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CRYPTOCURRENCY MARKET AND TAX REGULATIONS IN TURKEY: AN ANALYSIS IN THE EUROPEAN EMERGING ECONOMY

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CRYPTOCURRENCY MARKET AND TAX REGULATIONS IN TURKEY: AN ANALYSIS IN THE EUROPEAN EMERGING ECONOMY

Abstract

The aim of the article: The purpose of this study is to provide a thorough review of the current state of cryptocurrency market and how governments perceive and deal with the threats and opportunities brought by the block chain technology. Cryptocurrencies were certainly the most popular investment in the last decade with a skyrocketing trading volume. However, cryptocurrency abilities in money laundering, financing terrorism and tax evasion overshadow the great opportunities and potential of this new technology. Therefore, the major economies in the world have been working on an efficient and effective strategy to control and tax the cryptocurrency market. In this study, the current state in Turkey regarding cryptocurrency taxation is analysed and a tax system is proposed. The authors claim that the Tobin tax, or in other words, low tax rates would be the best tax system to be applied in Turkey.

Methodology: The study is based on a detailed literature review on the subject, academic papers, news releases and legal acts of the USA, Europe and Turkey. Different attitudes of varied groups are discussed and proposed solutions in the subject are being considered.

Results of the research: Cryptocurrency market has a great potential and block-chain technology is full of opportunities. However, it is essential to control this market without harming the appeal of cryptocurrencies, yet this is not an easy task. Therefore, we argue that Turkey should extend the usage of cryptocurrencies, create a tax strategy with low tax rates and we claim that a regulation similar to the Tobin tax application would be effective here.

Keywords: cryptocurrency, bitcoin taxation, tax law, Turkish law.

JEL Class: K34, G15 G28.

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INTRODUCTION

The development in decentralized finance applications has also diversified and increased the applications of cryptocurrencies, which have a great place in this system. The growth of this ecosystem has increased the interest in cryptocurrencies and has provided advantages in achieving the main purposes of the financial system such as making payments, financing, and investing. Compared to the traditional financial system, the advantages of this new one, such as high speed and low cost, are expected to provide financial inclusion by reducing the factors that make it difficult to gain access to financial services.

Decentralized financial services aim to perform the functions of the traditional financial system in an open, decentralized, autonomous way based on blockchain, thereby increasing the efficiency of these transactions. DeFi applications have a potential to expand financial inclusion, promote innovation and create new opportunities for entrepreneurs and innovators (Chen and Bellavitis, 2020: 2; OECD, 2022: 3). With the technological innovations they provide, cryptocurrencies have advantages such as high transaction speed, low cost, and security of transaction information, unlike traditional systems (Gowda and Chakravorty, 2021: 530). However, DeFi applications also have destabilizing effects such as high volatility, liquidity mismatches, openness to market manipulations, risk of illegal financing, and lack of transparency (Aramonte et al., 2021: 21; OECD, 2022: 3). One of the most important applications in this decentralized financial system, which is exempt from public regulations and is processed anonymously, is cryptocurrency applications. Despite the fact that cryptocurrencies are the most popular technology trend in the world, their possible adverse impacts, such as huge carbon emissions produced during mining (Stoll, Klaaßen and Gallersdörfer, 2019) or usage for illegal activities due to their anonymous nature are recently recognized problems. Today, the number of people using cryptocurrencies for tax avoidance is also striking. Unlike other financial transactions, the absence of tax regulations in these transactions causes that these systems create a competitive advantage. This disadvantageous situation in traditional financial systems leads to the use of decentralized financial systems, mainly as tax shelters. The intensity of the struggle of states against traditional tax havens (Şahin, 2019: 177) also increases the demand for the decentralized financial system led by cryptocurrencies. Although it is difficult for these transactions to be subject to tax regulations due to their unique characteristics, all states should regulate them with tax law.

In the future, it is expected that this system will expand, diversify, and replace the traditional financial system at certain points. However, for this to happen, the cryptocurrency system needs to be regulated and the investor and the system itself must be protected. Regulations made with a "prohibitive mindset" will cause cryptocurrencies to flee to countries where such regulations do not exist, and countries will have a competitive advantage unless there is an international agreement. For this reason, it is important that the introduced regulations are regulatory instead of prohibiting the system.

Cryptocurrency regulations in Turkey should also be examined in this context. The increasing interest in cryptocurrencies in Turkey in recent years has made these regulations mandatory. In order to protect the investor and the system, one of the changes expected to be made in 2022 is the taxation of cryptocurrencies. The protective regulations expected to be made in this area and the tax regulations expected to be formed within the framework of the Turkish Tax Law have been evaluated in the study. Changes and exceptions that may occur in tax rates with the change in the nature of cryptocurrencies are mentioned within the scope of the study. It is hoped that this evaluation can help overcome the problems that may be experienced during the regulation of cryptocurrency applications that create a new financial ecosystem.

The purpose of this paper is to analyze the current situation in the crypto market and crypto taxation as well as to propose a system for Turkey. Firstly, the cryptocurrencies and how they work in the financial system is explained and then, the issue concerning how the big economies tax cryptocurrencies is summarized. The authors of article analyzed the market in Turkey, Turkish tax system and we proposed a system indicating how the cryptocurrencies should be taxed in Turkey. The authors suggest that low tax rates should be very effective, both to generate tax revenue for the government and to prevent a possible damage in the crypto market. The authors of article aim to propose the most effective tax system for the crypto market in Turkey and firstly this requires a detailed analysis of the current situation in the world and particularly in Turkey.

1. THE CRYPTO MARKET AND CRYPTOCURRENCY TAXATION

1.1. Concept of cryptocurrency

Cryptocurrency is the most popular tech trend with more than $2 trillion market capitalization by April 2021 whereas the only country in the world which has made Bitcoin legal tender is El Salvador since its inception in 2009. Bitcoin was originally defined as a decentralized intangible currency based on peer-to-peer networking although it is neither like gold with high intrinsic value nor a traditional currency issued by a central authority. This identity crises of cryptocurrencies have initiated the discussion on whether cryptocurrencies are taxable or not.

After the collapse of the major financial institutions in 2008 crisis, investors lost confidence in the traditional financial system and chose to trust the technology infrastructure (Wątorek et al, 2021). Cryptocurrencies offered an alternative to the centralized banking system after the 2008 turmoil and the first crypto exchanges such as Mt. Gox and Bitcoinmarket.com were launched in 2010. Since then, hundreds of different cryptocurrency platforms have been launched such as Binance, CoinFLEX, OKX, Upbit and Deepcoin. Crypto Market Sizing Report (2022) released by Crypto.com forecasts that the number cryptocurrency owners will be around 1 billion by the end of 2022. That may be a bit surprising because there are only a handful of companies accepting the cryptocurrency as payment.

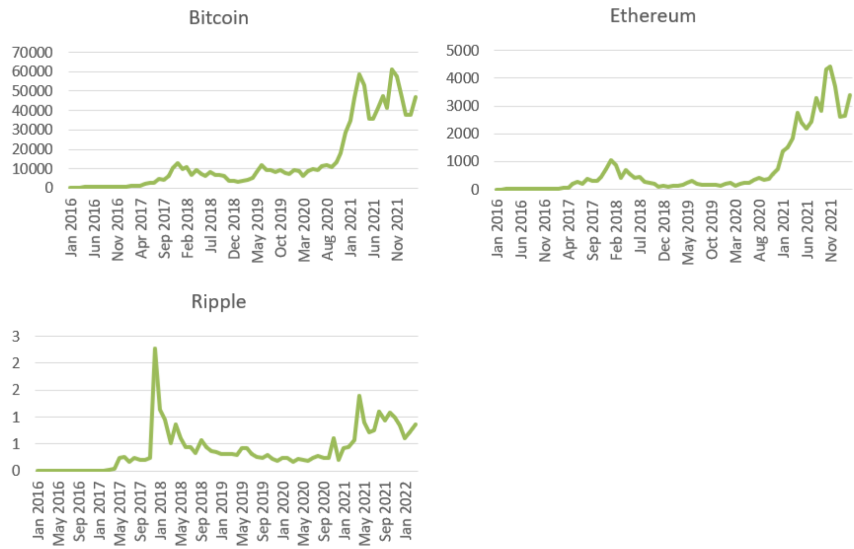

Chart 1. The historical prices of Bitcoin, Ethereum and Ripple

Source: CoinGecko and Statista.

Chart 1 shows the price change in the major cryptocurrencies: Bitcoin, Ethereum and Ripple since 2016. In the past decade, the cryptocurrencies have given the investors an excellent return of more than 1000%, even beyond the expectations of their original investors. Yermack (2015) emphasizes this characteristic of cryptocurrencies and argues that with such great volatility, Bitcoin should be categorized as a speculative investment. Being a new asset class and investment instrument (Haiss, Schmid-Schmidsfelden, 2018), cryptocurrencies created a new market and very well-known crypto billionaires have made fortunes in this market. Millions of dollars returns raised the problem that its investors should be taxed as ordinary stock or commodity holders while this is definitely not an easy task.

1.2. Taxation of cryptocurrencies

The problem how cryptocurrencies should be taxed presents a major challenge for the authorities as their nature complicates the issue. Cryptocurrencies are all digital, traded globally, not issued by a central bank and not stored by traditional banks and thus, these characteristics make them very hard to control and follow. Cryptocurrencies have emerged as new tools for money laundering (Dupuis and Gleason, 2020), financing terrorism (Choo, 2015) and tax evasion (Slattery, 2014). Although the crypto market is still so small, Marian (2013) argues that cryptocurrencies have the potential as a useful tool for tax evasion. Due to these real-life problems of virtual currencies, cryptocurrency taxation has attracted immense attention in the literature to propose solutions and a tax strategy for specific countries. Countries like the UK, Canada and the USA classify Bitcoin as a property and tax cryptocurrencies accordingly whereas Gamble (2017) argues that traditional ways for taxation of such a complex instrument would be a vain effort. In the next section, the authors try to summarize the taxation policies in the major economies and the experiences and criticism related to their strategies.

1.2.1. Taxation of cryptocurrency in the USA

In spite of the fact that Bitcoin was designed as a currency, due to immense interest by the investors, in 2014 the Internal Revenue Service of the United States of America (IRS), classified cryptocurrencies as property and declared that they should be taxed accordingly. Wiseman (2016) finds this ruling wrong for some reasons. Firstly, he states that this type of taxation will favor the long-term investors rather than daily users, as keeping daily record of transactions, daily losses and gains will create an immense burden for them. This complication would encourage the Bitcoin holders to use it as an investment but not for daily sale and purchases. Moreover, he states that the security and the anonymity of cryptocurrency offer makes the transactions untraceable for the IRS. Therefore, the system brought by the IRS is based on voluntary disclosure in practice and Sanchez (2017) argues that the system so far has failed to stop using cryptocurrencies for tax evasion purposes. Charging VAT on the cryptocurrencies is not an option for the USA but each state has the sole authority over imposing VAT (Ram, 2018). Therefore, the IRS which is responsible for nationwide taxation cannot enforce VAT on the crypto market.

Since blockchain offers infinite opportunities and is a constantly evolving technology, new instruments and applications which require new tax treatment come to market as well. Therefore, the IRS should update the tax system for crypto assets regularly to clear the fog in the market. One example is coin hard fork which is much like stock split. In 2017 Bitcoin had hard fork in which a new and separate currency called Bitcoin Cash emerged. Everyone having Bitcoin before the hard fork got the same amount of Bitcoin Cash in 2017. Lerer (2019) states that the IRS has not clarified how hard fork should be reported by the taxpayers and the debate over this issue is still going on. It is true that the USA is one of the pioneering countries in the world regarding the Bitcoin taxation, but there are still many traps along the way and the system should be updated regularly.

1.2.2. Taxation of cryptocurrency in Europe

The European Court of Justice ruled the exemption of Bitcoin from VAT when it is being exchanged for traditional currency in Hedqvist Case in October 2015. Solodan (2019) states that this ruling categorized the Bitcoin as a traditional currency, but the attitude of other EU institutions differs. The European Central Bank labels the Bitcoin as an asset and has a clear negative attitude towards Bitcoin. The ECB (2021) argues that Bitcoin is not to be trusted, a slow and an expensive payment instrument, a very volatile asset and it fails to offer protection for users. To bring a harmonized legal framework among the member states, the European Parliament adapted regulation on Markets in Crypto assets (MiCA). Despite the efforts of the EU Commission and Parliament, in the EU there is no unified approach against cryptocurrencies, and it is still up to member states to regulate the crypto assets. Chart 2 summarizes the regulation of cryptocurrencies across Europe.

Chart 2. Taxation of crypto currencies around Europe

Source: Based on the information provided by the Law Library of Congress, Global Legal Research Directorate (2021) Regulation of Cryptocurrency Around the World: November 2021 Update.

Although most of the European countries have already attempted to regulate and tax the cryptocurrencies: Germany, the Netherlands, Austria, Spain, Italy, Greece, Cyprus and Turkey impose no VAT on the Bitcoin. Global Legal Research Directorate (2021) report states that Bulgaria and Moldova do not apply any tax law and classify the status of Belgium regarding the application of tax law as ambiguous. Houben and Snyers (2018) state that regulating the cryptocurrencies at the EU level is better than permitting each member state to enforce law at a national level. Moreover, they argue that regulating the cryptocurrencies at an international level is actually the best way to fight with tax evasion.

1.2.3. Proposed solutions

Marian (2013) suggests that regulating the intermediaries is a possible way. The intermediaries collect some information of the users like a bank account. Whenever the coin is exchanged for real currency, the tax authorities might intervene and demand income tax from the users. However, Marian (2013) states that this way of taxation works only when the users exchange the crypto for real currency. There are other more radical approaches such as purchasing all Bitcoins by the central banks or forbidding using Bitcoin for payments, but Marian (2013) states that this would harm the Bitcoin market deeply which favors nobody at the current state. Instead of putting more limitation on the market to avoid tax evasion, Sanchez (2017) argues that recognizing Bitcoin as legal tender would solve the problem as the national regulations regarding currencies would be simply applied. Moreover, Wiseman (2016) states that classification of cryptos as currency would also benefit the users by avoiding reporting the burden and encourage the wide usage of cryptocurrencies. However, considering Bitcoin as legal tender does not offer solution to the question how mining or creating cryptocurrencies should be taxed. As suggested by Akins, Chapman and Gordon (2014) mining Bitcoin is similar to earning income in exchange of goods or services and thus income generated should be reported for tax purposes accordingly.

2. CRYPTOCURRENCY TAXATION IN TURKEY

2.1 Current Situation in Turkey and Turkey's Potential

The spread of cryptocurrencies in Turkey started with the sudden price increase in the unit price of Bitcoin in 2017 (ICTA, 2020: 21). According to the "Crypto Asset Report" prepared by the Central Bank in 2021, there are 40 cryptocurrency platforms and a transaction volume of 28 billion TL in Turkey (NTV, 2022a). These numbers are only estimations based on the transaction volumes of Turkey based trading platforms (Paribu 11.1; BTCTürk 7.6; Paritex 4.2 billion TL) which share data while transaction data on global platforms cannot be accessed. The report also emphasizes that cryptocurrencies have no intrinsic value, and their values are very volatile. Additionally, it states that it is not possible to use these coins as an account value unit or a medium of exchange. The report focuses on the disadvantages of crypto assets. Risks of cryptocurrencies were listed in the report as: (i) inadequate supervision; (ii) price risk due to extreme volatility in the market; (iii) usage in illegal activities due to their anonymity; (iv) difficulty in avoiding tax evasion; (v) wallet theft; (vi) vulnerability to cyber-attacks; (vii) irreversible transactions; (viii) no legal protection; (ix) sustainability problems as it is still not a globally accepted payment instrument; (x) global warming due to high electricity consumption (Bloomberght, 2021a).

In order to evaluate Turkey's position in the cryptocurrency market, it is necessary to look at its place in the international arena. In this context, according to Statista's Research in 2021 shared by the World Economic Forum; Turkey ranks fourth in the world after Nigeria, Vietnam, and the Philippines and first in Europe in the cryptocurrency market with regard to a number of users (WEF, 2021).

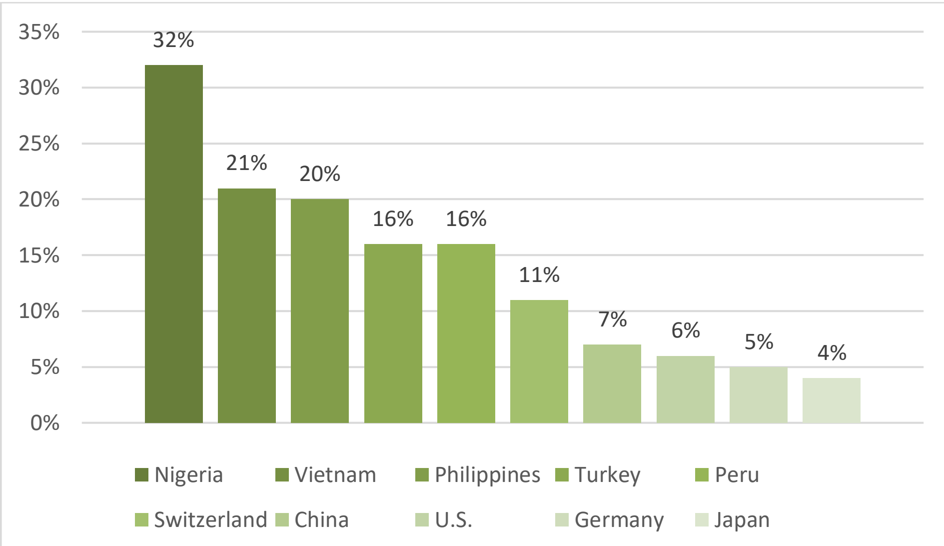

Chart 3. Share of respondents who said that they used or owned cryptocurrency

Source: Statista (2021).

According to the research conducted by Paribu, a cryptocurrency trading platform, in Turkey in 2021, the rate of those who heard of cryptocurrency raised to 69.9% with 54 points increase from 2020 to 2021, while the rate of those who traded doubled compared to the previous year and reached 11%. The report shows that 28.7% of the investors consider the cryptocurrency market as profitable. While the rate of those who have traded in cryptocurrency in Turkey was 0.7% in 2020, this rate increased to 7.7% in 2021 (Paribu, 2021: 1–3). The surge in the number of users and transaction volume of cryptocurrencies, the change in the investor's risk perception towards the crypto market as well as the high return expectations indicate how big their potential is in Turkey and similarly, in the rest of the world.

2.2 Legal Structure in Turkey

The first official statement regarding cryptocurrencies is given by the Banking Regulation and Supervison of Agency of Turkey in 2013. They declared that since cryptocurrencies are not issued by any official or private institution and no guarantee is given for their return, it cannot be considered as electronic money within the scope of the law and therefore its supervision and control is not possible (BRSA, 2013).

Capital Markets Board of Turkey, which prepared a booklet on cryptocurrencies in 2016, focused on the risks that may arise and stated that digital money supply (ICO) activities are outside the scope of control (CMB, 2018).

With the regulation published in April 2021, the Central Bank has decided that crypto assets cannot be used directly or indirectly in payments and that payment and electronic money institutions cannot intermediate fund transfers to crypto asset platforms. After this arrangement, the transfer of funds via traditional banks continued.

The report by the Turkish Grand National Assembly on cryptocurrencies explained the attitudes of other countries towards cryptocurrencies and stated that the market size increased to $3 trillion (2022) from $14 billion (2016), and that crypto assets are used as medium of exchange in many areas from tourism to education and art dealing. With the technological developments, cryptocurrencies are evolving and create a new financial ecosystem. To be a part of this financial system and have a competitive advantage in the international arena, countries take various initiatives. On the one hand, many countries are still cautious about the risks in the market, on the other hand, efforts are made not to stay out of this new financial order. At this point, it is possible to talk about digital currencies that Central Banks are working on. The Digital Euro of the European Central Bank, the Digital Yuan of the Central Bank of China and finally the Digital Dollar of the US Federal Reserve are in the agenda of these economies to take advantage of the opportunities in this financial system.

Turkey has also made an attempt to catch up with new advancements in the crypto market. In this framework, research on the Digital Turkish Lira circulation is carried out in cooperation with the Central Bank, Aselsan, Havelsan and Tübitak, and it is planned to be put into practice in 2022 (Bloomberght, 2021b)

There are also developments in the regulation of cryptocurrencies. With the regulation expected to be issued in 2022, it was emphasized that the capital of the platforms that organize the buying and selling of crypto assets should not be below a certain limit that these companies should be transparently audited by becoming financial institutions, and that the investor should be protected and taxed (Dünya, 2022; NTV, 2022b).

2.3 Taxation of cryptocurrencies in the Turkish legal system

It is an important principle in the Turkish legal system that the state uses its taxation authority in a way that respects fundamental rights and freedoms within the framework of the law. This principle should also be used during the taxation of cryptocurrencies. The property right, which is protected in Article 35 of the Constitution, can only be limited by reference to the public interest, and the public interest is referred in case of taxation of cryptocurrencies. Taxing cryptocurrencies will raise tax revenue and will bring control to the market by limiting the anonymity of crypto currencies. This will lead to public benefits such as the protection of small investors, the creation of an efficient and safe market, and the prevention of financing illegal transactions. At this point, it should be noted that the property rights of individuals should not be unreasonably and unauthorizedly restricted during the taxation of cryptocurrencies. It is believed that taxation, interference with people's right to use cryptocurrencies should be regulated by law, by authorized persons and in moderation.

Another principle concerns the taxation of illegal activities. According to the Article 9 of the Tax Procedure Law, although the taxable event is prohibited by law, tax burden is imposed. It is common knowledge that cryptocurrencies are also used for some illegal activities by taking advantage of their anonymity. Income earned from these transactions must also be taxed like other legal transactions. Another principle that must be followed during the taxation of cryptocurrencies is that the legal regulations should be clear in order to prevent arbitrariness in taxation, and that the taxable event should be clearly stated in the law. Additionally, the taxpayers should clearly know their rights and obligations. Due to different functions of cryptocurrencies, there is currently no clear expression of the taxable event or standardized regulations of the countries. In this framework, it is sufficient for crypto assets to have an economic function. The acceptance of cryptocurrencies, which perform an economic function, as a store of value or as a medium of exchange does not change the taxation requirement. Currently there is no unified approach to cryptocurrency taxation in the world. However, for the effectiveness of tax laws to regulate and control these currencies, the laws should be consistent in the international arena (IMF, 2016: 30).

Although tax regulations reduce the transaction volumes and future growth potential of cryptocurrencies, taxation is essential considering the negative effects of tax exemption of these economic units. Instead of rates that will reduce the attractiveness of cryptocurrencies, regulations should be introduced in such a way that a small rate of taxation is included so that countries can control these economic transactions and are not devoid of tax revenues. At this point, it should be ensured that both tax revenue is collected, and the competitive disadvantage on the other economic units is eliminated due to non-taxation with a low tax rate such as the Tobin tax. It provides protection from speculative capital flows. In order to prepare tax regulations, first of all, it is necessary to understand the transactions in the new financial order created by cryptocurrency. Today, although it is mainly used for investment, speculation, and arbitrage rather than use in the real economy (Aramonte et al., 2021: 32), cryptocurrency transactions change every day, and different types of revenues arise as a result. Income is generated as a result of transactions, such as cryptocurrency mining, earning commission income by intermediating their purchase and sale, making profit by changes in price, making payments by buying commercial goods/services, making profit from price difference that will occur by taking advantage of the initial public offering of cryptocurrencies (Serçemeli, 2018: 50). The tax regulations to be applied during the taxation of these incomes vary according to the nature of cryptocurrencies. If these coins are accepted as currency, commodities, intangible rights or securities (Sarıkaya, 2020: 61), the regulations will differ accordingly. For fair and effective tax regulations, it is necessary to determine the taxpayer, the type of income, the place where the taxable event occurs, the tax base, and the tax regime to be applied (Kaya and Akçay, 2017: 61). However, this process is not as easy as it seems. International institutions have different views on this issue. For this reason, within the scope of the study, the views of international institutions on the subject will be mentioned, and the regulations that should be made within the framework of the Turkish Tax Law will be evaluated.

2.4 Identity of cryptocurrencies

Due to its ever-changing features, it is getting harder and harder to fit cryptocurrencies into the traditional financial system. However, in the context of tax law, the clear determination of this nature is a necessity in accordance with "the principle of legality of taxes".

The 2018 report of the European Parliament emphasized that digital currencies such as Bitcoin exhibit the characteristics of securities and are somewhere between money/currency alternatives, credit/finance alternatives and payment/exchange alternatives. In the report that touched upon the difficulty of adapting this complex definition to traditional regulations, the parliament comments that digital money differs from “currency”, on the grounds that it is issued by a private institution instead of a central institution. It is not defined as legal tender, and is created, transferred, and stored digitally. It has been argued that some digital currencies (such as Bitcoin) act similarly to commodities because of the limited supply and resemblance to commodity-based monetary systems, like the gold standard. It was stated that the physical reality of the commodity was replaced by virtual reality in digital money (European Parliament, 2018: 10). The barriers to accepting digital money, which is defined as a kind of decentralized private money by the European Central Bank, as currency are listed. Accordingly, it was emphasized that it is used as a payment instrument to a limited extent. It is accepted by a limited number of merchants, and the number of transactions is insufficient. It was also stressed that it is not generally used for government payments or as a store of value due to the incredible volatility in prices (ECB, 2019: 3–9).

Cryptocurrencies are considered to be commodities by the U.S. Commodity Futures Trading Commission (CFTC). In the report published by the CFTC, risks such as the uncontrolled virtual currency market, the absence of platforms that protect the consumer from adverse situations like market manipulation, the extreme price volatility, the disadvantaged consumers due to platforms trading from their own accounts were emphasized (CFTC, 2019: 2). The U.S. Securities and Exchanges Commission (SEC), on the other hand, considers cryptocurrencies as securities. The SEC claims that for a digital asset to be identified as a security, it must meet three criteria, called the Howey Test. According to the Howey Test, financial assets that meet the criteria of: (i) investing money (ii) in a joint venture (iii) with a reasonable expectation of profit from the efforts of others are securities. The SEC bases its view on the existence of a startup that raises income through the sale of cryptocurrency coins and tokens, and an investor expecting to profit from that venture. There are lawsuits filed by the SEC against many cryptocurrency initiatives on the grounds that they are not registered as securities. While the lawsuit against the digital token called Kin has been won, the lawsuits against BlockFi and Ripple continue (Reuters, 2022). Today, the SEC has changed its view, and in its latest statements, it stated that there are both crypto commodity tokens and crypto security tokens. For this reason, there is a prevailing opinion that working with the CFTC and meeting on common ground will be beneficial to protect investors and entrepreneurs (SEC, 2022). It is thought that in the future, a consensus should be reached on this issue and regulations should be made accordingly.

Contrary to these views, the IFRS defines cryptocurrency as an intangible asset. In its report published in 2019, the IFRS stated that cryptocurrency should be considered within the scope of IAS 38 because: (i) it can be separated from its owner, sold, or transferred separately, (ii) does not give the holder the right to receive a fixed or determinable number of currencies. However, the IFRS has set an exception based on IAS 2 and emphasized that if cryptocurrencies are held for sale in the normal course of business, they should be considered inventory (IFRS, 2019: 3).

Institutions in Turkey also have different views on the nature of cryptocurrencies. The Ministry of Finance does not have a clear explanation of how cryptocurrency should be defined. However, the decision of the Revenue Administration that cryptocurrency can be inherited, and it should be taxed, and the decision of the enforcement offices that Bitcoin can be seized is interpreted as that the Ministry of Finance is actually recognizing cryptocurrency (HaberTürk, 2021).

The Capital Market Board of Turkey (CMB) specifically states that Bitcoin is not a security, as it does not comply with the rule that a security must be backed by an asset. On the other hand, the Central Bank of the Republic of Turkey is of the opinion that it cannot be accepted as currency since it is not issued by a central authority (Bloomberght, 2017). However, these definitions explain crypto assets through what they are not, rather than what they are, and emphasize the features they do not show instead of a precise qualification. In the Regulation published by the Central Bank in April 2021, crypto assets are defined as "intangible assets created virtually using either distributed ledger technology or a similar technology and distributed across digital networks which shall not in any manner be qualified as fiat money, cash, digital cash, instrument, security, or other capital market instruments" (CBRT, 2021). According to this definition, for the first time in Turkey, crypto assets are defined based on the features they have instead of a definition that emphasizes the features they do not own.

It is expected that the regulations, which will include tax regulations, will be issued in 2022. It is believed that these regulations will be based on the opinion that emerged as a result of the joint work of the Banking Regulation and Supervision Agency (BRSA), the Capital Market Board (CMB), the Central Bank of the Republic of Turkey (CBRT) and the Ministry of Finance. Within the scope of this study, it has been evaluated how this regulation will differ according to the definition of cryptocurrency mentioned in the Regulation.

2.4.1 Valuation and taxation of cryptocurrency as a currency

Money/currency should have functions such as accumulating value, being a unit of account, and being a medium of exchange. Cryptocurrency, as a virtual currency, fulfills these functions. However, in order to find a place for itself as a "currency" in the Turkish Tax Law, it is expected to meet certain conditions determined by law. According to Decree No. 32 on the Protection the Value of Turkish Currency: "Turkish currency means the money in circulation in Turkey according to the law of the Republic of Turkey or which has not expired even if it has been withdrawn from circulation". In the same Decree: "Any kind of accounts, documents, and instruments that provide payment in foreign currency, including the effective" are defined as foreign currency[1].

Since cryptocurrencies are not issued pursuant to the laws of the Republic of Turkey and there is no currency of another foreign country, they are not considered as money or foreign currency according to Turkish legislation (Sarıkaya, 2020: 62). Although it is unlikely, the taxation procedure should be determined if it is defined as "currency" in the new regulation. Accordingly, when it is accepted as

[1] Decision No. 89/14391 on Protecting the Value of Turkish Currency

a "currency", it will not be subject to any taxation in terms of income tax since it falls within the jurisdiction of the Central Bank (Günay and Kargı, 2018: 71). In the current situation, there is "no tax" on individuals buying and selling foreign currency. Cryptocurrencies will be treated in the same way. However, this is the case for those who trade without a commercial organization. It will be taxed as "commercial income" for those who regularly buy and sell within the scope of a commercial organization. From the point of view of corporate tax, the exchange rate differences that occur during the purchase and sale should be taken into account in the determination of "corporate income and taxes". As it is accepted as currency, the trading of cryptocurrencies does not constitute any value-added tax (VAT) base.

When the transactions made by the miners are analyzed from the point of view of the Turkish Tax Legislation, the income generated as a result of these transactions is classified as "commercial income". Since cryptocurrency mining is an activity that requires hardware with strong processing power and is capital and labor-intensive (Türkyılmaz, 2018: 8), it should be taxed as "commercial income" within the scope of Article 37 of the Income Tax Law (ITL). In terms of Corporation Income Tax, if the miners work as a corporate entity, then the revenue is expected to be taxed within the scope of "corporate income from commercial income".

Commercial income arising from the transactions of cryptocurrencies on online exchange platforms falls within the scope of "commercial income". However, if these platforms are established within the corporation, commission income is taxed as "corporate income" according to Article 1 of Corporate Tax (CT).

2.4.2 Valuation and taxation of cryptocurrency as a commodity

The concept of commodities, which means economic assets available for sale (Kaplan, 2007: 30), is also considered to define crypto assets. When crypto assets are regarded as commodities, it is important whether the activity is a continuous and commercial activity as in other definitions during taxation. During buying and selling of cryptocurrencies, earnings from non-commercial transactions of real persons should be counted among the "accidental income" mentioned in Article 82 of the ITL. A certain part of the accidental income is exempted from income tax each year. This figure has been determined as TL 58,000 for 2022. For this reason, the tax will not be charged on the earnings up to TL 58,000 (for the year 2022) of people who are engaged in the trading of crypto assets and whose activities are not continuous (Income Tax General Notification, 2021). In addition, since there is no continuity in these transactions, VAT is not collected. However, if the activity is within the scope of commercial activity and there is a continuity, it will be taxed as "commercial income", based on the statement in the Article 39 of the Income Tax Law that "the income arising from the purchase and sale of commodities will be commercial income". At this point, VAT is charged for continuity reasons. Considering the situation in terms of corporations, it is seen that earnings during trading will be subject to corporate tax within the scope of "corporate income arising from commercial income". When cryptocurrencies, which are considered as commodities, are used in mining, it is considered as “commercial income” in terms of miners' income and disposal of cryptocurrency. At this point, it is thought that there will be confusion concerning VAT. Taking into account that miners both receive commodities in return for service and deliver goods, these two transactions will be subject to VAT separately. In addition, the place where the intangible cryptocurrency is delivered and the person who makes the transactions is not clearly known due to the fact that many transfers are made at once with blockchain technology (Türkyılmaz, 2018: 8; Girgin, 2020: 74). Therefore, there is a need for detailed regulations regarding VAT to be collected from transactions. When these transactions are done institutionally, there is a relatively less complex situation. Accordingly, corporations will be taxed within the scope of VAT.

The characterization of cryptocurrencies as commodities will not change the scope of online exchange activities on cryptocurrency exchanges. In this framework, earnings from transactions will be handled within the scope of ITL as “commercial income” for real persons, and within the scope of CT as “corporate income” for corporations.

2.4.3 Valuation and taxation of cryptocurrency as security

Although the CMB has a negative opinion regarding the consideration of cryptocurrency as security, it is still an option for the government. According to the Capital Markets Law No. 2499, securities are defined as “Negotiable instruments which, represent a share or participation in the property of the issuer or an obligation of the issuer, represent a specified quantity of money, are of a series of instruments of the same nature, have the same wording, are dealt in as a medium for investment, are fungible, earn periodic income and have the terms and conditions determined by the CMB”.

Gains of real persons as a result of non-commercial, non-continuous cryptocurrency trading activities will be taxed as “value appreciation income” within the scope of Article 80 of the ITL. Since the exceptions in the law are not applied to securities, it is of the opinion that they should not be applied to cryptocurrencies as well (Ünalan, 2019: 123). Earnings from cryptocurrencies within the scope of a commercial organization will be considered within the scope of "commercial income". From the point of view of VAT, it should be taken into account that the subject of VAT is the delivery and services made within the framework of commercial, industrial, agricultural, and professional activities. Accordingly, VAT is not subject to taxation and is not taxed during the trading of cryptocurrencies, which are securities. When evaluated in terms of corporations, it is thought that taxation will be required within the scope of "corporate income from commercial income".

In terms of mining operations, cryptocurrencies that are qualified as securities are expected to be regarded as “commercial income” and taxed. Likewise, it is thought that online exchange platforms that generate income through intermediary transactions will incur income tax within the scope of “commercial income” or corporate tax within the scope of “corporate income arising from commercial income”. This varies depending on whether the tax officer who mediates the taxable event and earns commission income is an individual or corporate entity.

2.4.4 Valuation and taxation of cryptocurrency as intangible rights

In the General Communiqué No 1 on Disguised Profit Distribution by Way of Transfer Pricing, commercial intangible rights are defined as "patents, know-how, designs and models used in the production of a good or the provision of a service and transferred to customers or used in the operation of commercial activity (computer software programs) intangible rights that have the character of commercial assets". There is an opinion that cryptocurrencies can be considered as an intangible right because they are computer software and are subject to purchase and sale (Çelen, 2018: 160).

When cryptocurrencies are considered as intangibles, trading profits will be taxed as “commercial income” in cases where trading activity continues. It is also considered that VAT will be collected within the scope of VAT Article 10. In case the transactions are made individually, not commercially, the scope of tax will vary depending on whether the purchase and sale is one-time or leased. Accordingly, the earnings of real persons from one-time purchase and sale differences will be taxed within the scope of "accidental income" mentioned in Article 80 of the Income Tax Law. In case of renting, it is expected to be considered within the scope of "real property income" in Article 70 of the Income Tax Law (Sarıkaya, 2020: 74; Ünalan, 2019: 125). When viewed on a corporate basis, it should be considered within the framework of "corporate income from commercial income" and the corporate tax should be calculated accordingly.

If miners operate corporately, taxation will be made on “corporate income”. Conversely, if they operate individually, they are considered to be able to benefit from the copyright exemption within the scope of “self-employment income”, as they are seen as the creator of intangible rights. In these cases where self-employment income occurs, it is foreseen that they can benefit from the copyright exemption if it does not exceed TL 880,000 for the year 2022. However, there may also be some situations that may cause confusion in this case. There is uncertainty about the transfer of the earnings of the miners and the cryptocurrencies they produce. In this case, they are considered to be subject to withholding. In cryptocurrency exchanges, there is “corporate tax” in case of corporate structuring and “income tax” in case of individual intermediation.

CONCLUSIONS

The rising trend of trading volumes and market values of cryptocurrencies helps to create a new and different financial ecosystem. Aware of this great potential, governments are preparing new regulations in order not to be left out of the financial system. These regulations are made to protect both the system and the investor. In the same context, tax regulations are planned to protect the investor, regulate the system and generate tax revenue. In the upcoming period, to reduce the risks of this uncontrolled system, Turkey is also considering introducing certain regulations, taking into account the developments in the world.

At this point, the last regulation of the CBRT in April 2021 draws specific attention. In this regulation, cryptocurrencies were defined as “intangible assets” for the first time. While this definition is far from clear, it seems that cryptocurrencies are not considered securities or money and are considered commodities or intangibles. This definition, in the authors opinion evokes the concept of “commodity”. Accordingly, it is thought that cryptocurrencies will be fully defined in the coming period and their taxation will be determined precisely and clearly by law systems. However, it should be noted that cryptocurrencies are constantly developing and fulfilling different functions. Therefore, taxation should be implemented according to the priority of the essence, and the nature of the cryptocurrencies should be defined according to its function. If cryptocurrencies qualify as commodities, confusion over miners' earnings should also be removed with additional regulations.

Within the framework of today's tax laws, a way how the tax regulations are to be applied according to the nature of cryptocurrencies will differ and can be summarized as follows.

	Trading	Mining	Online Exchange Platform
Currency			
	Income Tax: None	Income Tax: Commercial Income	Income Tax: Commercial Income
	Value-Added Tax: None	Value-Added Tax: Available	Value-Added Tax: Available
	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income
	Value-Added Tax: None	Value-Added Tax: Available	Value-Added Tax: Available
Commodity			
Tax Exemption 58.000 TL (2022)	Income Tax: Accidental Commercial Income	Income Tax: Commercial Income	Income Tax: Commercial Income
	Value-Added Tax: None	Value-Added Tax: Available	Value-Added Tax: Available
	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income
	Value-Added Tax: Available	Value-Added Tax: Available	Value-Added Tax: Available
Security			
	Income Tax: Value Appreciation Income	Income Tax: Commercial Income	Income Tax: Commercial Income
	Value-Added Tax: None	Value-Added Tax: Available	Value-Added Tax: Available
	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income
	Value-Added Tax: None	Value-Added Tax: Available	Value-Added Tax: Available
Intangible Rights			
Renting	Income Tax: Accidental Commercial Income Real Property Income	Income Tax: Self Employment Income	Income Tax: Commercial Income
Copyright Exemption	Value-Added Tax: None	Value-Added Tax: Available	Value-Added Tax: Available
	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income	Corporate Tax: Corporate Income
	Value-Added Tax: None	Value-Added Tax: Available	Value-Added Tax: Available

Chart 4. Taxation of cryptocurrencies in Turkish legal system

Source: prepared by the authors.

The regulations expected to be introduced regarding cryptocurrencies should not only be about buying and selling. Taxation of these transactions will be insufficient. In today's world, it is thought that different applications such as Non-Fungible Tokens (NFT) and metaverse should also be regulated. In addition, the issue should be evaluated in terms of the Central Bank Digital Currency (such as the Digital Euro, Digital Yuan, and Digital Dollar), which will be on the agenda in the future. Accordingly, it should be determined how the Digital Turkish Lira, which is planned to be implemented in 2022, will be taxed. It is believed that this practice will prevent tax evasion and fraud.

In the taxation process of cryptocurrencies, different policy recommendations are made. One of them is to expand the usage areas of cryptocurrencies such as Bitcoin, which provide large-volume use in daily life, instead of cryptocurrencies that are likely to be used in illegal activities and to impose small taxes on transactions with these currencies (Şahin, 2019: 177). It is observed that the place of cryptocurrencies in the financial system is solid, and the transactions made are developing day by day. Since it is thought that their place in the financial ecosystem cannot be changed by prohibitions and deterrent tax rates, this place needs to be expanded to allow central institutions to regulate. At this stage, when tax rates are determined in a way that encourages the use of a certain cryptocurrency rather than as a deterrent, this newly formed financial system will be regulated by central institutions and a taxable income will be generated.

In addition, when taxing cryptocurrencies, taxation similar to the Tobin tax should be considered to help protect against speculative capital flows. Tobin (1978) described his proposed tax on financial transactions as "throwing sand into the wheels of excessively productive international money markets" (Tobin, 1978: 154). This may be a valid assumption for cryptocurrencies as well. It is thought that regulating this highly speculative and risky system with an incremental taxation will prevent financial volatility and ensure the continuity of the system. In this context, it is recommended to determine low tax rates such as one per thousand or one per ten thousand with the tax to be applied. Thus, it is attempted to ensure that taxation does not evacuate investors and capital from the country. Contrary to tax lessness, which is the most important point that attracts investors in the Decentralized Finance (DeFi) ecosystem, it is an undesirable result that the investor will suddenly take the capital flight point with the large tax rates to be applied. Instead, it should be emphasized that the regulation of this system will be ensured with small taxes collected, and the awareness of protecting the investor/consumer will be acted upon. In this study, the authors of article propose the Tobin tax for Turkey and future studies may analyze whether low tax rates for the revenues earned in the crypto market are effective and applicable for the developed economies or other emerging markets in the world.

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