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An Analytical Study on Awareness of Cryptocurrency

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Abstract

A digital or virtual currency that is virtually impossible to counterfeit or double-spend is called cryptocurrency. It is protected by cryptography. The majority of cryptocurrencies are maintained on decentralized networks through the use of blockchain technology, which is a distributed ledger maintained by various computer networks. This study aims to determine the degree of investor awareness of cryptocurrencies, as well as the preferences of investors across age and income brackets. Additionally, it will examine investor behaviour about crypto currencies and the awareness of various cryptocurrencies.

Introduction

People have created several methods over time for exchanging their belongings. Bartering was a system of exchanging goods and services among early humans. As time passed, people began exchanging goods and services for cash or gold. This physical money was produced by society and held some significance. With the development of computers and digital technology over time, the use of digital money started to become important in societies all over the world. International trade and commerce have been boosted by the use of digital currency. Many businesses that aspire to become global players have made their plans a reality. Strong currencies were possessed by nations that engaged in trade. Stocks and other securities became popular investment strategies. Stocks and other securities became popular investment strategies later on. Although it was merely another type of digital money, cryptocurrency gained popularity. All over the world, this payment method is accepted.

An American created the cryptography system known as e-cash in 1983. Twelve years later, they created Digi Cash, a different system that concealed financial transactions using cryptography. However, the concept or word "cryptocurrency" initially surfaced in 1998. But it was Satoshi Nakamoto who invented Bitcoin, the first cryptocurrency, back in 2009. He made it to set up a brand-new, decentralized, worldwide payment system that would not require a financial institution. The study's primary focus is "cryptocurrency."

Due to their decentralized structure and high return potential, cryptocurrencies have gained popularity as an investment choice among investors worldwide. It's critical to keep up with the main cryptocurrencies that are anticipated to rule the market as 2023 approaches. The top cryptocurrencies for 2023, along with their market values and the main elements that set them apart as excellent investments.

Different Types of Cryptocurrencies

1. Bitcoin (BTC)

Bitcoin, the original cryptocurrency, continues to be the leader in the cryptocurrency market. Created in 2009 by the mysterious Satoshi Nakamoto, Bitcoin revolutionized the concept of digital currency with its decentralized

blockchain-based system. Due to its widespread acceptance and use as a payment method, Bitcoin has established itself as the most valuable and popular cryptocurrency.
Despite its longevity, Bitcoin's value remains highly volatile, with significant price swings. However, its widespread adoption by businesses and financial institutions, including Visa and major banks, cements its position as a reliable investment option. In addition, ongoing developments such as the launch of a solar-powered Bitcoin mine in Texas add to its sustainability and long-term growth potential.

2. Ethereum (ETH)
Because of its blockchain technology, Ethereum—the second-largest cryptocurrency by market capitalization—offers a distinctive value proposition. Ethereum, in contrast to Bitcoin, is a platform that enables programmers to create smart contracts and decentralized applications (dApps). Because of this feature, Ethereum has become the industry leader in blockchain technology.
With the recent transition of Ethereum to "The Merge," a proof-of-stake consensus mechanism, the platform's scalability and energy consumption have both greatly improved. Ethereum is now a more effective and environmentally friendly alternative to Bitcoin. Its standing as one of the top cryptocurrencies in 2023 is further cemented by the platform's ongoing development and the growing interest of established businesses, like Fidelity, in providing Ethereum custody and trading services.

3. Binance Coin (BNB)
The native cryptocurrency of Binance, one of the biggest and most well-known cryptocurrency exchanges worldwide, is called Binance Coin, or BNB. On the Ethereum network, BNB was first used as a utility token that provided users with lower trading costs. Since then, though, it has expanded its functionality and moved to its blockchain.
The frequent coin-burning events, in which a portion of the tokens are permanently removed from circulation, are a major benefit of investing in BNB. Over time, this mechanism may raise the value of BNB by generating scarcity. Binance is determined to stay a top cryptocurrency exchange, as seen by its recovery fund and dedication to stabilizing the market despite regulatory obstacles and internal investigations.

4. Cardano (ADA)
The goal of the decentralized blockchain platform Cardano is to offer a more effective and long-lasting substitute for other cryptocurrencies like Ethereum and Bitcoin. Charles Hoskinson, a co-founder of Ethereum, founded Cardano, which prioritizes sustainability, security, and scalability in its architecture.
Cardano is a desirable investment because of its innovative proof-of-stake consensus mechanism and its capacity to handle transactions more quickly and cheaply. Cardano's potential for expansion and uptake is further enhanced by the recent introduction of Ada Swap, a platform for the creation of DeFi (decentralized finance) applications. But the platform's ability to draw in developers and gain broad traction will determine how successful it is.

5. Polygon (MATIC)
Originally called Matic Network, Polygon is an Ethereum Layer 2 scaling solution designed to increase both scalability and usability. Polygon solves some of the drawbacks of the Ethereum network by utilizing sidechains to facilitate quicker and less expensive transactions.
The need for scalable blockchain solutions like Polygon has grown as a result of the emergence of decentralized finance and non-fungible tokens (NFTs). Its capacity to accommodate a broad range of applications and Ethereum compatibility make it a viable investment choice for 2023. It's crucial to remember that there is a lot of competition in the layer 2 scaling market, so Polygon will need to keep coming up with new ideas to stay in the lead.

6. Terra (LUNA)
The blockchain platform Terra combines the advantages of cryptocurrencies with the dependability of fiat money. It does this by linking the US dollar and other fiat currencies to its stablecoin, Terra USD. Terra is a desirable choice for people who wish to reduce the volatility typically connected with cryptocurrencies because of its stability.
Terra's potential as an investment is increased by its distinct stablecoin strategy and its emphasis on building a strong DeFi ecosystem. Its alliances with significant businesses, like Amazon Web Services, increase its legitimacy and expansion potential. Like any stablecoin, though, regulatory oversight and the maintenance of its peg to fiat currencies will be important things to keep an eye on.

7. Avalanche
The goal of the blockchain platform Avalanche is to offer decentralized apps high-performance infrastructure. Its high transaction speed, cheap costs, and great scalability make it a desirable option for users and developers in the decentralized finance market.

Avalanche is a formidable competitor in the cryptocurrency space thanks to its high transaction processing rate and compatibility with multiple blockchains. Its collaborations with significant players in the market, such as Chain-link, confirm its potential for expansion and uptake. To stay ahead of the competition in the blockchain platform market, Avalanche will have to keep coming up with new ideas.

8. Chain-link

A decentralized Oracle network called Chain-link links real data and smart contracts. Its goal is to close the gap between blockchain technology and practical applications by offering smart contracts with dependable and impenetrable data inputs and outputs.

The demand for safe and dependable data sources is rising as blockchain technology and smart contracts become more widely used. Chain Link is positioned as a major player in the Oracle space thanks to its distinctive value proposition and alliances with well-known businesses like Google Cloud. It must, however, contend with rival blockchain initiatives that provide comparable services; therefore, its capacity to adjust to changing market demands will be essential to its success.

Objectives of the Study

- To understand the awareness level of cryptocurrencies among the investors.
- To find out the preference for various cryptocurrencies across the age and income levels of the investors.
- To analyse the awareness of different cryptocurrencies and the investor's behaviour towards cryptocurrencies.

Hypothesis of the Study

- **H_0^1:**There is no significant association between the preference for various cryptocurrencies across the age and income levels of the investors.
- **H_0^2:**There is no significant association between the awareness of different types of cryptocurrencies and the investor's behavior towards cryptocurrencies.

Research Methodology

Methodology

For this study, primary data were obtained by means of a straightforward random sampling technique, supplemented by the direct access method for certain samples, and a straightforward online questionnaire. The developed hypotheses are tested and the influence of each independent variable on the dependent variable is examined using correlation analysis, Kruskal Wallis test, and simple percentage analysis.

Study sampling

A sample of 150 respondents from the city of Chennai and surrounding areas was selected for the analysis of cryptocurrency awareness.

Study restrictions

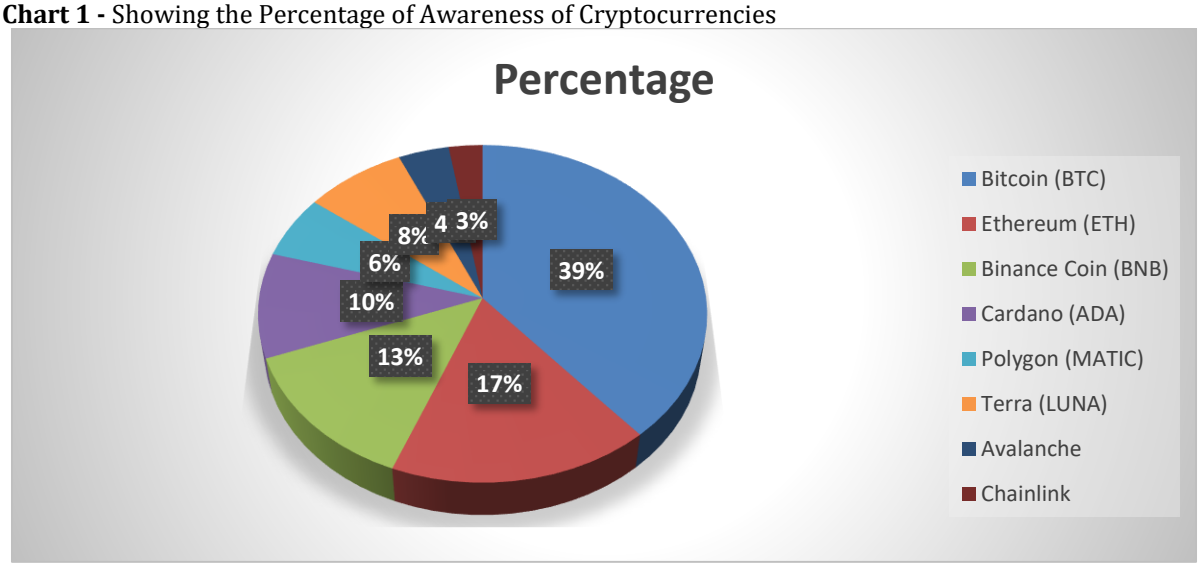
- It is very difficult to cover all kinds of investorsusingCryptocurrencies.
- The study is limited to a sample size of only 150 respondents**.**

Table 1 - Showing the Awareness of Cryptocurrencies

Types of Cryptocurrencies	Frequency	Percent	Valid Percent	Cumulative Percent
Bitcoin (BTC)	58	38.67	38.67	38.67
Ethereum (ETH)	26	17.33	17.33	56
Binance Coin (BNB)	20	13.33	13.33	69.33
Cardano (ADA)	15	10	10	79.33
Polygon (MATIC)	9	6	6	85.33
Terra (LUNA)	12	8	8	93.33
Avalanche	6	4	4	97.33

Chain-link	4	2.67	2.67	100
TOTAL	**150**	**100**	**100**	

Chart 1 - Showing the Percentage of Awareness of Cryptocurrencies



Interpretation

The table and graph above show the different types of cryptocurrencies that respondents are familiar with, which shows that most respondents are familiar with Bitcoin (38%), followed by Ethereum (17%), followed by Binance Coin (13%), Cardano (10%), Tera (8%) and Polygon (6%). Many respondents were unaware of Avalanche and Chain Link cryptocurrencies.

Kruskal-Wallis Test

- **H_0[1]**: There is no significant association between the preference for various cryptocurrencies across the age and income levels of the investors.

Table 2- Preference for Various Cryptocurrencies across the Age and Income Levels of the Investors

Various Cryptocurrencies	Age	Chi - Square	Asymp.Sig	Annual Income	Chi-Square	Asymp.Sig
Bitcoin (BTC)	30-40 yrs.	26.754	.000*	Up to 5 Lakhs	8.543	.015*
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		
Ethereum (ETH)	30-40 yrs.	17.622	.000*	Up to 5 Lakhs	6.832	.021*
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		
Binance Coin (BNB)	30-40 yrs.	18.125	.000*	Up to 5 Lakhs	6.432	.017*
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		

Cardano (ADA)	30-40 yrs.	15.274	.001*	Up to 5 Lakhs	7.263	.014*
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		
Polygon (MATIC)	30-40 yrs.	3.543	.132	Up to 5 Lakhs	1.327	.473
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		
Terra (LUNA)	30-40 yrs.	16.321	.001*	Up to 5 Lakhs	7.471	.016*
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		
Avalanche	30-40 yrs.	4.324	.214	Up to 5 Lakhs	2.362	.323
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		
Chain-link	30-40 yrs.	7.263	.153	Up to 5 Lakhs	4.623	.062
	41-50 yrs.			5 – 7 Lakhs		
	51-60 yrs.			7 – 9 Lakhs		

Source:*Significant at 5% level.

Table 2 shows that there is a significant association between the preferences of different cryptocurrencies across investor age. Kruskal-Wallis test calculated values except Polygon (Matics), Avalanche and Chain-link, all other variables like Bitcoin (BTC) (0.000), Ethereum (ETH) (0.000), Binance Coin (BNB) (0.000), Cardano (ADA) (0.001) and Terra (LUNA) (0.001), which is less than the hypothesized value (α = 0.05) at the 5% significance level. Therefore, the null hypothesis (**H_0^1**) is rejected. Therefore, there is a significant correlation between the preferences of different cryptocurrencies across the age of investors.

In addition to the aforementioned analysis of respondents' age and various cryptocurrency investments, the researchers also applied the Kruskal-Wallis test to the income and preference of various cryptocurrencies across investors. Calculated value for Bitcoin (BTC) (0.015), Ethereum (ETH) (0.021), Binance Coin (BNB) (0.017), Cardano (ADA) (0.014) and Terra (LUNA) (0.016) which is less than the hypothetical value (α = 0.05) at the 5% significance level. Therefore, the null hypothesis (**H_0^1**)is rejected. Thus, there is a statistically significant relationship between the preference of the aforementioned cryptocurrencies across investors' incomes, and the remaining cryptocurrencies have no significant relationship.

Correlation

- **H_0^2**: There is no significant association between the awareness of different types of cryptocurrencies and the investor's behavior towards cryptocurrencies.

Table 3- Awareness of Different Cryptocurrencies and the Investor's Behavior towards Cryptocurrencies

Parameters	**Correlation Coefficient(r)**	**P value**	**Remarks**
Bitcoin (BTC)	.314**	.000	HS

Ethereum (ETH)	.243**	.001	HS
Binance Coin (BNB)	.241**	.000	HS
Cardano (ADA)	.236**	.001	HS
Polygon (MATIC)	.036	.354	NS
Terra (LUNA)	.264**	.000	HS
Avalanche	.047	.326	NS
Chainlink	.043	.415	NS

HS- Highly Significant, NS- Not Significant

From the table, it can be concluded that there is a significant relationship between the awareness of different types of cryptocurrencies and investor behavior towards cryptocurrencies, Awareness of the Bitcoin (r=0.314, p=.000), Ethereum (r=.243, p=0.001), Binance Coin (r=0.241, p=0.000), Cardano (r=0.236, p=0.001), Terra (r=0.264, p=0.000) and hence the null hypothesis ($\mathbf{H_0^2}$) is rejected for the above cryptocurrencies. It also revealed that there is no significant correlation between Awareness of Polygon (r=0.036, p=0.354), Avalanche (r=0.047, p=0.326) and Chain-Link (r=0.043, p=. 415) cryptocurrencies.

Table 4-

ModelSummary				
Model	**R**	**R Square**	**Adjusted RSquare**	**Std. Error oftheEstimate**
1	.283[a]	.092	.084	3.42754
a. Predictors: (Constant), Bitcoin (BTC), Ethereum (ETH), Binance Coin (BNB), Cardano (ADA), Polygon (MATIC), Terra (LUNA), Avalanche, Chainlink				

The above table shows the correlation coefficient (R=0.283) which explains that there is a positive correlation between the dependent variable (Investment Behavior) and the independent variables (Bitcoin (BTC), Ethereum (ETH), Binance Coin (BNB), Cardano (ADA), Polygon (MATIC), Terra (LUNA), Avalanche, Chain-link.). R square is 0.092, which means that personality traits explain 10% of investment behavior and the remaining 80% is explained by other factors. Thus, there is a significant correlation between awareness of different types of cryptocurrencies and investor behavior towards cryptocurrencies.

Conclusion

It is a forerunner of technology that may develop into long-term financial systems, cryptocurrency is in a unique position. As a peer-to-peer system, it can, by definition, bridge the gaps in existing financial technologies and assist in resolving issues with traditional banking. The aforementioned analysis makes it evident that the majority of respondents (38%), Ethereum (17%), Binance Coin (13%), Cardano (10%), Tera (8%), and Polygon (6%), are familiar with Bitcoin. But a lot of respondents didn't know about cryptocurrencies like Chain Link and Avalanche. Except Polygon (Matics), Avalanche, and Chain-link, all other variables such as Bitcoin (BTC) (0.000), Ethereum (ETH) (0.000), Binance Coin (BNB) (0.000), and Cardano (ADA) (0.001), the computed value when comparing the ageand Terra (LUNA) (0.001), which at the 5% level of significance is less than the predicted value (α = 0.05), indicating that individuals between the ages of 41 and 50 are more interested in and knowledgeable about cryptocurrencies.

The Kruskal-Wallis test was also used by the researchers to examine investor preferences for various cryptocurrencies and income levels. At the 5% significance level, the calculated values for Cardano (ADA) (0.014), Terra (LUNA) (0.016), Ethereum (ETH) (0.021), Bitcoin (BTC) (0.015), and Binance Coin (BNB) (0.017) are less than the hypothetical value (α = 0.05). This suggests that a growing number of investors are expressing interest in buying cryptocurrency. Those who earn more money, in particular, are more interested in buying cryptocurrency. Furthermore, investors are becoming more

knowledgeable about all other cryptocurrency kinds and are participating in them, except Polygon, Avalanche, and Chain-link.

The ability of the cryptocurrency, specifically the set limit on how long Bitcoin will last, to function as a viable medium of exchange has been ingrained in its design from the beginning. Every four years, Bitcoin will be mined with decreasing returns until a maximum of 21 million coins is obtained. All it takes to purchase cryptocurrencies is to create an online account with an exchange and submit a request; the transaction typically takes place in a matter of minutes. They can purchase from thousands of sellers worldwide once the cryptocurrency is in their digital wallet. Even though some fiat currencies are more powerful and appealing than others, they are unable to match cryptocurrencies' agility. The disruptive technology known as cryptocurrency may find favor with investors who merely seek refuge from the volatile global markets.

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