



National  
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Ireland

**Cashless society and the adoption and use of  
cryptocurrency and the blockchain in the future**

Capstone Research Dissertation BA (Hons) in Business

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Student Number: X21116946/ Tomi Obe

Supervisor: Robert MacDonald

## **Submission of Thesis and Dissertation**

### **National College of Ireland**

#### **Research Students Declaration Form (Thesis/Author Declaration Form)**

**Name:** Oluwatomiwa Adetunji-Obe

**Student Number:** X21116946

**Degree for which thesis is submitted:** BA (Hons) Business – BAHBMD

**Title of Thesis:** 'Cashless Society and the feasibility of cryptocurrency and the blockchain in the future?'

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Signature: Tomi Obe

# Table of Contents

<b>Chapter 1</b> .....	5
<b>1.1 Introduction</b> .....	5
<b>1.2 Research Question</b> .....	6
<b>1.3 Research Objectives</b> .....	7
<b>1.4 Research Hypothesis</b> .....	7
<b>Chapter 2</b> .....	8
<b>2.1 Literature Review</b> .....	8
<b>2.2 Evolution of Cashless Society</b> .....	8
<b>2.4 Features benefits and benefits of cryptocurrency and Blockchain technology in a cashless society</b> .....	10
<b>2.5 Economic Implications of Digital Finance on the world</b> .....	13
<b>2.6 Adoption and User Acceptance of Cryptocurrencies and Blockchain Technology</b> .....	13
<b>2.7 Analysis of Limitations and Barriers preventing the Adoption of Cryptocurrency and blockchain     technology.</b> .....	14
<b>2.8 Future of Cryptocurrency and Blockchain Technology</b> .....	16
<b>Chapter 3</b> .....	17
<b>3.1Methodology</b> .....	17
<b>3.2 Research Design</b> .....	18
<b>3.3 Research Philosophy:</b> .....	19
<b>3.5 Sampling</b> .....	19
<b>3.6 Recruitment process</b> .....	20
<b>3.7 Interview Design</b> .....	21
<b>3.8 Interview Analysis</b> .....	21
<b>3.9 Limitations</b> .....	22
<b>3.10 Ethical Considerations</b> .....	22
<b>Chapter 4</b> .....	23
<b>4.1 Analyse and Findings</b> .....	23
<b>4.2 Move to a Cashless Society</b> .....	23
<b>4.3 Adoption of Cryptocurrency</b> .....	25
<b>4.4 Adoption and use of Blockchain Technology</b> .....	26
<b>Chapters 5</b> .....	27
<b>Discussions 5.1</b> .....	27

<b>Interpretation &amp; Implications 5.2</b> .....	27
<b>Implications 5.3</b> .....	29
<b>Limitations 5.4</b> .....	30
<b>Recommended 5.5</b> .....	30
<b>Conclusion 5.6</b> .....	31
<b>Bibliography</b> .....	32

# Chapter 1

## 1.1 Introduction

Money is a method of exchange that can be kept digitally on electronic cards, cash or coins. Currently, money is based on the Fiat system. In accordance with Senner and Sornette(2019), the fiat system grants the government and central banks control over the money supply and the determination of interest rates with currencies that is fundamentally not backed by any actual commodities, such as gold or silver, but rather by the goodwill that it has worth by the government and the central bank. The ability for the government and central bank to have control over money has led to people not trusting financial institutions. With some experts suggesting calling for decentralization of our monetary system. According to Dorn (2017) in a Journal Article, there it mentions to privatize and decentralize the monetary system as the economy would experience monetary equilibrium, and "any forecasting functions that did remain would be healthily decentralized under free banking. A way to change the monetary system is with cryptocurrencies as after the financial crisis in 2008, cryptocurrencies were developed, by Satoshi Nakamoto's creation of Bitcoin serving as the first to provide an alternative to fiat currencies like the US dollar, cryptocurrency was developed. With Blockchain technology being established in 2008 as the transaction log for the decentralized digital currency bitcoin. Blockchain technology is a mechanism to store data and record transactions using a distributed, digital ledger that is validated. The concept of blockchain technology was thought of in 1991 to timestamp digital records to prevent their manipulation, backdate or tampering. The use of cryptocurrency was suggested in a journal article written by Dorn (2017) who discussed its use to replace the current system. Lawrence H. White researched the expanding market for cryptocurrencies, with Bitcoin being the most well-known digital currency, with many coins known as altcoins." The market for these competing private irredeemable monies (or would-be monies) offers a chance to examine the viability of Hayek's theory of competitive private currencies. The two main characteristics of bitcoin are its rigorous quantity restriction and its open-source code on technology called The Blockchain. Dollars are exchanged for bitcoins, which are then used to purchase altcoins Dorn (2017). White believes that although cryptocurrencies are still a new phenomenon in the world of money, they have a lot of promise, particularly for usage in international remittances. Ireland is moving to a more

Cashless way of using money, especially with the mass adoption from Irish consumers of Fintech proposes a fascinating area to the research, of into the adoption of cryptocurrency and Blockchain technology. The objective of this research paper is to investigate the trend towards a cashless society and the adoption and use of cryptocurrency and blockchain, with a particular focus on Ireland while also considering a global perspective. It is crucial to analyze the shift towards a cashless society and to evaluate the advantages and disadvantages of cryptocurrency to determine if it can be widely accepted to potential replace fiat currencies. According to Umar (2021), approximately 1.7 billion people do not have access to conventional banking services, and those who do often face high fees. Of the 1.7 billion unbanked adults, 1.1 billion own a mobile phone, and in developing economies, 79% of adults own a mobile phone. This suggests that cryptocurrency may provide developing nations with more financial inclusion and address concerns related to privacy and security. However, organized cybercriminals pose significant threats, and they frequently develop new methods to compromise existing security measures, as noted by Fabris (2022). The adoption of various monetary management tools and mobile payments has increased significantly during the pandemic, as highlighted by Morgan (2023), but so has the number of data breaches. Blockchain technology has the potential to mitigate this, as cryptographic algorithms are used to secure data and transactions. This research paper will examine this topic using literature such as articles and journals and will be divided into seven sections: a literature review, research question and objective, methodology, data analysis, discussions, conclusion, and bibliography. The research paper will explore three main themes: the transition to a cashless society, the emergence of cryptocurrency as a digital currency, and the effect of cryptocurrency and blockchain technology. The transition towards a cashless society and the acceptance of cryptocurrency and blockchain in Ireland and globally are multifaceted issues that require careful examination and consideration.

## **1.2 Research Question**

The research question is based on three main themes the transition to a cashless society, the adoption of cryptocurrency, and the impact of Blockchain technology. The research question for this “The shift towards a cashless society and with the adoption of cryptocurrency and use of the blockchain technology? The COVID-19 pandemic is evident that there has been an accelerated shift from a more cash- traditional form of finance to a more cashless digitalized form of finance. The usage of neo-banks and contactless payment systems has increased, as opposed to cash and traditional banking institutions. This could result in a transition that will reconstruct the whole financial system. The rise in Cryptocurrency as an alternate

way of payment from the traditional Fiat system gives a possibility to a future where a bank account is no longer necessary around the world reducing financial inclusion. The use of Cryptocurrency as a form of legal tender around the world doesn't seem like one of imagination but could potentially be a reality as more countries, businesses, and people are starting to recognize cryptocurrencies as legal tender. The Technology that cryptocurrency is powered by blockchain which can be promoted in other aspects of the banking system, such as the security benefits, transparency, and the ability to reduce costs and speed up transactions. The world can make this digital financial revolution happen with cryptocurrencies and Blockchain technology. Understanding the feasibility and outweighing the positives and negatives of Cryptocurrency and The Blockchain technology could give a clearer answer if this technology could be adopted and completely transform the traditional banking system into a better one.

### **1.3 Research Objectives**

The Four key goals have been set up to investigate and provide conclusions about this field of research.

1. To determine and comprehend why countries, with Ireland as the primary case study, are moving toward a cashless society and the rise of Cryptocurrency and The Blockchain.
2. To outweigh the advantages and disadvantages of Cryptocurrency and Blockchain and why it's a suitable alternative to the traditional banking system considering factors such as security, privacy, transaction speed, and cost-efficiency.
3. Analyze how cryptocurrencies and blockchain technology might give unbanked and underbanked populations access to financial services by examining the consequences for financial inclusion of moving toward a cashless society.
4. To figure out if Cryptocurrency and Blockchain technology can be adopted in the future.

### **1.4 Research Hypothesis**

This study will be structured around the statement that 'Is there a shift towards a cashless society and will Cryptocurrency be a viable currency and how will the blockchain be used'. To explore this statement the following hypothesis will be tested:

1. A shift away from the use of cash in society is seen in changing societal attitudes and preferences, as well as a rising acceptance and preference for digital payment methods.
2. The adoption of Blockchain is currently hampered by issues with scalability.

3. The adoption and acceptability and trust of cryptocurrencies are heavily influenced by governmental policies and legal frameworks.

## Chapter 2

### 2.1 Literature Review

### 2.2 Evolution of Cashless Society

According to (Donohue et al.2020) In a cashless society, most financial transactions do not use paper money or coins. Instead, all purchases take place digitally and include the use of Apple Pay, debit or credit cards, or payment systems like PayPal. Ireland—is headed toward a cashless society, With the introduction of the shift towards a cashless society beginning in 1996 with the introduction of debit cards payments, As reported by Monaghan (2021) contactless cards were obtained by many Irish people from their banks in 2014, but they weren't used frequently. On average, consumers only made five payments using this method of payment per year (Centralbank.ie, 2022). According to Fabris (2022) The COVID-19 Pandemic caused societal unrest and affected many industries. The expansion of company digitalization across all industries was one of the biggest disruptions since remote work and social distance have contributed to the rise of cashless transactions Fabris (2022). The trend toward a cashless society has only been intensified as, Data from the Irish Central Bank, ATM usage quickly plummeted (Centralbank.ie, 2022) Data showing that Before the pandemic the average value of ATM withdrawals remained mostly constant (Centralbank.ie, 2022). It showed the average monthly outflow between January 2015 and February 2020 was €1.51 billion. ATM withdrawals dropped significantly when a rigorous lockdown was put in place because of the Covid-19 outbreak, which started in mid-March 2020, before increasing again. Following the start of the pandemic, limitations reduced in-store with cash, and individuals had fears about handling notes and coins, monthly ATM withdrawals averaged €1.04 billion from June 2020 to June 2022. Over 10 million ATM transactions were made in February 2020, whereas just over 4 million were made in April 2020. (Centralbank.ie, 2022). The data made available by the central bank (Centralbank.ie,



2022) shows in 2021, 62.4 percent of the payments were made by credit or debit card. About 37.6% of transactions were cash transactions. This demonstrates that the usage of cash in Irish society is steadily declining.

According to Fabris (2022) The digitalization of payments and increased usage of financial innovation have been strongly influenced by social isolation, lockdowns, and other limitations; nevertheless, on the other hand, the entire society and fintech firms have been impacted by the economic effects of the pandemic. As more people are relying on alternative online banking rather than the traditional banking system, it is increasingly popular as it is more accessible and convenient to use. According to Flynn (2020) using data compiled by AIB the use of apps like Apple Pay, Google Pay, Revolut, and N26 has increased during the pandemic. People in the 25 to 34 age group spent 31% more than those in the 35 to 44 age group, 26% more than those in the 45 to 54 age group, 22% more than those in the 55 to 64 age group, and 20% more than those in the 65 and older age group.

People aren't the only ones making this change as banks and businesses are also shifting to a more cashless system of working. More stores are implementing cashless payment systems, such as card-only self-checkout, and reducing or eliminating the option for paying with cash. However, this has sparked some outrage as there was an article published by an independent written by (Collins, 2022) this article was titled "Shops and cafes could be for people, not cash," and it describes not everyone is on board with this new cashless society since some people believe that financial institutions would gain power if there were no other way to pay for goods and services. According to (Clarke 2022) AIB is attempting to eliminate cash from its operations. This includes eliminating ATMs and closure of 70 of its physical branches to online. Reaction to this was negative because many were worried about how it would affect customers who are elderly or low-income because they rely more on cash than younger or wealthier generations do. Paul (2022) discusses how Some see a risk in moving toward a society where there is less use of physical currency, citing the possibility that technology may break down and, in that case, how payments would be handled.

However, going cashless offers many benefits as according to Pritchard (2022), this would simplify tasks like making international payments easier when visiting another country allows for cashless transactions. Instead, your mobile device manages everything Pritchard (2022). Payments made by card would

decrease the danger of physical theft or loss for an individual while making them more susceptible to online fraud. Cards are simple to cancel, and contactless payment systems have security features that suspend the card if fraudulent transactions are suspected.

Going cashless is more than simply practical. Both minting coins and printing currency are expensive (Pritchard, 2022). Currently, there are alternatives to the conventional fiat system of physical and digital money known as cryptocurrencies that have attracted a lot of interest in recent years (Donohue et al. 2020). Due to its separation from the conventional fiat system of money, this kind of Payment has gained enormous popularity with Companies like AMC, Microsoft, and Tesla Motors all accept Cryptocurrencies for selected products, and more businesses are starting to accept cryptocurrencies as a way of payment (Milk Road, 2023).

#### **2.4 Features benefits and benefits of cryptocurrency and Blockchain technology in a cashless society**

According to Forbes, a recently published article by (Hicks, 2023) detailed the various categories of decentralized cryptocurrency. (Hicks, 2023) categorizes them into four types: traditional cryptocurrencies, Utility Tokens, Stablecoins, and Security tokens. It is important to note that each of these categories possesses its own distinctive features. According to Kourmpetis, S & Gazis, A (2022) Traditional cryptocurrencies lack a backing and get their value on the idea that they would one day be utilized. An example is bitcoins. On the other hand, utility tokens have a specific purpose and can be used by other users to create new things. Examples of utility tokens include Bianance Coin, which is utilized to cover trading costs on the Bianance cryptocurrency exchange. According to Kourmpetis, S & Gazis, A (2022) More stability is provided by stablecoins since their value is connected to a valuable item, such as gold, silver, fiat money or other cryptocurrencies. These cryptocurrencies are mostly managed by private companies and can serve as a means of exchange because they can retain a constant stable value. However, Singh et al. (2023) states that stablecoins are counter to the idea of cryptocurrencies, which was to do away with the need for a central authority. It may result in a systemic relevance of relevant actors and a danger of monopolies due to the vast number of data collected by utilizing cryptocurrency, which is made worse by this. Security aspects like asset ownership are available with security tokens (Hicks, 2023).

The adoption of Cryptocurrency offers a few benefits which include:

**Decentralization-** It removes the monopoly of a currency and liberates money from government control. As some people believe the government agency can determine the value of a coin or a transaction, according to (N26, 2022) cryptocurrency advocates, “cryptocurrencies are a secure and safe way to freely control your money”.

**Investment-**Cryptocurrencies can be used as an investment that can yield gains. Bloomberg's article by Ossinger (2021) highlights the continuous rise in the value of cryptocurrency markets, which has surpassed \$2 trillion at one point. Bitcoin alone has a market cap of over \$540 billion and is held for its investment purposes with stable coins like Tether being used for more day-to-day transactions (CoinMarketCap, 2013).

**Transaction speed-** There are a few ways to transfer assets or money from one account to another extremely fast, like sending money to a family member abroad Gowda and Chakravorty(2021). Many transactions around the world typically finalize transactions in three to five days, with transactions made by wire transfer that can take up to 24 hours to complete. Transactions involving cryptocurrencies may be completed in a matter of minutes, which appeals to many as money can be received almost instantly Gowda and Chakravorty(2021).

**Cost efficient-** According to CB Insights (2022) Banks profit from payments, making them reluctant to lower fees. Cross-border transactions generated \$175B in payments revenues in 2020, but banks have little incentive to change. Cryptocurrencies offer the ability to be able to transfer money globally with the aid of cryptocurrencies, transaction costs may be very low or even nonexistent (CB Insights, 2022. Since it doesn't require third parties like VISA to authenticate transactions).

**Security and Safety-** According to Kourmpetis, S & Gazis, A (2022) Private key for your crypto wallet is the only way for someone to access your cryptocurrency. Cryptocurrencies cannot be retrieved if you lose or forget your key. To avoid cryptocurrency being hacked, it's best to store your cryptocurrency in your own wallet instead of keeping it in a centralized exchange that may have weak security measures.

**Transparency-** As stated in a publication an(2014) the technology of blockchain presents an unparalleled degree of transparency through its meticulous and precise record-keeping of all transactions. Despite the privacy features afforded by this technology, once authenticated by the network, all transactions on the platform become irreversible, preventing any form of modification, alteration, or deletion. To update a transaction, amendments must be made to each and every block in the system, rendering

manipulation virtually impossible an(2014). This level of automatic transparency ensures the integrity of the entire blockchain network an(2014). According to (Donohue et al.2020) it is a crucial component of the blockchain network as it builds trust with the network and user which is needed in a cashless society.

**Security-** Fabris(2022) states through greater use of digital technology and cashless transactions, the worldwide pandemic served as the catalyst for a surge in cyber dangers. According to Singh et al. (2023) popularity of blockchain technology is due to its ability to provide security, which contributes to ensuring the dependability and credibility of the technology reducing the risk of fraudulent activities. Because the blockchain is decentralized, it is difficult for hackers to take over its network. There was research done on the use of blockchain technology in several countries, including Russia, India, Japan, and the United States etc Singh et al. (2023). However, a portion of the financial industry thinks blockchain technology will have less of an influence on how we live our lives. However according to Fabris (2022) Before the pandemic outbreak, it was estimated that annual damage from cyberattacks might reach USD 6 trillion, or USD 16.4 billion per day, in 2021, or 1% of the global GDP. Comparing economic statistics between nations, cybercrime would rank third in terms of global economy, behind the US and China Fabris (2022). By 2025, it is anticipated that cybercrime would generate damages of up to USD 10.5 trillion year, far exceeding the devastation brought on by natural catastrophes and making it more profitable than the world's drug trade. Currently, some financial institutions are looking at ways to implement Blockchain Technology into their systems according to (Hornstein, 2023) The London Stock Exchange is exploring blockchain technology and has hired someone to lead their digital assets division. As well as (Hsbc.com, 2019) are using Blockchain technology With the Digital Vault, to access your private assets equity, debt, and real estate - in real-time without paper-based records. HSBC's innovation provides access to USD20 billion worth of assets on the blockchain for easy management.

**Smart Contract-** Raja Santhi and Muthuswamy, (2022) describe Smart contracts are algorithms that leverage the capabilities of blockchain technology to execute automatically upon the fulfillment of specific conditions. These contracts are frequently utilized to streamline the implementation of agreements, eliminating the need for intermediaries, and reducing the potential for delays. Additionally, they can be utilized to automate processes, allowing for the immediate execution of subsequent actions upon the fulfillment of predefined criteria. According to Singh et al. (2023) There is no cause for concern regarding any potential manipulation of information for personal benefit by any one participant, as there is no involvement of a third party, and all transactions are conducted through secure, encrypted

means. In addition, smart contracts may be used to automate procedures such as interest and dividend payments.

## **2.5 Economic Implications of Digital Finance on the world**

Research shows there is financial inclusion in the world as the (World Bank Group, 2018) research indicates that not everyone in the world has access to a bank account. There are an estimated 1.7 billion people who do not have access to a bank account. The ownership of a bank account is a step to reducing poverty as it allows a person to be able to send a receive money from anywhere in the (World Bank Group, 2018). This financial inclusion is more predominant in third-world countries where an individual faces social economic factors such as social class, the standard of living, income inequality, gender inequality, and lack of infrastructure (World Bank Group, 2018). Reports state that 72% of men have a bank account while 65% of women have an account this is a 7% difference in high-income economies. When it comes to developing economies, it indicates a 9% gap between men and women with this gap being unchanged since 2014. Reports by (World Bank Group, 2018) also state that adults in the top richest 60% of economies' households 74 percent possess an account and of those in the poorest 40% with only 61% of people possess an account which is a 13% gap (World Bank Group, 2018). According to (World Bank Group, 2018) Financial inclusion enables people to save for family necessities, take out loans to assist their businesses, or accumulate emergency funds. Access to financial services is a crucial first step in decreasing inequality and poverty. However, the report indicates that 1.1 billion people have internet and mobile phone connectivity however (World Bank Group 2022) Digital bank accounts have increased financial inclusion worldwide, with 71% of people in developing countries opening accounts due to the COVID-19. This surge also reduced gender inequality from 9% to 6% with the use of fintech (World Bank Group 2022). According to Fabris (2022) This result is not surprising given that these countries' traditional financial sectors are undeveloped and borrowing costs are higher than in wealthier countries. Since the pandemic lasted for a long time, cash reserves deplete, thus it is reasonable to assume that demand for digital finance would increase.

## **2.6 Adoption and User Acceptance of Cryptocurrencies and Blockchain Technology**

Research done by Ali and Abdullah (2023) Based on the research findings, it appears that factors such as performance expectancy, effort expectancy, social influence, security, and awareness all contribute to a greater likelihood of individuals using cryptocurrency. Additionally, the level of financial literacy one possesses can moderate the relationship between certain factors, such as performance expectancy,

security, social influence, and behavioral intention Ali and Abdullah (2023). These findings highlight the importance of understanding the numerous factors that influence the decision to use cryptocurrency and the potential role that education and awareness may play in shaping these attitudes and behaviors Ali and Abdullah (2023). In Ireland, the demographic of cryptocurrency is majority men as according to statistics by (Shevlin, 2023) 44% of men and only 26% of women are holding some sort of investments with the typical age being 18-34 years old holding cryptocurrency with a small percentage being over 55 years old in Ireland this highlights the demographic who invest into the currency. There was a study conducted by (Drobysheva, Gagarina and Nestik, 2021) which set out to find out the attitude of cryptocurrency on young people. The study found out that many young people understand the huge development of electronic money technologies but were not confident in the future of cryptocurrency (Drobysheva, Gagarina and Nestik, 2021). Only 25% of participants believed that cryptocurrency would replace traditional money within 10 years, and 28% believed that most stores would accept Bitcoin within 5 years (Drobysheva, Gagarina and Nestik, 2021). The majority disagreed with these statements. The study also revealed ambivalence among respondents regarding cryptocurrency, with similar percentages of young people expressing anxiety about its potential use by criminal groups and those who do not share these fears. The study also found the willingness to use cryptocurrency is limited by the availability of funds for its purchase (Drobysheva, Gagarina and Nestik, 2021).

## **2.7 Analysis of Limitations and Barriers preventing the Adoption of Cryptocurrency and blockchain technology.**

Cryptocurrency and Blockchain Technology could potentially transform the exchange of goods and services. However certain limitations raise concerns adopted as a legal tender and effectiveness in a cashless society.

**Trust**-There was a study done by (Edelman, 2020) where they surveyed more than 34,000 people in 28 different countries both developed and developing countries. The study result shows that per-to-per transactions received a score of 47 and Cryptocurrency received a score of 48 this compared to Financial services like asset management and banks with a score of 57 shows that more people trust financial institutes more than Digital assets although this figure would put Cryptocurrency and per-per transactions in the Distrusted it shows that there was a significant increase in both with 11 points of trust added to cryptocurrency and 1 added to per-to per transactions with results showing a decrease in financial services

by 1 (Edelman, 2020). Although there is an increase in trust, more is needed among people, and a solution for this education of Cryptocurrency and blockchain technology.

**Scalability-** According to (Rana et al. 2023) and Singh et al. (2023) both claims scalability as one of the few unresolved problems of the blockchain systems can handle large transaction volumes due to the scalability trilemma. This trilemma refers to the challenges that blockchain platforms, especially those on the public blockchains face when trying to balance scalability, decentralization, and security. While blockchains work well for a small number of users, they struggle when faced with mass integration network congestion that results in slower transaction speeds and higher costs. According to Economist (R.W. De Meijer, 2021) Ethereum and Bitcoin, the two most widely used blockchain platforms, are currently struggling to handle the high number of users on their networks as transaction volumes rise.

**Lack of standardization-** According to (CoinMarketCap, 2013) there are a total of 25,939 cryptocurrencies compared with 180 currencies in the world. This highlights the critical need for standards to ensure smooth transactions and a more efficient market, according to (Howarth, 2021) there are only really 8,832 active cryptocurrencies with the top 20 currencies making up to 90% of the total market (Mileva, 2022).

**Regulation-** The negative reputation of cryptocurrency as a medium of exchange is worsened by news of pumps and dumps and collapses of cryptocurrencies and firms like FTX which lost an estimated of 8 billion of user funds due to fraud (Robertson, 2022). According to Singh et al. (2023) Government regulations, exorbitant expert fees, and a lack of integrity combine to make it difficult for blockchain technology to be adopted in a variety of corporate contexts. Singh et al. (2023) states the adoption of blockchain is challenging because many countries have not yet accepted Bitcoin as a legal tender. Bitcoin's use has significantly tarnished blockchain's reputation, which has a detrimental effect on blockchain's credibility. Governments worldwide are now regulating cryptocurrency with the KYC process, which verifies digital identity, and ID document verification, which has been implemented to ensure secure and fraudulent transactions between crypto exchanges and their clients Finance Magnates (2023). In a report by the (European Commission, 2023) the report shows different regulations that will assess and monitor potential risks and illegal activities of the technology. A few regulations include the 27-country bloc, obtaining a license is mandatory for firms issuing, trading, and safeguarding crypto assets, tokenized assets, and stablecoins (European Commission, 2023). Additionally, starting January 2026, service providers must obtain the name of senders and beneficiaries in crypto assets, regardless of the amount

being transferred, to combat tax evasion and money laundering (European Commission, 2023). Crypto firms need for regulation global norms for cross-border activity to ensure regulatory certainty. Currently cryptocurrency is banned in a few countries which include China, Ghana, and Vietnam. According to (Centralbank.ie, 2014) The Irish government is working on improving regulations for certain types of crypto assets, (2014) with examples of stablecoins, and utility tokens. This aims to bring issuers into the regulatory framework for greater safety and stability in the Irish crypto industry.

## **2.8 Future of Cryptocurrency and Blockchain Technology**

Blockchain technology can revolutionize industries from finance to healthcare with its ability to secure information in an immutable and decentralized manner. However, scalability and regulatory hurdles need to be addressed before widespread adoption. According to Research firm (Gartner, 2018) Blockchain technology could be used to create more transparent supply chains, streamline cross-border payments, or even enable secure voting systems. It's no wonder that a research firm (Gartner, 2018) predicts that the business value added by blockchain will increase to over \$360 billion by 2026 and more than \$3.1 trillion by 2030.

Cryptocurrencies have rapidly evolved from mere digital fad to trillion-dollar technologies, they have the potential to destabilize the global financial system (Siripurapu and Berman, 2021). According to (Feingold and World Economic Forum, 2023) Cryptocurrency helped in situations like those faced by Ukrainians fleeing the Russian invasion as a store of value, is a notable example of its use. It is important to note that the IMF (International Monetary Fund) International Monetary Fund (2023) has advised against adopting cryptocurrency as a main national currency due to its price volatility, lack of consumer protections, and potential risks to macro-financial stability. However, the IMF International Monetary Fund (2023) acknowledges that adoption may occur more rapidly in countries where cryptocurrency is an improvement on the current financial system, According to Kourmpetis, S & Gazis, A (2022) the idea of bitcoin has been proposed as a substitute for financial institutions. The fact that most Bitcoin transactions now take place on stock exchanges and therefore financial institutions, where Bitcoin and other cryptocurrencies may be traded against each other and traditional fiat currency, obviously contradicts this Kourmpetis, S & Gazis, A (2022). It is essential to address these concerns of Scalability trust and Regulation before considering widespread adoption. However according to a recent report by Quinn (2022), despite the various challenges that cryptocurrencies El Salvador has become the first country to adopt a



cryptocurrency as legal tender. Gent (2022) reports that this was made possible through new legislation, which also included the inclusion of Bitcoin on 7 September. Fabris (2022) states that Covid-19 has served to hasten the already-current trend of society's transition away from the currency. The habits formed during the pandemic will contribute to a further decline in cash transactions, even if it is unrealistic to anticipate a cashless society to materialize very soon. Fabris (2022) states a move in that direction has been made by central bank digital currencies, which have been announced in response to the rising acceptance of decentralized cryptocurrencies by financial institutions. According to (Urquhart, 2022) Financial institutions want to create their own digital currencies that make use of their own blockchain. To create regulated, governmental-issued electronic money, banks are now working to build CBDCs (Central bank digital currencies). As pure "peer-to-peer" electronic money, most cryptocurrencies, like Bitcoin, are decentralized assets (Quinn, 2021), but CBDCs will be managed by central banks like the Bank of England, the ECB, and the FED. CBDCs are being designed to replace national currencies and usher in a cashless world, according to Urquhart (2022). Indeed, a recent Bank for International Settlements survey found that 86% of central banks are actively integrating CBDCs, 60% are testing them, and 14% are implementing pilot programs (Boar, 2021).

## **Chapter 3**

### **3.1 Methodology**

This will explore to discuss and evaluate the methodological instruments used the shift towards a cashless society and with the adoption of cryptocurrency and use of blockchain technology? The methodology chapter will discuss what methods were adopted throughout this study and why these methods were sought to be appropriate for this specific study. The research will help prove or disprove the three hypotheses based on literature in chapter 2 to explore relationships within the research topic.

1. H1.A shift away from the use of cash in society is due to young people and preferences with the use of technology, as well as a rising acceptance and preference for digital payment methods. Due to the article in section 2 Flynn (2020) using data compiled by AIB on the use of contactless payment methods the data shows that as the generation gets older the use of cashless payments decreases this provides the philosophical assumption that the shift towards a cashless society is

correlated due to younger people preference for technology and as the generations get older there is less reliance on technology.

2. H2. The adoption of Blockchain is currently hampered by issues with scalability. Due to the blockchain supporting loads of cryptocurrency transaction and use of the literature provided in chapter 2 by (Rana et al. 2023) and Singh et al. (2023) it can be indicating that as the blockchain increases in use it will starts to decrease its ability to be able scale. This hypothesis will test if the blockchain ability to be scale affects its widespread adoption.
3. H3. The adoption and acceptability and trust of cryptocurrencies are heavily influenced by governmental policies and legal frameworks. This hypothesis hopes to prove that regulation and the adoption of cryptocurrency trust is tied down to regulation hampering its adoption.

The data analysis will help determine prove or disproving hypotheses with literature in chapter 2. The research methodology will revolve on the positivist paradigm to explore the potential for a cashless society, the view of cryptocurrencies adoption, and the usage of blockchain technology.

### **3.2 Research Design**

The form of research that will be used in this research is qualitative research. The collection of data through this method aims to provide researchers with a more profound understanding of the perspectives held by participants regarding A cashless society, cryptocurrency, and Blockchain Technology. The main objective of this study is to acquire a better understanding of participants' knowledge and experience regarding the statement "Is there a shifting towards a more cashless society and can cryptocurrency and Blockchain technology be adopted" and to help prove the hypotheses of the study. There are many types of qualitative research example interviews, focus groups, observations, surveys, and case study research Compared to surveys that quantitative research provides, Qualitative approaches are more appropriate for this study issue. As the data you need to support the broad aspect are specific of this research are provided by qualitative data. Most of the time, people who fill out surveys view them as a hassle. As a result, participants will tend to scan quickly through the questions quickly and check out boxes blindly. Participants in surveys are not given the same opportunity to express their thoughts in depth. Participants not completing the survey completely or answering a question differently than it was intended are two

further drawbacks of using quantitative approaches. Interviews are the chosen method of this study and can assist in avoiding misinterpretation and guaranteeing accurate understanding of the data collected. Follow-up questions can also be asked to obtain the most appropriate response from the participants. The qualitative research which will be done by means of interviews aims to discover “Is there a shift towards a cashless society and will Cryptocurrency and blockchain technology be a viable to be used” by gaining knowledge from industry leading professionals and identifying themes which aim to. Common themes and opinions will be extracted from the interviews to gauge the effect of Cryptocurrency and blockchain technology and the effect a cashless society will have on the Irish banking industry.

### **3.3 Research Philosophy:**

The philosophical approach for this study that will be taken is interpretivism the reasoning for this approach to research known as interpretivism gives the examination of people's meanings, perspectives, and experiences to figure out the shift towards a cashless society, cryptocurrency, and blockchain technology above the analysis of quantitative facts Villiers et al. (2022). This can allow the researchers to better understand social interactions and the many aspects that impact them by using this qualitative research methodology Villiers et al. (2022). The goal of this method is to investigate and understand the meaning that participants assign to their interactions and acts while acknowledging the subjective character of human experience based on the themes of the research. With the qualitative research method that will be used for this research paper is Interviews. The interpretivist research perspective understands the significance of considering the context and social structures surrounding human experiences while investigating the subject of a cashless society, Cryptocurrency, and the blockchain. Participants get the chance to contribute their own experiences and viewpoints during interviews, providing a wealth of qualitative information that can reveal intricate and nuanced understandings of the subject. Interviews provide an unrestricted and flexible setting for the examination of individual experiences, decision-making techniques, and cultural factors that affect perceptions and actions Villiers et al. (2022). Interviews encourages trust between the researcher and participant, resulting in increased involvement and the potential to glean valuable data that would not be obtained using other techniques.

### **3.5 Sampling**

When selecting participants for a study, purposive sampling can be a useful technique. This involves selecting individuals who fit specific criteria or characteristics relevant to the research question, which can help ensure that the data collected is targeted and relevant. It is important to carefully consider the criteria for selection to avoid any biases or limitations in the sampling process Palinkas et al. (2016). This approach helps to save time and money Palinkas et al. (2016). The criteria for this study is very specific as the demographic for interviews is focused on employees in the Financial Sector one participant working in the banking sector with the other working in a cryptocurrency exchange. The second criteria were the size of the company which must be a large with a minimum of 500 employees and an annual revenue of 50 million euro for the preferred bank Ireland or AIB. AIB will be the primary choice to ask questions to find out if they are going to move toward a more cashless society and to see if there is any chance of a centralized Cryptocurrency and how they might use Blockchain based on an article which highlights that AIB attempted to close 70 of its branches. For The preferred Cryptocurrency exchanges were Crypto.com and Bianance. The Cryptocurrency business that will be interviewed to discuss the topic of cryptocurrency and the blockchain might play a significant role in a society without cash. All participants will be required to have extensive experience of 2 plus years in their respected field to give knowledgeable insight with the geographical location preferred being Ireland.

Interviewee	Role
1	Head Of Compliance
2	Cash Operations
3	Central Securities
4	Financial Control

### 3.6 Recruitment process

The recruitment process duration took a total of two weeks a total of 60 participants were message on LinkedIn by connecting with participants and sending them a 200-character message. Out of the 60 participants, only 14 participants responded, and they were informed about the research study and objectives with a total of 8 participants agreeing to participate after chatting with the participants and evaluating their experience. A total of 4 participants being interviewed 3 from AIB and 1 participant of Crypto.com. Employees were chosen based on their experience, knowledge, and availability rather than factors like age and gender.

### **3.7 Interview Design**

The chosen method used is semi-structured interview as the main method of data collection. This method allows for more flexibility as it allows for more qualitative collection while also getting insight into the participants, points of view, and experience of the research topic (McCombes, 2019). Conducting a semi-structured interviews allows for a set structure of questions that serve as the bases for the interview conversation with the participants. The questions also allow for the flexibility to be a jumping point to expand and explore for a more open end in the research area DeJonckheere & Vaughn (2019). This method is really good and highly effective as it ensures that, depending on the insights of the participants, deeper understanding can be explored DeJonckheere & Vaughn (2019). By accurately capturing the nuances, complexity, and unique variants within the study topic, this technique produces rich, in-depth data. In using an interpretivist research philosophy for this work, and the use of semi-structured interviews is consistent with that philosophy. The interview will run between 10-20 minutes and will be conducted by employees from AIB and an employee from Crypto.com all questions can be seen in the appendix. There are a total of 12 questions that will be asked to the AIB employee and a total of 6 questions asked to the Crypto.com employee. Both participants received separate set of questions that were formulated based on the participant's respective field as well as the research objectives and existing literature to get knowledge insight into the study's main topic of A cashless society and cryptocurrency and blockchain technology. Crypto.com employee was asked questions based on whether cryptocurrency and blockchain technology can be adopted and by asking questions related to the challenges, benefits, and potential of Cryptocurrency and questions based on scalability of the blockchain and regulation of cryptocurrency to answer the 2 hypotheses. AIB employee was asked questions based on if AIB is moving to a more cashless way of banking, the demographic of people that are still using cash, the correlation age digital payment methods to answer the hypothesis as well as, whether people are still relying on cash and if they plan to use Cryptocurrency and Blockchain technology. Overall, the qualitative aspect will be used to gain insight into if there is a shift towards a cashless society and will cryptocurrency be a feasible currency and how blockchain technology will be used.

### **3.8 Interview Analysis**

There was a total of 4 interviews conducted using different questions with the first interview conducted with the Crypto.com employee which was on the 14<sup>th</sup> of June 2023 this interview was conducted through google meetings and the duration of the interview lasted a total of 20 minutes. The second, third and

fourth Interview being conducted on the 22nd of June up to the 30 of June with the employees of AIB also all interview was conducted via Google meeting and the total duration of the interview was 10-20 minutes long with all participants. Some participants provided written answers to most of the questions prior to the interview however the interview was still conducted. A consent form was sent prior to all participants before the interview and to respect participants of not wanting to be identified their identity will be kept anonymous. Interviews will be transcribed the interviews for analysis, coded and sorted them into themes, and arrived at a more accurate result. The Data from these Interviews will be used to back up the research question to determine is “The shift towards a cashless society and with the adoption of cryptocurrency and use of the blockchain technology? “And also serve support the three Hypothesis It is crucial to establish a structured approach to conducting interviews and thoroughly evaluate and verify the gathered information, despite it being less formal than some quantitative methods. Hitchcock and Hughes (1995) describe two main approaches for analyzing interview data: becoming familiar with the data and using analytical categories to assign significance to it. Proper analysis of interview data is vital to ensure it is not misinterpreted, as interviews serve as a primary source of information.

### **3.9 Limitations**

Limitations of this process was there no access to LinkedIn Premium which gives access to Sales Navigator which would have cut the whole Recruitment process in half as the free version of LinkedIn provides limited features that made the process much more difficult like not being able to access AIB or Crypto.com employee’s list. A lot of time was wasted having to click on the recommended section to find the right participants with the right knowledge and experience. This in turn decreased the sample size as more participants with relevant knowledge and experience could have been interviewed another limitation is the use of qualitative methods as interviews are time consuming to plan analysis compared to surveys which can be done within how the research provide by interviews is rich in information that quantitative methods.

### **3.10 Ethical Considerations**

All Interviews were recorded, and all participants would have been sent a consent form to allow all the data they have provided to be used, participants all would receive self-explanatory instructions beforehand so the data gathered can be used in this research paper. All Questions were reviewed by NCI and will also be sent to the participants beforehand. During the interviews, Appropriate ethical behaviour was ensured by adhering to the rules provided by NCI ethics. All consent forms, recordings of

interviews, and additional data provided by participants will be stored for the time that is required on a password-protected file and deleted accordingly.

## **Chapter 4**

### **4.1 Analyse and Findings**

The studies analyse and findings regarding the research question will be presented and illustrated in three sections: the shift towards a cashless society, the adoption of cryptocurrency, and the adoption and use of blockchain technology. The qualitative aspect of the research involved interviewing professionals from some of Ireland's most prominent traditional banking institutions to gain a deeper understanding of the Irish banking industry. This qualitative approach aims to provide more conclusive results that will accurately prove or disprove the hypotheses. Four banking professionals with experience in the financial industry in Ireland were interviewed, and a thematic analysis approach was used to code and analyze the data from these interviews. The results will now be discussed and analyzed in relation to the research question and hypotheses that shape this research.

### **4.2 Move to a Cashless Society**

This theme encompasses the shift towards a more Cashless society. All 4 interviewees agreed with the statement with 3 of the employees being interviewed from AIB. Interviewees 2 role as a cash operation, Interviewee 3 role in Finance and Accounting for AIB and Interviewee 4 working on Securities in AIB they all had no doubt that Ireland is moving toward a cashless society. All interviewees agreed how AIB was already moving towards a cashless society, with the Covid-19 pandemic speeding up digital adoption as customers did not have any other option as cash could be a carrier of the Virus this correlates with Fabris

(2022) as discussed in the literature review. Interviewee 4 mentioned how with technology advancing it makes more sense to go digital as the preference with younger people who use technology as they switch toward a digital way of banking as he stated "It is just a natural switch that has been happening" with Interviewee 2 adding that the use of Fintech and google pay has become more popular with young people this correlates with Flynn (2020) in chapter 2. This in terms supports H1 "A shift away from the use of cash in society is due to young people and preferences with the use of technology, as well as a rising acceptance and preference for digital payment methods. All interviewees agreed with this with Interviewee 4 discussing his experience working in a Bank of Ireland another leading bank in Ireland during the covid-19 pandemic that the Younger generation (Teenagers/ Young Adults/) of people were going into the branch to help convert the Older generation (middle age/Elderly) switch to "Online Banking, getting everything set up online and getting statements online". An interesting thing to note was interviewee 4 mentioned how the older generation preferred the bank not because it was more convenient and what they knew but for social interaction aspect which was interesting to hear. As interviewee 4 said "Our generation definitely won't be going to a bank for social connection" and as the older generation passes away this shift will increase hugely. All Interviewees mentioned how AIB wants to reduce the usage of Cash and a step towards this was AIB wanted to close 70 of their branches review. However, the reason it was not done was due to the backlash and AIB being government owned which is consistent with (Clarke 2022) discussed in chapter 2, However, interviewee 4 adds to this saying AIB will try to do it again in the future. All interviewees discussed how AIB is trying to reduce the usage for a number of reasons Interviewee 2 discussed how AIB are always promoting their customers to go digital, not just for easier use but as a safe way in handling their cash with Interviewee 4 adding to this by 4 explaining how moving towards a digital way of banking is cheaper as cash is more costly as cash cost banks money as a bank teller needs to be hired and cash needs to be stored which consistent with (Pritchard, 2022) benefits on going cashless. Interviewee 2 mentioned how Fintech has no overhead and their business model is better and sustainable. Interviewee 2 mentioned Having multiple social media outlets advertising the digitalization of how to bank and easier methods to transfer your money to either a friend, landlord etc. With all interviewees agreeing how AIB is trying to make banking online much easier and convenient even for everyone, even the elderly so they don't have to go to their local banks to pay bills or transfer to a family member who may be on holiday. However, Interviewee 2 brought up the term "cash is king" is still in the atmosphere as customers still go to the branches to withdraw copious amounts of cash to pay off contractors doing work on family homes. To add to this interviewee 2, explain the demographic that rely on cash being small businesses and people from the countryside prefer cash to digital payments. However, Interviewee 3 discussed how



AIB is doing its best by offering digital support channels and they offer promotions like cashback when online shopping and rewards for using online services. Interviewee 2 offers a few statistics stating “Over the last 5 years there has been a 36% decline in cash withdraws from ATMs and 50% in cheque usage there are 2.9 million daily interactions in Ireland, and this compares to only 35,000 branch visits which is consistent with (Centralbank.ie, 2022) in chapter 2.

### **4.3 Adoption of Cryptocurrency**

This will pronominally focus on interviewee 1 who has 6 plus years of experience in this field with his current role as head of compliance for crypto.com. All Interviewees were questioned on the topic of whether cryptocurrency can be adopted as a currency all employees disagreed which is consistent with (Drobysheva, Gagarina and Nestik, 2021) study. Interviewee 1 reasoning was that we still need traditional finance for the structure as crypto exchanges, Bianance and Coinbase need their own payment accounts to handle fiat conversion to pay their employees and pay for marketing. Interviewee 1 also stated “He doesn’t feel comfortable getting paid in Bitcoin” and that we still need traditional finance. Interviewee 4 adds to this stating “he doesn’t think as a currency cryptocurrency doesn’t quite even come close to fiat money” and that cryptocurrency is more seen as an investment this is consistent with Ossinger (2021) and According to Kourmpetis, S & Gazis, A (2022) in chapter 2, and he will not want to make purchases in that way. When asked about CBDC (Central Bank Digital Currencies) all AIB employees said they haven’t heard if AIB has plans to implement CBDC However Interviewee 4 did add that currently the European Central bank are developing CBCD this is consistent with Fabris (2022) and Boar (2021) who discussed this in chapter. However, all interviewees weren’t sure if AIB is implementing CBCD. Interviewee 3 mentioned that in order to purchase cryptocurrency you need to be partnered with a bank and AIB is crypto-friendly, they offer support through partnerships with Bianance and Etoro. Major concern with Interviewees 4 2 and 1 as they all agreed that more regulation is needed with interviewee 1 discussing that cryptocurrency is going to have regulation just like gambling as there is risk and reward. Helps to support Hypothesis 3 “The adoption and acceptability and trust of cryptocurrencies are heavily influenced by governmental policies and legal frameworks.” Which is consistent with Singh et al. (2023) discussed in the literature review. However, interviewee 3 disagreed and said there is no need for more regulation as it makes it harder to purchase it and it loses its initial use of being decentralized. However, Interviewee 1 mentioned how cryptocurrency will be transparent as it becomes more regulated, informing the public about what a cryptocurrency token is, what its value is, how it is stable, and how it is not a scam. He also added how

institutions that offer custodial services and transfer services for cryptocurrency assets will need to have strong governance and act with honesty and integrity referring to FTX 8 billion fraud discussed by Robertson (2022) in the literature review. He also states there needs to be one cryptocurrency or the exchange of cryptocurrencies needs to be done through a robust regulatory framework where everyone knows the rules, risks, and rewards that come with buying and investing in cryptocurrencies as consumers are still interested in cryptocurrency assets and it should be regulated with consumer protection in mind. Interviewee 3 mentioned how cryptocurrency was used in AIB for criminal activity, but with KYC laws you must identify when purchasing and withdrawing cryptocurrency, this is consistent with Finance Magnates (2023). When asked about the stability of a currency's value Interviewee 1 said there is with Stablecoins however they will need liquidity to sustain their value, and cryptocurrencies will be compelled by law to hold reserves to do so. Interviewee 4 discussed how although there might be mistrust due to the financial crash you are still insured up to 100k guaranteed. However, Interviewee 1 discussed that cryptocurrency will be widely used and compared it to start-up internet. He discussed the true value of cryptocurrency is its ability to provide instantaneous transactions due to the world becoming more globalized. As crypto offer the benefits of lower fees, faster transactions and offers a way of investment which was discussed in chapter 2 discussed by Gowda and Chakravorty (2021) and CB Insights (2022) he discussed how cryptocurrency can offer an alternative solution to traditional banking and a more technologically advanced way of money management as it is transparent.

#### **4.4 Adoption and use of Blockchain Technology**

When asked about the adoption of Blockchain technology Interviewee agreed with interviewee 1 stating that Blockchain transactions are instantaneous and better than traditional banking institutes as you can send money to anyone just like that while traditional methods can take 2 hours to send money abroad and swift payments can take a total of 3 days this correlates with Gowda and Chakravorty (2021) discussed in chapter. He discusses how it can change the world of finance with instantaneous border transactions as it is instantaneous, and you can send money anytime stating that you cannot send money on the weekends to the USA. When asked about the Environmental concerns Interviewee discussed the POW (Proof of Work) mechanisms and there has recently been develops with Ethereum blockchain going from POW to POS (Prove of Sale which cut down the energy carbon usage by 99% with regulation from MICA (Markets in Crypto Assets) banning POW mechanism companies are going to need

to assess their environmental impact going forward and this issue should be dealt with as there is more environmentally friendly mechanism. When asked about the scalability of the blockchain interview 1 stated that the blockchain is inherently scalability and efficient He said, “There is growth in a lot of Blockchain businesses and the blockchain is growing and should be able to handle this moving forward as more people begin to use cryptocurrencies”. This disagreed H2 “The adoption of Blockchain is currently hampered by issues with scalability” and is not consistent with (R.W. De Meijer, 2021) When asked about the adoption of blockchain technology in AIB Interviewee 2,3,4 said they didn’t know much about it however interviewee 4 added that AIB has been working with blockchain technology in order to monitor and store the qualifications of their employees. However, he did mention when it comes to the financial side of thing with blockchain offering security he said this was likely due to the implementation of blockchain to related to transactions could be hindered due to regulations with (European Banking Authority) EBA, (Central Banking Ireland) CBI regulations and it would have to comply with KYC and comply with a range of anti-laundering regulations.

## **Chapters 5**

### **Discussions 5.1**

#### **Interpretation & Implications 5.2**

The finding showed that age was a strong factor in this transition towards a cashless society it was interesting to discover that the older generation doesn’t only go to the bank just because it is convenient

but because there is a social aspect towards it this is likely due to the older generations low reliance on technology and more on social engagement this idea is supported by (Clarke 2022) who was mentioned in chapter 2 and discussed the impact of going cashless would have a negative effect on customers who are elderly. This differs from the younger generations who have a strong reliance on technology this indicates that as the older generations passes the shift towards a cashless society will only increase it would indicate a clear trend toward a cashless society, with a significant increase in digital payment transactions and a decrease in cash usage as well as a rising acceptance and preference for digital payment methods. This aligns with the growing reliance on electronic payment methods like apple pay and google pay by the younger generations for reasons as well as a strong push for mobile wallets and online banking, which offer convenience and accessibility to consumers which is supported by Flynn (2020) in chapter 2 who statistic show the usage of these cashless methods and age having e a strong correlation this helps to proves H1” A shift away from the use of cash in society is due young people and preferences with the use of technology, as well as a rising acceptance and preference for digital payment methods.

However, Covid-19 proved to be a big accelerate in this transition towards a cashless society however the findings indicate that the transition towards a cashless society was already in motion with covid-19 only speeding up this process due to cash being able to spread the virus this enabled huge technological advancements, changing consumer preferences from cash to more contactless, which was a push for greater efficiency in financial transactions with the pandemic which can be supported in chapter 2 with (Centralbank.ie, 2022) providing statics showing there was already a decline in a cash usage and this was accelerated with the pandemic. The finding also indicates the arrival of fintech proves to be a sustainable and attractive business model as banks moving online helps them to be able to save money as physical branches cost money and if everything can be done online it would be a good strategic move from the banks. However, there is still a reliance on cash by some as the term “cash is king” is still alive and this is due to fewer technological advancements in some areas like the countryside or the ability to not be able to afford the supporting technology with small businesses. When it comes to the ability to utilize cryptocurrency as a currency to replace fiat currency the finding and literature both support the fact the use of traditional banks is still prevalent, which idea that Cryptocurrency would be a substitute and is better utilized as an investment and store of value or an alternative, preferred choice as it provides the benefits of lower fees, faster transactions rather than a currency which is support by literature in section as Kourmpetis, S & Gazis, A (2022) discusses how cryptocurrencies can be traded on the stock exchange. The findings indicate the bad stigma of cryptocurrency and its volatility and bad history with criminal activity is supported by literature in section two by (Robertson, 2022) which discusses pumps and dumps

and recently the FTX 8 billion fraud on its customers which has made people lose trust in the currency with a call for regulation this is supported in section 2 supported by (European Commission, 2023) report which discusses different regulations that will assess. This could support H2 “The adoption and acceptability and trust of cryptocurrencies are heavily influenced by governmental policies and legal frameworks.” By the fact that cryptocurrencies need heavy regulation in order to get people’s trust again or even be considered a sustainable currency as current fiat currency is governance by the governments and central banks and this offers protection of up to a certain amount. However, the adoption of the blockchain is positive with blockchain technology finding stating the ability of being able to make instantaneous transactions, secure and store information better than the technology that is utilized by traditional banks this is supported by. In the findings, the adoption of blockchain technology in the blockchain to secure transactions was due to regulation however the ability for it to store and secure information correlates with the literature in chapter 2 as Hsbc.com (2019) are using Blockchain technology private assets to secure equity, debt, and real estate - in real-time without paper-based records. However, it was interesting to find out when discussing, the scalability issue discussed in the literature in section 2 differs from the finding it states the blockchain is very scalable this was interesting as existing literature supported by (Rana et al. 2023) and Singh et al. (2023) both state that blockchain technology has limited scalability this highlights the relevance of my hypothesis 3 The adoption of Blockchain is currently hampered by issues with scalability however further research needs to be done to prove or disprove my Hypothesis.

### **Implications 5.3**

The implications of the adoption of Blockchain being hampered by scalability is still yet to be proven or disproved as literature supported by (Rana et al. 2023) and Singh et al. (2023) in chapter 2 prove this however the finding disapprove this hypothesis if the finding are true this would implicate that the blockchain technology can be adopted on a widespread level not just solve scalability issue for cryptocurrency (R.W. De Meijer, 2021) but would allow the blockchain to secure and transact faster as literature in chapter 2 support that its affected by this issue. However, this will allow adoption and integration in governmental voting system to reduce voting fraud by handling and securing the information free from manipulation and several other sectors Jafri&Singh(2022). There is also, a massive impact on the financial industry for banks on a global scale as the blockchain will be able to handle large amount of activity to start rlying to storing information just like (Hsbc.com, 2019) in chapter two however further research is needed to prove or disprove this.

#### **Limitations 5.4**

The information provided may not have been entirely accurate as interviewees may have had provided opinionated answers rather than factual answers and bias when conducting this study as although participants would have had knowledge about the adoption of cryptocurrencies and the blockchain certain bias could have influenced participants' answers when conducting the interviews as some participants could have been very into cryptocurrency or just have a dislike into cryptocurrency another limitation is the reliance on the available knowledge as cryptocurrency news is just as volatile the new information as it always updating about factors like regulation which have changed the whole could have had an impact on the findings of this study. The finale limitation of not being able to conduct interviews with more individuals in the cryptocurrency and blockchain space due to no response could have given more insight into the study findings and could have provided more information based on the scalability aspect of the blockchain a way to combat this is to potential interview various cryptocurrency and blockchain technology companies as oppose to one company as there is limited number of employees who can be contacted in a single company.

#### **Recommended 5.5**

The limitations provide a basis for future recommendations within this line of research. For future studies, this research should conduct research on a larger sample size of Banks and cryptocurrency and blockchain exchanges rather than a specific sample. The research seeks to answer the question the shift towards a cashless society and the adoptions of cryptocurrency and use of Blockchain technology Additionally, doing quantitative based surveys would have provided additionally information to support the findings as individuals in the financial sector are typically busy and may not have had time to conduct a 10-20 minute interview as when trying to schedule interviews a recurring response from the individuals was that they did have time to conduct an interview providing a quick survey could provide additional information of this research, with the same set of questions which gives a direct comparison between the basis of the study.

## Conclusion 5.6

To conclude this research the research question of the shift towards a cashless society with the adoption of cryptocurrency and use of blockchain technology? examine the question was broken into three themes the shift to a cashless society, the adoption of cryptocurrency, and the use of blockchain technology was supported by utilizing literature, such as books, articles, and journals etc. Supported by qualitative research. Research proves the shift towards a cashless society has proven to be positive. Ireland adopts the use of contactless payments and digital payments as it offers convenience and a safer way of making a payment. A reasonable understanding of this question is shown through examining the current framework of the banking sector. Through societal attitudes we can attain a conclusion on this area that age had a strong correlation towards the shift to a cashless society with Covid-19 being the accelerator. We can give the idea that in a few years Ireland will completely be cashless, however some people still believe in the term cash is king. The ability to change the banking industry through technology and no cash reliance. Banks such as AIB are pushing hard for this transition with huge push for online banking during the Covid-19 pandemic as this would make banking easier for customer. The push towards a cashless society only serves to provide a positive user experience by mixing banking and technology together to offer a wide range of feature However, the adoption of cryptocurrency as a currency to replace fiat money in this move doesn't seem positive as volatility, regulation and trust seem to be a big factor in its adoption, however this doesn't mean cryptocurrency can't have a wider use in the world currently cryptocurrency can serve to be an alternative way to decrease financial inclusion just like Fintech in the world in countries that don't have good traditional banking services and infrastructure, however cryptocurrency can provide infrastructure in the shift towards cashless society to traditional banking with developments CDBC to provide the positive benefits of cryptocurrencies. The blockchain adoption of the blockchain seems to be positive with banks utilizing it to be able to store essential data provided in the findings and literature review. The use of the blockchain technology doesn't only need to stop in the financial sector but can serve a greater use in being able to be use in elections to prevent voting fraud to increase transparency the technology Proves to have a greater use than just transacting cryptocurrencies. However, the H2 of scalability is unproved as the findings and literature both take different stances on the matter, which gives the notion for further research into this topic. However, to conclude and answer the research question of the moving towards a cashless society with the adoption of cryptocurrency and use of the blockchain technology?" This research proves that cryptocurrency adoption is not postive as a currency however blockchain can serve to improve many industries in this transition towards a cashless society.

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