



# Contemporary Accounting Case Studies

---

Vol. 1, No. 1, September 2022

Article 16

## ANALYSIS OF INTER-COUNTRY TAX TREATMENT AS A RECOMMENDATION FOR TAX TREATMENT OF CRYPTOCURRENCIES IN INDONESIA

**Muhamad Faried Kasaugie**

Master of Accounting Program, Faculty of Economics and Business, Universitas Indonesia  
[muhamad.faried@ui.ac.id](mailto:muhamad.faried@ui.ac.id)

**Dwi Martani**

Master of Accounting Program, Faculty of Economics and Business, Universitas Indonesia  
[dwimartani@yahoo.com](mailto:dwimartani@yahoo.com)

# ANALYSIS OF INTER-COUNTRY TAX TREATMENT AS A RECOMMENDATION FOR TAX TREATMENT OF CRYPTOCURRENCIES IN INDONESIA

*Muhamad Faried Kasaugie*<sup>1</sup>

*Dwi Martani*<sup>2</sup>

Master of Accounting, Faculty of Economics and Business,  
Universitas Indonesia

## ABSTRACT

This study aims to analyze the tax treatment of cryptocurrencies in several countries as a basis for recommendations for formulating tax treatment of cryptocurrencies in Indonesia. The analysis applied a case study approach with a qualitative methodology. The primary data analyzed in this study are in the form of interviews with sources from the Directorate General of Taxes (DGT), tax consultants, and taxpayers, while the secondary data are in the form of documents of tax treatment in Singapore, the United States, and Australia. The results show that profits from cryptocurrency transactions are objects of income tax, which are generally subject to normal income tax or capital gains tax rates depending on the purpose of ownership. In some countries, the supply of cryptocurrency is not subject to VAT (GST). This study recommends the DGT to set out specific rules that explain the definition, recognition, and valuation of cryptocurrencies in Indonesia. Based on the analysis, it is found that final income tax and normal income tax can be imposed on cryptocurrency transactions based on where the transaction is made. Meanwhile, the supply of cryptocurrencies in Indonesia should be exempt from VAT.

**Keywords:** capital gains tax, cryptocurrency, income tax, tax treatment, value-added tax.

---

<sup>1</sup> [muhamad.faried@ui.ac.id](mailto:muhamad.faried@ui.ac.id)

<sup>2</sup> [dwimartani@yahoo.com](mailto:dwimartani@yahoo.com)

## 1. INTRODUCTION

Cryptocurrency is a digital coin (payment token) that is created online and can be used for online shopping (Derousseau, 2019). According to Billah (2019), the development and operation of this digital asset apply cryptography and are supported by a digital platform technology called blockchain. In addition, cryptocurrency is operated in a decentralized manner, meaning that there is no third party such as a central bank which acts as the sole central authority that manages the currency network (Kent & Bain, 2020). The absence of such central authority that regulates and manages cryptocurrency attracts its users.

Cryptocurrency is currently used as a means of electronic exchange and/or a traded intangible asset in various countries. In Indonesia, it is seen as a traded commodity. The Organization for Economic Co-operation and Development or OECD (2020) explained that cryptocurrencies can be exchanged for fiat currency, other crypto assets, and goods or services. As an intangible asset, ownership of cryptocurrencies is traded using conventional currencies for profit.

In Indonesia, cryptocurrency transactions are growing rapidly. According to data from the Indonesian Blockchain Association (Asosiasi Blockchain Indonesia), the estimated number of crypto asset traders in Indonesia reached 1.5 million in 2020. This number has significantly increased since 2015, with a percentage of 2,263% (Indonesian Blockchain Association, 2020). With the magnitude of transactions and public interest in cryptocurrencies, the income from cryptocurrency transactions can make a potential object of revenue for the government.

However, the worldwide popularity of cryptocurrencies poses challenges for policymakers, including in terms of tax provisions. Several countries have responded to this challenge by issuing guidelines on taxation rules for cryptocurrency transactions. The results of a survey by the Organisation for Economic Cooperation and Development (OECD) through the distribution of questionnaires to 50 countries show that approximately 20-30 of these countries have implemented tax treatment rules for cryptocurrencies (OECD, 2020). The responses are divided into several categories based on the type of tax, namely personal income tax (PIT), corporate income tax (CIT), capital gains tax (CGT), value added tax (VAT, also termed as goods and services taxes or GST in some countries), and others.

Currently, Indonesia has not issued any specific regulations regarding tax treatment of cryptocurrency, despite several other countries being responsive to its

development by enforcing tax rules for cryptocurrency transactions. In Indonesia, income from cryptocurrency transactions is generally a tax object according to Article 4 paragraph (1) of the Income Tax Law and is subject to tax rates according to Article 17 of the Income Tax Law. Nevertheless, the absence of specific regulations on the tax treatment of cryptocurrency transactions can pose a risk of non-optimal tax revenue.

To overcome this problem, it is essential to conduct a study to formulate appropriate tax treatment of cryptocurrency transactions by analyzing and benchmarking the tax treatments of cryptocurrency transactions in several countries, i.e., Singapore, the United States, and Australia. These three countries are used as objects of comparison in this study due to the availability of publicly accessible data, articles, and percentages of cryptocurrency ownership. In addition, a more in-depth analysis of the perceptions of various related parties such as tax authorities, tax consultants, and taxpayers regarding income tax for cryptocurrency transactions is also extremely needed. Therefore, a recommendation for the suitable design for tax treatment of cryptocurrency transactions was produced based on the results of this study.

The purpose of this study is to analyze the tax treatment of cryptocurrencies in Singapore, the United States, and Australia. Furthermore, the perceptions of employees of the Directorate General of Taxes (DGT), tax consultants, and taxpayers of the tax treatment or application on cryptocurrencies in Indonesia were also investigated. From the analysis, a design for tax treatment of cryptocurrency transactions in Indonesia was proposed.

This article is divided into five parts: introduction, literature review, research methods, result and discussion, and conclusion and recommendation.

## **2. LITERATURE REVIEW**

### **2.1. TAX IMPOSITION THEORY**

Adam Smith explained in his book entitled “An Inquiry into the Nature and Causes of the Wealth of Nations” that there are four principles to consider in formulating a tax provision, namely equality, certainty, convenience, and efficiency (Smith, 1775). Based on this theory, tax treatment of cryptocurrencies is urgently needed in Indonesia. In terms of equality, taxpayers who earn from cryptocurrency should be able to contribute more in paying taxes according to their income. As regards to certainty, tax treatment of cryptocurrencies is necessary to ensure that the certainty of its imposition can be understood by taxpayers. Meanwhile, in the

matter of convenience, the tax rules formulated for cryptocurrencies must be technically convenient with regard to their imposition. Finally, concerning the principle of efficiency, the regulation on tax treatment of cryptocurrencies needs to be implemented maximally with minimal costs so as to optimize revenue for the government.

## **2.2. BITCOIN, BLOCKCHAIN, AND THE DEFINITION OF CRYPTOCURRENCY**

Bitcoin is the first cryptocurrency which was initiated in 2008 by Satoshi Nakamoto who introduced it for the first time through an article entitled “Bitcoin: A Peer-to-Peer Electronic Cash System”. In this article, Nakamoto explained that Bitcoin allows online payments through a peer-to-peer (P2P) electronic cash system method, meaning a direct transaction from one party to another (Nakamoto, 2008). Through this method, interventions of third parties or financial institutions such as banks as intermediaries are not required in making payments for online transactions. In short, Bitcoin was created by Satoshi Nakamoto upon consideration that there are several shortcomings in current conventional transaction methods.

Blockchain is the basis of the technology used in cryptocurrencies such as Bitcoin and another type of cryptocurrency called Altcoin (alternative coin). In the blockchain of Bitcoin, there is a database containing records of Bitcoin transactions; it is a virtual ledger distributed to all members of the community. In addition, every record of Bitcoin transactions in the Blockchain is validated and maintained by a computer network of community members around the world (Sarmah, 2018). This eliminates the possibility of manipulation of transaction records, either by replacing or deleting transactions.

Cryptocurrency (also known as digital currency, virtual currency, or crypto asset) is a term used for digital tokens or coins that utilize blockchain technology or the distributed ledger technology (DLT). According to the OECD (2020), cryptocurrencies such as Bitcoin, Ethereum, and other similar alternative coins are recognized as intangible assets. During the first appearance of Bitcoin, cryptocurrency was originally used for peer-to-peer transactions without the mediation of any third party as an intermediary (Nakamoto, 2008). However, the function of cryptocurrencies around the world continues to evolve; it is now used to purchase goods or services in a similar way to fiat currency, or, as an investment asset traded in the crypto asset market (Little, 2021).

According to the OECD (2020), there is no international definition of crypto assets or cryptocurrencies to date; each country has a different understanding and treatment of cryptocurrencies (OECD. 2020). Cassidy et al. (2020) argued that in the absence of a clear and authoritative definition of cryptocurrency, the best way to understand it is to look at its unique characteristics or features. According to them, the unique features of cryptocurrencies include the facts that they are entirely digital, use cryptography as a tool to maintain security and anonymity, are not issued by a particular country, and use blockchain technology as a database to store transactions.

### **2.3. THE CYCLE OF CRYPTOCURRENCY**

In understanding cryptocurrency, it is necessary to learn about its life cycle from the beginning of its formation or creation to the exchange transactions. There are at least three stages in the cycle of cryptocurrency as described in “Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issue” by the OECD (2020) that can be taken into account in taxation. These stages are creation, storage and transfer, and exchange.

Creation is the initial stage of acquiring cryptocurrency (token). There are at least four ways to obtain cryptocurrency, namely: (1) airdrops, receiving tokens for free without any particular consequences; (2) initial token/coin offering (ITO/ICO), an offer to purchase new tokens to interested investors in exchange for other tokens such as Bitcoin, or for a sum of money; (3) mining, a transaction validation activity in the blockchain where, upon successful validation, the miner (the person performing the validation) will receive a number of tokens as a reward; and (4) forging, a validation mechanism for new transactions which can only be carried out by the forger (the person who does the forging) after placing a certain number of tokens as collateral.

Storage and transfer is the next stage in the cycle of cryptocurrency. To store or send tokens, software called the ‘wallet’ is needed. Each wallet generally consists of one or more digital wallet addresses. The wallet employs an asymmetric cryptographic base that uses a pair of keys containing a public key and a private key to maintain the security of each token transaction. According to the OECD (2020), there are four types of wallet commonly used to store and send cryptocurrency coins, i.e., hot custodial wallet, hot non-custodial wallet, cold hardware wallet, and cold paper wallet.

Lastly, exchange is the final stage in the cycle of cryptocurrency. It is either in the form of purchase or sale through an exchange platform or over the contract (OTC), which is using the services of a third party. An exchange platform is a company that provides online services for buying and selling or exchanging cryptocurrencies. Among the biggest exchange platforms are Coinbase, Kraken, Indodax, Tokocrypto, and others.

#### **2.4. GENERAL TAXATION OF CRYPTOCURRENCY TRANSACTIONS**

Based on data compiled by the OECD, it is known that the tax treatments imposed in several countries on cryptocurrency transactions are mainly income tax and value added tax or goods and services tax (OECD, 2020). The imposition of income tax differs from one country to another regarding the timing of revenue recognition upon cryptocurrency transactions; some countries recognize income from cryptocurrency at the time of creation, while other countries acknowledge it at the time of disposal. As for the value added tax (VAT), the majority of countries have almost uniform regulations where cryptocurrency transactions are not included as VAT objects and are instead designated as exempt supplies.

Recognition of income tax at the time of creation means recognizing cryptocurrency as income when it is received by taxpayers. After obtaining tokens, taxpayers should report them as taxable income or other capital income. Furthermore, it will be accumulated with income from other sources and subject to income tax rates, either for individual or corporate, in accordance with applicable regulations. All types of costs incurred to acquire new tokens, if any, can be considered as deductible expenses for the income. The countries that apply this tax treatment are Argentina, Austria, Cote d'Ivoire, Columbia, Croatia, Estonia, Finland, Japan, Luxembourg, New Zealand, Slovenia, South Africa, the United Kingdom, and the United States (OECD, 2020).

Recognition of income on cryptocurrency transactions at the time of disposal generally occurs when the assets are sold or exchanged for goods or services, other types of cryptocurrencies, or fiat currency. In such exchange, gains will be made if the asset received is of greater value than the cryptocurrency being released. If there is a profit, the tax is imposed using the capital gains tax rate applicable in each country. This tax treatment is applied in Brazil, Chile, Czech Republic, Denmark, Estonia, Germany, Latvia, Hungary, South Korea, Mexico, Norway, and the United States (OECD, 2020).

The tax treatment of cryptocurrency transactions is different in each country depending on the purpose of cryptocurrency ownership, either as an investment (hobby) or as a part of a business. If it is owned as an investment or hobby, the profit earned on disposing of cryptocurrencies is subject to capital gains tax rate or ordinary income tax rate. However, if cryptocurrency ownership is a part of business activity, the income received from the sale of cryptocurrency is considered as additional income, therefore being subject to income tax. Besides, the incurred costs from the sale of cryptocurrencies can also be deducted in the calculation of income tax. Australia, Canada, and Japan are among the countries that apply this tax treatment (OECD, 2020).

For value added tax, the majority of countries (especially those in the European Union) tend to have a more uniform tax treatment of cryptocurrency transactions (OECD, 2020). Cryptocurrencies can be considered as objects, non-objects, or exempted objects. For example, the use of Bitcoin as a means of payment to obtain goods or services is exempt from VAT. On the other hand, payments in Bitcoin for the provision of goods or services that are objects of VAT is subject to VAT as it is equated with the provision of goods or services in general. Meanwhile, services provided by digital wallet companies are not subject to VAT if they are free, and vice versa. Meanwhile, mining activities may be subject to VAT but are exempt from its imposition if they meet certain criteria. Furthermore, services related to intermediation by exchange platforms are considered VAT objects as other services (The Directorate-General for Taxation and Customs Union of the European Commission, 2016).

### **3. RESEARCH METHODS**

This study applied a case study approach with qualitative method to answer the research problems. Creswell (2009) argued that qualitative research method involves an exploration or in-depth understanding of the case being explored. This can be achieved through interviews with open-ended questions, documentation data, analysis of writing and images, and interpretation of themes and patterns. The objective of a study that applies a case study approach with a qualitative method is to gain a deep understanding of a situation (Cooper and Schindler, 2014).

This study uses primary and secondary data in the analysis. The primary data was obtained directly from the objects of study through interviews with predetermined resource persons. Meanwhile, the secondary data is in the form of documented and published data, such as data on tax regulations, journals, other



relevant studies, and official news releases related to cryptocurrencies, one of which is the rules or guidelines on tax treatment for cryptocurrency transactions applied in the three sample countries. These secondary data were collected to compare the tax treatment for cryptocurrency transactions of each country. A list of tax treatment regulations on cryptocurrencies in the three countries can be seen in Table 1 below.

**Table 1. List of Tax Treatment Regulations Analyzed**

Country	Tax Authority	Regulations
Singapore	Inland Revenue Authority of Singapore ( <a href="https://www.iras.gov.sg/">https://www.iras.gov.sg/</a> )	1. IRAS <i>e-Tax Guide Income Tax Treatment of Digital Tokens</i> (published 17 April 2020); 2. IRAS <i>e-Tax Guide GST: Digital Payment Tokens</i> (published 19 November 2019)
The United States	Internal Revenue Service ( <a href="https://www.irs.gov/">https://www.irs.gov/</a> )	1. IRS Notice 2014-21 <i>IRS Virtual Currency Guide</i> 2. IRS Rev. Rule 2019-24 3. <i>Frequently Asked Questions on Virtual Currency Transaction</i>
Australia	Australian Taxation Office ( <a href="https://www.ato.gov.au/">https://www.ato.gov.au/</a> )	1. <i>Tax Treatment of Crypto-currencies in Australia-Specifically Bitcoin</i> 2. <i>GST and Digital Currency</i>

Source: Various sources

The analysis was done to answer the research problems by reviewing regulatory documents to compare the tax treatments of cryptocurrencies in the three sample countries as well as by examining the results of interviews with predetermined resource persons. This is divided into three parts as follows:

- a. Understanding Cryptocurrency (Definition, Recognition, and Valuation)
- b. Income Tax Treatment
- c. Goods and Services Tax (Value Added Tax) Treatment

The results of the comparative analysis on the regulatory documents in the sample countries as well as the results of the interviews were then interpreted to develop a recommendation for tax treatment design of cryptocurrency in Indonesia.

This study analyzed two subjects; with the first being the three sample countries that already apply tax treatment of cryptocurrency transactions, namely Singapore, the United States, and Australia. The main considerations in choosing these countries as the objects of comparison were: (1) the availability of easy-to-obtain tax regulations or other publication sources for cryptocurrency transactions; and (2) the large percentage of cryptocurrency ownerships in these countries.

The second subject of analysis in this study is the interviewees or the resource persons who are representatives of the Directorate General of Taxes as a regulator, tax consultants as partners of the DGT and taxpayers, as well as the taxpayers who conduct cryptocurrency transactions themselves. Table 2 below presents the list of interviewees.

**Table 2. List of Interviewees**

No	Interviewee	Number of Interviewees
1	Staff of the Directorate General of Taxation	2
2	Tax Consultant	3
3	Taxpayer	2
<b>Total</b>		7

Source: Researchers

These interviewees were selected based on their competence in the field of taxation and cryptocurrency. The interviewed representatives of the DGT are employees in charge of the formulation of tax rules. The selected tax consultants are those who have approximately 10 years of experience in providing tax consultancy. Meanwhile, the chosen taxpayers are those who have comprehensive knowledge and experience in investing, mining, or trading cryptocurrencies.

## **4. RESULT AND DISCUSSION**

### **4.1. COMPARATIVE ANALYSIS OF TAX TREATMENT**

Comparative analysis was carried out on the tax treatments applied in Singapore, the United States, and Australia. The tax treatments are compared in three categories as follows:

#### **A. Understanding Cryptocurrency**

The understanding of cryptocurrencies includes its term and definition, recognition, and valuation in each of the three sample countries as presented in Table 3. The terms used for cryptocurrency are different from one country to another, with several similarities in the examples given, e.g., Bitcoin, Ethereum, and others.

**Table 3. Comparison of Definition, Recognition, and Valuation of Cryptocurrency**

No	Researched Element	Singapore	The United States	Australia
1	Term and Definition	Payment Token: Representation of digital rights	(Convertible) Virtual Currency: The digital representation of a value	Cryptocurrency or Digital Currency: Digital assets that use encryption techniques
2	Recognition	Intangible (non-real estate) property	Property (non-real estate) as any other types of property (e.g. stocks)	Digital Asset
3	Valuation	Not specifically regulated	Valued using fair market value when received in US Dollars	Valued using market value when received in Australian Dollars

Source: various sources

As seen in Table 3 above, the tax authority of Singapore (Inland Revenue Authority of Singapore-IRAS) terms cryptocurrency as a Payment Token, which is a representation of digital rights. Such representation may be used or intended to be used to purchase goods and/or services. The United States' tax authority (Internal Revenue Service-IRS) uses the term Virtual Currency and defines it as a digital representation of a value that serves as a medium of exchange, a unit of account, and/or a store of value. In this country, virtual currency can be used as a means of payment for the provision of goods or services or held for investment purposes. Meanwhile, the tax authority of Australia (Australian Taxation Office-ATO) chooses the terms cryptocurrency and digital currency and defines them as digital assets that apply encryption techniques in the arrangements for the creation of additional new cryptocurrency units. Such encryption techniques are also used to verify transactions in the blockchain network.

All three sample countries recognize cryptocurrencies in general as an asset. IRAS recognizes cryptocurrencies as intangible property other than buildings (non-real estate). For federal tax purposes, IRS also acknowledges cryptocurrencies as property other than buildings (non-real estate), meaning that the tax consequences of cryptocurrency transactions in the United States will be the same as those of any property transactions such as stocks, bonds, and other property investments. Meanwhile, ATO recognizes cryptocurrency as a digital asset or digital currency since it has certain characteristics such as being interchangeable, usable as payment, and publicly available without any substantial limitations in its ownership, as well as having a value that is not derived from or dependent on anything else.

As for the valuation, as displayed in Table 3, the United States and Australia implement the same tax assessment method, while Singapore does not specifically

regulate it. The United States and Australia value cryptocurrencies in US Dollars or Australian Dollars using the fair market value on the date of receipt. The gain or loss in the event of a transaction, such as a sale or exchange of cryptocurrency, can be determined by comparing the price of the cryptocurrency received (using the fair market value) with the price of the cryptocurrency being released (the acquisition price). On the other hand, Singapore does not have a specific method for valuing cryptocurrencies, meaning that the taxpayers can use their best exchange rates that reflect the value of the received cryptocurrency. However, taxpayers should meet the following conditions in valuing cryptocurrencies, namely: (1) the chosen exchange rate or value must be reasonable and verifiable, and (2) the methodology used to determine the exchange rate must be used consistently for the following years.

#### B. Income Tax Treatment

Income tax treatment of cryptocurrency transactions can be divided into several types of transactions as seen in Table 4.

**Table 4. Comparison of Income Tax Treatments of Cryptocurrency Transactions**

No	Researched transactions	Singapore	The United States	Australia
1	Exchanging cryptocurrencies to get fiat money and other types of cryptocurrencies.	<ol style="list-style-type: none"> <li>1. As a non-taxable investment; or</li> <li>2. As a tradable asset, it is an object of income tax</li> </ol>	<ol style="list-style-type: none"> <li>1. Object of Capital Gains Tax; or</li> <li>2. Addition to Ordinary Income</li> </ol>	<ol style="list-style-type: none"> <li>1. Object of Capital Gains Tax; or</li> <li>2. Addition to Ordinary Income</li> </ol>
2	Receiving cryptocurrency as payment of employee wages or salaries	Object of income tax for employees in accordance with the agreed contract.	Object of federal government income tax withholding using the fair market value (FMV) at the time of payment.	Object of Fringe Benefits Tax if there is an agreement at the beginning of the transaction. If there is no initial agreement, it is considered normal salary income.

No	Researched transactions	Singapore	The United States	Australia
3	Receiving cryptocurrency from airdrop/hard fork/staking	An airdrop without consequences is not an object of income tax. An Airdrop with consequences is an object of income tax.	Hard fork is a tax object if it receives a new cryptocurrency through airdrop and therefore treated as ordinary income (other income).	Staking and airdrops are ordinary income for the recipients and are calculated with market value at the time of receipt.
4	Receiving cryptocurrency in the context of providing goods or services	Object of income tax, charged according to the value agreed by both parties (according to the contract)	Object of income tax that increases gross income, assessed according to the value of the cryptocurrency's FVM at the time of receipt	Object of income tax that increases gross income, assessed according to the market value of the cryptocurrency at the time of receipt
5	Exchanging cryptocurrency to obtain goods or services	Consequences are only for cryptocurrency as part of a business. Gains or losses on the disposal of cryptocurrency can be tax object or tax deductible.	<ol style="list-style-type: none"> <li>1. Object of Capital Gains Tax</li> <li>2. Addition to Ordinary Income</li> </ol>	<ol style="list-style-type: none"> <li>1. Object of Capital Gains Tax (personal use of asset)</li> <li>2. Addition to Ordinary Income</li> </ol>
6	Receiving cryptocurrency from mining	The taxation depends on the purpose of mining, whether for profit or as a hobby.	Upon receiving cryptocurrency from mining, the FMV will be calculated and added into ordinary income. There is a difference in mining as a hobby and as a business. If mining is carried out by individuals as a business, the net earnings are subject to self-employment tax.	If mining is a business activity, the tax treatment is the same as that of businesses in general (such as trading stock).  If it is not a business activity, the cryptocurrency is an object of CGT if it is sold.
7	Individual Tax Rate	Normal rate, 0 to 22% of applicable income	One of capital gains tax rate, marginal tax rate, or self-employment rate, or a combination of them	50% discount on capital gains if owned >1 year using normal income tax rates
8	Corporate Tax Rate	Normal rate, 17% of applicable income	Capital gains tax rate and/or marginal tax rate	30% of net capital gain

Source: Regulations listed in Table 1 and other sources

According to Table 4, there are several important points to note regarding the tax treatments of cryptocurrency transactions in the three sample countries as follows:

- a. Upon exchanging cryptocurrency for either fiat money, other types of cryptocurrencies, or goods or services (points 1 and 5), the profits earned are subject to capital gains tax in the United States and Australia. However, it only applies to ownership of cryptocurrency as an investment (capital asset). If it is held as a tradable asset or as a part of a business, the resulting gains are valued as an addition to ordinary income. Meanwhile, Singapore enforces a slightly different law regarding this matter. Since this country does not impose any type of capital gains tax, profits from cryptocurrency transactions, if any, will be added to ordinary income only if they are held as part of a business. At this stage, the cost of acquiring cryptocurrency can also be a deducting component in the calculation of income tax.
- b. If cryptocurrencies are received as wages or salaries (point 2), both in Singapore and the United States, the income is valued as an additional income for the employee, thus being an object of income tax. The income tax assessment can be based on agreement (Singapore) or the fair market value at the time of receipt (the United States). Furthermore, this income is subject to federal government withholding tax in the United States. In Australia, on the other hand, the income becomes an object of the fringe benefit tax if there is an initial agreement between both parties.
- c. For cryptocurrencies received from the airdrop mechanism (point 3) in Singapore, it can be valued as an additional income, meaning that the tax is calculated only if the cryptocurrency is accepted with a consequence. Conversely, the cryptocurrency is not subject to taxes if it is received free of charge without any consequences. In the United States, cryptocurrencies acquired from the hard fork mechanism will be taxable if the new hard fork tokens have been received by the recipient, thus being considered an additional income (ordinary income). Meanwhile in Australia, cryptocurrencies obtained from both airdrops and staking are automatically considered additional income.
- d. In the provision of goods or services with cryptocurrencies as a means of payment (point 4), all of the three sample countries have the same tax treatment where such transaction is seen as the provision of goods or services in general, thus being valued as an addition to ordinary income. The difference lies in the valuation of the transactions, which is in accordance with the agreement or

- contract in Singapore or based on the (fair) market value of the cryptocurrency at the time of receipt in both the United States and Australia.
- e. For mining activities, all of the sample countries differentiate tax treatment based on the purpose of the activity, whether as a hobby or as a business. If it is done as a hobby, the obtained cryptocurrency is not an object of income tax in Singapore and Australia. However, if it is carried out as a business activity, the earned income and the incurred costs from the activity are taken into account in calculating income tax. In the United States, on the other hand, cryptocurrencies are valued as an addition to ordinary income, whether it is acquired as a hobby or a business. If the transaction is carried out as a business, the costs spent to run the business can be deducted in the calculation of income tax. In addition, mining activities as a business by individuals in the United States are also subject to self-employment tax.
  - f. The tax rates for cryptocurrency transactions are charged according to the general income tax rate for both individuals and entities in Singapore. In the United States, the imposed tax rates differ depending on the length of ownership and the status of the taxpayer. If the cryptocurrency is held for up to one year, it is subject to the usual tax rate (general income tax rate), which is between 10%, 12%, 22%, 24%, 32%, 35%, or 37%. Meanwhile, if it is owned for more than a year, it will be charged with a lower rate of the capital gains tax, which is between 0%, 15%, or 20%. The self-employment tax rate (15.3%) is also imposed for individuals who carry out mining activities as a business. In Australia, cryptocurrencies that are the objects of capital gains tax are calculated using the general income tax rate. In addition, there is a 50% discount on the received capital gains if the cryptocurrency is held for more than a year. After deducting the discount, it is then multiplied by the applicable rate. For companies, however, there is no discount on this tax and a 30% rate is charged on net capital gains.

### C. Goods and Services Tax (Value Added Tax) Treatment

Of the three countries, Singapore and Australia have regulations regarding the imposition of goods and service tax (GST) on cryptocurrency transactions. In general, Singapore has applied a rule as of 1 January 2020 that the supply of digital payment tokens (cryptocurrency or virtual currency) is not an object of GST in cryptocurrency exchange transactions with other than fiat money (exchange for goods or services or other assets). In other words, if the cryptocurrency is exchanged for fiat money, it is excluded (exempt) from GST. Likewise, in

Australia, ATO has determined since 1 July 2017 that the sale or purchase of digital currency (cryptocurrency) is not an object of GST as cryptocurrency is recognized as an object of Financial Supplies or Input Tax. Unlike Singapore and Australia, the United States' federal government does not collect GST or VAT taxes. However, there are types of sales tax levied by some state governments such as New York, New Jersey, and California on cryptocurrency transactions.

#### **4.2. ANALYSIS OF THE INTERVIEWS**

Interviews were conducted with resource persons in three categories, namely the representatives of the Directorate General of Taxes, tax consultants, and taxpayers involved in cryptocurrency. The perceptions of tax treatment by each of these categories are as follows:

##### **A. Perception of the Representatives of the Directorate General of Taxes**

The resource persons from this category stated different definitions of cryptocurrency. One of the interviewees defined cryptocurrency as a right that provides returns or economic benefits to its owner, while another interviewee argued that it is a digital asset which, due to the current applicable regulations in Indonesia, has not been recognized as a currency.

The current recognition of cryptocurrencies from a perspective of tax, according to one resource person, needs to refer to the party that oversees cryptocurrency transactions, in this case the Commodity Futures Trading Regulatory Agency or CoFTRA (Badan Pengawas Perdagangan Berjangka Komoditi-Bappebti). Currently, CoFTRA recognizes cryptocurrency as a commodity. Therefore, from the perspective of tax, it is recognized as an asset or property that should be reported in the Annual Tax Return. The reporting or valuation of cryptocurrencies in the Annual Tax Return can use the selling price or the market price at the time of selling which can be seen from the prices given by several exchange platform companies.

Since there are currently no special rules regarding cryptocurrency, profits or income earned from cryptocurrency transactions are subject to capital gains tax as stipulated in Article 4 paragraph (1) of the Income Tax Law. The capital gains tax itself is obtained if there is a difference between the acquisition price of the owned cryptocurrency and the selling price or the obtained profits from the sales of the asset at a later date. Such gains will be subject to the normal income tax rate, which is in accordance with the tax rate regulated in Article 17 of the Income Tax Law.



Referring to the provisions of VAT, the representatives of the DGT explained that the transfer of cryptocurrencies can be subject to VAT since it is not included in the negative list as stated in Article 4A of the VAT Law. One of the resource person stated, “If (cryptocurrency) is valued as an intangible taxable item and there is no exception for it in Article 4A, it will be subject to VAT.”

Although cryptocurrencies can be categorized as intangible taxable goods, the imposition of VAT on the transfer of cryptocurrencies has not yet been determined by the DGT for several reasons. In terms of the subject, it is still unclear or difficult to identify the users who make any cryptocurrency transactions due to the anonymity feature of this digital asset. Since the subject is not yet clear, the imposition of tax on cryptocurrency remains difficult to implement.

#### B. Perception of Tax Consultants

Each resource person in this category has a different definition or understanding of cryptocurrency. One resource person argued that cryptocurrency is a currency that emerged due to the development of information systems using blockchain, while another resource person defined it as an investment tool or traded commodity.

However, all resource persons from tax consultant category acknowledged that cryptocurrencies are generally valued as investment assets and therefore should be reported in the Annual Tax Return. One of the underlying reasons for this argument is that cryptocurrencies meet the three criteria of assets, i.e., giving rights to their owners, being able to provide economic benefits, and having control.

The valuation of cryptocurrency is given at the time it is recorded or recognized as property in the Annual Tax Return as well as at the time of disposal, e.g., when it is sold. If it is recognized as property in the Annual Tax Return, all interviewed tax consultants agreed that the value used corresponds to the acquisition price of the cryptocurrency on the date of receipt. One of the resource persons stated that, “...to assess the tax, the historical cost or acquisition price is used, in accordance with Article 10 of the Income Tax Law.” Furthermore, another resource person added that the selling price of cryptocurrency uses the market price as referred to in Article 10 paragraph (2) of the Income Tax Law. According to this resource person, the acquisition value or sale value in the event of an exchange of assets is the amount that should be issued or received based on the market price.

In general, income from cryptocurrency transactions is an object of income tax as an additional economic capability as stipulated in Article 4 paragraph (1) of the

Income Tax Law . This is because the users will receive income in the form of profits (capital gains).

Since the profit earned from cryptocurrency transactions is valued as an income as referred to in Article 4 paragraph (1) and is not included in the exceptions listed in Article 4 paragraph (3), the normal tax rate is imposed according to Article 17 of the Income Tax Law. One of the resource persons stated, "...4 paragraph (1) is the general rate based on Article 17, depending on the individual or entity."

Income tax treatment for taxpayers who carry out mining activities is not much different from those who own cryptocurrency as an investment. According to the resource persons, cryptocurrencies obtained from mining are valued as an additional economic capability in accordance with Article 4 paragraph (1). Such cryptocurrency must be recorded as an asset in the Annual Tax Return based on the market price at the time of acquisition and is subject to capital gains tax upon being sold.

One of the resource persons expressed that VAT can be imposed to this cryptocurrency because it is not included in the negative list or the list of exempted objects of VAT in accordance with Article 4A of the VAT Law. Meanwhile, another resource person believed that the imposition of VAT for cryptocurrency transactions must first clearly comply with the tax rules as stated in Article 4 of the VAT Law; when VAT is imposed, it must be clear that the cryptocurrency is valued as taxable goods, taxable services, or others.

Although there are different perceptions of the imposition of VAT on cryptocurrency transactions, the resource persons from the tax consultant category share the same view that services provided by cryptocurrency exchange platform companies are subject to VAT. One of the resource persons explained, "For the services of Indodax (one of the crypto asset marketplaces) as a broker, VAT must be charged."

### C. Perception of Taxpayers

From the interviews with several taxpayers, it is found that each taxpayer has a different view regarding the definition of cryptocurrency. One of the interviewed taxpayers defined cryptocurrency as digital money that can function as a medium of exchange. Meanwhile, another resource person in this category saw cryptocurrencies such as Bitcoin as a digital asset which is a product of a technological development called blockchain. Cryptocurrency is referred to as "currency" since it has a function as a medium of exchange in several countries, although it is currently not applicable in Indonesia.

In general, the interviewed taxpayers expressed that they do not mind if there will be specific rules governing the taxation of cryptocurrency transactions. One of the resource persons argued, “Yes, after all, we have already made a profit, so why don’t we just pay taxes to the government? We pay for electricity too, and we should at least support the Indonesian platform as well.”

Regarding the taxation mechanism for cryptocurrency transactions, one of the resource persons suggested similar taxation to that of stock transactions. The tax can be levied by the cryptocurrency exchange platform at a rate of half of the final income tax rate on stocks transactions (0.1%), which is 0.05%. According to a resource person, this is extremely needed primarily to maintain the domestic investment climate for crypto assets so that users do not move to foreign platforms.

#### D. Discussion

Based on the analysis of the interviews, it can be concluded that several resource persons in the tax consultant category are of the view that it is better if the profits earned from cryptocurrency transactions are subject to a final tax. The imposition procedure is the same as that of selling shares on a stock exchange, which is already subject to final tax and is levied by the organizer or, in this case, by the cryptocurrency exchange platform. One of the resource persons argued that such imposition will provide various benefits for the government, i.e., the ease of administration and productivity as well as adequacy of state revenues. As for cryptocurrency transactions carried out overseas, the general income tax rate on capital gains at the time of sale can be applied using the rates stipulated in Article 17 of the Income Tax Law.

### **4.3. RECOMMENDATIONS FOR TAX TREATMENT DESIGN OF CRYPTOCURRENCY IN INDONESIA**

Based on the results of the comparative analysis of tax treatment in three sample countries and the interviews with various resource persons, the recommendations for tax treatment design of cryptocurrency are as follows:

1. As the three sample countries, the DGT needs to formulate specific rules that clearly define what cryptocurrency is. This definition may also be accompanied by a list of globally implemented functions of cryptocurrency to circumvent regulatory limitations.

2. It is also necessary for the DGT to stipulate that cryptocurrencies are recognized as assets or property. In addition, the DGT should also ensure that cryptocurrency ownership must be recorded in the taxpayers' Annual Tax Return.
3. Based on the results of the interviews, the DGT are required to explain that cryptocurrencies reported in the Annual Tax Return are at their acquisition price at the time they were acquired. If it is sold, it is valued according to the market price or according to the agreed price between the seller and the buyer at the time of the transaction.
4. In terms of income tax treatment, the Indonesian government is suggested to impose a final tax on the selling price (gross) of cryptocurrencies for every transaction made by taxpayers on domestic crypto exchange platforms. This will not only facilitate administration but also ensure tax revenue for the government.
5. Lastly, cryptocurrency investments or transactions by taxpayers can be carried out in foreign crypto exchange platform companies. For transactions, the proposed tax treatment is to use a tax mechanism on sales profits or capital gains. This will not only guarantee the imposition of taxes for every cryptocurrency transaction in Indonesia but also encourage taxpayers to transact domestically at lower rates.

## **5. CONCLUSION AND RECOMMENDATION**

### **5.1. CONCLUSION**

The results of this study indicate that in all the three sample countries, cryptocurrencies are subject to normal income tax if they are parts of a business or to capital gains tax if they are held for investment. Such taxation is applied in the United States and Australia. In Singapore, profits from selling cryptocurrencies are not taxed if they are held for investment purposes as the tax authority does not impose a capital gains tax. However, if the cryptocurrency is held for resale or becomes a part of a business, it will be taxed according to the applicable law. As of 1 January 2020, Singapore has not made the transfer of cryptocurrency an object of VAT or GST. Australia has also implements a similar law since 1 July 2017 where the transfer of cryptocurrency is considered a type of Financial Supplies or Input Tax, meaning that it is not subject to GST. Meanwhile in the United States, the US Federal Government does not collect either VAT or GST. Nevertheless, some state

governments such as New York, New Jersey, and California impose sales taxes on the sale of cryptocurrencies in their respective regions.

As for the results of the interviews, both the representatives of the Directorate General of Taxes and tax consultants argued that income from cryptocurrency is still valued as an object of income tax in the form of capital gains, thus being subject to the rate in accordance with Article 17 of the Income Tax Law. In spite of that, the DGT has taken no further steps such as fining that can encourage taxpayers to report their income from cryptocurrency transactions as there are currently no specific rules regarding the tax treatment of cryptocurrency. On the other hand, due to the absence of a definition on cryptocurrency according to the tax authority, VAT has not been levied on cryptocurrency transactions. Currently, the collection of VAT on crypto exchange platform companies for the fees they take from the consumers transacting in their applications is more encouraged.

Several resource persons from the tax consultant and taxpayer categories suggested cryptocurrency transactions to be subject to final tax for the ease of administration. This applies to transactions made on domestic exchange platforms with a low tax rate imposed on the selling price. In addition, some of the interviewed tax consultants also agreed that cryptocurrency transactions carried out outside the exchange platforms registered in Indonesia or abroad should be subject to income tax on capital gains or the normal mechanism.

## **5.2. LIMITATION**

There are several limitations in this study. First, it did not dig up information from other government bodies such as CoFTRA and from taxpayers on exchange platforms registered with CoFTRA. Second, this study only discussed general or global aspects of taxation regarding the imposition of income tax and VAT; it has not explored the aspects of taxation in detail for each business process of cryptocurrency transaction.

## **5.3. RECOMMENDATIONS**

Future studies are highly recommended to analyze further information and perceptions from other government bodies and domestic exchange platform companies registered with CoFTRA. In addition, specific and in-depth studies on the detailed aspects of income tax or value added tax treatment for each business process of cryptocurrency transaction are still extremely needed.

## **ACKNOWLEDGEMENT**

The researchers would like to express our deepest gratitude to all contributors to the preparation of this study. We are also most grateful for the Book Chapter UI Team for the opportunity to share the results of this study in order to provide input for the Directorate General of Taxation (DGT). The researchers are fully responsible for the results of this study.

## REFERENCES

- Australian Taxation Office. (2018). *GST and Digital Currency*. Retrieved from <https://www.ato.gov.au/Business/GST/In-detail/Your-industry/Financial-services-and-insurance/GST-and-digital-currency/>
- Australian Taxation Office. (2020). *Capital Gain Tax*. Retrieved from <https://www.ato.gov.au/General/Capital-gains-tax/>
- Australian Taxation Office. (2020). *Tax treatment of cryptocurrencies in Australia - specifically Bitcoin*. Retrieved from <https://www.ato.gov.au/General/Gen/Tax-treatment-of-crypto-currencies-in-Australia---specifically-bitcoin/>
- Coinbase. (2021). *2020 tax guide: crypto and Bitcoin in the U.S*. Retrieved from <https://www.coinbase.com/learn/tips-and-tutorials/crypto-and-bitcoin-taxes-US>
- Coinmarketcap.com. (2021). All Cryptocurrencies. Retrieved from <https://coinmarketcap.com/all/views/all>
- Corbet, S., Urquhart, A., & Larovaya, L. (2020). Cryptocurrency and Blockchain Technology. In *Batten-Corbet-Lucey Handbooks in Alternative Investments*. Walter de Gruyter GmbH.
- Creswell, J. W., & Creswell, J. D. (2017). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE.
- Derousseau, R. (2019). *The Everything Guide to Investing in Cryptocurrency: From Bitcoin to Ripple, the Safe and Secure Way to Buy, Trade, and Mine Digital Currencies*. Simon & Schuster.
- Dinenzon, M., Josyula, V., Moreno-Ramirez, J. C., Dippelsman, R., & Razin, T. (2018). *Treatment of Crypto Assets in Macroeconomics Statistics*. International Monetary Fund.
- Global Legal Insights. (2018). *Blockchain & Cryptocurrency Regulation 2019* (1st ed.). (J. Dewey, Ed.) London: Rory Smith.
- Hileman, G., & Rauchs, M. (2017). *Global Cryptocurrency Benchmarking Study*. Cambridge: University of Cambridge.
- Indonesian Blockchain Association. (2020). *Indonesia Crypto Outlook Report*. Retrieved from <https://asosiasiblockchain.co.id/wp-content/uploads/2020/09/Indonesia-Crypto-Outlook-2020-Report.pdf>

- Indonesian Government. (2008). Law Number 36 of 2008 on the Fourth Amendment to Law Number 7 of 1983 on Income Tax.
- Indonesian Government. (2009). Law Number 42 of 2009 on the Third Amendment to Law Number 8 of 1983 on Value Added Tax on Goods and Services and Sales Tax on Luxury Goods
- Inland Revenue Authority of Singapore. (2019). *IRAS e-Tax Guide GST: Digital Payment Token*. IRAS.
- Inland Revenue Authority of Singapore. (2020). *IRAS e-Tax Guide Income Tax Treatment of Digital Token*. IRAS.
- Internal Revenue Service. (2014). *Internal Revenue Bulletin: 2014-16, Notice 2014-21 IRS Virtual Currency Guidance*. Retrieved from [https://www.irs.gov/irb/2014-16\\_IRB#NOT-2014-21](https://www.irs.gov/irb/2014-16_IRB#NOT-2014-21)
- Internal Revenue Service. (2020). *Frequently Asked Questions on Virtual Currency Transactions*. Retrieved from <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions>
- Kent, P., & Bain, T. (2020). *Cryptocurrency Mining for Dummies*. Jhon Wiley & Son. Retrieved from <https://www.wiley.com/en-us/Cryptocurrency+Mining+For+Dummies-p-9781119579298>
- Little, K. (2021). What is Cryptocurrency. Retrieved from <https://time.com/nextadvisor/investing/cryptocurrency/what-is-cryptocurrency/>
- Nakamoto, S. (2008). *Bitcoin: A Peer-to-Peer Electronic Cash System*. Retrieved from <https://bitcoin.org/bitcoin.pdf>
- OECD. (2020). *Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issue*. OECD.
- Pichl, L., Eom, C., & Scalas, E. (2020). *Advanced Studies of Financial Technologies and Cryptocurrency Markets*. Singapore: Springer.
- Sarmah, S. S. (2018). Understanding Blockchain Technology. *Computer Science and Engineering*, 23-29.
- Smith, A. (1775). *An Inquiry Into the Nature and Causes of The Wealth of Nations*. Retrieved from [https://www.ibiblio.org/ml/libri/s/SmithA\\_WealthNations\\_p.pdf](https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf)



- Statista. (2021). *Number of daily transactions in Bitcoin, Ethereum and five other cryptocurrencies from January 2017 to January 11, 2021*. Retrieved from <https://www.statista.com/statistics/730838/number-of-daily-cryptocurrency-transactions-by-type/>
- Taylor, S. J., Bogdan, R., & DeVault, M. L. (2016). *Introduction to Qualitative Research Methods A Guidebook and Resource*. New Jersey: Wiley.
- The Directorate-General for Taxation and Customs Union of the European Commission. *VALUE ADDED TAX COMMITTEE (ARTICLE 398 OF DIRECTIVE 2006/112/EC) WORKING PAPER NO 892*, (2016).
- The Commodity Futures Trading Regulatory Agency. (2019). *Peraturan BAPPEBTI Nomor 5 Tahun 2019 tentang Ketentuan Teknis Penyelenggaraan Pasar Fisik Aset Kripto (Crypto Asset) Di Bursa Berjangka (BAPPEBTI Regulation Number 5 of 2019 concerning Technical Provisions for the Operation of the Physical Crypto Asset Market in Futures Exchange.)*.