Cryptocurrency – Ethereum and Bitcoin

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On my honor as a University Student, I have neither given nor received unauthorized aid on this

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STS Research Paper

1. Introduction

1.1. Brief overview of Ethereum and Bitcoin

      Ethereum and Bitcoin are the two most well-known cryptocurrencies around the globe. Vitalik Buterin created Ethereum, and Satoshi Nakamoto created Bitcoin. Satoshi Nakamoto is a actually an alias – no one knows who the actual creator of Bitcoin is, which protects the creator's large supply of Bitcoin. If people knew who he was, he would be in much more danger, like Buterin, who is in danger because people know he has so much Ethereum and may assault him for his digital wallet address. That address is like a key to his safe full of Ethereum currency, and people know that Buterin has it. Satoshi Nakamoto, on the other hand, is still clouded in mystery. No one knows if it's a he, a she, or an entire group. Whoever Satoshi is, he/she/they has a *ton* of Bitcoin.

      Cryptocurrency started on the dark web. It was an ominous, untrusted way for criminals and computer people to make massive transactions. This often involved criminal actions – ordering heroin, purchasing child pornography, and so much worse. I discuss the dangers and scary background of cryptocurrency and its criminal activity later in this paper. Even still,

cryptocurrency wasn't all that valuable back in the day. Now, though, those people who had hundreds of Bitcoins which didn't mean much then would be rich if they had kept it.

The 'blockchain' is the fundamental working behind cryptocurrency. Cryptocurrency as a whole relies on it, and it hinges on a 'digital ledger system.' A digital ledger system is a record-keeping system, somewhat like a database. In blockchain technology, the ledger is distributed, meaning that it is kept on everyone's computers to ensure the veracity of transactions. This makes the blockchain highly secure and decentralized, and therefore removes the struggle of bowing your financial privacy to a central organization. Blockchains have been used in many ways, many more than just financial systems. Supply chain management systems, voting applications, and the healthcare industry all use it to ensure privacy, security, and reliability. The blockchain relies on mathematical algorithms which I dive into later in this paper, and for this reason many people trust it more than a human. Cryptocurrencies are an alternative to fiat currency. Fiat currencies are coins, dollars, etc. that the government does not back with some real asset (i.e. gold). Rather, a fiat currency has been given value because people trust the government. Cryptocurrency, on the other hand, is trusted and given value by the people participating in the digital ledger system, making the digital ledger system the trusted party. People give it their trust because of the secure math, algorithms, and security behind it. The two cryptocurrencies are quite different – their security, energy usage, scalability, and open-source development all differ between them.

1.2 Purpose of the paper

The criteria I use to determine this throughout the paper are as follows: security, scalability, energy usage, and open-source development. I have chosen to analyze the listed factors because they give a great overview of the necessary features a cryptocurrency should possess. I will explain why I have chosen these criteria now. Firstly, a cryptocurrency must be secure. If it is not, no one use it – this security is accomplished through mathematical algorithms associated with the blockchain. The used algorithms and the blockchain structure varies from cryptocurrency to cryptocurrency, and I examine the differences in this paper. Moreover, I consider how the scams and collapses of cryptocurrencies could be regulated to aid consumers. The FTX collapse and other scams are constantly plaguing cryptocurrencies. Using Latour's actor-network theory (ANT), I determine whether the Federal Trade Commission (FTC) should get involved, or any other government agencies for that matter (Latour, 1980, 28). I discuss these incidents and their implications in the Section 3.2b of this paper. Energy usage is another important factor. In some cryptocurrencies, energy usage is so high that it is quite literally a concern for the planet. Bitcoin miners use more energy than the entire country of Argentina (Gonzales, para 2, 2022). It goes without saying that this takes a toll on the environment. Nor is it good for miners, who invest their dollars in mining equipment (machines that do work on the blockchain).The electrical costs generally outweigh any money miners make in the mining process. Next, I discuss scalability. This is a broad term, so to clarify, I mean scalability in the sense that the cryptocurrency has potential for growth and improvement. Are there design choices that may impede the cryptocurrency's growth? Are there interesting features that may accelerate its growth and potential (Buterin, 2013)? What proof methods do they use for verifying the blockchain's integrity (Hetler, n.d.)? Lastly, open-source development is quite important because it brings about more secure and scalable platforms (Adams, 2022). Open-

source development means that the code which the cryptocurrency runs on is able to be changed by anyone (with an approval process). Open-source technologies tend to be more robust, secure, and overall better. I not just ask 'is this cryptocurrency open-source?' but I also examine the size of the open-source community. The larger the community, the faster the code base can be modified, which means new features can be added quicker and bugs can be fixed sooner. By evaluating all of these criteria for both cryptocurrencies, I conclude at the end of the paper that Ethereum is superior to Bitcoin, as it tends to outperform Bitcoin in the majority of these criteria.

2. Methods and Frameworks

2.1. Research design

The first step of my research was scouring the documentation of the Bitcoin and Ethereum websites themselves. The Ethereum whitepaper is a wonderful overview and explanation of how the cryptocurrency functions, and the Bitcoin documentation also is quite helpful. Moreover, the scolarly article by Yunkin Liu investigating cryptocurrency in detail was quite useful. After examining these sources, I proceeded to examine online scholarly articles in order to further the evidence I could base my paper on. I found information from those sources that dApps, decentralized applications, are native to Ethereum and have grown in popularity. Smart contracts and NFTs were well reasoned and explained in the Ethereum whitepaper. Finally, the way in which transactions occur on each cryptocurrency's blockchain was investigated in that same paper.

I also looked at the communities and development teams behind each blockchain. I researched the different organizations and individuals involved in the development and maintenance of Ethereum and Bitcoin, and compared the size and diversity of their communities. This helped me to understand how each blockchain is governed and how decisions are made within their respective ecosystems. Lastly, I read articles and reports from industry experts, such as blockchain analysts and economists, to get their insights and opinions on the differences between Ethereum and Bitcoin. This helped me to understand the strengths and weaknesses of each blockchain from a more objective perspective. By taking a comprehensive approach and considering various aspects of each blockchain, I was able to gain a deeper understanding of the differences between Ethereum and Bitcoin. Some examples of these differences include proof of stake vs. proof of work and their energy usages. This made it possible for me to write a well-informed paper on the topic.

2.2. Analyzed Stakeholders

Cryptocurrencies have many stakeholders, including consumers, developers, governments, businesses, and the environment. I am using Actor-network theory to examine these stakeholders and their relationships (Banda, J. S., Callahan, M. A., Winnenburg, J. P., Strasberg, M. P., Camhi, R. J., Reis, K. E., ... & Zalocusky, K. A). This theory suggests that everything is an "actor" that is part of a network, and that the cryptocurrency itself is a key actor that affects all other actors. Developers are also important actors, as they create the cryptocurrency, while consumers are essential as they invest in and use it. The cryptocurrency itself is the center of the network that is being investigated, and therefore it is the most important

actor. The way that the cryptocurrency is designed have a significant impact on all other actors, making it a crucial focus. Developers are also key actors, I determined their motives and interests when investigating the open-source communities surrounding the cryptocurrencies. Consumers are another important actor, and their perspective is essential to understanding why they invest in one cryptocurrency or another.

The government is a crucial actor because the legality of cryptocurrency is always in question. Cryptocurrencies are often associated with money laundering and criminal activities, making them a target for government regulation. Businesses are also interested in cryptocurrency, and some are considering making their products purchasable and sellable through cryptocurrency. However, the volatility and uncertainty surrounding cryptocurrencies make this a risky proposition. Finally, the environment is an actor, as the energy usage associated with cryptocurrencies has a significant impact on the environment. Some cryptocurrencies use massive amounts of energy, which can harm the environment, while others have a smaller impact.

2.3. Relevant Social Groups

Consumers are the main social group affected by cryptocurrency. I consider consumers based on the 'average' consumer, and I also briefly touch on high-information users. For average consumers, I imagine that the consumer does not have extensive knowledge of the code behind the cryptocurrencies, the blockchain, etc. Most consumers are those who have heard

about the benefits of using cryptocurrency and want to 'get in on the hype' and these be those I investigate in my project. In the past, some consumers have been deeply aggrieved by painful cryptocurrency bubbles. Some cryptocurrencies have been made by famous people or well-advertised, and then the maker, who minted for themselves a ton of coin, sell all their coin, ruining the investments of the consumers. More, cryptocurrencies are so volatile that they cause deep anxiety to consumers. Yet further, the energy usage of a cryptocurrency is often concerning for environmental lovers. On the other hand, I also must consider high information, highly educated users, like those who got on crypto early. According to Professor Bloomfield at the University of Virginia, the teacher of Cryptocurrency, *whales* are people who own large amounts of cryptocurrency, and they can have *huge* effects on cryptocurrency. This is also a term used for people in gambling who have large amounts of money. With respect to cryptocurrency, these are generally people who got in early and know a lot about it. Whales often have a part to play in scams and cryptocurrency fallouts. The Juno (a failed cryptocurrency) catastrophe is a disaster I go into in my project. Moreover, I investigate the FTX bedlam, as well as Ponzi schemes, rug pulls, recursive sends, the 'phyand' scam, and so many other scams in cryptocurrency!

3. Results

3.1. Comparison of Ethereum and Bitcoin's technical differences

3.1a. Consensus mechanisms

At a basic level, cryptocurrency is digital currency that is secured and verified by computers. Cryptocurrencies are decentralized, secured by powerful algorithms instead of

centralized authorities. They are generally anonymous and volatile. The implications of cryptocurrency can have some dark effects on the world. With anonymity often comes a lack of regulation, and this is certainly the case with cryptocurrencies. The first contrast I make between Ethereum and Bitcoin are their methods of block verification, which is basically how the cryptocurrency proves that people making transactions are genuine and have the money to make them. The two consensus methods are called proof of stake and proof of work. Ethereum uses proof of stake, and Bitcoin uses proof of work. The proof of work algorithm (Bitcoin's method) is a system where people must solve a very tough math problem in order to 'mine' a block. Basically, whoever has the best computing power generally wins, and mines the block. To *mine* the block means to verify that it is genuine, and there's nothing wonky going on with it. The miner then receives Bitcoin (money) in return for their services. This keeps Bitcoin secure, but it's insanely energy intensive and terrible for the environment. I discuss this disgusting energy usage aspect in Section 3.1d (Farell, 2015).

Proof of stake (Ethereum's algorithm) uses validators rather than a miner. A *miner* is someone who uses high-energy-utilizing equipment to determine the block's nonce. A *validator* is also someone trying to confirm that a block is valid, but the difference is a validator has to put up money of their own. The amount of money the validator puts up is proportional to the amount of money they will receive after validating the block. This is way less energy intensive, but validators are still incentivized to be genuine, good people (not malicious users), because they have to put money up of their own. If they do something bad and it's discovered, then they lose all their money. Ethereum, because of their consensus method, has significantly better energy usage rates and scalability.

3.1b. Currency backing and smart contracts

Bitcoin is very similar to a fiat currency. A fiat currency is a currency that is not representative of something (like gold), nor is directly valuable, but because some authority backs it, we trust it – the US dollar, for instance, is a fiat currency. However, this time, instead of the government backing it, we have a whole community backing it, because Bitcoin is decentralized. Bitcoin itself isn't inherently valuable, but it is valuable because of the people who back it. Bitcoin's reputability is slightly damaged by this. Because fiat currency has no collateral, it is backed by the full faith of the community. An example would be the dollar. The Federal Reserve prints money, and the US trusts that the currency really has value because the government says it does. Another example would be the Chinese yuan. It is issued by the central bank of China which is backed by the Chinese government, and people trust it because the Chinese government is generally stable (depending on who you ask…).

Ethereum implements smart contracts, which are programs representing money. Ethereum is often backed by tokens, which are just 'things' that are valuable. That might be a physical thing that the contract represents, or perhaps it's a digital item, like a digital artwork. Ethereum has a *real* backing to it (Ethereum.org, 2023). Smart contracts have a multitude of uses – one, for example, is hedging. Consider an Indian farmer who is concerned of a drought – if there is a drought, he might not be able to feed his family for a month. With Ethereum, there is a solution to this. He could hedge on the weather. One could buy a smart contract that pays out inversely with the precipitation in India. This means that he would be protected in the case of a drought. With all of these uses, we must judge smart contracts by the criterium listed in the

introduction of this paper. Smart contracts are as secure as the Ethereum network itself, which as shown, is quite secure. They are triggered mathematically – there is no subjective opinion about whether one has *fulfilled* the contract like exists in human contracts. Their energy usage is hardly different than other Ethereum tokens, and the main energy usage is triggered upon the transaction. Because Ethereum used proof of stake, it is not too dangerous. Smart contracts are scalable, and they even allow for DAOs, decentralized anonymous organizations, which are helpful in politics and financial institutions for voting and investment purposes, respectively. Overall, Ethereum has a ton of positive social impacts. It really allows new possibilities and opens opportunities that weren't there before. I think this whole idea of Ethereum innovating and changing the ways people interact with the world is a valuable thing that consumers need to consider.

3.1c. Scalability solutions

When it comes to scalability, Ethereum and Bitcoin have taken different approaches to solving the issue. Ethereum has implemented a number of scalability solutions, including sharding and plasma. Sharding is a technique that allows for the creation of multiple independent chains, each with its own set of validators, that can process transactions in parallel. This allows for a greater number of transactions to be processed at the same time, increasing the overall scalability of the network. Plasma is a second-layer scaling solution that enables the creation of child chains that can process transactions off the main chain, reducing the load on the main chain and increasing its scalability.

Bitcoin, on the other hand, has primarily focused on increasing the block size limit to improve scalability. The block size limit is the maximum number of transactions that can be included in a block. By increasing the block size limit, more transactions can be processed at the same time, increasing the overall scalability of the network. However, this approach has led to several controversies within the Bitcoin community, with some arguing that increasing the block size limit would centralize the network and make it less secure. As a result, alternative solutions such as the Lightning Network have been proposed to address the scalability issues on the Bitcoin network, which utilizes sharding, discussed in other parts of this paper to improve transaction speed (rootstrap.com, 2022).

Scalability is extremely important for a cryptocurrency. If a cryptocurrency suddenly has a ton of demand (say that the USA, for example, decides to switch fully to Bitcoin) then there could be a huge problem if Bitcoin isn't ready for this! What if there are transactions (which are already thought to be quite slow) slow to such a halt that it makes the cryptocurrency unusable? All this lends me to the belief that it is *not a good idea* to switch a government currency to a cryptocurrency! The social effects of a slightly mishandled scalability solution could be massive and detrimental to the economy. Some countries have tried – it has not turned out well for them. El Salvador used Bitcoin as their main currency for a bit, but they lost money on that in the end.

3.1d. Energy usage

Bitcoin's mechanism for consensus is proof of work, and it is a great concern in terms of energy usage and climate change. In fact, Bitcoin mining is expected to use about the same amount of energy as the entire country of Argentina. Just one Bitcoin transaction uses about the same amount of energy as a US household does in 50 days (Gonzalez, 2022). Not a block, a transaction! The cost of this is repulsive to think about. All this brings us to the conclusion for the Bitcoin miner actor - if a miner is concerned about energy, then they should either not mine at all on the Bitcoin blockchain or use a different cryptocurrency such as Ethereum and become validator. Consumers need to consider the climate change data and decide if the amount of energy a cryptocurrency uses is important to them. If it is, then *do not* opt for Bitcoin!

3.1e. Susceptibility to Scam

It appears that both Ethereum and Bitcoin are susceptible to scams in about the same quantity. The issue is not really cryptocurrency design but rather the basic idea of how cryptocurrency works. The anonymity and lack of regulation is really the base of the problem here. With that comes the user's consent to the possibility of being scammed. There are multiple ways people can be scammed in cryptocurrency. Some are purposeful, and some are not. I begin with accidental 'scams', thinking of an accidental scam as whena cryptocurrency or an app built on cryptocurrency is poorly implemented and it leads to someone exploiting it. Take the Axie Infinity hack. This was a play-to-earn game built on cryptocurrency that was hacked because of a simple error, pushing 600 million dollars down the drain. This happens in other scenarios too. A single line of code can lead to huge losses on all sides, and one huge winner (a criminal winner) (Security Boulevard, 2023). Then, there are Ponzi schemes, rug pulls, phishing attacks, and so

much more. Oh, how wonderful is the world of cryptocurrency. The Futures Exchange (FTX) is the most notorious and recent example of a rug pull scheme. The masterminds lured people in to putting their crypto and tokens on the line, and then they took it and spent it. The exchange collapsed, leaving tons of people devastated (Security Boulevard, 2023).

In the end, consumers simply must be cognizant of this. If a consumer is going to use crypto, they need to be *super careful* when it comes to who they trust with their money. This is why not everyone should use crypto – it is not for everyone. All I am seeking in this paper is to show how certain cryptocurrencies may make this safe, how they can be dangerous to consumers, and how they may be used for positive social effects, examining all of this through Latour's ANT.

3.1f. Terrorist attacks

The dark side of cryptocurrency is no joke, with terrorists finding a pristine beauty in the anonymity. Terrorist organizations have been using cryptocurrency to fund their operations, as it offers a certain degree of anonymity and makes it more difficult for law enforcement to track the flow of funds. In recent years, there have been several instances where cryptocurrency has been linked to terrorist financing.

For example, in 2019, the U.S. Department of Justice charged two individuals for using cryptocurrencies, such as Bitcoin, to support the terrorist organization Hamas. Also, Israel has recently been seizing wallets that have been funding for Hamas. Hamas wallets receive donations anonymously which makes the terrorist organizations hard to track. This terrorist issue highlights the challenge that law enforcement faces in combating the use of cryptocurrency by terrorist organizations, as it can be difficult to track and disrupt these financial flows from evil organizations seeking to harm people. It is much easier to follow the money with regular currencies. To address this issue, governments around the world are working to implement new regulations and technologies aimed at detecting and preventing the use of cryptocurrency for terrorist financing. (Times of Israel, 2022*)*

3.2. Comparison of Ethereum and Bitcoin's economic differences

3.2a. Monetary policy

Ethereum and Bitcoin both have unique monetary policies that govern the issuance and circulation of their respective tokens. Ethereum's monetary policy is designed to be flexible and adaptable to the needs of its users and developers. The Ethereum protocol issues new tokens at a steady rate, with the rate of issuance decreasing over time in what is known as an "emission schedule." The emission schedule is designed to encourage the use of the network and encourage the development of new applications and services. As of May 10, 2023, there are about 120 million ether in circulation, and this will continue to grow at a steady rate with time. This will prevent problems with scalability that Bitcoin must deal with. In fact, Bitcoin's monetary policy rigidity, causes the Bitcoin network to have to create new features to improve scalability, like the implementation of sharding. This is an unfortunate reality of the woes of their monetary policy,

and the fact that the Bitcoin supply is stuck forever. The total supply of Bitcoin is limited to 21 million tokens, with a fixed issuance rate that decreases over time. Ethereum does not have a limit on the number of tokens. In Bitcoin, this issuance rate decreasing is known as a "halving" and it happens every 210,000 blocks (approximately every four years). The halving reduces the number of new Bitcoins that are mined and released into circulation, making the supply of Bitcoin more scarce over time. This is intended to create a deflationary effect and to encourage the long-term holding of Bitcoin. Bitcoin is already above 19 million tokens, and because of the halving protocol, it will asymptotically reach approximately 21 million tokens soon, meaning the amount in circulation will hardly be changing. Both Ethereum and Bitcoin monetary policy serve different purposes, and both have different long term effects on the value of the cryptocurrency based on their monetary policies (Ethereum.org, 2023).

The monetary policy of these currencies is important for a government to understand. It's useful for security organizations (National Security Agency, Central Intelligence Agency . . .) to understand so that when there are cryptocurrency scams or when mayhem happens on these networks, they know the background and how to deal with it. Consumers should also be aware of this, and the developer social group should be aware that the Ethereum emission schedule makes it quite unique.

3.2b. Fallout and volatility

Fallout is unfortunately a painfully common reality of cryptocurrency, and FTX is a great case study to examine. The scheme was designed to take advantage of unsophisticated investors who use mobile apps to make their investments. The lawsuit claims that when customers began sending money to FTX to open accounts on the exchange, those funds were being directed into bank accounts that were controlled by Alameda. The company behind FTX suggests that this was a scam from the very beginning and that FTX was not a legitimate exchange but rather a scheme to defraud investors. It is important to note that these are allegations and it is up to the court to determine the veracity of these claims (Security Boulevard, 2023).

Concerning volatility, *all* cryptocurrency is volatile. People who are living paycheck to paycheck should never put their faith in something in cryptocurrency and rather should opt for something more stable if they so desire to make investments. Most people know of this volatility, but it must be noted. It is true, though, that because bitcoin has a lower market cap, it is generally less volatile than Ethereum, which is a plus for Bitcoin (Liu and Tsyvinski).

3.2c. Open source community

The open-source community is a vital aspect of both Bitcoin and Ethereum's development and success, which is why I chose to include it as one of the criteria when comparing these two cryptocurrencies. An open source community is a community of developers, enthusiasts, and contributors who work together to improve the codebase of the currencies. The open-source nature of Bitcoin and Ethereum allows anyone to propose changes or improvements to the codebase, and these changes can be accepted or rejected based on their merit.

The Bitcoin open-source community is composed of a good amount of developers who strive to maintain and improve the currency's code. The Bitcoin Core development team is the main and most well-known group for doing this – after I did a quick Google search and looked at this repository, I noted the repository has more than 69,000 stars, a very large number of people willing to give up their time to contribute to the cryptocurrency's success. The community has made significant contributions to the development of the currency, including the implementation of the Segregated Witness, which allowed for more transactions to be processed in a single block. They have also been instrumental in addressing security issues in the Bitcoin network, ensuring its safety and stability, which is another criteria of cryptocurrency I found to be very important.

While Bitcoin's community is impressive, Ethereum's open-source community is even greater. The Ethereum Foundation is the main organization that maintains the Ethereum codebase. However, there are many other groups and individuals who contribute to Ethereum's development, including other organizations, like ConsenSys, and independent developers. Ethereum's open-source community has been vital in its rapid development and innovation. The community has developed various tools, libraries, and frameworks that make it easier to build decentralized applications on the Ethereum network (Ethereum Foundation, 2023). One significant example of the Ethereum community's impact is the recent transition from proof of work to proof of stake. This was called the merge, and it required so much testing and development. The Ethereum open source community was extremely important in ensuring that the transition went smoothly and successfully. The community developed and tested the proof of

stake protocol, found and fixed bugs, and provided feedback to ensure the protocol's security and stability. Because of all that, the merge went through successfully (WhatIs.com, 2022).

In conclusion, both Bitcoin and Ethereum's open-source communities have been instrumental in their development and success. While Bitcoin's community is impressive, Ethereum's larger and more diverse community has had a more significant impact on its rapid development and innovation. The community has been critical in ensuring the safety, security, and stability of both currencies.

4. Discussion

4.1. Recommendations for users and organizations who wish to utilize cryptocurrency

To safely invest and store cryptocurrency, it is recommended to follow several precautions. Firstly, use a reputable cryptocurrency exchange with a secure history of transactions. Secondly, keep your private keys offline and in a secure location, as they are the only way to access your cryptocurrency. Thirdly, consider using a hardware wallet for added security. Additionally, it's important to be aware of phishing scams and to double-check the URL of any website before entering sensitive information. Two-factor authentication is also recommended as an added layer of security. Before investing in a new cryptocurrency, research the project and team behind it to ensure they have a solid reputation and track record. Lastly,

diversifying your portfolio by investing in multiple different cryptocurrencies can help reduce the risk of losing all funds in case one cryptocurrency fails.

4.2. Limitations of the study

One major limitation of this study is the potential for bias in the selected articles. It is possible that the articles chosen may not represent the full spectrum of viewpoints and opinions on the topic of cryptocurrency – that is, they may be biased toward Ethereum or Bitcoin selectively. Additionally, there may be certain perspectives or arguments that are not well-represented in the articles that were reviewed. This could potentially limit the conclusions that can be drawn from this study and may result in a narrower understanding of the topic. Another limitation of the sole reliance on online sources is the risk of inaccuracies and outdated information. While online sources are valuable, they can also be prone to errors, misinformation, and unreliable data. This may have impacted the accuracy of the findings and the overall validity of the study. Furthermore, online sources may not provide a comprehensive understanding of the topic, as they may overlook important information that is only available through other methods, such as in-person interviews or surveys. Overall, it is important to acknowledge these limitations and to consider alternative research methods in future studies to help mitigate these potential issues.

4.3. Future research directions

As cryptocurrency continues to gain popularity, it is important to address the concerns surrounding its safety for consumers. For this reason, the first future research task I suggest should focus on exploring ways to make cryptocurrency more secure and protect consumers from scams such as the FTX incident described in this paper. This research should examine the factors that make cryptocurrency susceptible to fraudulent activities and explore potential solutions to mitigate these risks. Even more, I'd like to see governmental organizations research cryptocurrency scams and consider some level of regulation upon it.

Another important area for future research is the investigation of the causes of cryptocurrency volatility and ways to reduce it. The value of cryptocurrency is highly unpredictable, and this volatility can have significant impacts on investors and the market as a whole. Volatility is one of the major reasons that many consumers decide not to invest or to pull out their money. By studying the factors that contribute to volatility, such as market trends, adoption rates, and government regulations, researchers can develop strategies to minimize these effects and make cryptocurrency a more stable and reliable investment option. Then again, some may argue that the volatility of cryptocurrency is an inherent part of the investment, and whether it could be more stable or not, some people may prefer it to be volatile (well-versed crypto day-traders, for instance).

In addition, future research should also focus on the social and economic impacts of cryptocurrency. As more people start using cryptocurrency, it could disrupt traditional financial systems and change the way many people think about money and currency. Researchers should

investigate the potential benefits and drawbacks of this disruption, including the impact on global economic systems, financial inclusion, and the potential for new forms of economic activity. They should also consider how to mitigate any negative effects. Overall, future research in the field of cryptocurrency has the potential to drive significant advancements in the industry, making it more accessible, secure, and reliable for all consumers. By focusing on these key areas, researchers can work towards developing solutions that address the current challenges facing the industry and create a more stable and sustainable future for cryptocurrency.

5. Conclusion

Overall, Ethereum is the best currency for the average consumer. With all its use cases, it has more functionality, and the smart contracts make it unique and give ita real backing to the currency. While Bitcoin is less volatile and has a higher market capitalization, it simply doesn't compare to Ethereum when comparing all factors. Perhaps most strikingly, Ethereum's proof-of-stake algorithm makes it wildly superior to Bitcoin in terms of energy usage. As environmental problems continue to be a prevalent news topic in the world, it's imperative that we consider environmentally healthy solutions like Ethereum.

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