Factors Influencing Cryptocurrency Adoption in Georgia

Azer Dilanchiev[1]

International Black Sea University, Georgia

Teona Chikvaidze[2]

Master Student, International Black Sea University, Georgia

Metin Mercan[3]

International Black Sea University, Georgia

Abstract

Georgia is top of the list due to its tax restrictions on cryptocurrency mining activities. Furthermore, the overall costs of running a mining operation are substantially lower in Georgia. as Georgia takes place as the third biggest mining country in the world. The goal of this paper is to fill a deficiency in the existing literature that examines the present level of cryptocurrency acceptance, and adoption-influencing factors, offering an in-depth interpretation of these aspects and outlining certain problems associated with cryptocurrency adoption in Georgia.

This study employs a quantitative approach, a total of 175 people did take part in the poll (out of 200 questionnaire respondents). The survey was held in a hybrid manner, with the questionnaire being distributed in April and May 2022 in various cryptocurrency-selling locations throughout Tbilisi, the capital of Georgia. A structural equation model was applied in the paper (SEM). The findings of the study confirm that the measurement items and constructs in the proposed model are reliable and valid. The result of the study found that there is a positive relationship between future reward, innovativeness, knowledge, and cryptocurrency adoption. Furthermore, it was found that innovativeness is significant as a mediator between future rewards and cryptocurrency adoption.

Keywords: Blockchain, Cryptocurrency, Electronic money, Cryptocurrency adoption, SEM, Smart-PLS

[1] *Corresponding author E-mail address: adilanchiev@ibsu.edu.ge and https://orcid.org/0000-0002-9899-6621*

[2] Author e-mail: 20100499@ibsu.edu.ge

[3] Author e-mail: mmercan@ibsu.edu.ge

1.Introduction

Cryptocurrencies are assets widely used as an exchange medium for financial transactions. The question of the usage and spread of cryptocurrency as electronic money is one of the most important problems in modern economics. Despite the fact that the study of the problem at hand has received more or less serious attention lately, it is still a hidden mystery and requires much attention and study. As a result, the study aims to identify the factors influencing cryptocurrency adoption in Georgia and despite the fact that it has already been a highly appealing and speculative investment strategy, how it can find its way into our near future society and economy.

Deferring by being digital, unlike some other tangible currencies. A type of digital money is cryptocurrency. It is presently utilized in internet arrangements, due to which any sort of disbursement can be completed, but its presence is impossible without web admission. Even so, cryptography protects them at all times, preventing counterfeiting or double-spending.

To control the transaction history, cryptocurrency is typically allocated on a decentralized ledger. Even though they are currently dominant and are not fading or becoming limited, as some may believe: transactions are quick, digital, reliable, and international, allowing for the preservation of records without the risk of data larceny. Cybercrime has drastically decreased. The majority of cryptocurrencies are built on blockchain technology. It is a futuristic technology that will significantly alter the lives of the global community. Blockchain system was developed to secure information, accelerate transactions, and eliminate intermediaries. It is currently managed by no central bodies or private structures in Georgia or around the world and is thus decentralized. The information is stored in the form of blocks one below the other. The next block will not be opened until the previous block is closed. It stands out for its high level of information security.

Blockchain itself in simple terms means a series of blocks of information, which makes it hard or impossible to counterfeit, slash, hack or leak the system itself. Each and every bit of the blockchain is preserved and kept secure in each community of miners, preventing any leak of information or hacking because each participant's data information can detect those transactions has been changed.

The cryptocurrency platform's security is impressive and yet simple. As previously stated, the ledger is made up of groups of blocks. The chain is formed when each component begins with a hashing algorithm found in the previous block. The method by which hash values are determined prevents any number tampering; It is crucial to understand that the system of cryptocurrencies will be able to detect any changes and breaks in the chain. That type of sequence is not uncommon; But here is the key to keeping the details in blockchain authentic. There is one more kink in the blockchain hash key. Thus, every Hash code is generated by adding a set of bits at random.

Cryptocurrencies are undergoing extensive research and development, though it's been 13 years since its initial conception, many people around the world are still unfamiliar with it, but it is the most widely used and mined currency in Georgia. More than that as of today there is no existing institution controlling or administering each of the currencies in Georgia. People all over the world who are interested in receiving cryptocurrencies are known as miners. They are in the power to transparently monitor and process relevant distributed ledger technology information. Despite the hype surrounding Bitcoin and other cryptocurrencies today, it was still difficult, if not impossible, for them to gain acceptance in retail businesses. In Georgia, it was difficult to use in daily transactions or business activities when compared to tangible currencies, which were more generally available than other cryptocurrencies. However, Bitcoin still found its way into some online shops and the trends show that more and more shops are willing to think about executing this new technology.

Figure 1. Total Cryptocurrency Market Cap

Source: COINMARKETCAP.COM. (Accessed JUNE 1, 2022.)

It is unsure for certain if virtual currencies will navigate their way into our transaction records in Georgia, but some countries have recognized Bitcoin as a major currency within their zone of influence. The difficulties with current methods are driving the increasing importance of cryptocurrency rate important variables. Cryptocurrency market capitalization is volatile and impacted by a lot of factors. To begin with, it is a supply and demand ratio on cryptocurrency, on which various conditions act. One of them has prior experience in the mentioned field of knowledge. The cryptocurrency exchange rate rises or falls depending on the source of information and whether it is positive or negative. Georgia as well as some other countries has yet to recognize cryptocurrency as a form of payment. The presence of virtual currencies, exchange centers, ATMs, and other comparable facilities in numerous nations worldwide, especially Georgia, has a favorable effect on the crypto exchange rate.

The People's Bank of China's statement on the prohibition of cryptocurrency use within the country scale had a negative impact on the cryptocurrency exchange rate. Because of the aforementioned statement, the exchange rate of bitcoin fell, as did the exchange rates of other cryptocurrencies (Yan, Mirza, and Umar 2022;Cigu et al.).

This study utilized a quantitative research methodology in order to produce a valid quantitative result that can be generalized. In the light of these explanations, the primary purpose of this study is to find out the adoption level of cryptocurrency in Georgia and the factors influencing it and how it can find its way in our nearest future society and economy even though it has already been a highly attractive and speculative investment strategy. The goal of this study is to investigate cryptocurrency user acceptance using the four concepts: considering the risks related to other financial markets, the future expected rewards after purchasing the cryptocurrency, and how people's awareness of the cryptocurrency and their innovativeness and enhanced desire to invest in it. Therefore, the primary purpose of the paper is to define the problem at hand, the situations related to this problem, the variables, and the relationships between these variables. The results of the data analysis techniques used to analyze the collected data are presented.

Based on the aim of the paper, the study research question is:

What factors influence adoption of cryptocurrency in Georgia?

The scientific contribution of the paper is the fact that it is estimates the innovativeness as mediator factor between future reward and cryptocurrency adoption, furthermore it is novel contribution for the theory relating to analysis of cryptocurrency adoption in developing post-soviet country, Georgia.

2. Literature Review

The evolution of money and the need for extra monetary funds resulted in the formation of a cryptocurrencies, which had a positive effect on financial sector. People are now participating in and adding digital currencies into their investment portfolios to fullest capabilities their risks as virtual currency innovation has improved. Furthermore, some financial services firms treat cryptocurrency as subject to negotiation bonds and have them as their asset class to minimize systemic risk, maintain investment return, and free up, and it has been proven that this investment strategy outcome in an even more aggressive investment strategy. As a result, virtual currencies provide an investment option for investors looking for diversification. (Ang 2022). The world's largest companies have received cryptocurrencies in the form of payments. At the same time, the creation of regulatory laws on virtual currencies is underway in a number of states (Wan 2022).

A thorough assessment of prospective observational research discovered that another important issue associated with increased mining difficulty is causing an increase in yearly electricity demand for cryptocurrency mining. The

total amount of carbon produced by mining today likely exceeds that produced by the entire country of Portugal (Corbet, Lucey, and Yarovaya 2019). This is a strength, not a fault, in the world of cryptocurrencies. The findings imply that ongoing bitcoin energy usage has an effect on the performance of the energy sector, underlining the necessity for future research into the ecological effects of cryptocurrency expansion. (Corbet, Lucey, and Yarovaya 2019).

Another significant constraint on all of the work described in this sector is the impact on a crucial concern for investment bankers: the heart, or contents, of cryptocurrencies. Many scholars and scientists are studying on this problem now, both within Georgia and abroad, but they lack financial understanding and a precise definition of what they might be dealing with. (Sichinava 2019). Nonetheless, it is obvious. The virtual currency is a multifaceted product, and its macroeconomic components have virtually disappeared, particularly given recent occurrences. Georgia is indeed a developing nation. Following the dissolution of the Soviet era, these newly constituted nations, such as Georgia, were obliged to adopt their own currency. It's been such a long and exhausting route to get together for a variety of reasons, including hyperinflations. Georgians' recollections of the kupon generation are still vivid in their minds; as a result, Georgians are still in the process of accepting the cryptocurrency because it is a freshly released commodity. (Sichinava 2019).

At the same time, several papers have been written about the history of the origins of electronic money. (Kusumayudha et al. 2022) About cryptocurrencies, its need, causes, and current position in Georgia; It investigates modern blockchain technology as a technique of data preservation, preservation, and transaction acceleration that emerged at the turn of the century. The authors are provided with perspectives on the infrastructure needed for the recognition of cryptocurrency as a possible means of payment, as well as the legal situation and regulation of cryptocurrency globally. (“Cryptos Have Robust Potential in Key Balkan Markets” 2022), views by experts and well-known people in this field and the well-known personalities and the right conclusions are drawn (Tubinis 2018).

Based on the most recent research, statistical evidence, and recent surveys, several studies have investigated the implications of a thorough review of the present condition of financial inclusion and financial literacy in Georgia. Many studies offer an overview of current government policy initiatives and strategy documents aimed at improving financial access for SMEs and households; analyzes the state of Georgia's regulatory framework; focuses on the causes of current low financial inclusion and financial literacy among the young, poor, and rural population; and offers policy recommendations to comprehensively address Georgia's financial inclusion issue (Babych, Grigolia, and Keshelava 2018).

Everything in the world today is developing at a rapid pace, companies that may not have existed ten years ago now exist and generate huge revenue. Digitalization is a common factor of change in practically every field. There are also advancements in payment systems; the most high-profile issue in this area in recent times has been the advent of cryptocurrencies. It became popular not only locally but even globally within a few years of its debut. When researchers were working on the paper, they have used the multiple methods of data processing and analysis, quantitative and qualitative research methods, and statistical-economic analysis methods. Their study's main goal was to determine the most important directions for cryptocurrency development in the face of globalization's dangers and obstacles. Blockchain technology underpins the majority of cryptocurrencies. The present and the future technology. Future is created to securely store data, increase speed transactions, and reduce costs. Reduce foreign transaction expenses by switching to e-money instead of cb-money, and Intermediary circles should be eliminated (Xia et al. 2020)

A review of major studies in this area confirmed that cryptocurrency technology ushers in a new era of global innovation in commerce and communication. However, the advantages of a crypto currency billing system are compromised by criminal activities occurring through a completely anonymous network with no regulations to cover fraudulent acts. Georgia's current situation is as follows: Georgia now has a second datacenter for cryptocurrency processing. Although virtual money is uncommon even in wealthy countries, it is especially unusual in Georgia, since local economics are skeptical. As a consequence, they believe that digital money is unregulated by any banking system, allowing for an abundance of illegal transactions. The Georgian national financial sector, from the other part, believes bitcoins are not dangerous, and an absence of data has led to claims of money laundering. The most challenging problem appears to be managing Cryptocurrencies while not hindering their future development. While then there's always the possibility that currencies will collapse or be overtaken by a more inventive technology, policymakers, according to the report, must be cautious not to inhibit a technology with the potential to alter the global economy.(Mikeladze 2017).

There is a great deal of debate surrounding the scams related to hundreds of cryptocurrency exchanges that are developing as essential trading platforms for the ecosystem, facilitating the trading of digital assets (Mandowa 2022; Liu and Tsyvinski 2021). Simultaneously while, it attracts potential attackers' attention. A number of scam attacks against crypto exchange have been reported, resulting in substantial financial losses. However, no earlier studies in the sector has investigated this issue thoroughly. Their study was the first to try to categorize and uncover bitcoin exchange scams. First, over 1600 fraudulent domains more than 400 spurious apps were discovered by compiling existing data and using typo squatting generation tools. By investigating the relationship amongst scam domains and fraudulent apps, the researchers uncovered 100 scam website families and 35 phony app families. Further

examination of the consequences of such frauds finds that at minimum 520k US dollars have been destroyed as a result of these scams. Fake apps have also been identified to be sneaked into prominent application store in order to involve innocent consumers. The findings of this paper emphasize the significance of spotting and evading bitcoin exchange scams. To facilitate future investigations, all of the detected scam domains and fraudulent apps have been openly shared with the academic community (Xia et al. 2020; Dilanchiev, 2012).

In recent times, blockchain and cryptocurrency have become buzzwords. The research organizes the literature on blockchain-based applications in various sectors. The main goal of study was to look into the most recent trends in blockchain technology and its applications, as well as to focus on specific elements of this disruptive technology that has the potential to revolutionize standard business practices in the near future. Many academics have been researching in this topic for more than ten years and have published their findings in prestigious publications. There are also other reports and white papers accessible. As a result, future researchers will benefit greatly from a systematic collection of those publications and evaluations of the literature. The study presents a complete classification of blockchain-based applications from several disciplines, including land registration, healthcare, the Internet of Things, security, and the most recent research areas. For a better understanding, the obstacles and issues identified in numerous works of literature are discussed. The discovered gaps in the research and probable future work paths are also presented in forecasting the importance of value for researchers and academics based on the review (Jothi and Oswalt Manoj 2022).

Reviewing subsequent and more recent literature due to the popularity of bitcoin, blockchain technology has achieved wider utility, particularly in the realm of finance. Other fields, such as energy trade and the financial market, have developed as a result of blockchain. These sectors are new, and building codes and architecture are being developed to improve their functionality. There have been studies on blockchain finance, and the goal of the study was to outline a few of the ground-breaking studies and provide direction for future research. Their paper examined 77 journal papers on blockchain from the Science Citation Index (SCI) and Social Science Citation Index (SSCI) databases from 2018 to 2021. The papers that were chosen were divided into ten categories. The studies summary suggested that blockchain finance research should concentrate on building stronger privacy and security mechanisms, as well as better financial transaction regulations, not only to benefit from "Initial Coin Offerings," but also to spread investor risk and to be more reliable due to its uncertainty (Gorkhali and Chowdhury 2022).

A systematic assessment of peer-reviewed literature revealed that the volatility connectivity between cryptocurrencies, existing banking commodities and significant global uncertainty metrics increased from April 29, 2013 to June 30, 2020. According to the data, total spillover indices achieved new highs throughout COVID-19 and

have stayed high since then. The analysis also confirms the high return and market volatility of the COVID-19 timeframe across markets. In respect of return ripple effects, gold is central to the system and embodies the characteristics of safe heaven. Bitcoin is a net generator of volatility transmission to other markets during the COVID-19 era. Furthermore, the results of the Weighting Factor and Fourier LM tests reveal that Bitcoin transmits omnidirectional volatility to Gold, Securities, Bonds, the VIX, and Crude Oil. Remarkably, the EPU is the only global factor driving up Bitcoin volatility. Several probable outcomes of both the observations are also investigated. (Elsayed, Gozgor, and Lau 2022).

Another significant constraint on all of the work described in this area is the explosion of cryptocurrency use in company and as a share market speculator. Cryptocurrency is progressively being used in a wide range of criminal activities, most notably payment and financial fraud, but also investment fraud. The speculative nature of cryptocurrencies recalls the dotcom bubble of the 1990s, when any world wide web company attracted a lot of share market excitement despite the lack of a commodity, marketing plan, or ability to generate money. Naturally, the balloon was followed a few years later by the dot-com crisis, thereby ending an era of unsustainable high-risk internet companies. Going even further back in time, in the 1800s, people from all over the world went to Australia, Canada, and the United States to make their fortunes, only to learn that locating and mining a large gold stake was a dangerous and unlikely possibility. The year 2021 is when bitcoin became the new gold rush, when the doggie Doge meme went from joke to reality, and when cryptocurrency became the new gold rush (alongside toilet paper). The writers use their personal experience in industry and government to analyze current research and literature, as well as their personal experience investigating cybercrime, online fraud, and cryptocurrency frauds(Maurushat and Halpin 2022).

It has been experimentally demonstrated that cryptocurrency returns are driven and can be anticipated by components that are particular to cryptocurrency markets. Cryptocurrency returns are uncovered to cryptocurrency arrange components but not cryptocurrency generation variables. Studies develop the arrange variables to capture the client selection of cryptocurrencies and the generation variables to intermediary for the costs of cryptocurrency generation. Additionally, there is a solid time-series force impact, and intermediaries for financial specialist consideration unequivocally estimate future cryptocurrency returns (Y. Liu and Tsyvinski 2021).

Authors have found that these parameters contribute most to units of cryptocurrency character, and gather them into approximations of trade substances, what we call “super clusters”. Whereas these clusters can stay generally mysterious, authors are ready to credit numerous of them to specific trade categories by analyzing a few of their particular exchange designs, as watched amid the period from 2009-2015. Authors are at that point able to extricate and make a outline of the arrange of installment connections among them, and analyze exchange behavior found in

each commerce category. They conclude by distinguishing three stamped administrations that have advanced as the Bitcoin economy has developed and developed: from an early model organize; to a moment development organize populated in expansive portion with “sin” undertaking (i.e., betting, dark markets); to a third organize checked by a sharp movement absent from “sin” and toward genuine undertakings (Tasca, Liu, and Hayes 2016).

Cryptocurrencies have risen as important monetary computer program frameworks, according to studies. They rely on a secure distributed record information structure, and mining is an essential component of such frameworks. Mining records previous exchanges to the distributed record block chain Technology, allowing clients to create secure, solid agreements for each exchange. Mining also provides riches in the form of unused money units. Because cryptocurrencies were built as peer-to-peer systems, exchanges must be mediated by a central expert. Excavators are used to ratify deals. Cryptocurrencies necessitate reliable, secure mining computations. The authors of this study provide an overview of, compare, and differentiate contemporary mining methods used by major Cryptocurrencies. They evaluate the advantages, disadvantages, and potential hazards of each mining process. In general, a viewpoint on how Cryptocurrency mine, and they have comparable efficiency and verification, and since they have unique hazards and features is presented. (Mukhopadhyay et al. 2016).

Another significant constraint on all of the work mentioned in this location is that extensive economic markets are defined by a rapid flow of data, a large number of members with broadened pure conjecture skylines, and multiple criticism instruments, all of which contribute to the rise of sophisticated marvels, such as theoretical air pockets or crashes. As a result, they are regarded as one of the most intricate frameworks known. Various factors have illuminated stylized facts, also known as complexity attributes, which are followed over the vast majority of monetary markets. These incorporate that a so "fat tails" of the distribution of returns, instability clustering, the "long memory", solid stochasticity near non-linear interactions, tenacity, and the impacts following fractality and, indeed, multifractality. (Wątorek et al. 2021).

The work in this field mainly concerns itself to the remarkable betterment of the cryptocurrency highlight over the last few years - from being entirely fringe to order to capitalize at the stage of an intermediate-size inventory levels trade - giving a unique opportunity to watch its development in a short period. The availability of high-frequency information enables advanced factual evaluation of fluctuations on bitcoin exchanges from their inception to the show day. This offers a window that allows for the measurement of changes that occur within the complexity features that are associated with display development and development. The reason of the display survey, at that point, is to look at the properties of the cryptocurrency showcase and the related marvels. The point is to clarify to what degree, after such a reckless improvement, the characteristics of the complexity of trade rates on the cryptocurrency showcase

have ended up comparable to conventional and develop markets, such as stocks, bonds, commodities or monetary standards (Wątorek et al. 2021).

However, as stated in the literature, one of the most important and popular uses of blockchain innovation, cryptocurrency, has recently drawn widespread attention. All cryptocurrency trading records are irrevocable and recorded in sections according to blockchain technologies. These exchange records, which contain rich data and comprehensive follows of budgeting activities, are openly accessible, providing analysts with extraordinary opportunities for knowledge mining and informational revelation in this area. Systems are an ubiquitous language for defining organizational frameworks in the real world, and a significant percentage of current work on bitcoin exchanges is analyzed from an organizational standpoint. This outline helps to assess and summarize previous work on studying and comprehending bitcoin exchanges from a systematic standpoint. In order to provide a useful rule for researchers and engineers, the authors present the background information of cryptocurrency trading organize assessment and survey existing research in three aspects, namely, organize analysis, organize profiles, and network-based location. They present the challenges, explain the strategies, and discuss the findings and discoveries provided in the literature for each viewpoint. Furthermore, they illustrate the greatest problems as well as a few future orientations in this region. (Maurushat and Halpin 2022).

Prior work in this area can be divided into two main categories: Crypto-currency exchanging may be a quickly developing shape of conduct characterized by contributing in exceedingly unstable computerized resources based to a great extent on blockchain innovation. In this paper, we survey the specific auxiliary characteristics of this action and its potential to grant rise to over the top or hurtful conduct counting over-spending and compulsive checking. Authors note that there are a few likenesses between online sports wagering and day exchanging, but too a few imperative contrasts. These incorporate the persistent 24-hour accessibility of exchanging, the worldwide nature of the advertise, and the solid part of social media, social impact and non-balance sheet related occasions as determinants of cost developments (Delfabbro, King, and Williams 2021).

It has been successfully demonstrated that development is an unavoidable human nature that has its roots in our business operations. Private compounds, likewise, in search of extension and maybe greater influence over their area of capability, pick to go open at a specific point in time. Without a question, the timing of the transition from confidential to open could be a critical factor in the trade's future success. Within the traditional capitalist framework of this move, small private companies, defined by the Australian Companies and Investment Commission as those with combined income with less than half of hundred million per year, must choose between selling to a parent company and Initial Opening Advertising. Both options offer benefits and cons to their claims. However, they are

both sophisticated, extremely controlled, expensive, and disappointing, which are actually significant disadvantages for small firms. Disappointment to open due to these disadvantages results in the failure of small firms and the loss of workers, which is followed by dreadful socioeconomic outcomes. (Wątorek et al. 2021; Dilanchiev & Taktakishvili, 2021).

Despite the fact that the topic of cryptocurrencies has recently been so popular, there is a gap in the literature and theory about the motivations for adopting bitcoin in developing or growing post-Soviet small economies such as Georgia. The study tries to close this theoretical gap by examining the case of bitcoin adoption in the Georgian industry.

3. Research design and methodology

In this research, a questionnaire survey ’s strategy was used. The method was chosen since it is extensively used and allows for a large sample of the study population to be addressed at a low cost (Roby et al., 2003). Moreover, Hennessy and Patterson (2011) suggested that the research questionnaire be constructed beforehand and then do the research study. As a consequence, a questionnaire was constructed to gather information for this study.

The characteristics indicated in the suggested conceptual model are used to create questionnaire items. The replies are rated on a 7-point Likert Scale, with

1 "strongly disagree,"

2 "disagree,"

3 "somewhat disagree."

4. "Neutral,"

5. "somewhat agree,"

6. "Agree,"

7. "Strongly Agree"

The questionnaire was in the Georgian language and was divided into two sections. The first section consists of questions about respondents' demographic traits, whereas the second section consists of items that make up the variables used in the study (Khoshtaria et a., 2021; Matin et al., 2020; Mercan et al., 2021; Sewa et al., 2022).

Sampling technique is utilized to select respondents from bitcoin internet groups (mostly Facebook) to fill out the survey because these individuals are deemed to have cryptocurrency expertise and are more inclined to provide useful information. The pilot test sample size was estimated to be between 25 and 100 people (Cooper & Schindler, 2014; Dilanchiev et al.,2021). A total of (200) questionnaires was distributed online and in person to members of the Cryptocurrency Georgian Facebook Group for this study.

Initially, it was conducted a pilot study to guarantee the questionnaire's reliability and validity prior to actually collecting information. Participants in the study suggested a number of changes to the questionnaire. The questionnaire was modified in response to suggestions from the piloted study respondents. As a consequence, the modified survey was widely distributed in order to collect data.

Since it is widely utilized and includes a great sample of the target population that can be targeted at a cheap cost, a questionnaire survey statistical tool was used in this study (Abu-Taieh et al., 2020; Opie & Brown, 2019). Following Baker (2003), prior to the study survey analysis, the study questions must be prepared.

A total of 175 people did take part in the poll (out of 200 questionnaire respondents). The survey was held in a hybrid manner, with the questionnaire being distributed in April and May 2022 in various cryptocurrency selling locations throughout Tbilisi, the capital of Georgia.

The main question of the research is what factors affect the intention behind buying and using cryptocurrencies in the case of Georgia. In the paper, the following hypotheses were tested :

H1: The desire to buy cryptocurrencies is fueled by risk considerations in standard finance markets.

H2: The prospect of a future reward enhances the desire to purchase cryptocurrencies.

H3: Knowledge about cryptocurrency boosts the desire to purchase it.

H4: Personal innovativeness enhances their desire to purchase cryptocurrencies

H5: Inventiveness favorably moderates the association between future rewards and cryptocurrency adoption.

4 Findings and analysis

4.1 Validity and Reliability

The SEM approach was used to investigate the linkages drawn in the conceptual model.

SEM has the advantage of being less vulnerable to the study population than covariance-based SEM. The degree to which all of the model's relation to other parts are used to test its convergent validity is seen in Table 2. (Kura,

2017). This should have a value of >0.6 as a threshold. (Hair Jr. and colleagues, 2021). Since all of our results met the threshold criterion, each data gathering sign is authentic. Degrees with an average variance extracted (AVE) show reality or establish convergent validity (Sarstedt & Cheah, 2019; Mercan et al.,2021).

Table 1. Reliability and Validity Tests

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Cryptocurrency adoption	*0.882*	*0.882*	*0.927*	*0.810*
Future Reward	*0.918*	*0.945*	*0.948*	*0.858*
Innovativeness	*0.832*	*0.840*	*0.900*	*0.749*
Knowledge	*0.713*	*0.734*	*0.838*	*0.633*
Risk	*0.924*	*0.925*	*0.951*	*0.867*

The AVE value needs to be more than 0.5, according to Fornell and Larcker (1981) and Matin et al., (2021) and Matin et al., (2022). Structure reliability has been demonstrated using composite reliability and Cronbach's alpha value. The structural stability was assessed using composite dependability and Cronbach's alpha value. According to Hair Jr. and Sarstedt, it ought to be greater than 0.7; several of the variables in our sample have scores that are greater than or equal to the threshold level. Discriminant validity demonstrates that elements and their concepts have distinct meanings (Hair et al., 2016). Its result (Discriminant validity of the construct) in Table is more than 0.6, suggesting legitimate findings, whilst negative results indicate the opposite.

Table 2. Factor Loadings

	Cryptocurrency adoption	Future Reward	Innovativeness	Knowledge	Risk
CA1	*0.945*				
CA2	*0.895*				
CA3	*0.858*				
FR1		*0.943*			
FR2		*0.921*			

FR3	*0.914*				
IN1		*0.887*			
IN2		*0.811*			
IN3		*0.897*			
K1			*0.729*		
K2			*0.843*		
K3			*0.810*		
R1				*0.936*	
R2				*0.938*	
R3				*0.920*	

Table 2 shows the findings of the Discriminant Validity test, which was performed utilizing Fornell-Larcker Criterion. Each construct's sub-factors must be unique from other structures. The numbers in Table 2 form connections by specifying the vertical line of norms that covers the AVE square root. As per Fornell and Larcker, discriminant validity was assessed by demonstrating that the vertical line standards are more directly correlated with a matching spatial position in the table (Fornell & Larcker, 1981).

Table 3. Table Discriminant Validity of the construct

	Cryptocurrency adoption	**Future Reward**	**Innovativeness**	**Knowledge**	**Risk**
Cryptocurrency adoption	*0.900*				
Future Reward	*0.308*	*0.926*			
Innovativeness	*0.703*	*0.310*	*0.866*		
Knowledge	*0.451*	*0.174*	*0.455*	*0.796*	
Risk	*0.644*	*0.168*	*0.560*	*0.499*	*0.931*

4.2 SEM results

In R Square, the PLS regression model shows how much variance in the dependent variable is influenced by the predictor variables, as well as the model's robustness. The model's construct validity can be seen in this result. It must be higher than 0.3. The coefficients of determination (R square) are greater than the threshold value (0.588 in the model), indicating that the model in Table is appropriate.

Table 4. R square Table

	R Square	R Square Adjusted
Cryptocurrency adoption	*0.597*	*0.588*

Table 5 presents the regression results, that there is a significant and a positive relationship between future reward and cryptocurrency adoption (0.040***) which confirms the H2 hypothesis of the thesis that states -*The prospect of a future reward enhances the desire to purchase cryptocurrencies. This result in accordance with the findings of* (Cornalba et al. 2022)

Table 5. SEM path analysis results

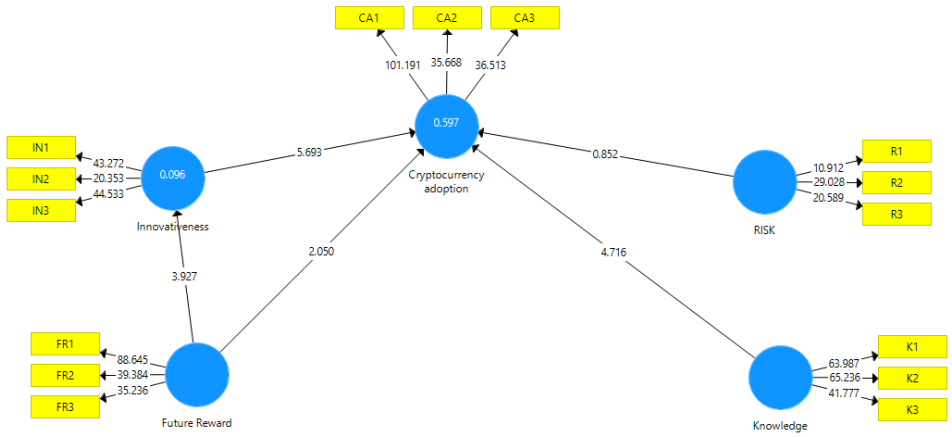
	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Future Reward -> Cryptocurrency adoption	*0.099*	*0.098*	*0.050*	*1.985*	***0.040***
Future Reward -> Innovativeness	*0.310*	*0.313*	*0.079*	*3.950*	***0.000***
Innovativeness -> Cryptocurrency adoption	*0.454*	*0.453*	*0.080*	*5.702*	***0.000***
Knowledge -> Cryptocurrency adoption	*0.054*	*0.059*	*0.062*	*0.862*	***0.000***
Risk -> Cryptocurrency adoption	*0.346*	*0.345*	*0.074*	*4.656*	***0.394***

Table 6. Specific Indirect Effects (moderator analysis)

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Future Reward -> Innovativeness -> Cryptocurrency adoption	*0.141*	*0.143*	*0.048*	*2.923*	***0.003***

The SMART PLS analysis with bootstrapping found a specific indirect effect in the model (Table 6), thus confirming hypothesis 5, that Inventiveness favorably moderates the association between future reward and cryptocurrency adoption. The result is 0.003 which is more than 5% which confirms the robustness of the result.

Figure 2. Graphical presentation of the SEM path analysis



5. Discussion and Conclusion

The result of the study found that there is a positive relationship between future reward, innovativeness, knowledge, and cryptocurrency adoption. Moreover, the most significant observation of this study is that people's expectancy of its future rewards has a direct impact on cryptocurrency adoption levels and it consequently causes its adoption level to rise. It was found that innovativeness also plays significant role as a mediator between future rewards and cryptocurrency adoption as well. Furthermore, there did not appear to be any remarkable difference as the people's innovativeness and their interest in new technologies was also considered as some of the major factors affecting to increase the customer's expectancy of their future rewards which directly influenced the adoption level to rise. It should be emphasized that people have the outstanding knowledge of new technologies or the platforms related to digital currency according to responder's opinions. Miners are well aware, informed and knowledgeable about the sources of the cryptocurrency, how it works, how reliable it can be or how trustful can financial platforms can become for their investments and some other crypto related information which instantaneously affects the cryptocurrency adoption levels. On the other hand, one of the key findings of this task can be mentioned that people find it risky to invest in cryptocurrencies, these results agree well with existing studies that most people buy and sell cryptocurrencies through exchanges. That means majority of exchanges today are regulated by legal entities, therefore they require laws to collect the user's personal information and make it available if needed, which causes

customer's hesitation to invest in cryptocurrencies. In the paper all the hypothesizes were accepted except H1: The desire to buy cryptocurrencies is fueled by risk considerations in standard finance markets.

In the long run, the fate of Cryptocurrencies and blockchain technology will be determined not only by global technological progress, but also by the socioeconomic conditions of individual countries, as well as the developmental level of foreign politics, political and legal impediments in the referenced field, and so on. As is well renowned, any citizen can create a cryptocurrency. As a result, some countries are wary of it, fearing that it will allow them to lose their monopoly on emission and regulation over its circulation, resulting in the appearance of certain unwanted propensities and troubles in the referenced field. Despite this, the number of cryptocurrency types is increasing on a daily basis, and its use is expected to become irreversible.

It is obvious that there are numerous advantages to using cryptocurrency as an alternative currency. Despite this, people are still hesitant to use crypto coins as an alternative currency because they have faith in traditional money. The paper come with the recommendation that people have to become more aware, informed and knowledgeable about the sources of the cryptocurrency, how it works, how reliable it can be or how trustful can financial platforms can become for their investments. In a rapidly cashless environment, developing a marketing strategy using blockchain based would assist the banking industry in adapting and sustaining with the times, as well as establishing transparency and growing confidence among existing clients and attracting new clients.

References

Alberini, Anna, Levan Bezhanishvili, and Milan Ščasný. 2022. "'Wild' Tariff Schemes: Evidence from the Republic of Georgia." *Energy Economics* 110 (June): 106030. https://doi.org/10.1016/j.eneco.2022.106030.

Amsyar, Izwan, Ethan Christopher, Arusyi Dithi, Amar Najiv Khan, and Sabda Maulana. 2020. "The Challenge of Cryptocurrency in the Era of the Digital Revolution: A Review of Systematic Literature." *Aptisi Transactions on Technopreneurship (ATT)* 2 (2): 153–59. https://doi.org/10.34306/att.v2i2.96.

Ang, Ming Torng. 2022. "The Influence of Virtual Currency Development and Investor Attention on Financial Stocks' Value : Evidence from Selected Asian Equity Markets." Masters, Tunku Abdul Rahman University College. https://eprints.tarc.edu.my/20212/.

Aspris, Angelo, Sean Foley, Jiri Svec, and Leqi Wang. 2021. "Decentralized Exchanges: The 'Wild West' of Cryptocurrency Trading." *International Review of Financial Analysis* 77 (October): 101845. https://doi.org/10.1016/j.irfa.2021.101845.

Babych, Yaroslava, Maya Grigolia, and Davit Keshelava. 2018. "Financial Inclusion, Financial Literacy, and Financial Education in Georgia." Working Paper 849. ADBI Working Paper. https://www.econstor.eu/handle/10419/190270.

Brauneis, Alexander, Roland Mestel, Ryan Riordan, and Erik Theissen. 2021. "How to Measure the Liquidity of Cryptocurrency Markets?" *Journal of Banking & Finance* 124 (March): 106041. https://doi.org/10.1016/j.jbankfin.2020.106041.

Cigu E, Petrișor M-B, Nuță A-C, Nuță F-M, Bostan I. The Nexus between Financial Regulation and Green Sustainable Economy. *Sustainability*. 2020; 12(21):8778. https://doi.org/10.3390/su12218778

Co, &, and Niji Oni. 2021. "Regulation of Cryptocurrency in Various Jurisdiction across the World." SSRN Scholarly Paper 3841589. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.3841589.

Corbet, Shaen, Brian M. Lucey, and Larisa Yarovaya. 2019. "The Financial Market Effects of Cryptocurrency Energy Usage." SSRN Scholarly Paper 3412194. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.3412194.

Cornalba, Federico, Constantin Disselkamp, Davide Scassola, and Christopher Helf. 2022. "Multi-Objective Reward Generalization: Improving Performance of Deep Reinforcement Learning for Selected Applications in Stock and Cryptocurrency Trading." arXiv:2203.04579. arXiv. https://doi.org/10.48550/arXiv.2203.04579.

D'Amato, Valeria, Susanna Levantesi, and Gabriella Piscopo. 2022. "Deep Learning in Predicting Cryptocurrency Volatility." *Physica A: Statistical Mechanics and Its Applications* 596 (June): 127158. https://doi.org/10.1016/j.physa.2022.127158.

Delfabbro, Paul, Daniel L. King, and Jennifer Williams. 2021. "The Psychology of Cryptocurrency Trading: Risk and Protective Factors." *Journal of Behavioral Addictions* 10 (2): 201–7. https://doi.org/10.1556/2006.2021.00037.

Dilanchiev, A. (2012)."Tourism Demand in Georgia: Gravity Model Analysis", International Black Sea University, Georgia.

Dilanchiev, A., Aghayev, A., Rahman, M. H., Ferdaus, J., & Baghirli, A. (2021). Dynamic Analysis for Measuring the Impact of Remittance Inflows on Inflation: Evidence From Georgia. International Journal of Financial Research, 12(1), 339- 347.

Dilanchiev A, Taktakishvili T (2021) Macroeconomic determinants of household consumptions in Georgia. Ann Finan Econ 16(04):2150020. https://doi.org/10.1142/S2010495221500202

Dutta, Pankaj, Tsan-Ming Choi, Surabhi Somani, and Richa Butala. 2020. "Blockchain Technology in Supply Chain Operations: Applications, Challenges and Research Opportunities." *Transportation Research Part E: Logistics and Transportation Review* 142 (October): 102067. https://doi.org/10.1016/j.tre.2020.102067.

Elsayed, Ahmed H., Giray Gozgor, and Chi Keung Marco Lau. 2022. "Risk Transmissions between Bitcoin and Traditional Financial Assets during the COVID-19 Era: The Role of Global Uncertainties." *International Review of Financial Analysis* 81 (May): 102069. https://doi.org/10.1016/j.irfa.2022.102069.

Fang, Fan, Carmine Ventre, Michail Basios, Leslie Kanthan, David Martinez-Rego, Fan Wu, and Lingbo Li. 2022. "Cryptocurrency Trading: A Comprehensive Survey." *Financial Innovation* 8 (1): 13. https://doi.org/10.1186/s40854-021-00321-6.

Farell, Ryan. n.d. "An Analysis of the Cryptocurrency Industry," 23.

Gorkhali, Anjee, and Rajib Chowdhury. 2022. "Blockchain and the Evolving Financial Market: A Literature Review." *Journal of Industrial Integration and Management* 07 (01): 47–81. https://doi.org/10.1142/S242486222150024X.

Jothi, K. R., and S. Oswalt Manoj. 2022. "A Comprehensive Survey on Blockchain and Cryptocurrency Technologies: Approaches, Challenges, and Opportunities." In *Blockchain, Artificial Intelligence, and the Internet of Things: Possibilities and Opportunities*, edited by Pethuru Raj, Ashutosh Kumar Dubey, Abhishek Kumar, and Pramod Singh Rathore, 1–22. EAI/Springer Innovations in Communication and Computing. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-77637-4_1.

Kaal, Wulf A. 2020. "Digital Asset Market Evolution." *Journal of Corporation Law* 46: 909.

Kasradze, Tea. 2021. "Emergence of Non-Traditional Financial Service Providers in the Market - A Threat or An Opportunity for the Georgian Banking Industry." *European Journal of Marketing and Economics* 4 (2): 97–109. https://doi.org/10.26417/264fri73f.

Khoshtaria, T., Matin, A., Mercan, M., & Datuashvili, D. (2021). The impact of customers' purchasing patterns on their showrooming and webrooming behaviour: empirical evidence from the Georgian retail sector.International Journal of Electronic Marketing and Retailing, 12(4), 394-413. https://dx.doi.org/10.1504/IJEMR.2021.10040527

Kusumayudha, Mochammad Rizky, Ahmad Hafidzul Kahfi, Muhamad Hasan, and Fitra Septia Nugraha. 2022. "Analysis of the Impact of the Use of Electronic Money on Community Consumption Behavior in The Bogor Station Environment." *Jurnal Mantik* 5 (4): 2210–18.

Liu, Feng, Hao-Yang Fan, and Jia-Yin Qi. 2022. "Blockchain Technology, Cryptocurrency: Entropy-Based Perspective." *Entropy* 24 (4): 557. https://doi.org/10.3390/e24040557.

Liu, Yukun, and Aleh Tsyvinski. 2021. "Risks and Returns of Cryptocurrency." *The Review of Financial Studies* 34 (6): 2689–2727. https://doi.org/10.1093/rfs/hhaa113.

Livieris, Ioannis E., Niki Kiriakidou, Stavros Stavroyiannis, and Panagiotis Pintelas. 2021. "An Advanced CNN-LSTM Model for Cryptocurrency Forecasting." *Electronics* 10 (3): 287. https://doi.org/10.3390/electronics10030287.

Mamaladze, Lela. 2018. "CRYPTO CURRENCY – A NEW CHALLENGE FOR THE ECONOMY OF GEORGIA." *Copernican Journal of Finance & Accounting* 7 (4): 87–97. https://doi.org/10.12775/CJFA.2018.022.

Mandowa, Nancy. 2022. "Risk Management for Digital Assets: Questions Companies Should Be Asking about Their Systems and Workflow for Asset Management." *Journal of Digital Media Management* 10 (3): 227–35.

Matin, A., Khoshtaria, T. & Tutberidze, G. (2020). The impact of social media engagement on consumers` trust and purchase intention". International Journal of Technology Marketing. 14 (3), .305–323. http://dx.doi.org/10.1504/IJTMKT.2020.10033402

Matin, A., Khoshtaria, T., Marcan, M, Davit, Datuashvili. (2021). The roles of hedonistic, utilitarian incentives and government policies affecting customer attitudes and purchase intention towards green products. Int Rev Public Nonprofit Mark. https://doi.org/10.1007/s12208-021-00325-z

Maurushat, Alana, and Dan Halpin. 2022. "Investigation of Cryptocurrency Enabled and Dependent Crimes." In *Financial Technology and the Law : Combating Financial Crime*, edited by Doron Goldbarsht and Louis de Koker, 235–67. Law, Governance and Technology Series. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-88036-1_10.

Mercan, M., Khoshtaria, T., Matin, A., & Sayfullin, S. (2020). The impact of e-services quality on consumer satisfaction: empirical study of Georgian HEI. *Journal of Business*, 9 (2), 15-27.

Mercan, M., Haji R., J., & Sayfullin S.(2021). Impact of ISO 9001QMS Practices on the Output of Firms: A Case Study in Kurdistan Region of Irak. Journal of Business, 10(2), 50-68

Mikeladze, Aleksandre. 2017. "Bitcoins within Georgiaâ€™s Money Laundering Scheme." *European Journal of Economics and Business Studies Articles* 3. https://econpapers.repec.org/article/eurejesjr/176.htm.

Mukhopadhyay, Ujan, Anthony Skjellum, Oluwakemi Hambolu, Jon Oakley, Lu Yu, and Richard Brooks. 2016. "A Brief Survey of Cryptocurrency Systems." In *2016 14th Annual Conference on Privacy, Security and Trust (PST)*, 745–52. https://doi.org/10.1109/PST.2016.7906988.

Nikzad, Amirhossein, and Mahmood Mehregan. 2022. "Techno-Economic, and Environmental Evaluations of a Novel Cogeneration System Based on Solar Energy and Cryptocurrency Mining." *Solar Energy* 232 (January): 409–20. https://doi.org/10.1016/j.solener.2022.01.014.

Oksanen, A., E. Mantere, I. Vuorinen, and I. Savolainen. 2022. "Gambling and Online Trading: Emerging Risks of Real-Time Stock and Cryptocurrency Trading Platforms." *Public Health* 205 (April): 72–78. https://doi.org/10.1016/j.puhe.2022.01.027.

Rossolillo, Nicholas. 2018. "Types of Cryptocurrency." The Motley Fool. April 5, 2018. https://www.fool.com/investing/stock-market/market-sectors/financials/cryptocurrency-stocks/types-of-cryptocurrencies/.

Sewa, Omed Omer A., Mercan, M., & Murvanidze I.(2022). Motivations of Firms Being ISO 9001 Certified and Benefits they received after the Certification: A Case Study in Kurdistan Region of Irak. *Journal of Business*, 11 (1), 24-36.

Sichinava, Demur. 2019. "Cryptocurrency – a Future Medium of Exchange." http://dspace.tsu.ge/xmlui/handle/123456789/332.

Tasca, Paolo, Shaowen Liu, and Adam Hayes. 2016. "The Evolution of the Bitcoin Economy: Extracting and Analyzing the Network of Payment Relationships." SSRN Scholarly Paper 2808762. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.2808762.

Taskinsoy, John. 2020. "Bitcoin Could Be the First Cryptocurrency to Reach a Market Capitalization of One Trillion Dollars." SSRN Scholarly Paper 3693765. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.3693765.

Tubinis, Jason. 2018. “The Blockchain Explained, or How to Make Lots of Money in Cryptocurrency.” *Presentations*, October. https://digitalcommons.law.uga.edu/speeches/117.

Wan, Wai Yee. 2022. “Regulating the Crypto Economy. By Iris H.-Y. Chiu.” *The Chinese Journal of Comparative Law*, April, cxac014. https://doi.org/10.1093/cjcl/cxac014.

Wątorek, Marcin, Stanisław Drożdż, Jarosław Kwapień, Ludovico Minati, Paweł Oświęcimka, and Marek Stanuszek. 2021. “Multiscale Characteristics of the Emerging Global Cryptocurrency Market.” *Physics Reports*, Multiscale characteristics of the emerging global cryptocurrency market, 901 (March): 1–82. https://doi.org/10.1016/j.physrep.2020.10.005.

Wu, Jiajing, Jieli Liu, Yijing Zhao, and Zibin Zheng. 2021. “Analysis of Cryptocurrency Transactions from a Network Perspective: An Overview.” *Journal of Network and Computer Applications* 190 (September): 103139. https://doi.org/10.1016/j.jnca.2021.103139.

Xia, Pengcheng, Haoyu Wang, Bowen Zhang, Ru Ji, Bingyu Gao, Lei Wu, Xiapu Luo, and Guoai Xu. 2020. “Characterizing Cryptocurrency Exchange Scams.” *Computers & Security* 98 (November): 101993. https://doi.org/10.1016/j.cose.2020.101993.

Yan, Lei, Nawazish Mirza, and Muhammad Umar. 2022. “The Cryptocurrency Uncertainties and Investment Transitions: Evidence from High and Low Carbon Energy Funds in China.” *Technological Forecasting and Social Change* 175 (February): 121326. https://doi.org/10.1016/j.techfore.2021.121326.

Yli-Huumo, Jesse, Deokyoon Ko, Sujin Choi, Sooyong Park, and Kari Smolander. 2016. “Where Is Current Research on Blockchain Technology?—A Systematic Review.” *PLOS ONE* 11 (10): e0163477. https://doi.org/10.1371/journal.pone.0163477.