

Taxation and Accounting of Cryptocurrencies from The Point of View of the Czech And Slovak Republic

Jiří SLEZÁK* and Ivana ČERMÁKOVÁ

Technical University of Ostrava, Ostrava, Czech Republic, jiri.slezak@vsb.cz; ivana.cermakova@vsb.cz

* Corresponding author: jiri.slezak@vsb.cz

Abstract: The submitted article deals with currently a very topical issue, which is cryptocurrencies. The goal of the article is to analyse cryptocurrencies from an accounting and tax point of view in the Czech and the Slovak Republic. Due to the complexity of all aspects, the paper is focused exclusively on personal income tax. The content of the article is also the characteristic of cryptocurrencies, comparison of differences between selected countries. Practical application of cryptocurrency taxation based on two model situations makes also a part of the article. The biggest difference between these two countries is that Slovakia has this issue processed legislatively. On the other hand, the Czech Republic does not. Another difference is the accounting capture of cryptocurrencies. In the Czech Republic, cryptocurrencies are accounted for inventories, while in Slovakia they are accounted for short-term financial assets. The last major difference is the point of view of transaction fees. In the Czech Republic, these are considered as tax-deductible costs compared to Slovakia. In both countries, operations with cryptocurrencies are taxed similarly according to the personal income tax, and at the same time the method of taxation depends on whether the income from this activity is received as part of a business or not.

Keywords: accounting; cryptocurrency; cryptocurrency taxation; taxes

JEL Classification: M21; M41; K34

1. Introduction

Cryptocurrencies are a very popular topic these days, both among investors, researchers and economic policy makers. The idea of some form of cryptocurrency dates back to 1989. However, the main milestone was 2008, when the digital currency Bitcoin was introduced (Černá & Hinke, 2022). Currently, cryptocurrencies are developing very quickly, they represent a very fast demand for all industries (Martincevic, Sesar, Buntak, & Miloloza, 2022) and raise a lot of legal questions that are in their early days (Goodell & Aste, 2019).

Cryptocurrency is a peer-to-peer online form of electronic cash that can be used to send payments between entities. These online payments do not go through the control system of financial institutions. Their value does not depend on any asset, country or company, but is based on a secure algorithm (Corbet, Lucey, Urquhart, & Yarovaya, 2019).

Cryptocurrencies can be defined as a decentralized payment system in which their ownership is expressed cryptographically. The Market, respectively, of the cryptocurrency system can be described as a system that serves to issue tokens that are used as a means of exchange (Lánský, 2020; Černá & Hinke, 2022). Cryptocurrencies can be acquired primarily

through specialized cryptocurrency exchange services or by mining them (Chervinski & Kreutz, 2019).

There is no trusted third party within cryptocurrency, but historical records of past cryptocurrency transfers back to their inception are required. This historical record is based on blockchain, which works on linking blocks in such a way that each block contains data about the previous block. Individual blocks then form a chain of digital records. Every participant in the cryptocurrency system has the same historical transactions at their disposal. Forging ownership is almost impossible, as this would require changing the previous blocks as well (Giudici, Milne, & Vinogradov, 2019). Adding more blocks of data is referred to as mining (Rueckert, 2019). The main difference between blockchain and a traditional ledger is decentralization. Traditional ledgers record transactions that are managed by centralized financial institutions, while blockchain is managed decentralized (Li & Whinston, 2019). Cryptocurrency ownership can basically only be proven cryptographically (Li & Whinston, 2019; Gregoriou, 2019).

Key features of cryptocurrencies include:

- Decentralization – the absence of a central authority that carries out administration,
- private transactions – subjects can remain anonymous (the existence of nicknames),
- no warranty – no legal protection or liability,
- blockchain – connectedness of previous data,
- unregulated – no central authority controls cryptocurrencies (Juškaitė & Gudelytė-Žilinskienė, 2022).

Cryptocurrencies are considered an alternative type of asset, although there are a variety of opinions on their classification. Investing in cryptocurrencies, however, poses a high risk, especially with regard to their price development and security (Ballis & Drakos, 2021). There are several thousand types of digital currencies in the cryptocurrency market. These currencies differ in security, privacy or financial influence (Li & Whinston, 2019). If there is growth in the market or market capitalization, the number of cryptocurrencies may increase in the following periods (Ballis & Drakos, 2021).

Important factors for a successful cryptocurrency include:

- Resistance to cyber attacks,
- ease of use – clarity, simplicity and ease for users,
- providing anonymity,
- impossibility of use for activities involving criminal activity,
- property of money (Bieliková, Hakalová, Pšenková, & Hlaváček, 2020).

According to Rejeb, Rejeb, and Keogh (2021), ownership of cryptocurrencies brings high efficiency, high security and privacy, the possibility of diversification and low transaction costs. More about cryptocurrencies, for example, in (Enoksen, Landsnes, Lucivjanska, & Molnar, 2020) or (Grobys & Sapkota, 2019).

There are several thousand varieties in the cryptocurrency market that differ from each other (Klose, 2022). Figure 1 uses the most valuable cryptocurrencies according to their market capitalization.

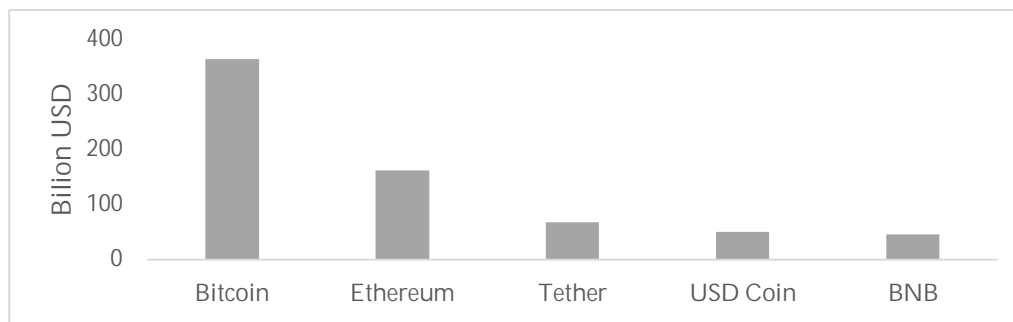


Figure 1. Selected types of cryptocurrencies according to their market capitalization. Own processing based on Coinmarketcap (2022).

There are different views on cryptocurrencies in different states. In Europe, Germany is the first to define cryptocurrencies in law. Germany defined cryptocurrency like type of financial instrument in private sector. So, the tax is counted from the cryptocurrency. The Great Britain discuss about cryptocurrency and their use in taxes. In USA, cryptocurrency is mostly used in private sector, for salary payments and in services (e.g. payments in restaurants). ATMs allows activities between cryptocurrency and dollars. Cryptocurrencies are mostly used in Japan. Japan registered cryptocurrency like regular currency in 2017. The People's Republic of China has restrictions of the cryptocurrency since 2018. Because of electricity costs from mining cryptocurrency, financial risks and money laundering (Inshyn, Mohlilveskyj, & Drozd, 2018). These are some selected countries that are considered to be the world's largest economies.

2. Methodology

In the paper, the methods of analysis and comparison were mainly applied. For clarity and understanding of the issue of taxation of cryptocurrencies, several model situations are established.

Table 1 shows model situations No. 1 - 4 for the application of the effects of the weighted arithmetic average method and the First in First Out method on the tax base. These methods are used to determine tax expenses. Table 1 shows the situation when a natural person made a total of 4 transactions related to cryptocurrencies in 2022. These transactions are only associated with the purchase and sale of cryptocurrency. The number of units in the given months represents the specific number of cryptocurrencies bought and sold. For currency conversion, the exchange rate according to the Financial Administration (2023) is set at 24,54 CZK/EUR as of the date of writing the article. This course type was used to simplify the model assumptions.

Table 1. Model situations No. 1–4

| Month | Number of units | Purchase in EUR | Purchase in CZK | Sale in EUR | Sale in CZK |
|----------|-----------------|-----------------|-----------------|-------------|-------------|
| January | 3 | 2,400 | 58,896 | | |
| May | 2 | 800 | 19,632 | | |
| July | 5 | 3,400 | 83,436 | | |
| December | 6 | | | 4,800 | 117,792 |

3. Results

This sub-chapter will be devoted to the accounting and tax capture of cryptocurrencies in the Czech and Slovak Republics. In principle, the taxation of cryptocurrencies only applies to personal income tax, corporate income tax and value added tax. Due to the complexity of all aspects, the post is focused exclusively on personal income tax.

3.1. Accounting and Tax Recording of Cryptocurrencies in the Czech Republic

In the Czech Republic, there is no legislative regulation directly in the field of cryptocurrencies. The issue of taxation and accounting of cryptocurrencies is primarily regulated by Act No. 561/1993 Coll., on Accounting and implementing Decree No. 500/2002 Coll. Furthermore, on 15 May 2018, the Ministry of Finance of the Czech Republic published an opinion on the accounting and presentation of digital currency.

From the tax point of view, cryptocurrencies are considered intangible, movable and fungible, and at the same time they are not cash or non-cash money or any form of investment instruments. The subject of income tax is the income received when selling cryptocurrency for legal (fiat) currency, as well as income obtained by exchanging cryptocurrency for goods or income obtained by exchanging cryptocurrency for cryptocurrency. In the first situation, taxable income arises at the moment the money is received. In the case of the second option, taxable income occurs the moment the transaction is recorded on the blockchain. Cryptocurrencies acquired through exchange are valued at the price that would be received when selling a similar asset or service provided.

In the case of ownership of cryptocurrency that is obtained through mining, from the point of view of taxes, the procedure is similar to that of self-production, i.e. that there is no taxable income during the creation of cryptocurrency until the moment of its sale. Assets acquired in this way are valued at their own costs according to the Accounting Act and decree, i.e. at direct costs and directly attributable indirect costs. In the case of the purchase and sale of goods for cryptocurrency, this is an exchange, or the purchase and sale of an item. Income from a given shift is treated as income in the year in which the income is earned. A tax-deductible expense is the value of cryptocurrency recorded in accounting.

The taxation procedure basically depends on whether it is a one-time or regular income or whether the cryptocurrency is classified as a business or not. In addition, cryptocurrencies can be used to pay the employee's net salary (in this case, the procedure is according to § 6), they can also be used to pay interest on a loan that is negotiated in cryptocurrencies (§ 8) or they can be used to pay rent (§ 9). However, from the point of view of personal income tax, cryptocurrency transactions are primarily taxed as income from self-employment (§ 7) or as other income according (§ 10).

In the case where the taxpayer conducts transactions with cryptocurrencies regularly, in his own name and for the purpose of making a profit, the income from this activity will fall under § 7. In the case where the taxpayer owns a trade license, he proceeds according to § 7/1/b), if he does not own the license, thus proceeding according to § 7/1/c). Against income, the taxpayer can claim either actual expenses or expenses as a % of income. Actual expenses include the input value of cryptocurrencies, or other expenses (transaction fees, etc.). If he

decides not to apply actual expenses, he can apply expenses as a % of income in the amount of 60% or 40% when determining the tax base.

In the case of rental income for property that is included in commercial property, the procedure is according to § 7/2/b), otherwise according to § 9/1/a). In all other cases, the procedure is according to § 10/1/b/c), according to which the possible loss is not taken into account. The exemption from taxation according to § 10/3/a) does not apply to cryptocurrencies, under which income up to CZK 30,000 is exempt. Nor can the exemption according to § 4/1/w), x) be applied to cryptocurrencies. These paragraphs (under the Act No. 586/1992 Sb., on Income Tax) state that the sale of securities is exempt if this income does not exceed the amount of CZK 100,000 per year or the period between acquisition and sale is more than 3 years.

From an accounting point of view, it is recommended that cryptocurrencies be recorded as a special type of inventories in accounting.

The acquisition of cryptocurrencies by purchase is valued at the acquisition price, which consists of the acquisition price and ancillary costs (for example, transaction costs to the cryptocurrency trader). The acquisition of cryptocurrencies by mining is valued at the own costs that were incurred for their creation (for example, energy consumption, employee wages, etc.). Appreciation or depreciation of cryptocurrencies in a situation where multiple purchases were made during the year, two depreciation valuation methods can be used as an expense, namely the weighted arithmetic average or the FIFO method. At the end of the balance sheet day, if the accounting entity discovers that the market value of cryptocurrencies is lower than the value in the accounting, an adjustment item is created. The creation of a correction item represents a non-taxable expense for the company. Cryptocurrencies are not valued at fair value at the balance sheet date (Financial Administration, 2022).

3.2. Accounting and Tax Recording of Cryptocurrencies in the Slovak Republic

From the point of view of legislation, Slovakia has a more sophisticated cryptocurrency issue. In 2018, Act No. 213/2018 Z. Z., on insurance tax and the amendment and addition of certain laws, implemented the rules for the accounting and taxation of cryptocurrencies, in which transactions with cryptocurrencies that are subject to tax are directly listed. Furthermore, in 2018, the Ministry of Finance of the Slovak Republic, as well as the Czech Republic, issued a methodological instruction on the procedure for the taxation of virtual currencies, which also includes the definition of cryptocurrencies. Cryptocurrencies, just like in the Czech Republic, do not have the legal status of currency or funds, but it is possible to use them as a means of payment.

According to the Income Tax Act, income from the sale of cryptocurrencies is taxable income that is subject to tax. Any exchange of cryptocurrency, whether for property, services or other cryptocurrency, is considered a sale. Income from cryptocurrencies is reported in the period in which the income from the cryptocurrency occurs. Income from cryptocurrency mining is reported in the period in which the sale of the given cryptocurrency takes place.

As in the Czech Republic, the problematic part is the taxation of income from cryptocurrencies from the point of view of continuous or occasional activity.

From the point of view of the Income Tax Act, the mining of cryptocurrencies itself is similar to that in the Czech Republic, namely the mining of cryptocurrencies does not constitute taxable income. Taxation will only occur in the case of the sale of cryptocurrency. Unlike the Czech Republic, however, in the case of cryptocurrency mining, it is possible to proceed within the framework of business, but also within the framework of non-business activities.

A taxpayer who does not have cryptocurrencies included in business assets or does not use them for business activities, income from the sale of cryptocurrency falls under other income according to § 8. To determine the tax, it is possible to reduce income by expenses that relate to the given area. If expenses are greater than income, the difference is not taken into account. This procedure is the same as in the Czech Republic.

In the case of a bribe exchange of cryptocurrency for legal currency, the received funds are taxable income. In case of conversion of cryptocurrency for property, service or other cryptocurrency, this non-monetary income is valued at fair value (for example, market price).

The entry price in the case of a cryptocurrency that is acquired for a fee is the purchase price. In the event that a cryptocurrency is purchased for another cryptocurrency, the input price is its real value. Tax-deductible costs are the entry price of cryptocurrency in the period in which the sale takes place, up to the amount of income from their sale. You can never make a loss from cryptocurrency transactions.

Cryptocurrency transactions are not exempt from tax, just like in the Czech Republic.

For the purposes of the Income Tax Act, cryptocurrencies are valued at fair value if the cryptocurrency is acquired for another, and at cost if the cryptocurrency is acquired for consideration.

From the point of view of the Accounting Act, cryptocurrency is considered a short-term financial asset other than cash, which is a different view compared to the Czech Republic. In the case of a paid acquisition of cryptocurrencies, they are considered immediately as a short-term financial asset other than cash and are valued using fair value. In the case of cryptocurrencies that are obtained through mining, they are recorded in the off-balance sheet. At the moment of use of cryptocurrency, it is valued through real value.

Any increases or decreases are charged to financial income or financial costs. When valuing cryptocurrency depreciation, it is possible to use either the weighted arithmetic average or the FIFO method. There is no obligation to revalue cryptocurrencies to fair value at the end of the balance sheet day (Financial Administration, 2018; Act no. 595/2003).

3.3. Determination of Tax Expenditure

From a practical point of view, there may be a problem with determining the purchase price in a cryptocurrency transaction. When valuing cryptocurrency depreciation, it is possible to use either the weighted arithmetic average or the FIFO method. To quantify the differences between these methods, model situation No. 1 is used.

Both the VAP method and the FIFO method are used to value the distribution of bitcoin, the results of which can be viewed in Table 2 and Table 3.

Table 2. Calculation of expenses using the method VAP and FIFO in CZK

| Method | Calculation expenses | Results in CZK |
|--------|--|----------------|
| VAP | $\frac{(58,896 + 19,632 + 83,436)}{10} \cdot 6$ | 97,178.4 |
| FIFO | $58,896 + 19,632 + x$ $X = \frac{83,436}{5} \cdot 1 = 16,687.2$ | 95,215.2 |

Table 3. Calculation of expenses using the method VAP and FIFO in EUR

| Method | Calculation expenses | Results in EUR |
|--------|--|----------------|
| VAP | $\frac{(2,400 + 800 + 3,400)}{10} \cdot 6$ | 3,960 |
| FIFO | $2,400 + 800 + x$ $X = \frac{3,400}{5} \cdot 1 = 680$ | 3,880 |

According to the results of both methods, the VAP method is optimal for tax purposes in the case of this model situation, but the chosen procedure always depends on the given circumstances. In this case, the basis of tax in the Czech Republic is the difference between income and expenses. The value of income amounts to CZK 117,792, and based on the chosen valuation method, expenses amount to CZK 97,178.4. Similarly, in Slovakia, income is 4,800 EUR and expenses are 3,960 EUR.

4. Discussion and Conclusions

This article dealt with the issue of cryptocurrencies mainly from an accounting and tax point of view in the Czech Republic and the Slovak Republic. The purpose of the article was also the characteristic of cryptocurrencies and comparison of differences between selected countries.

The Slovak Republic, unlike the Czech Republic, has a detailed legislative regulation of the issue of cryptocurrencies, in which cryptocurrencies are considered as virtual currency. The Czech Republic has issued only recommended methodological guidelines for the field of cryptocurrencies, through which cryptocurrencies are considered an intangible movable property. In the Czech Republic, cryptocurrencies are accounted for inventories of its kind, while in Slovakia, cryptocurrencies are accounted for a short-term financial asset. There is also a difference in the area of transaction fees, which are tax deductible in the Czech Republic, while not in Slovakia.

The subject of personal income tax in both countries is the income derived from the sale of cryptocurrencies for legal tender, non-monetary income from their exchange for goods and for other exchange and income from the sale of mined cryptocurrency. Cryptocurrency mining itself is viewed very similarly in both countries. Mining itself is not subject to tax, but only its subsequent sale is. In the framework of cryptocurrency trading, only the profit from the trade is subject to tax. Such profit is either treated as business profit or as other income. At the same time, operations with cryptocurrencies cannot be exempted from income tax under any conditions.

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