THE ISSUE OF CRYPTOCURRENCY LEGAL REGULATION IN UKRAINE AND ALL OVER THE WORLD: A COMPARATIVE ANALYSIS

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Abstract. As soon as the usage of cryptocurrency in the last few years has been gaining popularity all over the world, and this global trend has affected Ukraine, the purpose of the paper is to examine the essence of cryptocurrency, to identify the issues of its legal regulation in Ukraine, as well as using the analysis of world experience in this sphere, to identify ways of the improvement for relevant domestic legislation. The authors have indicated that the cryptocurrency market (or “virtual” money) operates successfully and provides an opportunity to analyse dynamics of the cost, supply, and demand of about 90-100 different cryptocurrency. Problem’s setting. The authors of the paper have emphasized that despite increasing popularity of cryptocurrency in Ukraine and throughout the world, there is no single clear definition of this concept. Therefore, the authors of this article state that cryptocurrency is a digital decentralized currency, a unit of which is a coin cryptographically protected against tampering since it is encrypted information that cannot be copied, while all information about transactions is stored in the blockchain system. Methodology. The study primarily uses comparative methods for the purposes of examination of the approaches taken under different jurisdictions towards cryptocurrency. Additionally, analysis of the body of theoretical literature on the matter was conducted. Results of the study allowed drawing several conclusions on the prospects of further development of the legal framework for cryptocurrencies in Ukraine since nowadays the country is neutral in the issue of using and regulating cryptocurrency and consequently it is losing precious time, because: first, potentially loses money, which could enter the state budget from individuals, who receive income from transactions on cryptocurrency markets; and secondly, the state runs a risk of citizens’ rights violation because of no real instruments for their protection. Practical implications of these are proposals to adopt certain amendments to the current legislation in this sphere, including setting up control over brokerage of cryptocurrency, licensing of the industry, and legal definition of the cryptocurrency for the purposes of taxation, etc. Value/originality. The paper represents one of the first comprehensive studies of the current state and prospects of development of the legal framework for the cryptocurrency in Ukraine. Its conclusions provide both proposals for the development of legislation in this sphere and may serve as a basis for the future studies of this topic.

Key words: cryptocurrency, blockchain, transaction.

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1. Introduction

The beginning of the 21st century is marked by a rapid development of information technology, which inevitably has caused the emergence of new institutions. One of these institutions is the cryptocurrency market. In the last few years, the use of cryptocurrency has been gaining popularity all over the world, and this global trend has affected Ukraine certainly. Even though the National Bank of Ukraine has determined cryptocurrency, in particular, Bitcoin, as a “money surrogate,” people are becoming interested in it (cryptocurrency) more. Thus, in mid-2016, one of the largest banks in Ukraine provided the opportunity to buy and sell the most common cryptocurrency Bitcoin. Moreover, almost in a year, in Ukraine, for the first time in the world, an agreement on sale and purchase of real estate for cryptocurrency (Ethereum) was signed. From the US, the owner of the apartment in Kyiv sold his property through his representative. This fact confirms the undisputed popularity of cryptocurrency in the state. However, Ukraine has many problematic issues in this sphere; in particular, it concerns legal regulation of cryptocurrency usage.

2. Definition of the cryptocurrency

To begin with, it is important to define the essence of the concept “cryptocurrency.” The first cryptocurrency appeared in 2008, when the anonym (a programmer or a group of programmers, whose identities are still unknown) under the pseudonym Satoshi Nakamoto described initially operation of the payment system in the form of a peer-to-peer network, which was presented by him as an open code of the client program Bitcoin on the Internet in 2009 (Official website of Bitcoin, n.d.). Lubenets, a programmer, explains the meaning of the concept “cryptocurrency” in terms of information technology and notes that this category means the type of digital currency, based on complex calculations of a function, which can be verified easily by reverse mathematical actions, while the main scheme of its emission is the proof of execution principle (Lubenets, 2014). It is worth noting that today a very large number of cryptocurrency exists. Cryptocurrency market (or “virtual” money) operates successfully and provides an opportunity to analyze dynamics of the cost, supply, and demand of about 90-100 different cryptocurrency. Among the largest in terms of capitalization cryptocurrency, such as Bitcoin, Ethereum, Ethereum Classic, Dash, Ripple, Monero, Litecoin, NEM, Augur, MaidSafeCoin, and others (The exchange rate of Bitcoin, n.d.). The most common and most expensive cryptocurrency is Bitcoin. The term “Bitcoin” is formed by merging the words: “bit” (a unit of computer memory) and “coin” (money) (Likhachov, 2017).

Despite increasing popularity of cryptocurrency in Ukraine and throughout the world, a single clear definition of this concept has not been provided for yet. This article maintains that cryptocurrency is a digital decentralized currency, a unit of which is a coin cryptographically protected against tampering, since it is an encrypted information that cannot be copied, while all information about transactions is stored in the blockchain system (Cryptocurrency: collect in the crypt, n.d.). According to Nikitin, cryptocurrency, for example, Bitcoin, possesses following features: 1) it is an electronic monetary unit, a virtual means for mutual settlements and accumulation; 2) it does not depend on any national currency; 3) Bitcoin is based on the “peering principle” that determines decentralization of Bitcoin, that is, its separation from administration by any government agency; 4) zero intrinsic value (Nikitin, 2014).

Frequently, ordinary citizens identify cryptocurrency with “electronic money,” which is not correct certainly. Therefore, in order to avoid confusion in this matter, the viewpoint of Senior Lawyer of the international company “LEMAN International Law Group” S. Nakonechnyi is worth noting, whereby the main differences between cryptocurrency and electronic money are: first, cryptocurrency does not mean debt obligations of its owner, holder or issuer (in fact, the issuer of cryptocurrency does not exist at all); second, cryptocurrency system has neither a single emission centre nor a central administrator; third, payments within certain cryptocurrency system can be made completely anonymous, that is, payers and recipients of cryptocurrency are not under control by any third party, including public authorities (because electronic keys, which are used for the identification of the parties of cryptocurrency payments, do not contain any personal data of such participants of payments, and therefore, it is impossible to identify such parties of cryptocurrency payments); fourth, possible creation of new cryptocurrency types or increase of cryptocurrency within one cryptocurrency system (mining) that lead to enlargement of the number of cryptocurrency units without any further affixed obligations to ensure such cryptocurrency, as well as ability of provision based on mathematical algorithms using the calculating power of computers of persons, who mine cryptocurrency additional units. Accordingly, the rate of new cryptocurrency unit generation decreases together with the increase in total weight of cryptocurrency, while in case of reaching a certain total number of units, generation of additional cryptocurrency units will be technically impossible (for example, in the case of achieving 21 million Bitcoins); fifth, legally electronic money is tied to a sovereign national currency and the issuer, while cryptocurrency cannot be tied to any currency of the world, and in essence, is an independent currency (Nakonechnyi, 2017).
3. Current legal status of cryptocurrency in Ukraine

In Ukraine, an attitude to any cryptocurrency is ambiguous, while lawyers and economists assess its existence and active use differently. In particular, the former see only shortcomings in it and the latter note mainly positive points. Therefore, scientists advocate cryptocurrency as an alternative expression of normal currency with several advantages (Bitcoin system: pros and cons, 2015): 1) cryptocurrency transactions are completely anonymous and confidential. All transaction information is encrypted in a set of characters, personal data is not linked up to a cryptocurrency wallet; 2) each cryptocurrency unit has a unique code and is protected against forgery; 3) cryptocurrency is decentralized, with no control centre, which is why the founder of digital money or any financial institution cannot affect its existence. The users of electronic wallets regulate currency exchange and transactions; 4) each unit of cryptocurrency is not tied up to any of the banks that significantly reduces commission for transactions. The commission is usually the cost of energy resources spent on the transaction; 5) the absence of a bind to banks contributes to a significant reduction in time expenditures for cryptocurrency transactions. Usually confirmation of cryptocurrency transactions comes in a few seconds; 6) transactions are carried out directly between different owners of electronic wallets that contributes to speeding up of transactions and decreasing of commission; 7) the emission of most of the cryptocurrency types has the maximum threshold caused by the finite number of all possible combinations of characters that form each new cryptocurrency unit. This contributes to the reduction of unjustified money supply in circulation and reduction of inflation (Bitcoin system: pros and cons, 2015). The aforementioned opinion is substantiated and undoubtedly worthy of attention.

However, despite seeming advantages, lawyers are sceptical about cryptocurrency. For example, Andrii Chornous, a lawyer at the international law firm “INTEGRITES”, notes the negative court practice in Bitcoin cases. According to him, only a clear definition of cryptocurrency in the regulations can correct this situation (Bitcoin in Ukraine: legal status, n.d.). K. Nikitin, a Russian lawyer, concludes that Bitcoin is a money surrogate and refers to an information message from Russian Financial Monitoring Service “On Cryptocurrency Use” of 06 February 2014, which directly states this term (“money surrogate”) and emphasizes that the price for Bitcoin is determined solely by speculative actions, which create a risk of loss of value and, as a consequence, violation of rights of individuals holding Bitcoin (Nikitin, 2014).

Moreover, not only lawyers have a negative attitude towards cryptocurrency. Thus, in a letter of the NBU No. 29-208/72889, dated 2014, December 08, the issuance of the virtual currency Bitcoin is provided for as one that has no intrinsic value, is not a liability of any individual or institution, nor backed by any authority. Therefore, according to the NBU, Bitcoin is a money surrogate, which has no intrinsic value. The National Bank emphasizes that purchase and sale of Bitcoin for US dollars or other foreign currency have signs of the so-called “financial pyramids” functioning and may indicate a potential involvement in dubious transactions in accordance with the legislation on counteraction to legalization (laundering) of proceeds from crime and terrorist financing (National Bank of Ukraine, 2014). Moreover, in the above-mentioned letter, the NBU warns citizens and legal entities about exchange of virtual currencies for goods or cash, as this implicates the risk of complete loss of funds in such transactions, as well as the risk of involving such persons in activities, related to the legalization (laundering) of proceeds from crime and terrorist financing. In order to protect the rights of consumers, safety of funds transfer, the National Bank of Ukraine recommends citizens to use only services of those payment systems, transaction systems, included by the National Bank of Ukraine to the Register of payment systems, transaction systems, participants of these systems, and payment service providers (National Bank of Ukraine, 2014).

Therefore, summing up the above, the following can be stated:

- first, from an economic perspective, cryptocurrency is an interesting phenomenon, which has a number of positive features and advantages over other currencies, for example: it is not influenced by inflation in any way; using it each person can earn profits (obviously aware of certain risks);
- second, its use entails certain risks for cryptocurrency holders. Thus, one of the main risks is almost no legal protection of the rights of citizens in case of committing offenses against them in this sphere (Drozd et al., 2017);
- third, the use of cryptocurrency may entail a number of negative consequences for the state, in particular: 1) taking into account the peculiarity of using cryptocurrency (such as anonymity, etc.), it is possible to “launder” money gained criminally; 2) a person can withdraw money from Ukraine, avoiding payment of taxes and other obligatory payments; 3) payment of income tax, which individuals receive from cryptocurrency transactions, is undeveloped;
- fourth, the essence of cryptocurrency (for example, Bitcoin) is a kind of start-up, and that is why it is difficult to predict its further development.

Therefore, there are two ways to solve the abovementioned issues. The first is to ban completely the use of cryptocurrency in Ukraine with subsequent blocking of relevant sites. However, in practice, this method has turned out to be ineffective because the experience of blocking social networks “mail.
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ru” “ВКонтакте” [“VKontakte”], “Одноклассники” [“Odnoklassniki”] etc. showed that interested parties could use special freely accessible programs that allow bypassing these restrictions. Therefore, the state should create an appropriate legal framework for resolving issues related to cryptocurrency in Ukraine. This requires analysis of the experience of those countries that have already paid attention to this issue at the legislative level.

4. Overview of the approaches towards cryptocurrency regulation across the globe

Therefore, considering European experience in regulating the use of cryptocurrency, Germany should be mentioned first. The Federal Financial Supervisory Authority defines virtual currencies as financial instruments. According to German law, they are a form of “private money” that can be taxed as capital. The creation of virtual money, as well as their use as a means of payment, does not require any permission. If virtual money is sold, it is considered a financial instrument and needs to be licensed in accordance with the German Banking Act (Kreditwesengesetz, KWG). Any commercial use of the virtual currency requires licensing (Comparative review of foreign legislation, n.d.). It should be noted that cryptocurrency in Germany is subject to 25 percent tax on capital gains but it is held only if the income has been obtained within one year after receiving Bitcoin. Thus, if the sale of Bitcoin is held more than a year after purchase, it will not be taxed on capital gains and the transaction will be treated as “private sale”. In Germany, Bitcoin is considered an analogue of other investment instruments such as stocks or bonds (Tax on cryptocurrency, 2017). Therefore, summing up Germany’s experience in regulating cryptocurrency, it is worth noting that in this state, cryptocurrency is recognized as one of the varieties of currency, which undoubtedly confirms its popularity. In addition, most Germans who use cryptocurrency avoid 25% of income tax when dealing with it. So far, the authorities of Germany should decide on how to develop legal regulation to solve avoiding income tax.

Another interesting example is the experience of the UK, where, in 2015, was stated that the government would take a direct part in regulating the activity of bitcoin and introducing innovations in the country. Thus, in 2017, the Exchequer published a project of a financial innovative plan, in which the government supported digital currency exchange, and would promote the creation of an appropriate environment for virtual money (Leshchyshyn, 2017). The Bank of England does not consider virtual currency as a threat to the monetary or financial stability of the United Kingdom, but the government will necessarily take a direct part in controlling and monitoring the situation of Bitcoin and other cryptocurrencies in the UK market. This suggests a possibility of integrating cryptocurrency technologies into current payment system and improving it, as well as making a foreign exchange policy flexible (Leshchyshyn, 2017; Deciphering cryptocurrencies, n.d.). Moreover, the Bank of England has chosen a group of researchers to study the possibility of issuing cryptocurrency by the central bank. In order to prevent volatility, observed in Bitcoin, cryptocurrency will be supported by the Bank of England and will be tied to the pound sterling, the national currency of the country. The bank expects that the research institution will report on findings in mid-2018. Such an idea seems quite promising because the creation of a national cryptocurrency will allow, first, effective state control over its circulation, and second, give additional guarantees to citizens and the state.

The experience of the United States of America, where Bitcoin is recognized as one of the types of payments in e-commerce, cannot be overlooked. In the United States, cases of salaries for civil servants in Bitcoin are frequent. In addition, Bitcoin is accepted for payment in many restaurants, hotels, and stores in a number of countries around the world. Most scholars state that the United States of America is one of the most convenient countries in the world for cryptocurrency business. In this country, large hedge funds, exchanges, and other companies related to cryptography are incorporated and for many goods and services, one can pay not only fiat currency (money, which nominal value is established and guaranteed by the state) or electronic money but also digital. In the United States, ATMs, which allow fiduciary money and cryptocurrency to be exchanged, are also available (Cryptocurrency in the world, 2017).

Regarding the legal regulation of cryptocurrency, the state of California was the first to allow the use of cryptocurrency by adopting Assembly Bill 129. This law provides for a corporation, association or individual to participate in circulation, as money, anything that differs from lawful payment systems. Nevertheless, Assembly Bill 129 does not regulate the introduction of cryptocurrency. In New York, in August 2015, the Department of Financial Services was provided for the legal regulation in the New York Codes, Rules and Regulations. Adoption of Bitlicense, a license to enter cryptocurrency business, possesses both upsides and downsides (Comparative review of foreign legislation, n.d.; Torpey, n.d.). As for the US litigation practice, decisions of judges of different states lead to the conclusion that the result of cases differs significantly sometimes. Decisions of the District Court Judge of the Eastern District of Texas and the District Court of Florida serve as an example. In the first case, Bitcoin was determined as currency and certain legislation to transactions with this cryptocurrency was applied. In the second case, the court ruled and proclaimed the opposite, which led to the removal of charges regarding the legalization (laundering) of proceeds from crime (Comparative review of foreign legislation, n.d.; Torpey, n.d.). Therefore, United
States legislation on cryptocurrency is one of the most developed in the world. Nevertheless, two aspects may be of special consideration to Ukraine: first, nowadays the United States works actively on the unification of cryptocurrency, in particular, a system of an equal solution of court cases is being formed; and second, in this country, cryptocurrency is considered the property for tax purposes.

Reference should be made to the experience of Japan, which is a global leader in innovation. It is Japan, as mentioned above, where the pseudonym of the founder of Bitcoin, Satoshi Nakamoto, reaches its linguistic roots. In April 2017, Japan legalized cryptocurrency as a form of payment, which is why the interest in Bitcoin continues to grow steadily in the country. In addition, according to company statements in cryptocurrency, such as Coincheck, this year, thousands of traders would start accepting a virtual currency for payment. It should be noted that, in Japan, The Japan Authority of Digital Asset operates as a self-regulating body. In the same year, the law on regulation of exchanges operation was passed: they must be registered at the Financial Services Agency, which can monitor such a business and apply administrative measures in relation to it. In accordance with this law, cryptocurrency is a value similar to assets (Cryptocurrency in the world, 2017). From the beginning of January 2018, in Japan, there is a "cryptocurrency boom" because everybody buys it up, while the Japanese almost refuse from the real currency. This is primarily due to the legalization of cryptocurrency in the state.

Thus, Japan, in comparison with other countries of the world, has made tremendous strides in cryptocurrency usage and legislation that regulates it. This can be explained by the following: first, Japan has been the source of global innovation in various spheres for the last decades; second, the high internal discipline of the Japanese, which is of importance in cryptocurrency usage; third, in this country, two types of cryptocurrency have been legalized. As regards benefits of Japan's experience in Ukraine, the introduction of a supervisory authority, which would oversee and monitor cryptocurrency exchange activities to prevent violations of the rights of citizens in transactions on this exchange, would be helpful.

On the contrary, in another eastern country, the People's Republic of China, Chinese authorities began to restrict cryptocurrency circulation. At the end of September 2017, the People's Bank of China has banned the sale of cryptocurrency within the country. Two leading exchanges in China were warned about trading cessation; for the fear of persecution, Bitcoin owners began to transfer chats from the WeChat, controlled by authorities, to the illegal Telegram. In addition, the People's Bank of China has announced illegal operations related to ICO. Officials explained that such investment carried financial risks and sometimes turned out to be fraud. The authorities ordered to stop all campaigns. Organizations and individuals, who have already completed investment, have to return funds to investors (China kills Bitcoin, 2018). Such actions by the authorities of the People's Republic of China caused the collapse of Bitcoin exchange rate by almost two thousand dollars in two weeks. On September 1, Bitcoin costs five thousand dollars, once again updating the historical maximum. Three days later, the exchange rate of cryptocurrency began to decline sharply. The actions of the Chinese authorities had such a significant impact on cryptocurrency because two-thirds of all Bitcoin is mined in this country (mainly because of cheap electricity) (China collapsed the exchange rate, 2017). Among the main reasons of ban on cryptocurrency by Chinese authorities, several factors need to be mentioned: first, the cryptocurrency mining requires extra electricity costs; second, during the years of the growth of this currency, the state became aware that this currency was not backed up and carried financial risks, in particular, money laundering. Thus, China was one of the first countries in the world that decided radically on the issue of cryptocurrency completely banning it. Therefore, compliance with this provision in the People's Republic of China is beyond question due to citizens' mentality of high internal discipline and respect for authorities' orders, prohibitions, etc.

5. Conclusions

Considering all the material presented in this scientific research, it is worth noting that the issue of legal regulation of cryptocurrency is relevant not only in Ukraine but also in many other countries of the world. Nowadays, Ukraine is neutral on the issue of using and regulating cryptocurrency and consequently it is losing precious time, because: first, potentially loses money, which could enter the state budget from individuals, who receive income from transactions on cryptocurrency markets; and second, the state runs a risk of citizens' rights violation, because of no real instruments for their protection.

As for other countries' experience in the legal regulation of cryptocurrency, the following positive points can be used in Ukraine:
- to introduce a system of strict control over brokerage firms dealing with cryptocurrency (experience in Japan);
- to take a tough position regarding the status of cryptocurrency in Ukraine;
- to introduce licensing of cryptocurrency exchanges (Germany, Japan);
- to define cryptocurrency as a property for tax purposes (US and German's experience);
- to adopt laws and regulations on relations in this area and protect the rights of citizens from violations against them;
- to establish liability for the violation of the relevant legislation.
References:


