



# Investor Sentiment And The Function Of Blockchain Technology In Relation To Digital Currencies: The Here And Now And The Future.

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**Citation:** Syed Mohd Minhaj, et al (2024), Investor Sentiment And The Function Of Blockchain Technology In Relation To Digital Currencies: The Here And Now And The Future., *Educational Administration: Theory and Practice*, 30(5), 7777-7791, Doi: 10.53555/kuey.v30i5.3942

## ARTICLE INFO

## ABSTRACT

**Purpose:** The purpose of this study was to investigate how investors view cryptocurrency and what part block chains play in the digital currency industry. The primary objective of this research is to understand how investors feel about cryptocurrency. All throughout the globe, people are talking about cryptocurrency. Cryptocurrency refers to digital money that uses a decentralized system and blockchain technology.

**Methodology:** The study had 225 participants. A method known as convenience sampling has been employed. In order to determine whether the parameters are statistically significant, the "software package Smart-PLS-3" uses a bootstrapping method with 5,000 samples to accomplish "Structure Equation Modelling (SEM)", Trustworthiness, Convergent and Discriminate Validity, and model fitness.

**Findings:** This discovery explains the substantial impact of digital bitcoin on investors. The article continues by stating that the widespread adoption of bitcoin as a medium of exchange is greatly affected by aspects such as Trustworthiness, societal significance, and efficiency. However, the widespread use of cryptocurrencies as a medium of exchange is unaffected by issues like government oversight, security concerns, and danger.

**Originality:** This study sheds light on how investors feel about cryptocurrency, which, as far as the researchers are aware, has never been revealed in any previous study. For companies and investors considering India as a potential market, the data produced might provide useful practical information. Trustworthiness of sources, social relevance, Achievement, government control, security features, and danger are the six components of cryptocurrency that this study remarkably identifies.

**Keywords:** Cryptocurrency, Block chain, Oversight from the governments, Investors, Social relevance.

## 1. Introduction

**Crypto currency:** Numerous opportunities have arisen on various platforms as a result of the transformation in the sectors of information technology and communication. Among these areas are the commercial and

financial spheres. Currency, transaction, and trading methods that are up-to-date have been introduced. The introduction of cryptocurrencies in the last few years is one of the most remarkable changes to the financial landscape [1]. It's fair to say that CC is a virtual currency, a substitute for fiat money that facilitates a wide range of monetary transactions both online and off.

Cryptocurrency refers to a "digital form" of money that is created and controlled using cutting-edge methods like decentralization and cryptography. One definition of a crypto currency is a "modern-day" kind of money that operates independently of a central bank or government [2]. In addition, there are a plethora of unofficial online exchanges where it is traded in national currencies.

**Block chain:** Blockchain technology is the backbone of the cryptocurrency industry. A blockchain is a distributed ledger system that does not rely on any one entity to store or administer its records. We should think about the potential use of blockchain technology in many other industries, both monetary and otherwise. To put it simply, a block chain is a decentralized database that records and links all transactions in a chronological order [3].

The immutability of these recorded transactions is a key component of blockchain technology that sets it apart from other systems [4]. The widespread adoption of blockchain technology in digital currencies paves the possibility for its use in other domains, such as logistics, insurance, voting, and personal record keeping, among others [5]. Although ideas for digital money have been around since the 1980s, the term "cryptocurrency" didn't come to use until 2009, when Bitcoin emerged as a "decentralized cryptocurrency" built on the Blockchain. Since the beginning of 2009, small-scale Bitcoin transactions have been happening throughout the country. By 2013, Bitcoin's popularity had skyrocketed across many nations, and the same year, several merchants began taking Bitcoin as payment [6].

Following Bitcoin's success, several alternative cryptocurrencies have recently been developed. After Bitcoin, there will be a plethora of these, some of which are quite popular [7]. Dogecoin mining, Pi mining, and other similar sites are cropping up to facilitate their mining, which is also becoming increasingly popular. Emergence of cryptocurrency exchanges in the country was rapid; early adopters such as Unocoin, BtcxIndia, and Coinsecure eventually became the go-to places for "cryptocurrency exchange" and "trading services." Over time, other platforms like as Bitcoin-India, Koinex, Zebpay, and Wazirx have been included in this list [8]. From 2013 to the present day, the crypto sector in India has grown rapidly due to the proliferation of crypto trading and exchange platforms. In addition to Bitcoin ATMs, tech hubs in major Indian cities are home to a plethora of over-the-counter (OTC) crypto stores [9].

Authorities are currently addressing digital currencies and new technologies that are based on decentralized financial systems, primarily various forms of blockchain and distributed ledger technology, as well as developments in more conventional centralised systems that promote finance. Some claim that the methods of payment and the medium of exchange are undergoing a technological revolution right now [10]. When new financial and economic hazards emerge from various technologies and all parties are treated equally, authorities must consider how to implement legislation effectively. Stable coins have caused problems, even though Bitcoin and other cryptocurrencies have not become big alternatives yet [11]. Potential future uses are also suggested, with private stable currencies being accepted as a payment method for e-commerce, micro-payments, and peer-to-peer transactions, among other things [12].

In an effort to address the study's central issues, the paper investigated several aspects of cryptocurrency platforms, such as "Will cryptocurrency be the next currency platform?" In your opinion, how secure are virtual currency platforms? In order to get an easy and organized classification of cryptocurrencies, it finds multiple platforms that have a thorough and precise knowledge of the procedures and methods of implementing, issuing, controlling, and trading cryptocurrency [13]. Current cryptocurrency systems and platforms are also examined in this study to identify problems, difficulties, and concerns [14]. Governments, cryptocurrency platform operators, and cryptocurrency platform users will all benefit from this study's findings when it comes to regulation of the cryptocurrency market. Lawmakers and providers of virtual currency will also find the results useful as they work to establish policies, laws, and regulations to govern and oversee digital currency systems [15].

## 2. Review of Literature

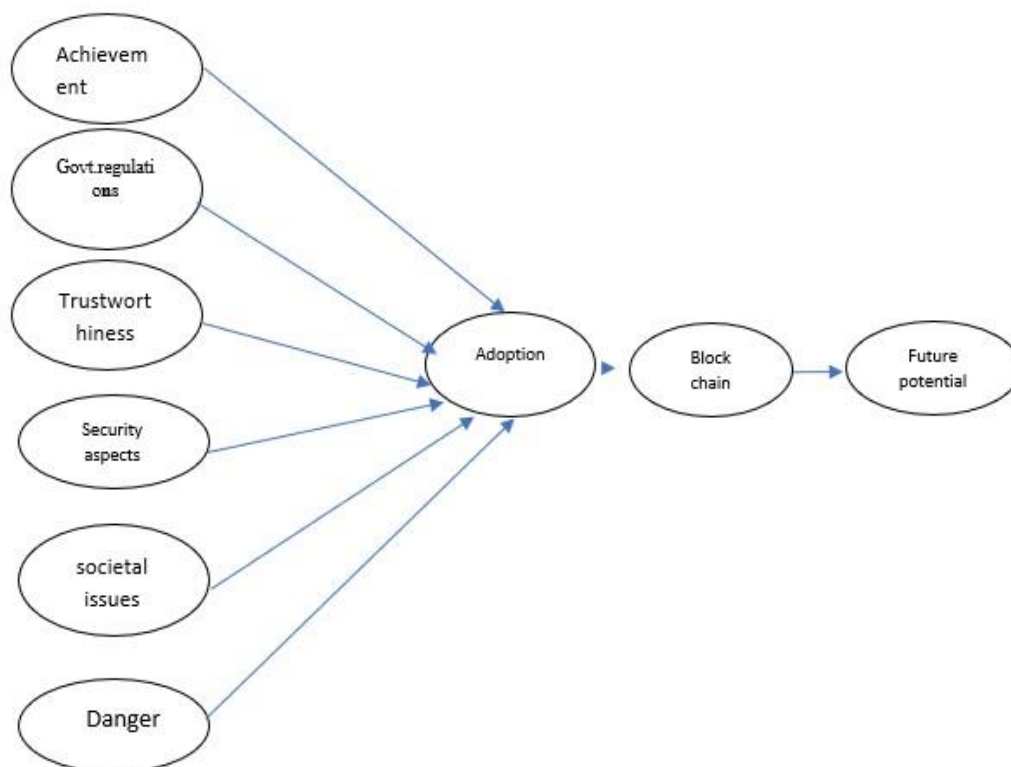
In the last 10 years, cryptocurrency has captured the interest of many, including investors, industry professionals, and academics. Numerous studies have investigated many aspects of cryptocurrency, including its safe heaven qualities [16], its Achievement in comparison to other financial assets [17], and whether it should be classified as money, gold, or cash [18].

Under the alias "Satoshi Nakamoto," an anonymous person or organization introduced a "peer-to-peer" system based on the bitcoin cryptocurrency after the 2008 global financial crisis. Introduced in 2008 and officially launched in early 2009, Bitcoin is a decentralized virtual money. The financial sector's habit of privatizing gains and socializing losses prompted this move [19]. Cryptocurrencies came into being in part because people wanted a way to conduct fast, cheap transactions that didn't rely on trusted third parties (like banks) [20]. Many see bitcoin as a potential future alternative to currency produced by governments [21].

More than 1,600 different cryptocurrencies have been introduced since Bitcoin's debut. Cryptos are already being used to buy things in the real world, not just in marketing schemes [21]. According to Shahzad et al. (2018), cryptocurrency's revolutionary administration, construction, and regulation of financial systems is one of its most striking features [22].

Everybody seems to agree that blockchain is the revolutionary technology that has propelled cryptocurrency to new heights, as stated in [23]. Blockchain technology refers to a distributed digital ledger that captures transactions and organizes them sequentially to ensure that records are permanently and immutably stored [24]. Blockchain technology is based on cryptographic security and peer-to-peer connectivity, which enables a decentralized approach with increased confidence and transparency in place of centralized and opaque monetary systems. Innovative investment vehicles and new financial mechanisms that provide diversity [25]. One way in which cryptocurrencies are similar to other financial markets and precious metals is that they facilitate everyday transactions by serving as a means of exchange. Many monetary authorities and retail banks around the world are interested in blockchain technology [26]. More and more banks are putting money into fintech startups so they can use blockchain to power cryptocurrencies and provide financial services [27].

Examining the role of cryptocurrencies in modern financial and monetary systems is the primary goal of this research [28]. We synthesise prior studies on cryptocurrency from a financial perspective by conducting a comprehensive literature study. Academic perspectives that assess the potential benefits and drawbacks of cryptocurrency in modern financial systems are few, despite ongoing attempts to understand this phenomenon [29]. One of the many potential applications of cryptocurrencies is in the banking industry, as stated in [30]. However, his research is solely focused on bitcoin. Even still, there are several conceptual and theoretical holes in the research, such as the difficulties presented by cryptocurrency to the "financial ecosystem." Numerous new research are investigating the link between anonymity and digital money, as has now come to light [31]. Nevertheless, further factors impacting the banking sector's acceptance of cryptocurrencies have not been adequately examined. What makes this study unique is its focus on the social importance of cryptocurrency use in finance, as well as its stable and thorough Achievement assessment, Oversight from the government, dependable source, security component, and more.



### Figure 1: Research model

Using data from prior research, the conceptual model in figure-1 illustrates the interrelationships of the several study variables. Prospective possibilities was the sole exogenous variable; acceptance and blockchain were the two mediator factors; and the following were the six endogenous variables: factors such as societal relevance, danger, dependable source, governmental regulation, and Achievement. Achievement, Oversight from the government, dependable source, security aspect, social importance, and danger towards Prospective possibilities are all directly related in this model [32]. Additionally, it shows how adoption and blockchain mediate the impact on future possibilities. In short, we can say that the dependent variables are being affected by the latent construct, which is Prospective possibilities, through the mediating effects of acceptance and blockchain. The latent construct, on the other hand, is indirectly influencing the dependent variables through its effect on Achievement, reliable source, and social relevance given to investors in relation to cryptocurrency [1].

### 3. Hypotheses Development

#### Trustworthiness

Newcomers to the world of digital currencies should educate themselves on the subject before putting their money into the market. It would be wise for you to familiarize yourself with the many currencies that are available [33]. There are a lot more coins and tokens out there; you should explore them all, not just the popular ones like Bitcoin, Ethereum, and Ripple. Investigate the tokens' blockchain technology usage and any unique characteristics that set them apart from the competition once you've decided on a cryptocurrency (or more) to invest in. If you want to know if an investment is worth it, study up on blockchain technology and cryptocurrencies [34].

HO1: The Trustworthiness towards Adoption of digital currency positively affects the Prospective possibilities.

HO2: The Trustworthiness towards block chain of cryptocurrency positively affects the Prospective possibilities.

#### Societal issues

Prominent digital currency prices as reported in online media such as news articles, social media posts, or blogs that were published the day prior to or on the same day as a significant surge or decline in the value of prominent cryptocurrency prices. We will be conducting further research into the following factors: Oversight from the governments, news from crypto exchanges, celebrities' opinions, information about crypto bans, announcements from large companies or regulatory authorities, information about crypto fraud, and bank notices regarding crypto. These factors are believed to be correlated with one another [35].

HO3: The societal issues towards Adoption of digital currency positively affects the Prospective possibilities.

HO4: The societal issues towards block chain of cryptocurrency positively affects the Prospective possibilities.

#### Oversight from the government

Legislation to control cryptocurrencies and prohibit private coin generation is anticipated from the government, which is also expected to create the framework for a digital currency issued by the Reserve Bank of India (RBI). Private cryptocurrency will be illegal in India according to the bill [36]. But there are a few loopholes that let you spread the word about bitcoin and its applications, "

In a notice from the Lok Sabha, the measure is one of 26 that will be considered this session. There will likely not be a total prohibition of cryptocurrencies in India, according to the crypto industry's optimistic predictions [37].

HO5: The Oversight from the government towards Adoption of digital currency positively affects the Prospective possibilities.

HO6: The Oversight from the government towards block chain of cryptocurrency positively affects the Prospective possibilities.

#### Security

Cryptocurrency, despite the rise of blockchain technology, is still vulnerable to hacking. There are still cybersecurity threats. Ransomware and other security breaches caused by hackers have already affected several cryptocurrencies. The repercussions of blockchain security breaches for Ethereum Classic and ZenCash have been financially devastating. Despite blockchain technology's stellar reputation for security, over a third of bitcoin trading platforms have fallen victim to hacking. Security concerns arose due to the blockchain's use of transactions and keys [38].

Bitcoins are uniquely identified by a combination of letters and numbers called a key. But when it enters a bitcoin wallet or a trading site, the platform's security becomes critical; if the key is gained, the currency can be taken, so it's safe and secure.

HO7: The security towards Adoption of digital currency positively affects the Prospective possibilities.

HO8: The security towards block chain of cryptocurrency positively affects the Prospective possibilities.

### **Achievement**

H09: The Achievement towards Adoption of digital currency positively affects the Prospective possibilities.

H010: The Achievement towards block chain of cryptocurrency positively affects the Prospective possibilities.

### **Danger**

Everyone from tax officials to central banks is trying to figure out what digital currencies are and why they're important. On the one hand, private investors face specific legal concerns when purchasing and trading cryptocurrencies, despite the fact that doing so might yield substantial profits [39].

Cryptocurrencies are now considered property rather than currency by the Internal Revenue Service in the US. It is mandatory to report income and expenses related to bitcoin on yearly tax returns, thus individual investors must pay capital gains tax regardless of where they bought cryptocurrency. Keep in mind that the above is accurate for those who trade cryptocurrencies as an investment. Cryptocurrency income is taxable if it is received by an employee. The value of the cryptocurrency in US dollars when it was paid determines the amount [40].

H011: The danger towards Adoption of digital currency positively affects the Prospective possibilities.

H012: The danger towards block chain of cryptocurrency positively affects the Prospective possibilities.

### **Acceptance and block chain**

H013: The Adoption of digital currency positively affects the Prospective possibilities.

H014: Block chain positively affects the Prospective possibilities of cryptocurrency.

H015: The Adoption of digital currency and block chain serve as mediators between Trustworthiness and a Prospective possibility.

H016: The Adoption of digital currency and block chain serve as mediators between societal issues and a Prospective possibility.

H017: The Adoption of digital currency and block chain serve as mediators between government and a Prospective possibility.

H018: The Adoption of digital currency and block chain serve as mediators between Components of security and a Prospective possibility.

H019: The Adoption of digital currency and block chain serve as mediators between Achievement and a Prospective possibility.

H020: The Adoption of digital currency and block chain serve as mediators between danger and a Prospective possibility.

## **4. Methodology**

### **4.1 Sampling and Data Collection**

All citizens and permanent residents of India, regardless of age, were included in this study's population. We mainly aimed for "potential early adopters" because these individuals already have some knowledge about cryptocurrency. Convenience sampling was employed. The online anonymous survey ran from October 2022 until December 2023. There were 247 forms total; 22 were discarded because they did not meet the experience criteria for the prior crypto currencies.

### **4.2 Measurement of Variables**

The items in each variable are measured using the "Likert" scale, which ranges from 1 (strongly disagree) to 5 (strongly agree). The many research variables were selected based on prior studies and the specifics of this investigation.

### **4.3 Data Analysis**

The model has been validated, the structural model has been analyzed, and the measurement scales' validity and Trustworthiness have been specified using PLS. We precisely evaluated the parameters' significance using the software program "Smart-PLS -3" with a bootstrap of 5000 samples. When attempting to determine or estimate the factors that influence an investor's actions, PLS is the appropriate method to use.

## **5. Findings**

### **5.1 Background Information of the Respondents**

In this section, you can see representative samples of the people who took part in the survey. Table 1 shows the results of the survey questions concerning the demographic variables used in this analysis. Primary sources were used to compile the data that is displayed here.



**Table-1: Baseline Data of the Participants (N= 225)**

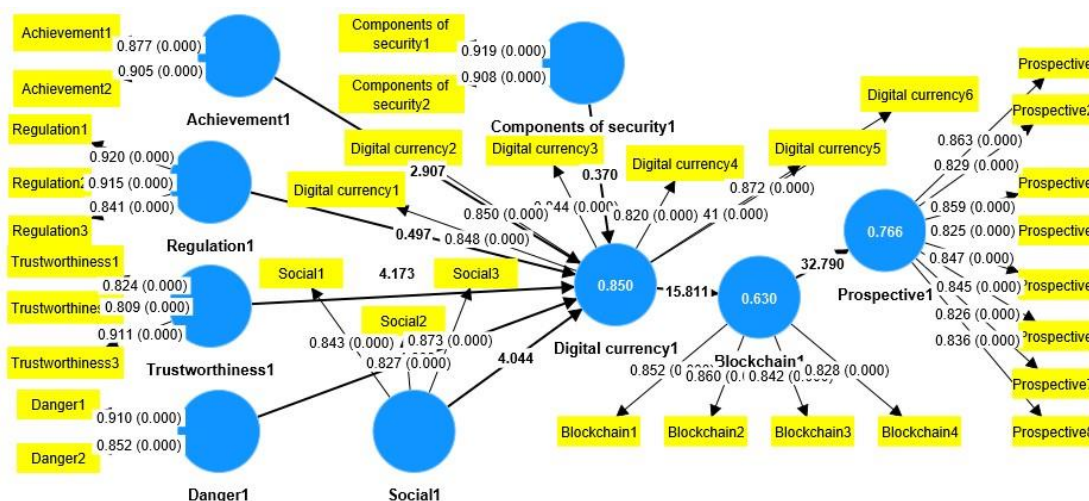
Basis	Categories	F	%
<b>Gender</b>	Male	143	63.55
	Female	82	36.44
<b>Age Group</b>	Above 18 years	43	19.11
	21-30 years	73	32.44
	31-40 years	62	27.55
	41 and above	47	20.88
<b>Educational Qualification</b>	U. G	27	12
	G	95	42.22
	P. G	50	22.22
	P.D.H	53	23.55
<b>Occupational Status</b>	Govt. Employees	23	10.22
	Private. Employees	78	34.66
	Business and self. Employees	83	36.88
	Students	41	18.22
<b>Monthly Income</b>	≤ Rs15000	43	19.11
	Rs 15000-Rs 25000	32	14.22
	Rs 25001- Rs 50000	85	37.77
	> Rs 50000	65	28.88

Table-1 depicts the demographic statistics of participants based on their age group, gender, level of study, course of study, and present status. It reveals that 63.55% of sample respondents were males (M), while 36.44% were females (F). The following data indicates that at least 19.11% of the total respondents are part of the age group of 18 years or above. A majority of 32.44% fit into the age group of 21-30 years, 27.55% was part of the age group of 31-40 years, and 20.88% belonged to the age group of 41 and above.

Educational attainment demonstrates that 12% of respondents represent Undergraduate (U.G), 42.22% belong to Graduation (G), 22.22% belong to Post Graduation (P.G), and 23.55% represent Professional Degree Holders (PDH). Occupational status denotes that 10.22% of respondents represent government employees, 34.66% belong to private employees, 36.88% belong to business or self-employed individuals, and 18.22% represent students. The following is a breakdown of respondents' monthly incomes: 19.11 percent of respondents earn less than Rs 15000, 14.22 percent earn between Rs 15000 and 25000, 37.77 percent earn between Rs 25001 and 50000, and 28.88 percent earn more than Rs 50000.

## 5.2 Measurement Model Evaluation

The measurements of convergent validity, internal consistency, and discriminant validity are used to test the measuring model.

**Fig-2: Measurement Model from SmartPLS 3.0**

**Table-2: Mean, Standard Deviation and Factor Loading**

Construct	Item	Mean	SD	Loading
Oversight from the governments	Regulations1	3.173	0.884	0.842
	Regulations2	4.20	0.977	0.804
	Regulations3	4.320	0.790	0.891
Components of security	Security1	3.127	0.991	0.762
	Security2	3.753	0.932	0.881
Danger	Danger1	3.227	0.832	0.834
	Danger2	4.867	1.008	0.781
Acceptance	Acceptance1	3.193	0.869	0.881
	Acceptance2	4.140	0.875	0.903
	Acceptance3	4.293	0.933	0.857
	Acceptance4	3.507	0.874	0.873
	Acceptance5	3.890	1.052	0.786
	Acceptance6	4.120	0.881	0.847
Prospective possibilities	Future1	4.217	0.767	0.913
	Future2	4.447	0.882	0.927
	Future3	3.020	0.752	0.924
	Future4	3.890	1.052	0.786
	Future5	4.120	0.881	0.847
	Future6	4.217	0.767	0.913
	Future7	3.827	1.077	0.803
	Future8	3.793	1.062	0.768
Achievement	Achievement1	3.200	0.883	0.812
	Achievement2	3.507	0.874	0.873
Social relevance	Social relevance1	3.890	1.052	0.786
	Social relevance2	3.890	1.052	0.786
	Social relevance3	4.120	0.881	0.847
Reliable source	Reliable1	4.217	0.767	0.913
	Reliable2	3.507	0.874	0.873
	Reliable3	3.890	1.052	0.786
Block chain	Block chain1	4.120	0.881	0.847
	Block chain2	4.217	0.767	0.913
	Block chain3	4.447	0.882	0.927
	Block chain4	3.020	0.752	0.924

Investors' favorable reaction to cryptocurrencies is shown by mean values larger than 3, as shown in Table 2. The researcher has utilized a five-point Likert scale in this study, with the options being "Strongly Disagree" (1) and "Strongly Agree" (5). All items in each build have factor loadings higher than the required 0.70. That is to say, the statements all provide a thorough justification of the theoretical assumptions they are based on.

### 5.3 Convergent Validity Result

The Cronbach Alpha, Rho, and convergent validity of the measurement model results of the present study are shown in Table-2 given below.

**Table-3: Convergent Validity Result**

Constructs	Cronbach's Alpha	Rho-A	Composite Trustworthiness (C.R)	Average Variance Explained (AVE)
Oversight from the governments	0.801	0.789	0.865	0.732
Social relevance	0.799	0.811	0.811	0.797
Danger	0.721	0.790	0.809	0.708
Reliable source	0.732	0.833	0.765	0.743
Achievement aspects	0.819	0.787	0.809	0.732
Components of security	0.821	0.813	0.921	0.811
Prospective possibilities	0.876	0.888	0.909	0.787
Acceptance	0.798	0.865	0.953	0.708
Block chain	0.789	0.808	0.911	0.709

All eight components meet the prescribed limit, as shown in Table 3, where the Composite Trustworthiness (C.R.) value was greater than 0.7 and the "Average Variance Extracted (AVE)" value was greater than 0.5 [41]. When both the "Cronbach's Alpha" and the "rho-a" values were higher than 0.7, it meant that the data was internally consistent. As a result, the constructs' convergent validity was established [42].

#### 5.4 Discriminant Validity Result

There was confirmation of discriminant validity using the Fornell-Larcker and cross-loading criteria. As the name implies, discriminant validity reveals "how well the measure is different from other things in the nomological net."

**Table-4: Discriminant validity–Fornell-Larcker criterion**

Constructs	Oversight from the governments	Components of security	Danger	Acceptance	Prospective possibilities	Achievement	Social relevance	Reliable source	Blockchain
Oversight from the governments	<b>0.901</b>								
Components of security	0.741	<b>0.854</b>							
Danger	0.803	0.726	<b>0.836</b>						
Prospective possibilities	0.717	0.762	0.756	<b>0.854</b>					
Acceptance	0.760	0.732	0.654	0.781	<b>0.897</b>				
Achievement	0.801	0.681	0.755	0.816	0.808	<b>0.912</b>			
Social relevance	0.732	0.722	0.654	0.609	0.723	0.802	<b>0.853</b>		
Reliable source	0.743	0.712	0.607	0.789	0.689	0.768	0.679	<b>0.843</b>	
Blockchain	0.622	0.607	0.710	0.718	0.721	0.665	0.722	0.702	<b>0.887</b>

You obtained this conclusion by taking the "square roots of Average Variance Extracted" of the accessible constructs, as shown in Table -4, which represents the Fornell-Larcker criterion. The following values were recorded: More significant than the correlation values between any two constructs were the following: government oversight (0.901), security components (0.884), danger (0.854), acceptance (0.836), prospective possibilities (0.854), achievement (0.897), social relevance (0.912), reliable source (0.853), and blockchain (0.843). According to the Fornell-Larcker criterion, discriminant validity was thus achieved [43].

**Table-5: Discriminant validity–loading and cross-loading criterion**



Constructs	Oversight from the governments	Components of security	Danger	Acceptance	Prospective possibilities	Achievement	Social relevance	Reliable source	Blockchain
Regulation 1	<b>0.819</b>	0.736	0.786	0.825	0.701	0.701	0.734	0.749	0.734
Regulation 2	<b>0.821</b>	0.725	0.763	0.785	0.689	0.689	0.803	0.791	0.803
Regulation 3	<b>0.914</b>	0.673	0.723	0.682	0.646	0.646	0.706	0.738	0.800
Security1	0.640	<b>0.847</b>	0.651	0.717	0.580	0.642	0.739	0.738	0.774
Security2	0.763	<b>0.905</b>	0.728	0.811	0.681	0.683	0.722	0.769	0.660
Danger1	0.714	0.727	<b>0.851</b>	0.791	0.655	0.595	0.625	0.600	0.681
Danger2	0.729	0.634	<b>0.892</b>	0.625	0.778	0.707	0.699	0.701	0.695
Acceptance1	0.697	0.749	0.635	<b>0.827</b>	0.605	0.732	0.734	0.718	0.717
Acceptance2	0.666	0.712	0.704	<b>0.813</b>	0.609	0.705	0.640	0.717	0.667
Acceptance3	0.795	0.736	0.760	<b>0.903</b>	0.705	0.739	0.747	0.720	0.837
Acceptance4	0.609	0.706	0.696	<b>0.914</b>	0.585	0.734	0.736	0.762	0.764
Acceptance5	0.657	0.707	0.639	<b>0.837</b>	0.621	0.702	0.783	0.681	0.766
Acceptance6	0.628	0.753	0.678	<b>0.895</b>	0.644	0.656	0.713	0.657	0.733
Future1	0.707	0.699	0.701	0.695	<b>0.932</b>	0.681	0.733	0.695	0.707
Future2	0.732	0.734	0.718	0.717	<b>0.881</b>	0.620	0.681	0.633	0.726
Future3	0.705	0.640	0.717	0.667	<b>0.874</b>	0.635	0.726	0.656	0.712
Future4	0.739	0.747	0.720	0.837	<b>0.831</b>	0.662	0.712	0.681	0.713
Future5	0.734	0.736	0.762	0.764	<b>0.898</b>	0.656	0.713	0.657	0.733
Future6	0.702	0.783	0.681	0.766	<b>0.805</b>	0.681	0.733	0.695	0.707
Future7	0.695	0.719	0.683	0.744	<b>0.841</b>	0.688	0.700	0.632	0.753
Future8	0.630	0.673	0.646	0.683	<b>0.864</b>	0.686	0.695	0.672	0.544
Achievement1	0.673	0.723	0.682	0.646	0.739	<b>0.802</b>	0.783	0.762	0.559
Achievement2	0.619	0.741	0.753	0.741	0.679	<b>0.891</b>	0.703	0.733	0.581
Social1	0.701	0.734	0.749	0.734	0.632	0.657	<b>0.876</b>	0.758	0.646
Social2	0.689	0.803	0.791	0.803	0.806	0.695	<b>0.854</b>	0.690	0.738
Social3	0.646	0.706	0.738	0.800	0.695	0.725	<b>0.921</b>	0.776	0.695
Reliable1	0.642	0.739	0.738	0.774	0.666	0.663	0.739	<b>0.815</b>	0.717
Reliable2	0.683	0.722	0.769	0.660	0.669	0.728	0.733	<b>0.814</b>	0.667
Reliable3	0.595	0.625	0.600	0.681	0.641	0.689	0.750	<b>0.863</b>	0.783
B.C1	0.620	0.681	0.633	0.726	0.744	0.641	0.689	0.733	<b>0.801</b>
B.C2	0.635	0.726	0.656	0.712	0.695	0.632	0.703	0.733	<b>0.897</b>

B.C3	0.662	0.712	0.681	0.713	0.765	0.747	0.720	0.837	<b>0.914</b>
B.C4	0.656	0.713	0.657	0.733	0.801	0.821	0.754	0.760	<b>0.875</b>
	0.681	0.733	0.695	0.707	0.739	0.738	0.774	0.666	<b>0.910</b>

All of the construct loadings in Table -5 were higher than the cross-loadings with other constructs across all columns, which represents the cross-loading criterion. Therefore, the results were in line with the cross-loading criterion, indicating discriminant validity [44].

#### 5.4 Structural Equation Model

To ensure accurate results, it is necessary to check for multicollinearity when examining the structural model. There was no evidence of multicollinearity in the model, since the VIF values were between 1.709 and 3.155 [45]. The next step was to evaluate the study's hypotheses by running the structural model through the bootstrapping procedure with 5000 resamples.

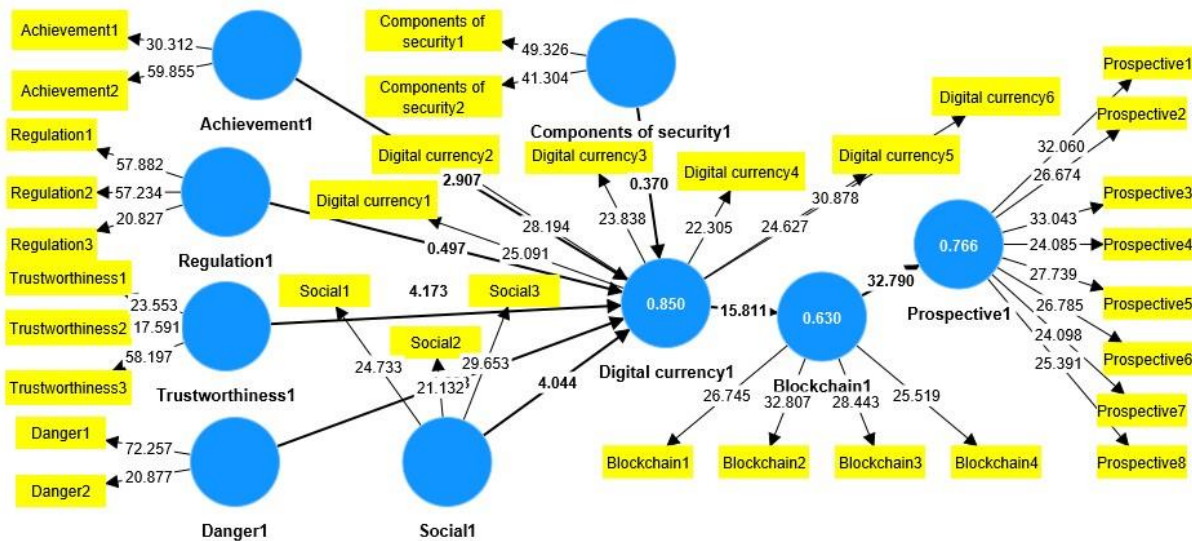


Figure-3: Structural Equation Model (SEM)

If the t-values of the regression weights are greater than 1.96 in this PLS-SEM model, then every path is significant at the 5% level or higher, meaning that the estimated path parameter is also significant. You can see the SEM model's output in the table down below.

Table-6: Direct impact of Trustworthiness on Adoption of digital currency and block chain

Hypothesis	Path	B	t-value	Result
Ho1	Trust worthiness → acceptance of cryptocurrency	0.374	3.193	Supported
Ho2	Trustworthiness → block chain	0.295	3.143	Supported

Cryptocurrency acceptance was positively and directly correlated with Trustworthiness ( $\beta = 0.374$ , t-value = 3.193, and  $p < 0.001$ ), as shown in Table 6, which also supports Hypotheses Ho1 and Ho2. On the other hand, Trustworthiness is positively and directly correlated with the block chain ( $\beta = 0.295$ , t-value = 3.143, and  $p < 0.001$ ).

Table-7: Direct impact of societal issues on Adoption of digital currency and block chain

Hypothesis	Path	B	t-value	Result
Ho3	societal issues → acceptance of cryptocurrency	0.316	3.454	Supported
Ho4	societal issues → block chain	0.249	3.205	Supported

A direct and positive relationship between societal difficulties and cryptocurrency acceptability was found ( $\beta = 0.316$ , t-value = 3.454, and  $p < 0.001$ ), as shown in Table 7, which also supports hypotheses Ho3 and Ho4. But,

there is a direct and positive relationship between societal issues and blockchain ( $\beta = 0.249$ ,  $t\text{-value} = 3.205$ , and  $p < 0.001$ ).

**Table-8: Direct impact of Oversight from the government on Adoption of digital currency and block chain**

Hypothesis	Path	B	t-value	Result
Ho5	Oversight from the government → acceptance of cryptocurrency	0.032	0.411	Not supported
Ho6	Oversight from the government → block chain	0.025	0.405	Not supported

Table-8 reveals that neither Ho5 nor Ho6 were validated, but that there was a direct and positive correlation between government oversight and the acceptability of cryptocurrencies ( $\gamma = 0.032$ ,  $t\text{-value} = 0.411$ , and  $p = N.S.$ ). However, there is a direct and positive relationship between government oversight and blockchain ( $\beta = 0.025$ ,  $t\text{-value} = 0.405$ , and  $p = N.S.$ ).

**Table-9: Direct impact of Components of security on Adoption of digital currency and block chain**

Hypothesis	Path	B	t-value	Result
Ho7	security → acceptance of cryptocurrency	0.052	0.802	Not supported
Ho8	security → block chain	0.066	0.819	Not supported

Cryptocurrency acceptability was positively and directly correlated with security ( $\beta = 0.052$ ,  $t\text{-value} = 0.802$ , and  $p = N.S.$ ), as shown in Table-9, which disproves Hypotheses Ho7 and Ho8. Conversely, the security has a direct and positive relationship with the blockchain ( $\beta = 0.066$ ,  $t\text{-value} = 0.819$ , and  $p = N.S.$ ).

**Table-10: Direct impact of Achievement on Adoption of digital currency and block chain**

Hypothesis	Path	B	t-value	Result
Ho9	Achievement → acceptance of cryptocurrency	0.217	2.232	Supported
Ho10	Achievement → block chain	0.170	2.314	Supported

According to Table 10, neither Ho9 nor Ho10 were supported, but there was a direct and positive relationship between Achievement and cryptocurrency adoption ( $\beta = 0.217$ ,  $t\text{-value} = 2.232$ , and  $p < 0.001$ ). Additionally, there is a direct and positive correlation between achievement and cryptocurrency acceptability ( $\beta = 0.170$ ,  $t\text{-value} = 2.314$ , and  $p < 0.001$ ).

**Table-11: Direct impact of danger on Adoption of digital currency and block chain**

Hypothesis	Path	B	t-value	Result
Ho11	Danger → acceptance of cryptocurrency	0.029	0.306	Not Supported
Ho12	Danger → block chain	0.016	0.312	Not Supported

According to Table 11, neither Ho11 nor Ho12 were supported, and there was a direct and positive relationship between danger and the adoption of cryptocurrencies ( $\beta = 0.029$ ,  $t\text{-value} = 0.306$ , and  $p = N.S.$ ). Despite this, the risk is positively and directly associated with the blockchain ( $\beta = 0.016$ ,  $t\text{-value} = 0.312$ , and  $p = N.S.$ ).

**Table-12: Direct impact of independent variables on Adoption of digital currency and block chain**

Hypothesis	Path	B	t-value	Result
H013	Adoption of digital currency→ block chain	0.793	11.976	Supported
H014	Block chain→ Prospective possibilities	0.875	25.35	Supported
H015	Trustworthiness→ Adoption of digital currency→ block chain→ Prospective possibilities	0.258	3.068	Supported
H016	Societal issues → Adoption of digital currency→ block chain→ Prospective possibilities	0.2183	3.101	Supported
H017	Oversight from the government → Adoption of digital currency→ block chain→ Prospective possibilities	0.0252	0.411	Not Supported
H018	Components of security → Adoption of digital currency→ block chain→ Prospective possibilities	0.0218	0.820	Not supported
H019	Achievement → Adoption of digital currency→ block chain→ Prospective possibilities	0.148	2.277	Supported
H020	Danger → Adoption of digital currency→ block chain→ Prospective possibilities	0.014	0.312	Not supported

Hypotheses H013, H014, H015, H016, and H019 were found to be supported according to Table-12, however hypotheses H017, H018, and H020 were found to be unsupported. The acceptability of cryptocurrencies was discovered to be favorably and directly correlated with the block chain ( $\beta = 0.793$ ,  $t\text{-value} = 11.976$ ,  $p < 0.001$ ). The same holds true for the discovery that blockchain technology has a direct and positive relationship with prospective possibilities ( $\beta = 0.875$ ,  $t\text{-value} = 25.35$ , and  $p < 0.001$ ).

With a beta of 0.258,  $t\text{-value}$  of 3.068, and  $p < 0.001$ , the positive association between dependability and potential is mediated by the use of digital currency and blockchain technology. Conversely, the usage of digital money and blockchains acts as a mediator between social problems and potential future opportunities ( $\beta = 0.2183$ ,  $t\text{-value} = 3.101$ ,  $p < 0.001$ ). Alternatively, the use of digital money and blockchain technology acts as a mediator between government oversight and potential future outcomes ( $\beta = 0.0252$ ,  $t\text{-value} = 0.411$ ,  $p = N.S.$ ). In contrast, the presence of digital money and blockchain technology acts as a mediator between security and prospective possibilities, as shown by  $\beta = 0.258$ ,  $t\text{-value} = 3.068$ ,  $p < 0.001$ . Beyond that, the positive correlation between Achievement and potential ( $\beta = 0.148$ ,  $t\text{-value} = 2.277$ ,  $p < 0.001$ ) is mediated by the use of digital currency and blockchain technology. Lastly, the positive correlation between risk and opportunity is mediated by blockchain technology and cryptocurrency ( $\beta = 0.014$ ,  $t\text{-value} = 0.312$ ,  $p = N.S.$ ).

## 6. Implication of study

The following independent variables were taken into account in this study: Oversight from the government, danger, societal relevance, Trustworthiness, security difficulties, and future scope. The most major problem with this study's findings is that investors are wary of putting money into cryptocurrencies due to the government's reluctance to regulate them. In a similar vein, investors' ignorance about the platform's ins and outs poses security and danger concerns.

The social and Achievement-based aspects of cryptocurrencies, on the other hand, are growing in popularity. Crypto exchanges and cryptocurrency are both made more trustworthy because most trading platforms take precautions to protect investors' money. This points to the imminent possibility of significant shifts in the trajectory of cryptocurrencies. Cryptocurrency prices might skyrocket as a result of new technology being incorporated into financial systems.

Crypto as a potential new national currency is already being considered by a number of nations. A lot of nations are thinking about how to legitimize and regulate these digital currencies.

## 7. Future scope

When a small number of individuals or a small area amass a disproportionate amount of computing power, problems arise in the bitcoin sector. When investing in the right currency at the right place through authorized crypto currency exchanges, we must be extremely careful.

The blockchain system is among the most cutting-edge and inventive systems in use today in the financial sector, and it is a prime example of how innovation pays off. Many investors are drawn to these crypto currencies due to their immediate nature and minimal transaction costs.

One of the most crucial features is the ability to conduct a fully secure peer-to-peer transaction. Blockchain technology has several advantages when it comes to creating crypto currencies, including decentralization, transparency, and authenticity. Due to market volatility and a lack of regulation, only a small number of governments have outright forbidden the trade of cryptocurrency. Their meteoric rise in value has prompted several financial institutions and governments to try to influence the cryptocurrency market.

## 8. Conclusion

Cryptocurrency is the newest, most appealing, most efficient method of payment. By facilitating the use of a variety of non-cash payment options, it facilitates a wide range of financial transactions, including buying, selling, exchanging, and transferring funds. Despite the proliferation of digital financial transaction platforms, none of them have been subject to any kind of oversight or regulation as of yet. The key issues with the bitcoin system are the absence of legislation and regulation. In order to address the research topics, this study has examined a number of indicators. Research and studies also indicate that bitcoin is shaping up to be the digital currency platform of choice. This is mainly because of the huge amount of cryptocurrency that is constantly increasing in value as a result of its widespread adoption and the numerous prospects that it presents.

Furthermore, investors' trust in cryptocurrencies is growing, as seen in numerous cases discussed in this article, even though investors have not fully grasped the big picture of cryptocurrency use just yet. Until bitcoin is fully regulated and monitored, investors should remain vigilant and take necessary safeguards. In particular, the e-business and e-payment industries stand to benefit from the many new possibilities that cryptocurrency's bright future holds. Additional advancements in cryptocurrencies may be possible as a result of faster and more effective development in the technical domain. Numerous measures have been implemented to enhance and expand cryptocurrency since this study was carried out. Many businesses are already accepting various cryptocurrencies as payment, and more and more individuals are starting to see the possibilities and advantages that cryptocurrencies have to offer.

The substantial impact of cryptocurrency on financiers has been demonstrated by this research. There is a favourable relationship between the adoption of crypto currency and characteristics like Achievement, social significance, and Trustworthiness, and no significant relationship between the acceptance of crypto currency and elements like government laws, Components of security, or danger. Crypto market regulation and regulation by financial institutions is essential. Numerous avenues of inquiry exist within the realm of cryptocurrency, and there will always be a demand for scholarly articles. An investor's perspective on the potential regional uses of cryptocurrency can be shaped by a long-term study of the topic.

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