

Implications of Bitcoin

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Introduction

Cryptocurrency, a digital asset that acts as a medium of exchange using cryptography to secure the transactions, came into existence in 2009 with the creation of Bitcoin. Although it is a recent technology, the use and influence on cryptocurrency have grown at an immense rate. The government has faced difficulties trying to regulate Bitcoin since it is unlike any other currency. In addition, society has yet to become accustomed to this new technology which challenges incumbent money. Cryptocurrency has the potential to revolutionize society, however, there are many important obstacles that must be considered. *Bitcoin Versus Regulated Payment Systems: What Gives?* provides a decent overview of Bitcoin, such as investigating how it is being used, its emergence and future ramifications, and how the government is trying to regulate the new technology. Although the paper spans many important topics, it fails to provide adequate support. Specifically, it lacks support for the economic, legal, and ethical implications of Bitcoin, as well as what should be done to improve regulations in the United States.

Summary and Analysis

Bitcoin Versus Regulated Payment Systems: What Gives? analyzes cryptocurrencies from a legal and economic perspectives. Trautman and Harrell go through the history of money and how the concept evolved in the United States. The paper compares the concept of money with cryptocurrencies, such as Bitcoin, to analyze if it should be categorized as a foreign currency (Trautman & Harrell, 2017, p. 1043). Similarities include that both of them serve as a medium for exchanging goods and services. However, unlike regular currency, Bitcoin is decentralized and thus not backed by a nation's government. Bitcoin is backed by its own community consisting of members from all across the globe. Fees for Bitcoin transactions are cheaper compared to traditional ways of transferring money over the internet. Bitcoin is also backed by a

verification system, called blockchain technology, to make sure that all these transactions are legitimate. Blockchain creates a copy of a ledger in everyone's computer that are affiliated with Bitcoin; different from a centralized bank, in which only the bank has the ledger. Since Bitcoin has been introduced, it has brought many changes to the global economy.

Bitcoin Versus Regulated Payment Systems: What Gives? provides a general overview of the economic impacts brought by Bitcoin. Without the monitoring of the International Monetary Fund, Bitcoin threatens the stability of the international currency market; for example, one could use Bitcoin to speculatively attack a country's currency. Furthermore, Bitcoin will bring about serious deflation because the supply of Bitcoin cannot adjust to the demand. In addition, this article illustrates the regulations for traditional payment systems and digital currency. Trautman and Harrell also demonstrate that regulating cryptocurrencies is more complicated than a traditional currency. In the United States, a few tentative rules have been set up to supervise virtual currency. The New York State Department of Financial Services (DFS) published its regulations on virtual currencies back in July of 2014 creating "BitLicense" which aims to: restrain money laundering, protect consumers, and maintain cyber security of transactions. Trautman and Harrell also argue that Bitcoin can help people living in poor countries have access to financial services. Although Bitcoin can be utilized to help people, some people abuse the currency. Silk Road is an example of people taking advantage of Bitcoin's anonymity in order to buy drugs over the internet. Various illegal transactions happen on the deep web using Bitcoin as their currency of choice. It is questioned if Bitcoin should be blamed for the illegal purchases. When it comes to the future of virtual currency, this article emphasizes how the blockchain technology of Bitcoin can be used in the current financial system. Over the past few years, the block chain technology has gained trust and acknowledgement from dominant central

banks around the world. Specially, several central banks are planning to issue Central Bank Digital Currency (CBDC) in order to improve economic efficiency.

The article, *Bitcoin Versus Regulated Payment Systems: What Give?*, is written by Lawrence J. Trautman and Alvin C. Harrell. Trautman received his juris degree of Business Law from Oklahoma City University School of Law and his MBA of Finance and Investments from the George Washington University School of Business. Harrell works as a professor at Oklahoma City University School of Law. Both authors have many years of experience in law and finance. This paper is published by *Cardozo Law Review*, which publishes six issues per year, which includes peer-reviewed articles and student notes on a variety of legal topics (“About Us”, 2017, para. 1). The source is also objective because concrete laws are given, although the interpretation of laws could be seen as bias. The journal provides us with the progression and functions of currencies in the history and then particularly mentions the evolution of cryptocurrencies. Trautman and Harrell also give us a background of the role that money plays in the global economy and defines virtual currencies as a foreign area on the financial spectrum. Additionally, the paper provides some predictions as to where Bitcoin is headed in the future and possible regulations based on contract law. Since Bitcoin was first introduced, it has profoundly changed the pattern of global economy.

Support

Economic Implications of Bitcoin: Yongheng Li

National currencies are issued and regulated by central banks, whereas virtual currencies are unregulated digital money since they are created by programmers. Without the monitoring and regulation from central banks, virtual currencies endanger global economic stability. *Bitcoin Versus Regulated Payment Systems: What Gives?* particularly emphasizes how Bitcoin

undermines the international currency exchange market. However, this article fails to explore how Bitcoin could also threaten economies in other aspects. For instance, extreme price volatility of the virtual currency causes risks and losses for companies and individuals using Bitcoin. The existence of Bitcoin challenges the current monetary system as well. While *Bitcoin Versus Regulated Payment Systems: What Gives?* analyzes the negative effects of Bitcoin on the currency market, it ignores the unfavorable influences of Bitcoin on its users and the monetary system.

As shown in the article, virtual currencies potentially jeopardize the stability of the currency market on a global scale. The International Monetary Fund (IMF) was established to diminish trade barriers and facilitate global economies (Trautman & Harrell, 2017, p. 1092). One major responsibility of the IMF is to stabilize the exchange rates of currencies. The countries who are members of the organization have to follow the standards set by the IMF to ensure the stability of exchange market. However, virtual currencies are not backed up by any country's government and thus are exempt from the IMF monitoring. Consequently, IMF is restricted in what it can do to thwart malicious events; for instance, someone can take advantage of Bitcoin to attack the value of a traditional currency through a "speculative attack". Speculative attack refers an overwhelming selling of a "weak currency", a currency that has a lower value than other currencies. Without the surveillance from IMF, an effective speculative attack could lead a weak currency to an even lower value, making the international currency exchange market unstable. The virtual currency not only destabilizes the international currency market, but also poses risks to businesses and people using Bitcoin.

The price volatility of the virtual currency threatens its users as well. The high volatility is considered the most significant difference between the virtual currency and the national

currency. Since its introduction in 2009, the price of one Bitcoin has skyrocketed from zero to around \$1,100 in 2013 (Ciaian, Ragjcaniova, & Kancs, 2016, p. 886). The fluctuation of the price has exceeded 8000% between 2009 to 2013. For comparison, the fluctuation of the exchange rate between US dollar and Euro has not surpassed 20% in the same period of time. Speculative investing contributes to the price volatility of Bitcoin. Most of the Bitcoin transactions are initiated by speculative investors; purchases of goods and services only represent 20% among all the Bitcoin transactions. In order to understand the impact of volatility to a currency, one should first know its functions: a medium of exchange, a unit of account, and a store of value (Ciaian, Ragjcaniova, & Kancs, 2016, p. 887). There is no significant difference between virtual currencies and national currencies as a medium of exchange. However, functioning as a unit of account, Bitcoin fails to accurately reflect the relative value of goods and services due to its extremely unstable price. In the context of a store of value, since Bitcoin is constantly fluctuating it cannot maintain a stable value. As shown, volatile price distorts the function of Bitcoin as a currency; this potentially leads to risks and losses for companies and individual users due to changes in the purchasing power of Bitcoin. This is not the only negative consequence of Bitcoin towards the economy.

The existence of virtual currency also poses a potential threat to the monetary system. As a decentralized product, the virtual currency does not have an elastic supply reacting to the changes in macro-economy or demands. In addition, Bitcoin is programmed to halt after it reaches the amount of 21 million, resulting in a fixed money supply. The limited supply is going to cause deflation since Bitcoin cannot accommodate to the changes in demand, which might cause harmful effects on workers' wages and employment. According to Sauer, the existence of virtual currency challenges central banks as well (2016, p. 117). The role of central banks is

controlling the money volume in circulation through various monetary policies (Trautman & Harrell, 2017, p. 1091). Provided that Bitcoin continues to thrive and eventually replaces a portion of a national money, a central bank must take actions to reduce its money supply in order to ensure a money market equilibrium. Otherwise, excessive money supply could negatively influence the current interest rate. However, since the virtual currency is liquidating without the monitoring of any official organizations, a central bank has no way to determine how much the national currency has been replaced by the virtual currency. Therefore, it is becoming more difficult for central banks to control the money in circulation. Now, central banks are no longer the only issuer of currency; it is becoming more difficult and complicated for a central bank to govern money supply and interest rate. The existence of Bitcoin also challenges traditional payment methods of goods and services.

Legal Implications of Bitcoin: Cristobal Forno

Trautman and Harrell (2017) describe the evolution of transactions of exchanging goods and services. They address what the negotiable instruments law is along with the creation of the American bank collection and payments system, which then culminated into the Uniform Commercial Code (UCC) we know today. Although the authors are descriptive of how modern transaction formed, they forget to mention an important aspect when buying or selling goods or services, taxes.

The tax dilemma. When Bitcoin was created in 2009, the United States government did not tax the transactions when using the cryptocurrency for five years. Over those years, the United States government observed how Bitcoin was becoming popular quickly over the years. Consequently, on March 26, 2014, the Internal Revenue Service (IRS) announced that virtual currencies, such as Bitcoin, will be “treated as a property for United States federal taxation

purposes” (Wiseman, 2016, p. 418). A property is a long-term investment that can change in value over time. If you sell an investment at a gain, you owe taxes to the IRS towards the difference between what you got from the sale and what you originally paid for. If all Bitcoin users were using Bitcoin as a long-term investment, this decision would make sense; this is not the case since there is a large portion of the Bitcoin community who uses it as daily currency. This decision creates a nightmare for those users trying to fill tax forms. For example, if a Bitcoin user purchases a slice of pizza using Bitcoin (Lean Crust Pizza in New York accepts Bitcoin (Wiseman, 2016, p. 418)), the user should document when that portion of their Bitcoin was bought and sold to calculate the percentage of tax they have to give to the IRS. This creates a cumbersome amount of work for a single transaction involving a small amount of money. The decision not only presents challenges to the consumer, it challenges the IRS itself. With the introduction of this new tax law, the IRS has to make sure that all Bitcoin users, even anonymous ones, are following the tax regulations.

There have been many criticisms on this decision by the daily Bitcoin users and other government officials such as Texas Representative Steve Stockman. “On May 7, 2014, Representative Steve Stockman introduced the Virtual Currency Tax Reform Act, which proposed changing the tax status of virtual currencies from property to foreign currency.” (Wiseman, 2016, p. 419). The Act enables Bitcoin to become a currency, as it was initially designed. Consequently, users will instead pay a fixed tax percentage when making a purchase. Unfortunately, the Virtual Currency Tax Reform Act did not pass Congress as it did not gain enough traction within the government. Conversely, legal reforms have been passed in the United States such as BitLicenses in New York State.

BitLicense. On *Bitcoin Versus Regulated Payment Systems: What Gives?*, Trautman and Harrell introduces New York State issuing BitLicenses for Virtual Currency Firms on p. 1081. On July 23, 2014, the New York State Department of Financial Services (DFS) published its regulations on virtual currencies (Trautman & Harrell, 2017, p. 1082). According to the guidelines of the DFS, the companies conducting transactions on virtual currencies are supposed to obtain a “BitLicense” if they were:

Receiving or transmitting Virtual Currency on behalf of consumers; securing, storing, or maintaining custody or control of such Virtual Currency on the behalf of customers; performing retail conversion services, including the conversion or exchange of Fiat Currency or other value into Virtual Currency, the conversion or exchange of Virtual Currency into Fiat Currency or other value, or the conversion or exchange of one form of Virtual Currency into another form of Virtual Currency; buying and selling Virtual Currency as a customer business (as distinct from personal use); or controlling, administering, or issuing a Virtual Currency. (Note: this does not refer to virtual currency miners). (Trautman & Harrell, 2017, p. 1082).

The DFS regulations on digital currency aims to restrain money laundering, protect consumers, and maintain cyber security of transactions. Berlin et al. imply that the future of these regulations spreading to other states is ambiguous stating “In light of New York’s new regulatory regime for virtual currency businesses, it remains to be seen whether other states such as California will follow New York’s lead.” (Berlin et al., 2015, p. 21). If other states do create such regulations, then it will lead to the entire United States creating federal laws, and finally the rest of the globe creating regulations on virtual currency. This trend could potentially threaten the stability of our physical currency market on a global scale. The influence spreading to other

states seems very unlikely though, as Trautman and Harrell state in page 1084, “As of October 5, 2015, NYDFS has received 25 BitLicense applications.” This is not a lot of applications considering BitLicense has been accessible to sign up for over a year from that point. The progress in implementing Bitcoin into society has to be greatly improved, as some users may take advantage of Bitcoin’s features, such as anonymity, for malicious use.

Ethical Implications of Bitcoin: Robert Riess

The ethical implications of Bitcoin are a multifaceted issue. *Bitcoin Versus Regulated Payment Systems: What Gives?* emphasizes the positive ethical implications that Bitcoin has on poor societies. For example, the paper states that Bitcoin is a promising antipoverty technique since it improves the access to basic financial services in poor countries (Trautman & Harrell, 2017, p. 1067). The low cost of Bitcoin transactions also helps individuals and small business owners with an alternative to using credit cards. Despite these accurate statements, this is a flawed perspective since Bitcoin has many ethically questionable features that should be looked into.

Carmine DiPiero, a graduate student from University of Illinois College of Law, wrote the peer-reviewed paper, *Deciphering Cryptocurrency: Shining a Light On The Deep Dark Web*, analyzing cryptocurrency such as Bitcoin and their interaction with the deep web. The deep web is a portion of the internet which can’t be viewed through conventional search engines (DiPiero, 2017, para. 13). To visit the deep web it must be done through the tor browser, which does not trace its users to their IP addresses, making users somewhat anonymous. Due to this, various illegal transactions occur on the deep web, usually using Bitcoin as the currency exchanged. One example given by Carmine DiPiero is the Silk Road, a darknet website. The Silk Road was originally unveiled on January 27, 2011, described as an anonymous website where one

buy or sell anything they wanted (DiPiero, 2017, para. 14). This led to the sale of various illegal drugs and services. The website was one of the first online instances where Bitcoin and Tor were combined for this service. It is arguable whether Bitcoin is at fault for the usage of the Silk Road. While it was not Bitcoin's original intention to be used for illegal activities, it is a byproduct of its creation and should be considered when discussing the virtual currency. Trautman and Harrell do mention the Silk Road, but do not fully discuss its impact on Bitcoin's ethics.

James J. Angel and Douglas McCabe, both professors of business at Georgetown University, wrote the paper, *The Ethics of Payments: Paper, Plastic or Bitcoin*. Similar to Trautman and Harrell, the paper focuses on the ethics related to Bitcoin's lack of an intermediary. Without an intermediary, Bitcoin is a system that does not rely upon trust in a bank or government to hold your money. The paper gives the example of how one has to trust the banks to honor their checks (Angel & McCabe, 2015, p. 605). By having the users regulate the system of Bitcoin themselves, it is much more reliable. This does however lead to some ethical problems that should be questioned. Since Bitcoin is regulated by its own users, one is unable to recover their losses if their bitwallet gets hacked. Another questionable component of the currency is that if somebody gained 51% of the computer mining power in the network, they could fraudulently manipulate the currency (Angel & McCabe, 2015, p. 607). Is it ethical to continue to use Bitcoin when its users could possibly be at risk?

Claus Dierksmeier and Peter Seele wrote the paper, *Cryptocurrencies and Business Ethics*, which argues that Bitcoin needs to fix its morally unjust features in order to become a viable currency. The paper states that the lack of intermediary is damaging to Bitcoin, as opposed to the view in *The Ethics of Payments: Paper, Plastic or Bitcoin*. Dierksmeier and Seele believe that money has value because it is issued from public authorities (2016, p. 10). Since

Bitcoin isn't state issued, it is feared that it could potentially drop in value. This volatility can damage the people who use Bitcoin in poor countries. Trautman and Harrell don't fully address this in their paper and instead focus only on its positive benefit to people living in poor countries. The ethics of Bitcoin are important to understand to secure the future of the currency.

The Future of Bitcoin: Alexander Orellana

When it comes to the future of Bitcoin there are many important aspects to consider. One must consider the potential for Bitcoin to take off as a mainstream currency, as well as how the government will attempt to regulate Bitcoin in the future, or perhaps even attempt to ban Bitcoin. *Bitcoin Versus Regulated Banking System: What gives?* fails to fully discuss many of these aspects. Instead the paper talks about the future of central bank digital currency (CBDC), assuming Bitcoin will fail and CBDC will take its place. While interesting, the idea of CBDC provides no closure for the topic of Bitcoin. In reality, Trautman and Harrell are quick to disregard the future of Bitcoin without explaining the obstacles it must overcome.

Obstacles Bitcoin Must Overcome. One problem with Bitcoin is that there is already an established incumbent money (William, 2016, p. 398). This would entail updating countless ATMs, transactions records, and learning a new means of money. For such a movement, Bitcoin must be vastly superior to incumbent money and be worth the cost of switching. Even then, most monies around the world are government-sponsored. Bitcoin is completely different from many incumbent monies, and conflicts with government objectives. William (2016), an assistant professor of economics at Kenyon College, mentions many of these objectives: "monetary policy, raising revenue, preventing private agents from engaging in illegal transactions" (p. 399). In addition, there are currencies that have begun to rise and might improve in areas where Bitcoin fails. It is difficult to determine if Bitcoin will be able to overcome all these obstacles

and overtake incumbent monies. On top of that, even if it became a popular currency in the future regulations might change the currency entirely.

There are many approaches that the government can take to regulate Bitcoin in the United States. However, since Bitcoin is such an innovation, it is difficult to regulate Bitcoin like other currencies in the past. One of these currencies that should be noted is the Liberty Dollar, which the article fails to mention. The Liberty Dollar was determined illegal because it was found to counterfeit U.S. tender. Bitcoin, unlike the Liberty Dollar, has no physical representation and has no specie backing. As such, Bitcoin cannot be considered counterfeit (Dion, 2013, p. 190). Overall, since Bitcoin is such a new technology the government will not be able to regulate it like other currencies in the past.

Even so, there are a few regulations that might work, the most prominent being through money laundering laws. Since people can exchange Bitcoin into other currencies, it falls under the Bank Secrecy Act. This act would require Bitcoin to report exchanges greater than \$10,000. Second, the Money Laundering Act could be used to close Bitcoin currency exchanges. In a way, exchanges neglect to regulate their trades since they are anonymous (Dion, 2013, p. 195).

While regulation is good, the article does bring up a good point when it comes to these sorts of laws. The article states that “virtual currencies...if smothered by excessive regulation...the promise and potential benefits will be lost” (Trautman & Harrell, 2017, p. 1096). In other words, even if Bitcoin is not outright banned, if too many regulations are put in place people will cease to use Bitcoin and move on to other means of currency. In fact, the government has already begun to impose some harsh regulations on Bitcoin.

Improvements and Solutions. As mentioned before, Trautman and Harrell neglect to mention one of these major regulations. The IRS recently classified virtual currencies as property

(Wiseman, 2016, p. 435). This decision requires Bitcoin users to keep detailed records of all their transactions, including the amount spent, current exchange price, and comparison calculation. This system is without a doubt inefficient and hinders the daily use of Bitcoin as a currency. There are much better solutions that can be put in place to deal with the taxation of Bitcoin. Firstly, as Wiseman (2016) mentions, “the IRS should allow Bitcoin users to declare whether they are using Bitcoin as an investment or as a method of exchange” (p. 438). In addition, a standard sales tax should be considered. With this method, the IRS will benefit because users will not have to worry about complex tax reporting (Wiseman, 2016, p. 439).

On top of that, the text does not consider if Bitcoin will be banned in the future. It is difficult to determine what regulations could be used to ban Bitcoin in the United States. Even so, countries around the world have already begun to ban cryptocurrencies. One country is Bangladesh, where “those caught using Bitcoin could spend up to 12 years in prison” (Hendrickson & Luther, 2017, p. 189). In reality, many countries are afraid of allowing alternative currencies. It is more than likely that the government will not ban Bitcoin. A lot of criminal activity is conducted with the use of Bitcoin. With proper regulation, the government can keep track of criminal behavior. In addition to that, banning Bitcoin would only temporarily solve the problem. People would find other means of anonymously committing criminal activity. As shown, Trautman and Harrell not only fail to mention certain aspects about the future of Bitcoin, it fails to address the topic of Bitcoin in its entirety.

Conclusion

While the paper covers many main points about the currency, such as its history and global effect, it falls short at trying to depict the full picture. The ideas suggested in the paper are essential to mention since cryptocurrency will potentially become normalized in society. Hence,

it is problematic because the paper does not fully discuss Bitcoin in its entirety. There are four main topics where the paper does not fully explain the issues surrounding Bitcoin. Trautman and Harrell do not address the full ramifications of Bitcoin on the economy. The decentralized Bitcoin endangers current monetary system because of its volatility and elastic supply. The paper also fails to mention how the taxes applied to Bitcoin in the United States are processed as a property instead of a foreign currency. Instead, it focuses mainly on the Uniform Commercial Code and its creation. However, the paper does go over the BitLicense issued in New York State to allowing business owners to register their company to accept Bitcoin. Additionally, the paper does not fully question the ethical ramifications of the usage of Bitcoin. While it mentions its impact on poor countries it neglects to mention how Bitcoin's volatility could eventually harm these people. Trautman and Harrell also fail to mention how users can take advantage of Bitcoin's anonymity and abuse it to create illegal online markets in the dark web. Finally, the paper discusses what society should do to improve Bitcoin in the foreseeable future. However, Trautman and Harrell lack in analysis at the end of their paper, instead they focus on the central bank digital currency. They should mention the obstacles Bitcoin must overcome such as government regulations and other cryptocurrencies that might take its place. These four points reveal why the paper does not completely achieve its goal stated in its abstract. The paper spends too much time on areas that do not add to the overall thesis of the paper. *Bitcoin Versus Regulated Payment Systems: What Gives?* focuses on a wide variety of topics related to Bitcoin, but does not completely evaluate the key topics.

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