits and Challenges of Cryptocurrency

With their promise of many benefits to the financial system, digital currencies have gotten a lot of attention and are used by many people all over the world. These digital assets cause a lot of problems for users, businesses, and government bodies. Each group faces its problems. The world of pros and cons of digital money is huge, and this study looks into it all.

2.2.1. Benefits of Cryptocurrency

• More security

Because they use more advanced cryptographic calculations, digital currencies add another layer of security to financial transactions. It is less likely that fraud or illegal changes will happen because block chain technology is decentralized and the past of transactions can't be changed. When compared to other common financial systems, the fact that secret keys are controlled by the client makes computerized resources safer (Cong et al., 2021).

• Convenience and Efficiency

Cryptocurrencies reduce the necessity for intermediaries and enhance transaction efficiency. Although there may be a slight delay in converting fiat currency into cryptocurrency on various platforms, the process of exchanging cryptocurrencies is quite efficient. Within the economy, this reduces the necessity for intermediaries. Bitcoin contracts can be structured and enforced to exclude or include third-party authorizations, reference external information, or be executed at a later date or time, all at a much-reduced cost and time compared to the conventional system (Rosic, 2016).

Decentralized system

Banks are controlled and supervised by the government, but cryptocurrencies are decentralized and not backed by any government.

Sometimes Bank faces a single point of failure, and cryptocurrency does not meet any single point of failure, which is why many prefer crypto transactions over average bank transactions (Baek H. et al., 2019). In bank transactions, the government has some supervision to restrict some of the trade, and cryptocurrency does not come under government supervision. Cryptocurrencies enable peer-to-peer transactions with no intermediary, allowing users to transfer funds instantly without incurring transaction fees (Wang et al., 2020). Transactions are connected to the transaction ID on the blockchain rather than being identified by an individual bank account through a financial institution.

Anonymity and limited supply

Cryptocurrencies can be anonymous or semi-anonymous, and they provide users with quick transaction processing at minimal costs. Cryptocurrencies have limited supply and allow all users to interact under the same conditions, with low or even zero commission fees. (Casey and Vigna, 2018).

Low-cost and borderless transactions

The exchange fees for digital money are usually lower than those for other common money systems. This is especially true for international transactions. When middlemen like banks and payment processors go away, the costs of being in charge go down. Having this ability is helpful for businesses and people working around the world because everyday costs can add up quickly. One of the most innovative things about digital forms of money is that they can help advance monetary thought. Digital currencies give people who don't have ledgers or good financial services access to financial services, so they don't need to have them to join the global economy. This kind of openness could give groups that aren't well-known a say and make it easier for them to save, invest, and do business (Zohar., 2015).

2.2.2. Constraints of Cryptocurrency

Vulnerability of regulations

One big problem in the crypto business is that there aren't enough clear and consistent rules. The block chain is often used to fund various illicit operations. In the absence of governmental oversight, crypto transactions can traverse the system with optimal efficiency and remain untaxed (Zohuri B. et al., 2021). Although the government has implemented several restrictions concerning digital currencies, the framework is still in the process of being built.

Legislative and government offices all over the world are trying to figure out the best way to group and keep track of digital currencies. Companies and customers are left open to risk because there aren't any clear rules, which affects how digital currencies are generally accepted.

• Volatility and scalability

A lot of price changes happen in the market for digital currencies, especially for well-known ones like Bitcoin. Bitcoin in particular has been known to develop price bubbles due to severe price volatility linked to macroeconomic factors (Cheah and Fry, 2021). Brokers gain from this lack of predictability, but people and businesses that want to make strong bets have trouble.

The volatility of cryptocurrency is influenced by factors such as trust, supply, and demand. Currencies get their value from the perceptions and actions of consumers and investors. The value of a currency increases proportionally with its magnitude. Users should use prudence and only allocate funds they are prepared to forfeit. Similar to the stock market, the future of cryptocurrencies is characterized by unpredictability (Tashea, 2018).

When deciding whether or not to use cryptocurrencies in everyday financial dealings, scalability is an essential factor to weigh. Most cryptocurrencies cannot compare in transaction volume to traditional financial systems. To facilitate widespread adoption, the technical barrier of scaling up block chain networks to handle more enormous transaction volumes without compromising efficiency or security must be overcome (Cheah and Fry, 2021).

• Security problems due to anonymity

There are some reasons to worry that crooks could use anonymous crypto transactions to hide their wealth, avoid paying taxes, or fund illegal businesses. Police may have trouble in following and stopping illegal financial activity because clients aren't always clear, which makes routine examinations more difficult (Zohuri B. et al., 2021). Not nearly as many safeguards are in place for people who buy digital money as there are for people who use more traditional banking systems. Clients have problems with transactions that can't be undone and not being able to get their money back after theft or blackmail.

• Misunderstanding of the crypto world

Some people might not want to invest in digital currencies because they are hard to understand and not open to everyone. It is important to have some specific knowledge to buy, store, and manage digital currencies. Also, things like the ease of access to the internet and machines in some places can make it harder for people to use digital currencies.

Although, there are some advantages to using digital cash, such as more security and financial flexibility, but there are also some disadvantages. Such as fixing problems with regulations, making prices less volatile, and finding a balance between privacy and stopping illegal activity. Partners should have a full understanding of both the pros and cons of the constantly changing digital money ecosystem to effectively explore it (Narayanan et al., 2016).

2.3. Types of Cryptocurrencies

There are many types of cryptocurrencies were created to facilitate working on the block chain. In this section, we will provide a summary of the top 5 cryptocurrencies according to their features, issue date, and trading volume.

• Bitcoin (BTC)

Bitcoin (BTC), the first decentralized digital money, was launched in 2008 and has since emerged as the preeminent and very unstable cryptocurrency on a worldwide scale. The cryptocurrency's market capitalization reached about \$1,300 billion with a value of around \$66,000 for one BTC, establishing it as the highest-valued cryptocurrency globally. (Coinmarketcap, 2024).

• Ethereum (ETH)

The first alternative cryptocurrency, Ethereum (ETH), is a decentralized software platform that eliminates the need for central servers, fraud, control, and third-party interference in the creation and execution of smart contracts and decentralized applications. Ether, founded in 2015 by Vitalik Buterin, is presently the second-largest digital currency by market value behind Bitcoin, although it trails far behind with a market capitalization of \$ 400 billion with a value of around \$3,200 for one ETH. (Coinmarketcap, 2024).

• Tether (USDT)

To reduce their market volatility, some altcoins have attempted to link their value to a fiat currency or other external standard; one of the most prominent of them is Tether (USDT). Tether's valuation is closely correlated with the U.S. dollar, facilitating swift conversion of cash from alternative cryptocurrencies to U.S. dollars, without the need for the time-consuming process of converting to traditional currency. Tether's market capitalization reached \$109 billion, with each token valued at \$1.00 (\$0.999), positioning it as the most stable and the third-largest cryptocurrency. (Coinmarketcap, 2024).

• Binance Coin (BNB)

To cover the expenses of trading on the Binance Exchange, users may use the utility cryptocurrency known as Binance Coin (BNB). It is the fourth-largest cryptocurrency based on market capitalization. The Binance Coin block chain is the basis for Binance's decentralized exchange. Binance Coin had a market valuation of \$87 billion, with a value of around \$590 for one BNB. (Coinmarketcap, 2024).

• Solana (SOL)

Solana is a blockchain platform that allows decentralized applications which was established in 2017. As it can handle more transactions per second and has cheaper transaction fees than Ethereum, it is sometimes called a "Ethereum killer." Modern applications like decentralized finance (DeFi) and non-fungible tokens (NFTs) rely on smart contracts, which are supported by Solana and Ethereum. The market valuation of Solana reached \$68 billion, a significant increase over its initial price, with a value of around \$150 for one SOL. (Coinmarketcap, 2024).

Table 2.1: Summary Indicators of the Top 5 Cryptocurrencies by Trading Volume

Cryptocurre	Value	Market Value	Issue Date	Explanations
ncy				
Bitcoin	\$66,000	\$1,300	It was created	The first decentralized digital
(BTC)		billion	by Satoshi	money, the most popular and
			Nakamoto in	very unstable cryptocurrency
			2008	on a worldwide scale.
Ethereum	\$3,200	\$400 billion	It was created	It has the second-highest
(ETH)			by Vitalik	market value after Bitcoin. It
			Buterin in	eliminates the need for central
			2015	servers, fraud, control, and
				third-party interference in the
				creation and execution of smart
				contracts and decentralized
				applications.
Tether	\$1	\$109 billion	It was	Tether's valuation is closely
(USDT)			introduced in	correlated with the U.S. dollar,
			2014	facilitating swift conversion of
				cash from alternative
				cryptocurrencies to U.S.
				dollars, without the need for the
				time-consuming process of
				converting to traditional
				currency.
Binance	\$590	\$87 billion	It was created	It is the native cryptocurrency
Coin			by Binance in	of the Binance exchange, has its
(BNB)			2017	blockchain, and provides
				discounts for exchange
				transactions.
				It is currently one of the most
				extensively utilized exchanges
				globally in terms of trade
				volumes.
Solana	\$150	\$68 billion	It was	It is known as an "Ethereum
(SOL)			established in	killer," because it can handle
			2017	more transactions per second
				and has cheaper transaction fees
				than Ethereum. Ethereum and
				Solana support smart contracts.

Sources: (Investopedia, 2024); (Coinmarketcap, 2024)

2.4. Legal Status of Cryptocurrency in the World

Cryptocurrencies' legal status varies significantly from jurisdiction to jurisdiction, and many of them remain undefined or changing. While the utilization of cryptocurrencies is not illegal in the majority of countries, their regulatory implications and usage as payment methods or commodities vary (Crypto Law Review, 2018). While some countries officially allow its use and trade, others prohibit or restrict it. Additionally, cryptocurrencies have been categorized differently by several governmental agencies, departments, and tribunals. Much of the regulatory structure is still evolving, and regulations and limits differ based on the purpose, such as payments, investments, derivatives, and tax status. Most countries have discovered ways to tax gains or income from cryptocurrencies, with some having more specific duties than others.

Conventional financial systems all over the world have been shaken up by cryptocurrencies' ability to facilitate decentralized and borderless transactions. As an ever-increasing number of individuals purchase cryptographic money, legislatures all through the world are attempting to sort out some way to control and integrate these computerized resources into their economies (Tapscott & Tapscott., 2016). This has made administrative obstacles. Market shakiness, criminal behavior, and buyer security are a portion of the concerns that could offset the potential benefits, such as proficiency reserve funds, and monetary incorporation.

In this section, we will provide a summary of the three blocks of acceptance of cryptocurrencies, the way cryptocurrencies are regulated, their legal status, and their implications.

• Mostly Legal Tender

El Salvador became the first country to recognize Bitcoin as legitimate cash in September 2021, President Bukele promised no income tax on cryptos and plans to develop a favorable business climate to encourage Bitcoin mining. However, the International Monetary Fund has encouraged El Salvador to rethink its policy, expressing concerns about the country's financial stability. The transition to legal tender status is largely regarded as a dangerous experiment, with credit rating agencies reducing the country's debt rating and concerns about AML and KYC compliance (Thomson Reuters, 2022).

The use of cryptocurrencies is legal in the European Union, but the regulations vary by member states, and the capital gains tax on crypto-derived revenues is applied. Cryptocurrencies have been declared tax-free since 2015 by the EU's Court of Justice. In 2020, The EU's Fifth Anti-Money Laundering Directive (5AMLD) mandated cryptocurrency-to-fiat exchanges to anti-money laundering laws and KYC/CDD requirements. In December 2020, The Sixth AMLD made cryptocurrency compliance stricter, including cybercrime among money laundering predicate crimes (IMF,2020).

The US has taken a more nuanced approach to cryptocurrency regulation than El Salvador has. Many government bodies keep an eye on various parts of the cryptocurrency industry. The SEC and the CFTC are just two of these. Because cryptocurrencies and their uses are so varied, this disjointed strategy is appropriate. In American tax law, cryptocurrencies like Bitcoin are considered property. Anyone or any organization engaging in Bitcoin transactions may be affected by this categorization (Treiblmaier, 2018). The SEC considers cryptocurrencies to be securities, the CFTC to be commodities, and the Treasury to be currencies. Digital currencies are characterized as a medium of trade, a unit of measurement for value, and a way to store wealth. The US regulatory environment for cryptocurrencies is constantly evolving due to rapid innovation in the bitcoin market. Discussions on regulatory frameworks, investor protection measures, and digital asset categorization are ongoing. The potential threats and upheaval presented by cryptocurrencies are evident in San Salvador's actions and the uneven regulatory stance. The Securities and Exchange Commission (SEC) is the most powerful regulator in the US (Thomson Reuters, 2022).

Regulated cryptocurrency exchanges in Japan are subject to anti-money laundering and counter-financing of terrorism regulations. To avoid confusion with legal tender, the Payment Services Act (PSA) treats cryptocurrency as property. Japan was the pioneer in developing self-regulatory institutions in the sphere of virtual currencies when it created the Japan Virtual Currency Exchange Association (JVCEA) and the Japan STO Association in April 2020. (Thomson Reuters, 2022).

Cryptos are viewed differently by Nigeria's two key financial regulators: The Central Bank of Nigeria has implemented a prohibition on banks and financial institutions engaging in cryptocurrency transactions, while the Nigerian Securities and Exchange Commission (SEC) is aiming to oversee cryptocurrency investments due to their classification as securities transactions.

Both regulators have declared specific hazards within the digital asset industry, with Bitcoin, the original and largest cryptocurrency, growing in popularity in Nigeria in recent years (Thomson Reuters, 2022).

• Restricted Tenders (with some concerns)

Russia's President Vladimir Putin approved a law governing digital financial asset transactions in 2020, which went into effect on January 1, 2021, but cannot be used to buy or sell products or services (Thomson Reuters, 2022). The Indian Supreme Court invalidated the restriction in 2020, and India has promoted innovation and the usage of block chain. By introducing the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021, the Lok Sabha website in India has encouraged innovation and block chain technology. (Thomson Reuters, 2022).

Retail investors are worried about the rigorous cryptocurrency regulations in Hong Kong, especially because the Securities and Futures Commission is considering banning trading in cryptocurrencies. (Thomson Reuters, 2022). Mexico has banned the use of cryptocurrencies, implementing fintech regulations that established a legal framework and a "sandbox" for virtual assets. The Financial Action Task Force (FATF) defines "vulnerable activities" as those involving "virtual assets," and in 2018 the Mexican Federal ALM regulations included this requirement. Cryptocurrency taxation is still a topic of discussion and is likely to change in the future. (Thomson Reuters, 2022).

• Mostly Illegal Tenders

The Colombian government has forbidden banks from offering financial services to cryptocurrency startups, creating a barrier for the industry. The Banco de la República and the Superintendencia Financiera de Colombia (SFC) gave some precisions about cryptocurrency, cryptocurrency is not a legal tender or a lawful investment for monitored businesses, and firms are not allowed to advise or manage them. However, companies can lawfully purchase cryptocurrency such as Bitcoin, even though such "intangible assets" are uncontrolled (Thomson Reuters, 2022).

Cryptocurrency ownership is not prohibited in Türkiye, but user information from crypto trading platforms is required to prevent tax avoidance, creating a distinct regulatory environment in this country.

According to the latest news, The Turkish government wants to establish a CBDC for the Turkish lira due to the increase in the crypto interest in the population. (Thomson Reuters, 2022). In 2013, the People's Bank of China banned initial coin offerings (ICOs) and deals in digital currencies. China, as a leader in crypto activities, struggled to the development of the central bank's digital currency with the digital yuan. Despite the PBOC's adoption of blockchain technology, the prohibition on mining and all other crypto-related activity continues until today. (Thomson Reuters, 2022). However, cryptos are seen as a possible threat to Algeria's financial security, so the country has made it illegal to buy, sell, and keep them.

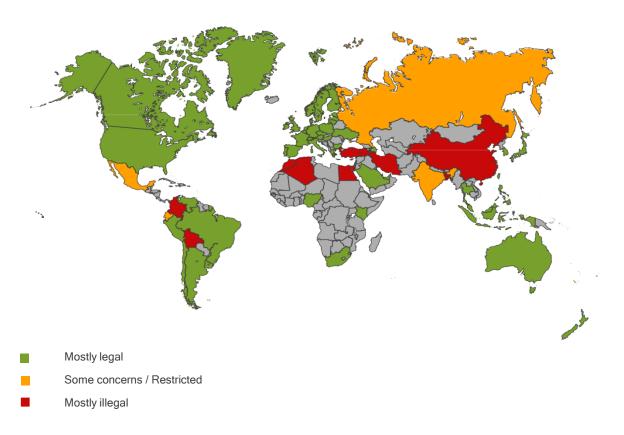


Figure 2.1: Crypto Regulations around Countries

2.5. Legal Status of Cryptocurrency in the Turkish Republic of Northern Cyprus

Cryptocurrencies have emerged as one of the most widely discussed subjects in recent years. Buying and selling Bitcoin is quite popular today, particularly in the TRNC. Northern Cyprus is home to numerous bitcoin exchange points. Furthermore, more TRNC businesses now accept cryptocurrencies as payment for goods and services, including purchasing a home in Northern Cyprus.

Despite the widespread use of Bitcoin in Northern Cyprus, no rules or regulations govern cryptocurrency turnover on TRNC territory. The laws of the TRNC neither recognize nor prohibit cryptocurrency. As a result, any cryptocurrency withdrawals or payments cannot be confirmed by a receipt of payment, which can only be provided for traditional cash. Because present legislation does not recognize or regulate cryptocurrency operations, anyone who makes a Bitcoin payment is not legally protected. The TRNC administration recently announced plans to draft legislation to restrict the use of cryptocurrency. Nevertheless, governments and experts advise against making payments in cryptocurrencies until the legislation is enacted. This technique is not legally recognized and has numerous issues, particularly for substantial transactions (Kibris Gazetesi, 2021).

Concerning Türkiye and its association with Northern Cyprus, the Turkish government has communicated its interest in blockchain and digital money. There has been a ton of discussion about blockchain innovation and the formation of public computerized cash (CBDC), which shows that the public authority sees the worth in these turns of events. Due to its vicinity to Türkiye, Northern Cyprus could feel the impacts of Türkiye's moving demeanor against cryptographic money (Kibris Gazetesi, 2021).

CHAPTER 3

RESEARCH METHODOLOGY

The study proposes to use a scalable descriptive survey design that enables the researcher to collect data that are current from respondents who will describe the phenomena under study as they exist and also the use of some case studies in which we will see how some countries adopt the phenomena and how it works on them (Saunders & Thornhill, 2019).

This study adopts the quantitative methods approach that will seek to collect numerical data through a questionnaire designed especially for this study based on the analysis of existing literature on cryptocurrency used for this research. The sampling method used in this research is purposive sampling, also known as judgment sampling. It means the researcher selects participants according to the criteria he has set according to the representativeness of the participant regarding the whole target. Awareness and familiarity with cryptocurrency are some of the primary questions of the respondents who will attempt to answer the survey. Participants will be tested on their familiarity with cryptocurrency and their ability to respond and fill out the survey correctly.

The inclusion and exclusion criteria determine which target population members can or can't participate in a research study. Collectively, they are known as eligibility criteria, and establishing them is critical when seeking study participants for clinical trials. The inclusion criteria comprise the characteristics or attributes prospective research participants must have to be included in the study. In this research, the common inclusion criteria are demographic (gender, age, location, occupation, etc.) and specific variables such as knowledge of the topic, and ethical considerations. The exclusion criteria comprise characteristics used to identify potential research participants who should not be included in a study. In this research, we considered exclusion criteria such as ethical considerations (being a minor or being unable to give informed consent) and practical considerations (not being able to read and answer the survey).

Due to the complexity of the topic, we will work with exchange offices (currency and cryptocurrencies) which are best to understand the topic and to answer the survey. We selected a minimum of two hundred (210) participants because there are some statistical criteria for sample selection one of them is the rule that in instrument-type surveys, the number of respondents needs to be ten (10) times greater than the number of the questions in the instrument to get successful factor analysis results. We selected three (3) districts (Kyrenia, Nicosia, and Famagusta) for better couverture and gathering of information and also the results must be generalized and representative of the whole population.

The data collection procedure is simple; we distributed the surveys across the selected locations and collected them once the respondents had filled out the survey. We tried to help them fill out the survey if necessary and discuss a few with them for better understanding and collection of information. After gathering the data, we will work with the SPSS Program to get the results by doing frequency and descriptive tests. The reliability test (face validity) will be done on the questionnaire after the gathering.

Furthermore, we examined the existing literature about cryptocurrencies gathered through research papers, blogs, and websites linked to the topic. Due to the lack of data available on the case of Northern Cyprus, we analyzed general cases of cryptocurrency in some countries through the existing literature to get specific conclusions for the case of Northern Cyprus.

CHAPTER 4

RESULTS AND DISCUSSION

Detailed analyses of data acquired from a field survey via questionnaires are carried out in this chapter. The questionnaire is divided into two (2) sections: A and B. Section A contains eight (8) questions used to collect personal information from the study's respondents. In contrast, section B contains twenty-one (21) questions used to measure the knowledge of cryptocurrencies and questions related to securing crypto and the projection of the use of crypto in the future.

The personal information of the survey respondents and questions about cryptocurrency are described in this section. The frequency and descriptive Distribution in terms of gender, location, and education are represented in the tables in the following sections. The frequency Distribution in terms of knowledge about cryptocurrency, holding crypto, regulating crypto, and crypto to facilitate illegal activities will be also represented in this section. The tables left will be provided in the appendixes.

4.1. Frequency Distribution

Table 4.1 below shows variable (1) which means "Male" with 56.2% of the participants (118 in total) while variable (2) which means "Female" with 43.8% (92 in total).

Table 4.1: Gender Distribution

A1

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 M 118		56,2	56,2	56,2
Valid	2 F	92	43,8	43,8	100,0
	Total	210	100,0	100,0	

Source: Field survey

Table 4.2 below shows that 38.1% of the participants (80 in total) live in Kyrenia (1), 33.3% of the participants (70 in total) live in Nicosia (2), and 28.6% of the participants (60 in total) live in Famagusta (3).

Table 4.2: Location Distribution

A3

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 K	80	38,1	38,1	38,1
X 7 1' 1	2 N	70	33,3	33,3	71,4
Valid	3 F	60	28,6	28,6	100,0
	Total	210	100,0	100,0	

Source: Field survey

Table 4.3 below shows that 50.5% of the participants (106 in total) have a university grade (5), 42.4% of the participants (89 in total) have a college grade (4), 5.7% of the participants (12 in total) have a secondary school grade (3), 0.5% of the participants (1 in total) have a primary school grade (2), and 1.0% of the participants (2 in total) are not educated (1).

Table 4.3: Education Distribution

A5

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (N.Ed)	2	1,0	1,0	1,0
	2 (P.S)	1	,5	,5	1,4
** 1.1	3 (S.S)	12	5,7	5,7	7,1
Valid	4 (H.S)	89	42,4	42,4	49,5
	5 (Univ)	106	50,5	50,5	100,0
	Total	210	100,0	100,0	

Source: Field survey

Table 4.4 below shows the highest percentage of 41.0%, which means that 86 participants have a medium knowledge of cryptocurrency (3). In comparison, the lowest percentage is 9.0% with 19 participants who think that the knowledge about crypto is not important (4). That means the knowledge about crypto is important for most of the respondents and not important at all for others. The trend of this Distribution is from medium (3) to very important (1) as shown in the table.

Table 4.4: Knowledge Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	37	17,6	17,6	11,9
	2	43	20,5	20,5	21,0
Valid	3	86	41,0	41,0	61,9
vanu	4	19	9,0	9,0	82,4
	5	24	11,4	11,4	100,0
	Total	210	100,0	100,0	

Source: Field survey

Table 4.5 below shows the highest percentage of 26.2%, which means that 55 participants do not hold a crypto account at the moment (5), while the lowest percentage is 16.2%, with 35 participants who are crypto holders (1). That means holding a crypto account at the moment depends on the needs of respondents; for some, it is important, and for others, it is not important at all. The trend of this Distribution is balanced among respondents, as shown in the table.

Table 4.5: Holding Crypto Distribution

B2

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	35	16,7	16,7	26,2
2 45 21,4	21,4	42,4			
	3	41	19,5	19,5	61,9
Valid	4	34	16,2	16,2	83,3
	5	55	26,2	26,2	100,0
	Total	210	100,0	100,0	

Source: Field survey

Table 4.6 below shows the highest percentage of 43.8%, which means that 92 participants agreed that the regulation of the crypto market to secure investors is very important (1) while the lowest percentage is 6.2% with 13 participants thinking the need for regulation is not important at all (5). That means the respondents advocate for the need for regulation of the crypto market to secure crypto holders and investors. The trend of this Distribution is from important (2) to very important (1) as shown in the table.

Table 4.6: Regulation of Crypto Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	92	43,8	43,8	6,2
	2	51	24,3	24,3	15,7
3 7.1°.1	3	34	16,2	16,2	31,9
Valid	4	20	9,5	9,5	56,2
	5	13	6,2	6,2	100,0
	Total	210	100,0	100,0	

Source: Field survey

Table 4.7 below shows the highest percentage of 31.4%, which means that 66 participants think crypto might not be used to facilitate illegal activities (1) while the lowest percentage is 13.3% with 28 participants who think crypto might be used to facilitate illegal activities (1). That means most of the respondents agreed that crypto might not be used to facilitate illegal activities however is very important to regulate this sector against any temp of facilitating illegal activities. The trend of this Distribution is from very important at all (1) to medium (3) as shown in the table.

Table 4.7: Crypto Illegal Activities Distribution

B16

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	28	13,3	13,3	24,8
2 32 15,	15,2	15,2	39,5		
X7.11.1	3	66	31,4	31,4	71,0
Valid	4	31	14,8	14,8	86,2
	5	52	24,8	24,8	99,5
	Total	210	100,0	100,0	

Source: Field survey

Table 4.8 below shows the summary of frequency tables of all the questions asked in survey about cryptocurrency. Results are represented in percentage for each question. High percentages are in red (positive) while low percentages are in red (negative). Most of the questions have shown satisfying results (positive).

Table 4.8: Summary of frequency tables

В	B1	B2	В3	B4	В5	B6	B7	B8	В9	B10	B11
1	18%	17%	26%	21%	21%	28%	22%	44%	31%	18%	12%
2	20%	21%	23%	21%	19%	26%	20%	24%	23%	24%	31%
3	41%	20%	17%	32%	31%	25%	36%	16%	27%	25%	37%
4	9%	16%	15%	15%	18%	11%	15%	10%	8%	24%	13%
5	11%	26%	19%	11%	11%	10%	7%	6%	11%	9%	7%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

В	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21
1	16%	19%	25%	28%	13%	20%	11%	17%	16%	16%
2	21%	22%	25%	23%	15%	25%	25%	22%	20%	27%
3	39%	34%	35%	24%	32%	24%	36%	22%	27%	23%
4	15%	20%	14%	17%	15%	19%	17%	20%	24%	20%
5	9%	5%	11%	8%	25%	12%	11%	19%	13%	14%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Frequency results based on survey questions (B) are represented in percentages. The highest percentages are in green while the lowest percentages are in red. The frequency trend goes from very important (1) to medium (3) for most of the questions.

Source: Field survey

In descriptive statistics, this study examines the "mean" variable, the most widely used measure of central tendency. It is commonly called the average. The mean is sensitive to extremely large or small values. The survey results show satisfying means according to different questions. They are below five (5), which means they are positive and important for respondents according to the Likert scale.

Table 4.9: Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
B1	209	1	5	3,24	1,189
B2	210	1	5	2,86	1,443
B3	210	1	5	3,20	1,468
B4	210	1	5	3,25	1,259
B5	210	1	5	3,20	1,278
B6	210	1	5	3,48	1,272
B7	210	1	5	3,34	1,192
B8	210	1	5	3,90	1,239
В9	210	1	5	3,57	1,293
B10	210	1	5	3,17	1,249
B11	210	1	5	3,29	1,066
B12	210	1	5	3,19	1,162
B13	210	1	5	3,28	1,142
B14	210	1	5	3,18	1,187
B15	210	1	5	3,48	1,269
B16	210	1	6	2,79	1,353
B17	210	1	6	3,24	1,305
B18	210	1	5	3,09	1,146
B19	210	1	5	2,97	1,359
B20	210	1	5	3,03	1,269
B21	210	1	5	3,10	1,290
Valid N (listwise)	209				

Source: Field survey

Table 4.10 below summarizes descriptive results based on gender, location, and education level of respondents. Selected questions in this table demonstrated how they were more significant for respondents.

In the gender section (A1), the results obtained are positive (low mean) from all the questions selected from the survey with a particular interest in male respondents who participated the most in the survey than females.

In the location section (A3), the results obtained are very satisfying for all the questions selected because those cities hold a high amount of exchange offices and they are more favorable for crypto investors. Respondents in those locations have shown a high interest in the industry and have pleaded that the government should monitor the sector to protect them from the crypto market hazards.

In the education section (A5), for respondents with the lowest degree of education (not educated and primary), the table shows negative results (high mean) for all the questions selected from the survey, which means they did not show a particular interest for the crypto industry and they are less aware from this, furthermore, the few numbers of respondents are not enough to get satisfying results.

For respondents who hold a high degree of education (secondary, college, and university), the table shows positive results (low mean) for all the questions selected from in the survey, which means they are more informed and aware of the crypto industry and would like more involvement from government to regulate the sector because most of them are part from the new generation of investors (Fintech).

Table 4.10: Descriptive Distribution based on gender, location, and education (summary)

A		B2	В3	B4	B5	B6	B8	B15	B16	B18	B19
	1 M	3.2	3.2	3.4	3.3	3.3	3.2	3.4	2.8	3	3.1
A1	2 F	2.4	3.1	2.9	3	3.3	3.3	3.4	2.7	3.1	2.7
	1 K	2.7	3.1	3.2	3.3	3.4	3.3	3.4	3	2.8	3
	2 N	2.8	3.2	3.2	3	3.3	3.3	3.3	2.8	3.2	2.7
A3	3 L	3	3.2	3.3	3.2	3.3	3.4	3.3	2.4	3.1	3.1
	1 N-E	4	4	4.5	5	4.5	4	4	4	3.4	3
	2 P	5	5	5	4	5	5	4	5	2	5
	3 S	2.7	3.4	3.5	3	3.4	3.4	2.9	2.4	3.1	3.1
	4 C	2.6	3	3.2	3.2	3.4	3.4	3.4	2.6	3	2.8
A5	5 U	2.9	3.3	3.1	3.1	3.3	3.4	3.4	2.9	3.1	3

The lowest means are in green (positive) while the highest are in red (negative). The whole version of this table will be provided in the appendix section.

Source: Field survey

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

With the advent of cryptocurrency, Northern Cyprus has seen a substantial transformation. The proliferation of bitcoin exchanges in recent years has drawn an increasing number of fintech and block chain companies. Cryptocurrency is not prohibited in Cyprus, therefore buying, mining, and trading cryptos are all perfectly legal. The island embraces new technology to keep up with global expansion and provide a business-friendly climate for cryptocurrencies and block chain enterprises (101evlerBlog, 2022).

Cryptocurrencies have brought certain benefits over traditional currencies, such as more security by using advanced cryptography during transactions (Conf et al., 2021), convenience and efficiency by reducing any intermediaries (Rosic, 2016), anonymity, faster and borderless transactions, lower transaction fees, and certain tax benefits. Due to their decentralized systems, crypto transactions operate funds without interference from traditional financial systems (Baek H. et al., 2019). Despite the benefits, cryptos present challenges to investors such as the volatility of the crypto market with severe price volatility linked to macroeconomic factors making it the riskiest investment (Cheah and Fry, 2012), to policymakers, the vulnerability of regulations concerning tax evasion issues and money laundering posing risks to consumers and investors (Zohuri B. et al., 2021).

The TRNC law has to be improved in terms of cryptocurrencies since it currently does not address them. Despite the presence of Bitcoin and other cryptocurrency trading centers, there is no clear regulation governing traders' rights and obligations in the area. The government needs to be informed about the responsibilities of merchants and exchange offices. Cryptocurrency is not listed in the TRNC's Banking Law, although it might be added as another type of currency for monetary transactions. However, because of the decentralized nature of cryptocurrencies, this proposal is unlikely to be adopted in banking law. Instead, a separate framework, such as an Investment Law, might be established to manage this new currency. Governing entities in the Republic of Cyprus hold a distinct perspective regarding cryptocurrencies. Nevertheless, civil and Cypriot Investment Law accept cryptocurrencies as financial instruments. According to the Central Bank of Cyprus, cryptocurrencies are neither illegal nor regulated, but they are also not subject to any oversight. Therefore, buying, mining, and exchanging cryptocurrencies is legal in Cyprus. (Gürkan & Gürkan, 2021).

Germany, El Salvador, Slovenia, Portugal, and Switzerland are among the countries that have successfully organized their cryptocurrency markets, drawing in investors and establishing a more secure setting for trade. By enacting changes, these nations want to create a safe environment for trade. Investors from other countries are not subject to taxes in El Salvador on their bitcoin gains. El Salvador does not impose taxes on companies that have financial assets in Bitcoin. Since 2021, El Salvador has also recognized Bitcoin and the US dollar as legal money (Nasdaq, 2021).

The Republic of Türkiye's Official Gazette banned Bitcoin as a payment method in 2021, but by early 2024, the country was ready to regulate and tax the digital assets. This decision demonstrates a strong commitment to adopting digital currencies into the legal and financial systems. According to Statista, Türkiye is projected to have more than 170 million users on its digital crypto platforms by 2028. The country is already the fourth biggest in terms of Bitcoin transaction value. Both macroeconomic considerations and the country's youth's intense fascination with innovation and technology fuel this increase. The Financial Crimes Investigation Board (FCIB) which supervises the fintech industry is working in compliance with Anti-Money Laundering measures and Know Your Customer data to prevent illicit activities such as money laundering and terrorism financing (International Trade Administration US, 2024).

Cryptocurrencies face tax issues and potential money laundering risks due to their anonymous and decentralized nature. Authorities struggle to track cryptos, making them attractive for criminal activities. Instead of excluding crypto trading from legal platforms, it would be beneficial to collaborate with both platforms and governments to regulate transactions and prevent tax evasion and money laundering through specialized legislation, such as the US Cryptocurrency Act 2020 which aims to provide clear definitions of different digital currencies and determine the specific government agency responsible for them.

The Turkish government has shown its interest in blockchain technology and digital currency about Türkiye and its relationship with Northern Cyprus. Blockchain technology and the creation of a public digital bank of cryptocurrency have been the subject of much debate, suggesting that the government recognizes their potential benefits. Northern Cyprus may be affected by Turkey's stance on cryptocurrency because of its proximity to the country (Kibris Gazetesi, 2021).

The primary goals of this research are to determine the advantages and disadvantages of cryptocurrencies, Northern Cyprus's position, and the future of cryptocurrency in its economy. Another goal is to determine people's knowledge about cryptocurrency and their willingness to use and invest in it. According to the findings of the surveys shared with respondents, frequency and descriptive tests were conducted; the results have shown how TRNC's people are interested in cryptocurrencies by their growth in use and popularity especially by younger people (18-39 years) as shown in Table 4.4. Also, TRNC's people have a good knowledge of cryptos and they believe that cryptos might be a good investment for the future but they are also worried that cryptos might be too risky due to the volatile nature of the crypto market and the unregulated crypto sector. They wish that the government may take measures to regulate this sector to protect them from the crypto market risks (Table 4.6). This goal could be achieved if both government and crypto platforms work together to establish the nature of cryptocurrencies as commodities, currencies, or means of exchange as the Crypto Act 2020 did. Thus, creating government platforms to keep an eye on various parts of the cryptocurrency industry will be helpful because cryptocurrencies and their uses are so varied and could be attractive for criminal activities as done in countries that have legalized and regulated the use of crypto.

Finally, the future of cryptocurrency in TRNC is quite promising, by their popularity, use, and acceptance, it's possible today to buy and sell articles with cryptos such as houses and cars. Cryptos are almost accepted in some shops and some people are using cryptos mostly because they are easy to use, easy to carry, borderless, fast for payment, and low cost for transactions. Cryptos are part of the daily lives of some people and coexist with fiat currencies, however, cryptos remain risky and we recommend having enough knowledge and information before adopting them as a means of payment.

5.1. Limitations and Recommendations for Future Research

This research had to rely on online resources like surveys, interviews, and blogs to fill in the gaps left by the dearth of crypto-related literature and publications in the TRNC; as a result, we hope to see more written works and academic studies on the subject in the future, especially as cryptos continue to grow in popularity and usage throughout the nation. Thus, this study's results guided the potential development of a regulatory framework, the future of cryptocurrency in the TRNC, and improved alternatives to earlier crypto research.

Sampling and findings were additionally constrained by respondents' lack of knowledge and desire to participate in surveys throughout the targeted sites. Data collection from these exchanges would take considerable financial resources and time. Consequently, the study's results provided better conclusions. To enhance the study's outcomes, researchers should investigate increasing the sample size and exploring new variables and data processing methods.

Understanding the cryptocurrency's environment, legal status, and future in the TRNC was the goal of the thesis, which intended to clarify cryptocurrency. This study may serve as a foundation for future research on cryptocurrencies in the Turkish Republic of Northern Cyprus (TRNC).

REFERENCES

- 101evler, Northern Cyprus Blockchain Crypto Investors New Hot spot 101evler Blog. (Accessed 2024)
- Antonopoulos, A. M. (2014), Mastering Bitcoin: Unlocking Digital Cryptocurrencies. O'Reilly Media.
- Azman M. & Sharma K. (2020), A secure cryptocurrency e-wallet & exchange system with two-way authentication, Third International Conference on Smart Systems and Inventive Technology (ICSSIT), IEEE, 2020, pp. 305–310.
- Baek H., Oh J., Kim C.Y. & Lee K., (2019), A Model for detecting cryptocurrency transactions with discernible purpose, Eleventh International Conference on Ubiquitous and Future Networks (ICUFN), IEEE, 2019, pp. 713–717.
- Bouri, E., Azzi, G., & Dyhrberg, A. H. (2017), On the Return-Volatility Relationship in the Bitcoin Market Around the Price Crash of 2013. Economics Thee Open-Access, Open Assessment E-Journal, 11, pp.1–16
- Casey, M. J., & Vigna, P. (2018), The Truth Machine: The Blockchain and the Future of Everything. St. Martin's Press.
- Catalini, C., & Gans, J. S. (2016), Some Simple Economics of the Blockchain. NBER Working Paper No.22952. National Bureau of Economic Research.
- Cheah, E.T., & Fry, J. (2021), Speculative bubbles in Bitcoin markets? An empirical investigation into the fundamental value of Bitcoin. Economics Letters, 130, pp.32-36.
- Coinmarketcap, "Today's Cryptocurrency Prices by Market Cap." (Accessed 2024).
- Cong, L. W., & Xiao, Y. (2021), Categories and functions of crypto-tokens. The Palgrave Handbook of FinTech and Blockchain, pp.267-284.
- European Central Bank. (2021), Crypto-assets: Implications for financial stability, monetary policy, and payments and market infrastructures. Retrieved from https://www.ecb.europa.eu/pub/pdf/other/ecb.op221.en.pdf
- Financial Stability Board. (2021), Crypto assets: Report to the G20 on work by the FSB and standard-setting bodies. Retrieved from https://www.fsb.org/wpcontent/uploads/P050418.pdf

- García-Monleón, F., Erdmann, A., & Arilla, R. (2023), A value-based approach to the adoption of cryptocurrencies. Journal of Innovation & Knowledge, 8(2), 100342.
- Gowda, N., & Chakravorty, C. (2021), Comparative study on cryptocurrency transaction and banking transaction. Global Transitions Proceedings, 2(2), pp.530-534.
- Gürkan & Gürkan, The Legal Status of the Cryptocurrencies and the Regulatory Framework in the Republic of Cyprus and the TRNC | Gürkan & Gürkan (gurkangurkan.com) (Accessed 2024).
- Halaburda, H., Haeringer, G., Gans, J., & Gandal, N. (2022), The microeconomics of cryptocurrencies. Journal of Economic Literature, 60(3), pp.971-1013.
- Härdle, W. K., Harvey, C. R., & Reule, R. C. (2020), Understanding cryptocurrencies. Journal of Financial Econometrics, 18(2), pp.181-208.
- International Trade Administration, https://www.trade.gov (Accessed 2024).
- Investopedia, https://www.investopedia.com / (Accessed 2024)
- Kang T.S, Joo M.I, Kim B.S. & Lee T.-G. (2021), Blockchain-based lightweight transaction process modeling and development, 23rd International Conference on Advanced Communication Technology (ICACT), IEEE, 2021, pp. 113–118.
- Kibris Gazetesi. https://www.hibrisgazitesi.com / (Accessed 2024)
- Lerer, M., & McGarrigle, C. (2018), Art in the Age of Financial Crisis, Visual Resources, 34(12), pp.1–12. https://doi.org/10.1080/01973762.2018.1455355
- Lexico. https://www.dictionary.com / (Accessed 2024)
- Lo, S., & Wang, J. C. (2021). Bitcoin as Money? Current Policy Perspectives. Federal Reserve Bank of Boston. No. 14-4: https://cryptochainuni.com/wp-content/uploads/Fedral Reserve-Bankof-Boston-Current-Policy-Persepctives.pdf [04.06.2020].
- Marquez-Velazquez, A. (2010), the Report of the Stiglitz Commission: A Summary and Comment. SSRN Scholarly Paper ID 2196125.
- Masters, B. (2022), Can Blockchain Become the Infrastructure of Financial Services? Yale Insights: https://insights.som.yale.edu/insights/can-blockchain-become-the-infrastructure-of-financial-services

- Nakamoto, S. (2008), Bitcoin: A Peer-to-Peer Electronic Cash System. Satoshi Nakamoto Institute Working Paper. Retrieved from: http://nakamotoinstitute.org/bitcoin/
- Nakamoto, S. (2008), Bitcoin: A Peer-to-Peer Electronic Cash System. Retrieved from https://bitcoin.org/bitcoin.pdf
- Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016), Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction. Princeton University Press.
- Nasdaq, https://www.nasdaq.com/ (Accessed 2024).
- Prasad, E. S. (2021), The future of money: How the digital revolution is transforming currencies and finance, Harvard University Press.
- Rosic, A. (2016), Amazing Benefits of Cryptocurrency: A New Digital Future. Retrieved April 15, 2018, from https://blockgeeks.com/5-benefits-cryptocurrency/ (Accessed 2024)
- Rosic, A. (2017), Ethereum Mining 101: Your Complete Guide. Retrieved April 03, 2018, from https://www.huffingtonpost.com/entry/ethereum-mining-101-your-complete-guide_us_58b6e1eee4b02f3f81e44e9f
- Roubini, N. (2019), The crypto-fascist takeover of the global banking system. Retrieved from https://www.project-syndicate.org/commentary/financial-system-future-depends-on-regulators-by-Nouriel-Roubini-2019-10 / (Accessed 2024)
- Saunders H., Lewis P. & Thornhill A. (2009), Research methods for Business students, 5th edition, Essex, England, Parson Education Limited
- Shahzad, F., Xiu, G., Wang, J., & Shahbaz, M. (2018), An Empirical Investigation on the Adoption of Cryptocurrencies Among the People of Mainland China. Technology in Society, pp.55, 33–40. https://doi.org/10.1016/j.techsoc.2018.05.006
- Sureshbhai, P. N., Bhattacharya, P., & Tanwar, S. (2020), A blockchain-based sentiment analysis framework for fraud cryptocurrency schemes, In 2020 IEEE International Conference on Communications Workshops (ICC Workshops) (pp. 1-6). IEEE
- Swan, M. (2015), Blockchain: Blueprint for a new economy. "O'Reilly Media, Inc.".
- Tapscott, D., & Tapscott, A. (2016), Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies is Changing the World. Penguin.

- Thomson Reuters (2022), Cryptos Report Compendium, /www.thomsonreuters.com/en-us/posts/wp-content/uploads/sites/20/2022/04/Cryptos-Report-Compendium-2022.pdf (Accessed 2024).
- Treiblmaier, H. (2018), The Impact of the Blockchain on the Supply Chain: A Theory-Based Research Framework and a Call for Action. Supply Chain Management: An International Journal, 23(6), pp.545–559. https://doi.org/10.1108/SCM-01-2018-0029
- Wang C., Wang B., Fan X. (2020), EcoBoost: efficient bootstrapping for confidential transactions, IEEE International Conference on Blockchain and Cryptocurrency (ICBC), IEEE, 2020, pp. 1–3.
- Wilson, C. (2019), Cryptocurrencies: The Future of Finance with Yu, F-L. T., & Kwan, D. S. (Eds.), Contemporary Issues in International Political Economy, pp.359–394. Berlin: Springer.
- Yli-Huumo, J., Ko, D., Choi, S., Park, S., & Smolander, K. (2016), Where Is Current Research on Blockchain Technology: A Systematic Review, Plos One, 11(10), e0163477.
- Zohar, A. (2015), Bitcoin: under the hood. Communications of the ACM, 58(9), pp.104-113.
- Zohuri, B., Nguyen, H. T., & Moghaddam, M. (2022), What is the Cryptocurrency? Is it a Threat to Our National Security, Domestically and Globally, pp.1-14.

APPENDICES

APPENDIX 1

DEFINITIONS OF KEY TERMS

- *Cryptocurrency:* (sometimes written as "cryptocurrency" or "crypto") is a form of digital currency designed to function as a means of exchange across a decentralized network rather than a centralized bank or government. (Lexico, 2024).
- *Crypto Exchange:* is a private platform for buying and selling cryptocurrencies. In addition to trading services, the crypto exchange also offers price determination through trading activity and storage of cryptocurrencies. (Lexico, 2024).
- *Central bank digital currencies (CBDCs):* are a kind of digital money that is issued by the central bank of a nation. Identical to the fiat currency of the nation, its value is set by the central bank, setting it apart from cryptocurrencies. (Investopedia, 2024).
- *Pear to pear*: (in computing) means sharing files or other resources between computers connected through a network rather than using a central server (a central computer that stores files). (In finance) Peer-to-peer lending involves using specialized websites that bring together suitable individual lenders and borrowers. (Lexico, 2024).
- *Blockchain*: a system used to make a digital record of all the occasions a cryptocurrency (such as bitcoin) is bought or sold, and that is constantly growing as more blocks are added. (Lexico, 2024).
- *DeFi*: Decentralized finance (DeFi) is an emerging model for organizing and enabling cryptocurrency-based transactions, exchanges, and financial services. (Lexico, 2024).

APPENDIX 2

QUESTIONNAIRE/SURVEY ABOUT CRYPTOCURRENCY IN THE TRNC

Dear respondents,

I invite you to participate in this research by completing the following survey. The survey concerns "Cryptocurrency: overview, legal position and future in Northern Cyprus". The following questionnaire will require approximately 10 minutes to complete. Thank you for taking your time in assisting me with this research. Your participation in this survey is completely voluntary and you may stop the survey at any time. Neither your name nor other identifying information will be recorded on the survey, and your responses will be kept completely anonymous. There is no known risk involved in this. Prospective data related to your participation will be used for research purposes only.

PART A. PERSONAL INFORMATION

- I. Gender
 - 1. Male
 - 2. Female
- II. Age
 - 1. 18-29
 - 2. 30-39
 - 3. 40-49
 - 4. 50-59
 - 5. 60 and above
- III. Location
 - 1. Kyrenia
 - 2. Nicosia
 - 3. Famagusta
- IV. Occupation
 - 1. Student
 - 2. Government sector
 - 3. Private companies
 - 4. State-owned companies

- 5. Retired
- 6. Others

V. Education level

1. Not Educated

4. High School/ College Graduate

2. Primary School Graduate

- 5. University Graduate
- 3. Secondary School Graduated
- VI. Have you already heard or read about cryptocurrencies?
 - 1. Yes
 - 2. No
- VII. Would you like to invest in cryptocurrencies?
 - 1. Yes
 - 2. No
- VIII. Did/Do you own cryptocurrencies?
 - 1. Yes
 - 2. No

PART B. QUESTIONS ABOUT CRYPTOCURRENCY

Please answer the following questions by using 5-points Likert scale below:

- 1: Very Important
- 2: Important
- 3: Medium /Don't know
- 4: Not Important
- 5: Not Important at All

B1	Knowledge about cryptocurrency	1	2	3	4	5
B2	Holding cryptocurrencies at the moment	1	2	3	4	5
В3	Getting advice from others to invest or own crypto	1	2	3	4	5
B4	Crypto as a long-term investment	1	2	3	4	5
B5	Losing money from crypto	1	2	3	4	5
В6	Crypto as a dominant currency in years to come	1	2	3	4	5
В7	Crypto as a part of our daily lives	1	2	3	4	5
В8	Regulating crypto to secure investors	1	2	3	4	5

B9	Possibility of any risk in the crypto market	1	2	3	4	5
B10	Crypto as a cross-border payment	1	2	3	4	5
B11	Easiness of Crypto	1	2	3	4	5
B12	Cheapness of crypto transactions	1	2	3	4	5
B13	Crypto for payments as timesaving	1	2	3	4	5
B14	Crypto payment/transfer to be more secure than other mean of payments	1	2	3	4	5
B15	Securing the value of crypto over time	1	2	3	4	5
B16	Crypto to facilitate illegal activities	1	2	3	4	5
B17	Crypto market to be too volatile	1	2	3	4	5
B18	Crypto as a trend	1	2	3	4	5
B19	Intending to use crypto regularly	1	2	3	4	5
B20	Encouraging others to use crypto as a mode of exchange	1	2	3	4	5
B21	Intending to use Bitcoin as an alternative source of currency to buy or sell products in the future	1	2	3	4	5

APPENDIX 3

FREQUENCY TABLES

Table 3.1. Gender Distribution

A1

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 M	118	56,2	56,2	56,2
Valid	2 F	92	43,8	43,8	100,0
	Total	210	100,0	100,0	

Table 3.2. Age Distribution

A2

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (18-29)	85	40,5	40,5	40,5
	2 (30-39)	70	33,3	33,3	73,8
** 11.1	3 (40-49)	37	17,6	17,6	91,4
Valid	4 (50-59)	16	7,6	7,6	99,0
	5 (60)	2	1,0	1,0	100,0
	Total	210	100,0	100,0	

Table 3.3. Location Distribution

A3

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 K	80	38,1	38,1	38,1
77 1° 1	2 N	70	33,3	33,3	71,4
Valid	3 F	60	28,6	28,6	100,0
	Total	210	100,0	100,0	

Table 3.4. Occupation Distribution

A4

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (Std)	37	17,6	17,6	17,6
	3 (Priv)	152	72,4	72,4	90,0
Valid	6 (Oth.)	21	10,0	10,0	100,0
	Total	210	100,0	100,0	

Table 3.5. Education Distribution

A5

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (N.Ed)	2	1,0	1,0	1,0
	2 (P.S)	1	,5	,5	1,4
77.11.1	3 (S.S)	12	5,7	5,7	7,1
Valid	4 (H.S)	89	42,4	42,4	49,5
	5 (Univ)	106	50,5	50,5	100,0
	Total	210	100,0	100,0	

Table 3.6. Hearing crypto Distribution

A6

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 (YES)	210	100,0	100,0	100,0

Table 3.7. Investing crypto Distribution

A7

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (YES)	147	70,0	70,0	70,0
Valid	2 (NO)	63	30,0	30,0	100,0
	Total	210	100,0	100,0	

Table 3.8. Owning/Holding crypto Distribution

A8

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (YES)	123	58,6	58,6	58,6
Valid	2 (NO)	86	41,0	41,0	99,5
	Total	210	100,0	100,0	

Table 3.9. Knowledge Distribution

B1

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	37	17,6	17,6	11,9
	2	43	20,5	20,5	21,0
Valid	3	86	41,0	41,0	61,9
vanu	4	19	9,0	9,0	82,4
	5	24	11,4	11,4	100,0
	Total	210	100,0	100,0	

Table 3.10. Possessing crypto Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	55	26,2	26,2	26,2
	2	34	16,2	16,2	42,4
	3	41	19,5	19,5	61,9
Valid	4	45	21,4	21,4	83,3
	5	35	16,7	16,7	100,0
	Total	210	100,0	100,0	

Table 3.11. Advice Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	54	25,7	25,7	19,5
	2	48	22,9	22,9	34,3
** 1. 1	3	36	17,1	17,1	51,4
Valid	4	31	14,8	14,8	74,3
	5	41	19,5	19,5	100,0
	Total	210	100,0	100,0	

Table 3.12. Crypto investment Distribution

B4

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	43	20,5	20,5	11,4
	2	45	21,4	21,4	26,2
*****	3	67	31,9	31,9	58,1
Valid	4	31	14,8	14,8	79,5
	5	24	11,4	11,4	100,0
	Total	210	100,0	100,0	

Table 3.13. Losing money Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	44	21,0	21,0	11,4
	2	40	19,0	19,0	29,5
** ** 1	3	64	30,5	30,5	60,0
Valid	4	38	18,1	18,1	79,0
	5	24	11,4	11,4	100,0
	Total	210	100,0	100,0	

Table 3.14. Crypto-dominant currency Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	54	25,7	25,7	10,5
	2	59	28,1	28,1	21,4
37.11.1	3	52	24,8	24,8	46,2
Valid	4	23	11,0	11,0	74,3
	5	22	10,5	10,5	100,0
	Total	210	100,0	100,0	

Table 3.15. Crypto Daily Lives Distribution

B7

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	46	21,9	21,9	7,6
	2	42	20,0	20,0	22,4
77 1° 1	3	75	35,7	35,7	58,1
Valid	4	31	14,8	14,8	78,1
	5	16	7,6	7,6	100,0
	Total	210	100,0	100,0	

Table 3.16. Crypto regulation Distribution

			20		
		Frequency	Percent	Valid Percent	Cumulative Percent
	1	92	43,8	43,8	6,2
	2	51	24,3	24,3	15,7
** ** *	3	34	16,2	16,2	31,9
Valid	4	20	9,5	9,5	56,2
	5	13	6,2	6,2	100,0
	Total	210	100,0	100,0	

Table 3.17. Crypto risk market Distribution

2						
		Frequency	Percent	Valid Percent	Cumulative Percent	
	1	66	31,4	31,4	10,5	
	2	48	22,9	22,9	18,6	
	3	57	27,1	27,1	45,7	
Valid	4	17	8,1	8,1	68,6	
	5	22	10,5	10,5	100,0	
	Total	210	100,0	100,0	-,-	

Table 3.18. Cross-border payment Distribution

B10

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	38	18,1	18,1	9,5
	2	50	23,8	23,8	33,3
37-1: J	3	52	24,8	24,8	58,1
Valid	4	50	23,8	23,8	81,9
	5	20	9,5	9,5	100,0
	Total	210	100,0	100,0	

Table 3.19. Easy crypto operations Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	26	12,4	12,4	7,1
	2	65	31,0	31,0	19,5
\$7.1°1	3	78	37,1	37,1	56,7
Valid	4	26	12,4	12,4	87,6
	5	15	7,1	7,1	100,0
	Total	210	100,0	100,0	

Table 3.20. Cheaper payment method Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	34	16,2	16,2	9,5
	2	43	20,5	20,5	24,3
	3	82	39,0	39,0	63,3
Valid	4	31	14,8	14,8	83,8
	5	20	9,5	9,5	100,0
	Total	210	100,0	100,0	

Table 3.21. Crypto timesaving Distribution

B13

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	39	18,6	18,6	5,2
	2	46	21,9	21,9	25,7
X7 1' 1	3	71	33,8	33,8	59,5
Valid	4	43	20,5	20,5	81,4
	5	11	5,2	5,2	100,0
	Total	210	100,0	100,0	

Table 3.22. Crypto transfer Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	31	14,8	14,8	11,4
	2	52	24,8	24,8	25,2
Valid	3	74	35,2	35,2	60,5
v and	4	29	13,8	13,8	85,2
	5	24	11,4	11,4	100,0
	Total	210	100,0	100,0	

Table 3.23. Securing crypto value Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	59	28,1	28,1	7,6
	2	49	23,3	23,3	24,3
	3	51	24,3	24,3	48,6
Valid	4	35	16,7	16,7	71,9
	5	16	7,6	7,6	100,0
	Total	210	100,0	100,0	

Table 3.24. Illegal activities Distribution

			210		
_		Frequency	Percent	Valid Percent	Cumulative Percent
	1	28	13,3	13,3	24,8
	2	32	15,2	15,2	39,5
X	3	66	31,4	31,4	71,0
Valid	4	31	14,8	14,8	86,2
	5	52	24,8	24,8	99,5
	Total	210	100,0	100,0	

Table 3.25. Volatility Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	42	20,0	20,0	11,9
	2	52	24,8	24,8	30,5
37 1: 1	3	51	24,3	24,3	54,8
Valid	4	39	18,6	18,6	79,5
	5	25	11,9	11,9	100,0
	Total	210	100,0	100,0	

Table 3.26. Crypto trend/fun Distribution

B18

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	24	11,4	11,4	11,0
	2	52	24,8	24,8	28,1
	3	75	35,7	35,7	63,8
Valid	4	36	17,1	17,1	88,6
	5	23	11,0	11,0	100,0
	Total	210	100,0	100,0	

Table 3.27. Using crypto regularly Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	35	16,7	16,7	18,6
	2	46	21,9	21,9	39,5
	3	46	21,9	21,9	61,4
Valid	4	44	21,0	21,0	83,3
	5	39	18,6	18,6	100,0
	Total	210	100,0	100,0	
	-				

Table 3.28. Crypto mode of exchange Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	34	16,2	16,2	12,9
	2	43	20,5	20,5	36,7
*****	3	56	26,7	26,7	63,3
Valid	4	50	23,8	23,8	83,8
	5	27	12,9	12,9	100,0
	Total	210	100,0	100,0	

Table 3.29. Using crypto in future Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
	1	33	15,7	15,7	14,3
	2	57	27,1	27,1	33,8
37 11 1	3	49	23,3	23,3	57,1
Valid	4	41	19,5	19,5	84,3
	5	30	14,3	14,3	100,0
	Total	210	100,0	100,0	

ANNEX 4 DESCRIPTIVE TABLES

Table 4.1. Gender Distribution

	A1	N	Minimum	Maximum	Mean	Std. Deviation
1	B1	118	1	5	3,38	1,226
	B2	118	1	5	3,22	1,403
	В3	118	1	5	3,25	1,426
	B4	118	1	5	3,46	1,337
	B5	118	1	5	3,36	1,251
	В6	118	1	5	3,53	1,319
	В7	118	1	5	3,58	1,187
	В8	118	1	5	4,06	1,172
	В9	118	1	5	3,57	1,343
	B10	118	1	5	3,38	1,300
	B11	118	1	5	3,44	1,098
	B12	118	1	5	3,31	1,224
	B13	118	1	5	3,37	1,131
	B14	118	1	5	3,35	1,165
	B15	118	1	5	3,48	1,279
	B16	118	1	6	2,83	1,392
	B17	118	1	6	3,16	1,377
	B18	118	1	5	3,08	1,185
	B19	118	1	5	3,15	1,388
	B20	118	1	5	3,32	1,205
	B21	118	1	5	3,32	1,274
	Valid N	118				
2	B1	91	1	5	3,05	1,119
	B2	92	1	5	2,40	1,367
	В3	92	1	5	3,15	1,526
	В4	92	1	5	2,98	1,099
	B5	92	1	5	3,00	1,292
	В6	92	1	5	3,41	1,215
	В7	92	1	5	3,03	1,133
	B8	92	1	5	3,70	1,299
	В9	92	1	5	3,57	1,234
	B10	92	1	5	2,90	1,130
	B11	92	1	5	3,10	,995
	B12	92	1	5	3,03	1,063
	B13	92	1	5	3,16	1,151

B14	92	1	5	2,96	1,185
B15	92	1	5	3,47	1,262
B16	92	1	5	2,74	1,308
B17	92	1	5	3,34	1,207
B18	92	1	5	3,10	1,100
B19	92	1	5	2,74	1,291
B20	92	1	5	2,66	1,260
B21	92	1	5	2,83	1,263
Valid N	91				

Table 4.2. Location Distribution

	A1	N	Minimum	Maximum	Mean	Std. Deviation
1	B1	80	1	5	3,14	1,209
	B2	80	1	5	2,73	1,441
	В3	80	1	5	3,11	1,493
	B4	80	1	5	3,20	1,306
	B5	80	1	5	3,34	1,350
	В6	80	1	5	3,57	1,339
	B7	80	1	5	3,40	1,228
	B8	80	1	5	3,69	1,356
	В9	80	1	5	3,49	1,341
	B10	80	1	5	3,19	1,264
	B11	80	1	5	3,24	1,046
	B12	80	1	5	3,13	1,216
	B13	80	1	5	3,31	1,228
	B14	80	1	5	3,34	1,302
	B15	80	1	5	3,41	1,309
	B16	80	1	6	3,05	1,449
	B17	80	1	6	3,31	1,346
	B18	80	1	5	2,89	1,169
	B19	80	1	5	3,04	1,445
	B20	80	1	5	3,14	1,403
	B21	80	1	5	3,21	1,347
	Valid N	80				
2	B1	69	1	5	3,19	1,204
	B2	70	1	5	2,89	1,430
	В3	70	1	5	3,26	1,520
	B4	70	1	5	3,23	1,276
	B5	70	1	5	3,03	1,251
	В6	70	1	5	3,30	1,267

B7			I			ı	Г
B9		B7	70	1	5	3,23	1,265
B10		B8	70	1	5	3,86	1,277
B11		В9	70	1	5	3,56	1,281
B12		B10	70	1	5	2,93	1,220
B13		B11	70	1	5	3,23	1,079
B14 70 1 5 3,09 1,151 B15 70 1 5 3,39 1,266 B16 70 1 5 2,83 1,239 B17 70 1 5 3,00 1,319 B18 70 1 5 3,27 1,076 B19 70 1 5 2,74 1,348 B20 70 1 5 2,99 1,245 B21 70 1 5 2,99 1,245 Valid N 69 8 8 1,245 8 1,245 B2 60 1 5 3,43 1,140 9 1,467 9 9 1,245 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467 9 1,467		B12	70	1	5	3,20	1,071
B15 70 1 5 3,39 1,266 B16 70 1 5 2,83 1,239 B17 70 1 5 3,00 1,319 B18 70 1 5 3,00 1,319 B18 70 1 5 3,27 1,076 B19 70 1 5 2,74 1,348 B20 70 1 5 2,99 1,245 Valid N 69		B13	70	1	5	3,10	1,131
B16 70 1 5 2,83 1,239 B17 70 1 5 3,00 1,319 B18 70 1 5 3,27 1,076 B19 70 1 5 2,74 1,348 B20 70 1 5 2,99 1,245 B21 70 1 5 2,96 1,245 Valid N 69		B14	70	1	5	3,09	1,151
B17 70 1 5 3,00 1,319 B18 70 1 5 3,27 1,076 B19 70 1 5 2,74 1,348 B20 70 1 5 2,99 1,245 B21 70 1 5 2,96 1,245 Valid N 69 9 1 1 5 2,96 1,245 Valid N 69 9 1 245 1 5 2,96 1,245 Valid N 69 9 1 5 3,43 1,140 1 5 3,43 1,140 1 6 1,245 1 6 1,245 1 1 1 1 1 1 1,245 1		B15	70	1	5	3,39	1,266
B18 70 1 5 3,27 1,076 B19 70 1 5 2,74 1,348 B20 70 1 5 2,99 1,245 B21 70 1 5 2,96 1,245 Valid N 69 9 1 1 5 2,96 1,245 Valid N 69 9 1 5 2,96 1,245 Valid N 69 9 1 245 1 5 2,96 1,245 Valid N 69 9 1 245 1 1 245 1 1 2,96 1,245 1<		B16	70	1	5	2,83	1,239
B19 70 1 5 2,74 1,348 B20 70 1 5 2,99 1,245 B21 70 1 5 2,96 1,245 Valid N 69 9 1 1 5 2,96 1,245 Valid N 69 9 9 1 1 5 2,96 1,245 Valid N 69 9 9 1 245 1 <td< td=""><td></td><td>B17</td><td>70</td><td>1</td><td>5</td><td>3,00</td><td>1,319</td></td<>		B17	70	1	5	3,00	1,319
B20 70 1 5 2,99 1,245 B21 70 1 5 2,96 1,245 Valid N 69 B1 60 1 5 3,43 1,140 B2 60 1 5 3,02 1,467 B3 60 1 5 3,27 1,388 B4 60 1 5 3,27 1,388 B4 60 1 5 3,33 1,188 B5 60 1 5 3,22 1,209 B6 60 1 5 3,55 1,185 B7 60 1 5 3,38 1,059 B8 60 1 5 3,38 1,059 B9 60 1 5 3,43 1,255 B1 60 1 5 3,43 1,276 B11 60 1 5		B18	70	1	5	3,27	1,076
B21 70 1 5 2,96 1,245 Valid N 69 B1 60 1 5 3,43 1,140 B2 60 1 5 3,02 1,467 B3 60 1 5 3,27 1,388 B4 60 1 5 3,33 1,188 B5 60 1 5 3,22 1,209 B6 60 1 5 3,55 1,185 B7 60 1 5 3,55 1,185 B8 60 1 5 3,38 1,059 B8 60 1 5 3,38 1,059 B8 60 1 5 3,43 1,059 B9 60 1 5 3,43 1,226 B1 60 1 5 3,43 1,079 B11 60 1 5		B19	70	1	5	2,74	1,348
Name		B20	70	1	5	2,99	1,245
B1 60 1 5 3,43 1,140 B2 60 1 5 3,02 1,467 B3 60 1 5 3,27 1,388 B4 60 1 5 3,22 1,209 B6 60 1 5 3,55 1,185 B7 60 1 5 3,55 1,185 B7 60 1 5 3,38 1,059 B8 60 1 5 3,38 1,059 B8 60 1 5 3,38 1,059 B8 60 1 5 3,43 1,059 B8 60 1 5 3,68 1,255 B9 60 1 5 3,43 1,079 B11 60 1 5 3,43 1,079 B12 60 1 5 3,45 1,016 B14 60		B21	70	1	5	2,96	1,245
B2 60 1 5 3,02 1,467 B3 60 1 5 3,27 1,388 B4 60 1 5 3,33 1,188 B5 60 1 5 3,22 1,209 B6 60 1 5 3,55 1,185 B7 60 1 5 3,38 1,059 B8 60 1 5 3,38 1,059 B8 60 1 5 3,43 1,059 B9 60 1 5 3,68 1,255 B9 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60		Valid N	69				
B3 60 1 5 3,27 1,388 B4 60 1 5 3,33 1,188 B5 60 1 5 3,22 1,209 B6 60 1 5 3,55 1,185 B7 60 1 5 3,38 1,059 B8 60 1 5 3,38 1,059 B8 60 1 5 3,68 1,255 B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,43 1,079 B13 60 1 5 3,45 1,016 B14 60 1 5 3,45 1,016 B15 60 1 5 3,07 1,056 B16 60 1 5 3,67 1,217 B16 60 1 5 3,42 1,211 B18 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 3,13 1,171 B19 60 1 5 3,13 1,268		B1	60	1		3,43	1,140
B4 60 1 5 3,33 1,188 B5 60 1 5 3,22 1,209 B6 60 1 5 3,55 1,185 B7 60 1 5 3,38 1,059 B8 60 1 5 4,23 ,945 B9 60 1 5 3,68 1,255 B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,226 B12 60 1 5 3,43 1,079 B13 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 3,42 1,211 B18 60		B2	60			3,02	1,467
B5 60 1 5 3,22 1,209 B6 60 1 5 3,55 1,185 B7 60 1 5 3,38 1,059 B8 60 1 5 4,23 ,945 B9 60 1 5 3,68 1,255 B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,13 1,233 B20 60 <td></td> <td>В3</td> <td>60</td> <td>1</td> <td></td> <td>3,27</td> <td>1,388</td>		В3	60	1		3,27	1,388
B6 60 1 5 3,55 1,185 B7 60 1 5 3,38 1,059 B8 60 1 5 4,23 ,945 B9 60 1 5 3,68 1,255 B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 3,67 1,217 B18 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 <td></td> <td>B4</td> <td>60</td> <td>1</td> <td></td> <td>3,33</td> <td>1,188</td>		B4	60	1		3,33	1,188
B7 60 1 5 3,38 1,059 B8 60 1 5 4,23 ,945 B9 60 1 5 3,68 1,255 B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 </td <td></td> <td>B5</td> <td>60</td> <td>1</td> <td></td> <td>3,22</td> <td>1,209</td>		B5	60	1		3,22	1,209
B8 60 1 5 4,23 ,945 B9 60 1 5 3,68 1,255 B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		В6	60	1		3,55	1,185
B9 60 1 5 3,68 1,255 B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		В7	60	1	5	3,38	1,059
B10 60 1 5 3,43 1,226 B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B8	60	1		4,23	,945
B11 60 1 5 3,43 1,079 B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		В9	60	1		3,68	1,255
B12 60 1 5 3,27 1,205 B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268	3	B10	60	1		3,43	1,226
B13 60 1 5 3,45 1,016 B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B11	60	1	5	3,43	1,079
B14 60 1 5 3,07 1,056 B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B12	60	1		3,27	1,205
B15 60 1 5 3,67 1,217 B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B13	60	1		3,45	1,016
B16 60 1 5 2,40 1,278 B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B14	60	1			1,056
B17 60 1 5 3,42 1,211 B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B15	60			3,67	1,217
B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B16	60	1		2,40	1,278
B18 60 1 5 3,13 1,171 B19 60 1 5 3,15 1,233 B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B17	60	1		3,42	1,211
B20 60 1 5 2,95 1,111 B21 60 1 5 3,13 1,268		B18	60	1		3,13	1,171
B21 60 1 5 3,13 1,268		B19	60	1		3,15	1,233
521		B20	60	1		2,95	1,111
Valid N 60		B21	60	1	5	3,13	1,268
		Valid N	60				

Table 4.3. Education Distribution

	A1	N	Minimum	Maximum	Mean	Std. Deviation
	B1	2	3	5	4,00	1,414
	B2	2	3	5	4,00	1,414
	В3	2	3	5	4,00	1,414
	B4	2	4	5	4,50	,707
	B5	2	5	5	5,00	,000
	В6	2	4	5	4,50	,707
	B7	2	3	5	4,00	1,414
	B8	2	3	5	4,00	1,414
	В9	2	3	5	4,00	1,414
1	B10	2	2	5	3,50	2,121
	B11	2	2	5	3,50	2,121
	B12	2	4	5	4,50	,707
	B13	2	3	5	4,00	1,414
	B14	2	5	5	5,00	,000
	B15	2	3	5	4,00	1,414
	B16	2	3	5	4,00	1,414
	B17	2	4	5	4,50	,707
	B18	2	2	5	3,50	2,121
	B19	2	1	5	3,00	2,828
	B20	2	1	5	3,00	2,828
	B21	2	1	5	3,00	2,828
	Valid N	2				
	B1	1	3	3	3,00	
	B2	1	5	5	5,00	
	В3	1	5	5	5,00	
	B4	1	5	5	5,00	
	B5	1	4	4	4,00	
	B6	1	5	5	5,00	
	B7	1	3	3	3,00	
	B8	1	5	5	5,00	
	В9	1	4	4	4,00	
2	B10	1	4	4	4,00	
	B11	1	4	4	4,00	
	B12	1	4	4	4,00	
	B13	1	4	4	4,00	
	B14	1	5	5	5,00	
	B15	1	4	4	4,00	
	B16	1	5	5	5,00	
	B17	1	5	5	5,00	

	_	4		2	2.00	
	B18	1	2	2	2,00	•
	B19	1	5	5	5,00	
	B20	1	5	5	5,00	
	B21	1	4	4	4,00	•
	Valid N	1	4	4	2.02	1.020
	B1	12	1	4	2,83	1,030
	B2	12	1	4	2,75	,965
	B3	12	2	5	3,42	,996
	B4	12	1	5	3,50	1,168
	B5	12	1	5	3,00	1,206
	B6	12	2	4	3,50	,674
	B7	12	3	5	3,75	,754
	B8	12	1	5	4,00	1,348
	В9	12	1	5	3,33	1,557
	B10	12	2	5	3,75	1,215
3	B11	12	1	5	3,17	1,030
	B12	12	2	5	3,08	,900
	B13	12	2	5	3,33	,985
	B14	12	1	5	3,42	1,379
	B15	12	1	5	2,92	1,443
	B16	12	1	5	2,42	1,379
	B17	12	1	5	3,00	1,206
	B18	12	1	5	3,17	1,115
	B19	12	1	5	3,17	1,267
	B20	12	2	5	2,67	,888
	B21	12	1	5	3,25	1,357
	Valid N	12				
	B1	88	1	5	3,24	1,155
	B2	89	1	5	2,69	1,443
	B3	89	1	5	3,02	1,469
	B4	89	1	5	3,29	1,199
	B5	89	1	5	3,25	1,246
	B6	89	1	5	3,55	1,279
		89	1	5	3,40	1,135
	B7	89	1	5	4,03	1,102
	B8	89	1	5	3,66	1,148
4	B9	89	1	5	3,22	1,175
	B10		1	5	3,28	,988
	B11	89	1	5	3,20	1,108
	B12	89	1	5	3,12	1,108
	B13	89	1	5	3,03	1,020
	B14	89		5		
	B15	89	1	5	3,49	1,188

	B16	89	1	5	2,65	1,349
	B17	89	1	5	3,20	1,316
	B18	89	1	5	3,00	1,087
	B19	89	1	5	2,81	1,305
	B20	89	1	5	3,02	1,252
	B21	89	1	5	3,16	1,224
	Valid N	88				
	B1	106	1	5	3,27	1,239
	B2	106	1	5	2,98	1,473
	В3	106	1	5	3,30	1,507
	B4	106	1	5	3,14	1,312
	B5	106	1	5	3,14	1,312
	В6	106	1	5	3,38	1,320
	В7	106	1	5	3,23	1,275
5	B8	106	1	5	3,76	1,335
	В9	106	1	5	3,50	1,389
	B10	106	1	5	3,05	1,297
	B11	106	1	5	3,30	1,131
	B12	106	1	5	3,33	1,217
	B13	106	1	5	3,39	1,246
	B14	106	1	5	3,22	1,163
	B15	106	1	5	3,51	1,318
	B16	106	1	6	2,91	1,335
	B17	106	1	6	3,25	1,310
	B18	106	1	5	3,15	1,194
	B19	106	1	5	3,07	1,389
	B20	106	1	5	3,07	1,297
	B21	106	1	5	3,04	1,330
	Valid N	106				

Thesis By Frédéric Fida SHINDA (K20211178)

by Frédéric Fida SHINDA (K20211178)

Submission date: 15-May-2024 11:02AM (UTC+0300)

Submission ID: 2379900611

File name: Turnitin_Version.docx (78.34K)

Word count: 10541

Character count: 60618

Thesis By Frédéric Fida SHINDA (K20211178)

	ALITY REPORT	deric Fida ShinD	A (N2U211178)		
SIMILA	% ARITY INDEX	7% INTERNET SOURCES	5% PUBLICATIONS	8% STUDENT PAPERS	
PRIMAR	Y SOURCES				
1	WWW.CO Internet Source	ursehero.com			2%
2	Submitt Student Pape	ed to Caleb Univ	versity		1 %
3	reposito		1 %		
4		ed to The Scient h Council of Tur		gical	1 %
5	Submitt Student Pape	<	 %		
6	www.zb	<	1 %		
7	Nandan "Compatransact Transition	y	1 %		
8	tind-cus	tomer-uchicago	.s3.amazonaw	s.com	 %