Abstract

Bitcoin is widely used and accepted by many countries. The features that are being offered and the positive uprising of its price have made it popular among its users and investors. The value of Bitcoin started from less than a dollar in 2009 and raking up to over two thousand dollars within 2017. In Indonesia, Bitcoin became popular in 2013; a group of people began to form a community and online forum where people with similar interest can gather and conduct exchange of Bitcoin. In early 2014, the community had formed the first professional Bitcoin brokerage service in Indonesia which also known as bitcoin.co.id and over fifty thousand members were registered. With the daily transaction valuing over five hundred million Rupiah, bitcoin.co.id has made its name on South East Asia. However, despite the positive response in Indonesia, the lack of legal framework regulating cryptocurrency and the risk of misusing it to fund illicit activity has become a national concern. This paper provides an analysis of legal problems that are being encountered by Indonesia government and thorough comparison with America’s laws on cryptocurrency. By stipulating a law on cryptocurrency, Indonesia’s government would have show support for cryptocurrency in Indonesia through reducing the volatility risk and the possible illicit activities derived from the usage of cryptocurrency.

Keywords: Bitcoin, Bitcoin Legality, Cryptocurrency, Comparative Study

Kata Kunci: Bitcoin, Legalitas Bitcoin, Kriptokurensi, Studi Komparatif

Intisari


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A. Introduction to Bitcoin as Cryptocurrency

Bitcoin relies on the concept of peer to peer lending, making it the world’s first completely decentralized digital-payments system so that no intermediary is needed hence allowing direct transactions between the users. (Britto, 2013:3) One might question Bitcoin security due to the absence of intermediary role such as in Paypal yet this is not true since it establishes the intermediary in form of electronic instrument as distributed ledger or notably known as blockchain. New transactions are checked against the blockchain to ensure the same Bitcoins have not been previously spent.

Blockchain functions through public-key cryptography that serves as two “keys”. (Paar, 2010) One private key functions similar to password and one public key to be shared with the world thus within a transaction of Bitcoin, sender creates a message that contains recipient’s public key and later “signed” by sender through her private key. Public-key cryptography ensures all computers within the network have constantly updated and verified record of all transactions so the transfer of ownership of the Bitcoins are recorded, time-stamped, and displayed within a “block” of blockchain. (Britto, 2013:5)

Each “block” varies in size which depends on the value of transactions forming a data. Once recorded the data in any given block cannot be altered retroactively without altering all subsequent blocks. Through the ledger mechanism, the risk of fraud or system failure are greatly minimalized.

Pseudonymity:

Modern online transactions or payment mostly involves third party as intermediary such as Paypal that keeps record of every transactions and to the extent of personal identity. But in the case of transaction based on cash without any intermediary and both parties have no clue over each other’s identities, the transaction is completely anonymous. Bitcoins are similar to cash to the extent upon transfer of it there is no third party intermediary that records the identity of parties involved. A transaction that happened between two public keys means that relevant information are recorded in the blockchain and publicly viewable. (Britto, 2013:8) Despite the public keys for all transactions or Bitcoin addresses1 are recorded in the blockchain, those keys are not tied to anyone’s identity. Yet if a person’s identity happened to be linked to a public key or users publicize their key addresses publicly (Roberts, 2011), the recorded transactions in the block chain tied to that identity can be traced and accessible publicly hence making Bitcoin pseudonymous. To maximize the pseudonym feature, user can employ the use of anonymity software like Tor and remain responsible by avoiding transacting with Bitcoin addresses that could be tied back to one’s identity. However through routinal observation notably known as “entity merging”, two or more public keys used as an input to one transaction at the same time, one can gradually link the records together hence the transaction was no longer anonymous. (Ober, 2013:246)

Potential Virtues & Drawbacks:

Besides the feature of pseudonymity, Bitcoin also offers various benefits namely from low transaction cost, superior store value, preventing poverty and most importantly stimulate financial innovations. (Britto, 2013:10-17) Since Bitcoin does not involve third party per-se as intermediary, transactions are relatively cheaper and quicker. The imposition of tax is unlikely possible due to every transaction is recorded in the public accessible ledger blockchain instead of done by appointed intermediary such as Paypal. Several small businesses have already started to accept Bitcoin as a way to avoid the costs of doing business with credit card companies (Karol, 2013) and to some extent adopting Bitcoin for its

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1 By default any Bitcoin addresses that being recorded to Blockchain are not tied to anyone’s identity.
speed and efficiency in facilitating transactions. (Reutzel, 2013)

Improvement of access to basic financial services can greatly reduce poverty. (Yunus, 2003) It is estimated over 64 percent of people living in developing countries have difficulty to access financial service due to the unbearable cost to be afforded by conventional financial institutions to serve poor or rural areas (Mylenko, 2011:6-11). Bitcoin offers a huge breakthrough in financial service sector by the means of technology. The current mobile banking service further would be left behind by the adoption of Bitcoin. (Spaven, 2013) In a split second, transaction can be done without delay, unnecessary fees and risk of fraud. Hence Bitcoin is one step ahead over conventional financial institutions.

Traditional currencies often accepted as stores of value due to government’s influence behind, hence giving them a sense of legitimacy and stability in the eyes of users. This could be a problem if a country is embroiled in conflict, the currency might be affected. If the government decides to inflate its currency for national economy policy, the wealth held by individuals in the form of currency decreases. (Plassaras, 2013:390) Bitcoin as cryptocurrency on the other hand, would answer to market forces rather than the policies of national governments and the various special interests they represent. (Macintosh, 1998:764)

Due to its protocol contains blueprints for various developments on useful financial (Britto, 2013 news) and legal services, Bitcoin is open for extensive innovation. It is not limited only as currency or payment methods. Thus, policymakers should avoid regulation that may quash the promising innovative features offered by Bitcoin’s protocol.

With the ongoing benefits and opportunities offered by Bitcoin, there are also constant drawbacks that should be taken into consideration such as volatility, risk of misuse and security breaches. If Bitcoin is used to store values or units of account, the currency’s volatility can endanger it yet if used as medium of exchange, volatility is less of a problem. As more people become familiar with Bitcoin, volatility risk would decrease. (Britto, 2013:18).

There comes also the risk of misusing it to propagate illegal activities. The infamous “Deep Web” black-market site known as “Silk Road” takes advantage of the anonymizing software Tor (Dingledine, Mathewson, and Syverson, 2004) and the pseudonymous nature of Bitcoin to enable transactions of illicit drugs, ransomwares, stolen credit card information and forged documents. (Kim, 2014) It was estimated that the turnover on the “Silk Road” market as the first to support Bitcoin transactions exclusively valuing $15 million just one year after it began operation. (Bohme, Christin and Moore 2013:222-223) Bitcoin’s association with “Silk Road” has tarnished its reputation. (Britto, 2013:21)

Since it functions as a virtual currency, Bitcoin is prone to be used as a medium for money laundering activities or supporting various criminal activities. Illegitimate money to fund terrorism and trafficking illegal goods could be concealed simply by converting to Bitcoin. This issue has been highlighted for years, especially after the case of Liberty Reserve, a private, centralized digital-currency service based in Costa Rica, was shut down by authorities for money laundering. (BBC, 2013) China’s central bank also banned Chinese banks from relationships with Bitcoin exchanges as to prevent yuan from being moved overseas via Bitcoin. Similarly, despite the high demand of Bitcoin in Argentina, the government policy strictly limits transfers to other currencies. (Bohme, Christin and Moore 2013:224)

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2 An Argentinian man named MarceloAraozhas managed to utilize Bitcoindistributing computing power as digital notary service to allow people to verify legal document existence through a program named Proof of Existence. Other similar program see Bitnotar and Chronobit

3 Use of Bitcoin as speculative investment would increase the risk of its volatility and against its main purpose as an alternative form of payment.
Security had also become prominent issue for Bitcoin. In 2012 Bitfloor a bitcoin exchange lost 24,000 BTC (worth $250,000) from a net heist. (Caldewey, 2012) A year later, a massive series of distributed denial-of-service (DDoS) devastated a well known bitcoin exchange, Mt.Gox. Network threat also went to the extent of removing pseudonimity as one can trace particular transaction from blockchain, stole credentials and personal identity or worst knowing one’s private keys. (Miers, Garman and Rubin, 2013)

Hence it can be said there is a strong link between Bitcoin’s volatility and security.

B. The Analysis of Legality of Bitcoin and The Importance of Enacting Cryptocurrency Law in Indonesia

Before Bitcoin became popular in Indonesia as a method of payment or alternative currency, mobile banking was the first innovation that incorporated the use of technology. These two innovation are the example of financial technology or notably known as “Fintech”. There is no exact term for fintech, but generally fintech aims at providing financial services through the incorporation of modern technology. Fintech main objective is to achieve a financial inclusion, to reduce the constraints that exclude people from participating in the financial sector. There are so many categories of service in Fintech hence Bitcoin together with blockchain falls under the “Crypto currency & Blockchain” categories.

As a cryptocurrency, Bitcoin has a different transaction scheme which resulting in different legal relationship. Most currencies have a “triangle” type of transaction termed centralization where banks act as a financial intermediary role between parties thus transfer of payment shall be carried out by banks. (Tampi, 2017:88) On the other hand a bitcoin transactions only needs two parties with mutual consent to exchange certain goods or currencies with a certain amount of bitcoin, therefore it is decentralized unlike banks. (Tampi, 2017:90) (Ferrera, 2004). The legal relationship incorporates basic values of communication such as confidentiality, integrity, authenticity, non-repudiation and availability. (Makarim, 2003:223)

Confidentiality ensures the system to maintain privacy so that only authorized individuals can view sensitive information. Integrity emphasizes the importance of accurate and reliable information of each bitcoin transaction which recorded by blockchain. Authenticity means the content of bitcoin transaction can be verified and altered in an unauthorized manner. Non-repudiation incorporates that the origin of any action on the bitcoin system can be traced thus enabling every user to have private key and records of transaction. (Makarim, 2003:223)

Before discussing further about the legality of Bitcoin in Indonesia, a comparison can be made with America on how they regulate the use of cryptocurrency. The Internal Revenue Service or IRS, treats virtual currency as property thus any gains or losses upon an exchange of virtual currency will be subject to taxation. (IRS, 2014) (Pagliery, 2014) In 2013, the U.S Senate Committee on Homeland Security announced plans to start an inquiry aimed at establishing a regulatory framework for Bitcoin. (Lee, 2013)

In 2013, the Financial Criminal Enforcement Network (FinCEN) issued notice that obliged every exchanges and administrators of virtual currency are subject to the Bank Secrecy Act (BSA), Title

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4In 2013, Mt. Gox a well-known Bitcoin exchange suffered from a massive DDoS which led to the fall of Bitcoin’s value along with several hacking. With the ongoing hack and inability to pay the refund, Mt. Gox on April 2014, filed for bankruptcy in Japan along with bankruptcy protection in US.

5Fintech Weekly defined it in general sense of incorporating technology means in financial service sector

6The pursuit of making financial services accessible at affordable costs to all individuals and businesses, irrespective of net worth and size respectively. Investopedia further describes how Fintech could help government to achieve financial inclusion.

7See further Fintech Ecosystem graph provided by Business Insider.
III of PATRIOT Act (GAO, 2014) and should be registered as Money Servicess Business (MSB). It was legislated to prevent misuse of virtual currency for money laundering, funding illicit activities or tax evasion. However, even after the obligation to comply with BSA, virtual currency is still used for illegal purposes due to its pseudonimity protocols nature. (Zetter, 2013) With the decentralized and pseudonimity nature of virtual currency, Government Accountability Office (GAO) noted it is necessary to have global cooperation to address these crimes (GAO, 2014:1).

The Securities and Exchange Commission (SEC) had also proposed a bill to regulate virtual currency which being used as securities and prevent illegal activities involving securities by means of virtual currency. The bill further regulates that virtual currencies are equal as money, so investing money (virtual currencies included) in a token with an expectation of profit derived from the managerial efforts of other people points to a virtual currency being a security, and that it’s required to be regulated as such. (Churchouse, 2017)

A notable virtual currency case had also forced the US government to form a uniform cryptocurrency law. On July 23, 2013 the SEC charged Shavers for committing ponzi scheme to defraud investors through his company, Bitcoin Savings and Trust (“BTCST”). Through BTCST, Shavers solicited and accepted all investments and paid all purported returns in the form of virtual currency, Bitcoin. The conduct done by Shavers was found to meet the definition of investment contract. Since it was security crime, the court had absolute jurisdiction over the case through the Securities Act.

An investment contract is defined as “any contract, transaction, or scheme involving: (1) an investment money; (2) in a common enterprise; (3) with the expectation of profits would derived from the efforts of the promoter or a third party. The main question was whether Bitcoin invested into Shaver’s ponzi scheme qualified as an investment money. Since Bitcoin can be used to purchase goods or services, afford individual living expenses and be exchanged for fiat currencies, Bitcoin constituted an investment of money or “reserve fund”. (SEC v. Shavers, pg.1-16, 2013)

With the ongoing use of virtual currency and its extensive development, the current regulations would not be able to fill in the legal vacuum. Thus the US government had proposed a uniform regulation of virtual currencies business act. The proposed regulation will regulate licensing requirements, reciprocity, consumer protection, cyber-security, anti-money laundering and licensee’s supervision coupled with sanctions. (Redman, 2017)

1. Legality and Problems of Bitcoin in Indonesia

As discussed before, due to the absence of intermediary to help transaction happens between parties, the Indonesia Civil Code through article 1338 and 1320 can be incorporated to regulate legal relation involving exchange of Bitcoin. Under 1138, the contract for exchange of Bitcoin shall be the law for both parties (Pacta Sunt Servanda), and cancellation of contract shall be based on parties consent or reasonable by law (Miru, Pati, 2008:78).

Some might conclude that Bitcoin can be regulated by Law Number 11 of 2008 Concerning Electronic Information and Transaction through Article 1 paragraph 1 “Electronic information means one cluster or clusters of electronic data, including but not limited to…” thus it is categorized as electronic data which is not limited by the definition of electronic information. The supporting elements of Bitcoin transactions such as blockchain, hash, public and private key can be listed as sign and access code that have been processed and understandable by qualified persons. (Tampi, 2017)

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8 See further FinCEN’s guide paper 2013-G001 on its regulations application to persons administering, exchanging, or using virtual currencies.
Furthermore, Article 1 paragraph 2 of the law defined electronic transaction as a legal act that is committed by the use of computers, computers networks, and or other electronic media. Despite Bitcoin transaction happens through the use of computer, the action of transacting itself has not been regulated. However due to the principle of *nullum delictum nulla poena sine praevia lege poenali* (Pangaribuan, 2016), this does not mean transaction of bitcoin is illegal.

Similar to the Law Number 11 of 2008, the Law Number 8 of 2010 on Prevention of Money Laundering, Article 1 paragraph 16 had implicitly regulated documents including not limited to electronic recorded documents, thus incorporating Bitcoin for criminal activity followed by money laundering can be subject to criminal sanction of this law, however if report of money laundry by Bitcoin was made by Administrator or Bitcoin Exchange, it has not been included under Article 17 of Law Number 8 of 2010 on Prevention of Money Laundering. Not to mention also, Bitcoin can be seen as a potential medium by tax criminals for tax avoidance (Marian, 2013:42).

In other laws such as Law Number 10 of 2011 on Future Trading, Law Number 8 of 1995 on Capital Market, there is no regulation concerning bitcoin. Although as discussed before Bitcoin falls under Fintech, the current law on Fintech issued by Financial Authority Service (OJK), POJK Number 77 of 2016 was concerning Peer-to-Peer Lending only. Even worst, the Bank of Indonesia (BI) issued PBI Number 18/40 of 2016 on Processing Transfer of Payment, wherein Article 34 (a) specified a prohibition to process transaction with virtual currency. The lack of uniform regulation concerning virtual currency administration, usage and penalty would risk the future use of virtual currency and directly affect consumer’s trust whether to use Bitcoin or remain with conventional cash currency. With the unclear regulation and current restriction by Bank of Indonesia on the use of cryptocurrency, Indonesia’s government should respond immediately to ensure a safe and effective use of cryptocurrency.

2. The Importance of Enacting Uniform Law of Cryptocurrency in Indonesia

There are several factors to be taken into consideration as the reasons to enact a law on cryptocurrency.

Firstly, it is due to its well-known and widespread usage globally. The prominent features offered and its increasing value (Plassaras, 2013:389) has attracted people and many people had change to use Bitcoin as a form of payment. As more people involved in Bitcoin transaction, the value of Bitcoin itself would eventually become more stable and attracts Bitcoin investors to Indonesia. Moreover, since there has been several Bitcoin Exchanges in Indonesia such as *bitcoin.co.id*, it would be better to have a proper regulation on cryptocurrency to administer or issue license for financial institution delivering cryptocurrency services, hence it can also foster Indonesia’s economic growth.

Secondly, considering the prominent pseudonimity and decentralized features which are prone to be used for criminal activities. Several criminal cases such as money laundering, ponzi scheme, contraband trafficking and possible tax avoidance had proven how devastating cryptocurrency could be over a state economy.\(^9\) In many ways, Bitcoin and cash are similar since both share a key property that makes them both suitable for illegal activity. Neither requires an institutional and subpoenable intermediary. (Tsukerman, 2015:1147). Having a legal framework on cryptocurrency would stipulate criminal sanction and can significantly reduce illegal activities involving cryptocurrency such as Bitcoin. Further, the enactment of cryptocurrency

\(^9\) *Bitcoin.co.id* is the first and leading cryptocurrency-based Bitcoin exchange in Indonesia ever since 2013 and now expanding its business to include *Ether*, a cryptocurrency that derives from *Ethereum*’s block chain.

\(^10\) See further the case of Liberty Reserve that involves money laundry and its correlation with cryptocurrency, SEC v. Shavers on cryptocurrency with Ponzi’s scheme, *Silk Road* Drug charges by Manhattan U.S Attorney (Department of Justice),
law enables the cooperation with ITE’s act, anti-money laundering act, banking act, capital market act, and many more.

Lastly, regarding Bitcoin’s volatility. The Efficient-Markets-Hypothesis (EMH) stated that the market value of an asset is equal to the best available estimate of the value of the income flows it will generate. Since Bitcoin does not generate any earnings and has no intrinsic value, it has to appreciate in value to ensure people to be willing to hold them. (Swartz, 2014:319-335) Most Bitcoin users are acquiring it as a speculative investment, rather than with the intent to purchase goods in which some exchanges show 80% of Bitcoin users purchase it as a speculative tool. (Harvey, 2015:1). By having cryptocurrency law, there can be regulation and requirements to use Bitcoin as a tool of investment thus reducing the risk of volatility. Even the SEC is planning to regulate initial coin offering (ICO), (Marshall, 2017) a phase similar to initial public offering where company releases its own cryptocurrency with a purpose of funding. (Coggine, 2017)

C. Conclusion

Based on the abovementioned factors and reference to US treatment on cryptocurrency, there are several important conclusions to be taken into consideration. Firstly, due to the widespread use of Bitcoin, the regulator should stipulate a policy that would not quash cryptocurrency in a way hindering its usage. It would be better also to form a committee to conduct comparative study with other countries to enrich the knowledge of regulators by means of research thus ensuring an effective cryptocurrency law upon the enactment of it.

Secondly, considering the transactions recorded in blockchain are anonymous and decentralized, there should be a strict regulation on licensing for those willing to incorporate Bitcoin business or exchange. By having a cryptocurrency law, the authority can oblige Bitcoin service providers to cooperate on tracing transactions and Bitcoin’s account owner in Indonesia. This can minimized the misuse of bitcoin transactions.

Lastly, having a clear legal framework can enable Bitcoin to contribute to Indonesia’s economy. As the users and market of Bitcoin grows, equal income distribution and infrastructure development all over Indonesia can be achieved. People will find it convenient to use Bitcoin due to its value, paperless, no additional cost for transfer hence relating to lower tax imposition.

The enactment of cryptocurrency law can embrace the citizens of Indonesia to gradually move from the current exchange system into incorporating Bitcoin and other cryptocurrency to conduct their business.
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