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CONTENTS

Accounting Treatment of Cryptocurrency: A Malaysian Context

Teh Sin Yee[1♣], Angeline Yap Kiew Heong and Wong Siew Chin
HELP University, Kuala Lumpur

ABSTRACT

Cryptocurrencies have become the buzzword among society, especially after some prominent companies such as Wikipedia, Microsoft and Amazon accept the use of cryptocurrencies. Nonetheless, accounting treatment of cryptocurrencies appears to be a challenging area for standard setters, financial statement preparers, and also users. This is mainly because elements of cryptocurrency do not explicitly fall under any existing accounting standards. The fact that cryptocurrencies are held for different business models and intentions may affect how it should be treated under accounting standards. Hence, this research aimed to examine factors that affect the accounting treatment of cryptocurrencies in Malaysia. Different factors were examined including the function of cryptocurrencies, conceptual framework of financial reporting and the legal status of cryptocurrencies. Targeted respondents involved in this research were accountants in Malaysia. Data collected were analysed using SPSS and SmartPLS 3. SPSS was mainly used to analyse the demographics of respondents whereas SmartPLS 3 was used to carry out reflective measurement model and structural model evaluation. The results concluded that all the independent variables which are the functions of cryptocurrencies, conceptual framework of financial reporting, and the legal status of cryptocurrencies have a significant relationship with the accounting treatment of cryptocurrencies. The results of this study provide an insight about factors that standards setters and financial standards should consider when accounting for cryptocurrencies' transactions in order to provide faithful representation and relevant information. Some limitations and suggestions are included in this research to provide ideas for future researchers to carry out further research.

Keywords: Cryptocurrencies, Accounting Treatment

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[1♣] Corresponding Author: Teh Sin Yee, Faculty of Business, Economics and Accounting and Economic, HELP University, 50490 Kuala Lumpur, Malaysia ; Email: sinyee_417@hotmail.com; Tel: +603-27162000

INTRODUCTION

In the world we live today, we can deeply experience that our lives are embedded with and enabled by various types of information technology as well as financial technology. The Millennials and Generation Z are those who experience the most changes in the world and most of the things around them are becoming virtual. It is believed that the traditional business trading method may become obsolete. The emergence of Financial Technology (FinTech) has brought to the innovation in cryptocurrency. The acceptance and penetration of cryptocurrencies in the market have been increasing in recent years. CoinMarketCap (2020) listed 5140 cryptocurrencies in its server with a total market capital of $280,764,423,880. There are more than 100,000 merchants around the world accepting the use of cryptocurrency and these include some well-known companies such as Wikipedia, Microsoft, and Amazon. According to a survey done by Hartford Steam Boiler and Insurance Co. in 2020, it was found that 36% of small-medium businesses in the United States accept the use of cryptocurrency (Cooper, 2020). In Malaysia, there are more than 20 merchants, including petrol stations and restaurants, which accept cryptocurrencies as a payment method (Luno, 2017).

However, acceptance and use of cryptocurrency is far from universal. Some of the countries explicitly ban the use of cryptocurrency. Most of the central banks and state authorities refuse to recognize cryptocurrency as a medium of exchange even though cryptocurrency trend as a transaction payment is mushrooming across the world. Also, the rising issues of cryptocurrency being used to conduct illegal activities has drawn the attention of authorities to take part in regulating the currencies through different approaches. Malaysian regulators remain ambiguous with the acceptance of cryptocurrencies as the currency is neither accepted as a legal tender nor banned explicitly. Regulations were enacted to control the transactions and protect investors in digital asset trading. In 2019, it was announced that the Securities Commission has authority over all digital currencies, tokens, and crypto-assets. Unauthorised digital asset transactions are against the law, and fines will be imposed.

According to AASB (2016), the market of cryptocurrency, namely Bitcoin, is significant enough to warrant actions. Prochazka (2018) views

that the participation of cryptocurrencies as a stake of wealth should not be disregarded. Entities who hold cryptocurrencies during or at the end of the reporting period should assess how to record and report transactions involving the cryptocurrencies and the balances in the financial statements. However, it remains debatable on the asset qualification, valuation and method to record its transaction in the financial statements (Hyytia & Sundqvist, 2019). The limited-scope guidance under the International Financial Reporting Standards (IFRS) brings confusion to the accounting profession or entities in recording the transactions, including accountants in Malaysia. The vast increasing use of cryptocurrency and inconsistent accounting practices are becoming a more critical issue, especially for entities who trade the cryptocurrency in public trading and those transactions which have a material impact on financial statements. The conflicting accounting treatment and lack of proper guidance from authorities have confused both financial information preparers and users.

When identifying the appropriate accounting policies, different aspects of the cryptocurrency should be taken into consideration. To fit cryptocurrency into accounting standards, it is important to ensure that cryptocurrencies meet the criteria of the standard. Therefore, what are the factors that affect the accounting treatment of cryptocurrencies? Hence, the objectives of this research are to:

1. Explore whether the function of cryptocurrency affect its accounting treatment
2. Investigate whether the basic concept of conceptual framework for financial reporting affect the accounting treatment of cryptocurrency
3. Assess whether legal status affects the accounting treatment of cryptocurrency
4. The next section presents the literature and theoretical framework, followed by the research methods; the results and discussion; and the conclusion are presented in the last two sections.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Cryptocurrency

The cryptocurrency which is also known as digital currency or virtual currency is an encrypted peer-to-peer network used as a medium of exchange in the digital barter (DeVries 2016). Cryptocurrency arises as a by-product of blockchain technology. Blockchain is a decentralized technology to record the transactions of cryptocurrency in a public database, functioning as a distributed ledger (Sivanesan, Ashwn, Vignesh & Manikandan, 2018). Bitcoin is the first cryptocurrency that uses blockchain technology to allow online transactions to be done directly from one party to another without going through a trusted third party (Lee, Li & Yu 2017; Nakamoto 2008). Using cryptocurrency, a transaction can be done through exchanging the value in digital form without any third-party oversight. Cryptocurrency functions are based on the theory of solving the encrypted algorithms to form distinctive hashes that are finite in number. By combining this theory with a network of computers validating the transaction, allows the transfer of hashes which is similar to the transfer of physical currency. According to Kethineni, Cao & Dodge (2018), the source code for cryptocurrency such as Bitcoin is open, individuals can be rewarded with new coins through the mining process.

A study by Ram, Maroun & Garnett (2016) successfully identified various characteristics of cryptocurrency. Based on the study, cryptocurrency is virtual money that is exposed to high price volatility. This could be because the supply of cryptocurrency is finite and it is currently being driven by speculative investors (Ciaian, Rajcaniova & Kancs 2017; Yusof & Al-Harthy, 2018). Furthermore, Gandal, Hamrick, Moore & Oberman (2018) mentioned that the fact that cryptocurrency is neither issued nor backed by any central authority, , it is exposed to market manipulation. In the study, analysis results show that there were numerous suspicious trading activities of cryptocurrency which had caused the spike in the exchange rate of the US dollar and Bitcoin within a short period. This can be further supported by Ram et al. (2016) who argues that the decentralized nature allows cryptocurrency to be transferred easily and is irreversible.

The Underpinning Theory

Institutional theory

The Institutional Theory has been extensively used in accounting research to understand the impact on organizational structures. According to Oliver (1997), it views the organization operates within social norms, values and makes assumptions that certain economic behaviour is appropriate and acceptable. Most of the time, organizations comply with the behaviour because they are taken-for-granted as 'the way we do these things'. To remain sustainable in the environment, organizations need to conform to the rules and belief systems. Organizations conform to institutional pressure for change to receive rewards in return. The rewards can be in the form of improved legitimacy, resources, and sustainability (Scott, 1987).

Since the usage of cryptocurrencies is growing, organizations are expected to conform to institutional pressure by incorporating it into their operation to meet public expectations and demands. This is also known as coercive isomorphism. As mentioned in the introduction, high prestigious companies such as Wikipedia, Microsoft, and Amazon accept digital currencies for payment. It is believed that it will influence smaller organizations to practice the use of cryptocurrencies to conform to the social norms. In such circumstances, it is undeniable that governance structures such as the accounting professionals, need to follow the norms. Accounting professionals need to be ready to overcome prompting challenges by cryptocurrencies in the business environment. Hence, it is crucial for accounting professionals to understand the underlying factors that affect accounting treatment for cryptocurrencies.

Subjectivism

According to Saunders, Lewis and Thornhill, (2012), subjectivism holds the view that social entities are formed based on the perceptions and actions of individuals in society. Therefore, it is crucial to understand the situation as well as the social details of a situation. Collis & Hussey (2014) state that reality is constructed by society and there are numerous realities as each individual has their own perception of reality.

At present, no standards regulating the accounting for cryptocurrencies exist and thus it remains unexplored. In such a situation, the nature of

reality requires to be explored based on a subjectivist approach (Hyytia & Sundqvist, 2019). The accounting for cryptocurrencies depends on the social constructs to make accounting decisions. The assumptions made on the accounting decision need to be captured using a subjective approach. This is because these are influenced by perceptions and actions of social actors and based on judgement. In addition, the presentation of financial statements may vary from one country to another as it is influenced by factors such as economic, social and legal requirements of different countries.

Function of Cryptocurrency

The idea of cryptocurrency is to combine fiat money's features with the convenience of electronic transactions. Cryptocurrency preserves some of the characteristics of fiat money while having the advantages of an immediate transaction can be made (Pirjan, Petrosanu, Huth & Negoita 2015). It functions similarly to the traditional method of payment and enables users to make payment for a wide range of products and services. Cryptocurrency such as Bitcoin can be used to make payments in exchange for goods and services at Bitcoin Merchants (Ram et al., 2016) such as Wikipedia, Microsoft and Amazon. Cryptocurrency , therefore, serves as a medium of exchange to facilitate transactions.

According to Sauer (2016), cryptocurrency satisfies the function of the unit of account when the currency is accepted by users. Since the popularity and usage of cryptocurrencies are mushrooming, cryptocurrencies fulfill the function. This is further supported by Carrick (2016) who states that cryptocurrency such as Bitcoin can be calculated and exposed to mathematical operations since it is equally created. Despite cryptocurrency meeting the unit of account requirements, there remains debatable as the ability of cryptocurrency to value goods and services consistently due to its fluctuation in price.

About 10 years after cryptocurrency's first release, economic agents tend to acquire it not only to pay online transactions but also to invest in it to earn future capital gains (Prochazka, 2018). An empirical study of Bitcoin users by Glasser et al. (2014) indicates that users tend to keep their cryptocurrency as an asset in hope that it will store up value for use in the future instead of using them as currency. It was also found out that

cryptocurrency can be used to diversify investors' portfolios. Thus, Ram et al. (2016) claimed that cryptocurrency meets the second function of fiat money, which is the store of value. Ranaldo & Soderlind (2010) argues that investors gauge the credibility of cryptocurrency as a store of value because it is exposed to high price volatility.

As discussed above, cryptocurrency is being used by users for different purpose. Cryptocurrency is being driven by speculative investors who hold cryptocurrency with the intention to reach capital appreciation (Prochazka, 2018 & Glasser et al. 2014). In other words, cryptocurrency is being treated as investment vehicle by users (Luther, 2016). Cryptocurrency is traded at different prices as it depends on bids and offers (Yermack, 2015). Therefore, the value of cryptocurrency may vary according to its supply, demand and public perspective on its worthiness. As a result, it leads to fluctuation in the price of cryptocurrency (Yusof & Al-Harthy, 2018). In addition, the exchange of digital currency can be done in the ordinary course of business as well as holding it to provide exchange services. An entity may hold cryptocurrency to resell them to customers. Prochazka (2018) mentions that in such circumstances, cryptocurrency should be treated as a commodity owned by broker-traders. Broker-traders refers to individuals who buy or hold commodities and sell them in the near future to generate a profit.

Essentially, the way cryptocurrency is used by its holder may affect under which categories a cryptocurrency is classified. This is because classification and accounting treatment of assets or liabilities depends on entity's business model and intentions (Daniel & Green 2018; Grant Thornton, 2018; KPMG, 2019; Prochazka, 2018). This is further discussed in Section 2.6. Since cryptocurrency appears to provide different functions to users, the measurement model that should be applied when recording cryptocurrency transactions may vary. However, there remain arguments on the proper presentation in financial statements that reflect relevant and decision-useful information (Prochazka 2018). Hence, the hypothesis formed is as below:

H_1: The function of cryptocurrency has a significant impact on the accounting treatment of cryptocurrency.

Conceptual Framework

At present, most countries do not provide official accounting pronouncements about the recognition and measurement of cryptocurrency on both the assets and liabilities side of the accounting entry. In implication, the current complex challenges for financial information preparers is to identify the most appropriate method to account for the cryptocurrency while taking into consideration the nature of the cryptocurrency.. The two fundamental qualitative characteristics of the conceptual framework which are relevant and a faithful representation that should be considered when identifying the accounting treatment (Tan & Low, 2018). In addition, it is important to understand the underlying economic substance to identify the best fit under the current accounting standards (Tan & Low, 2018). Meanwhile, a comprehensive understanding of the distributed ledger technology used by cryptocurrency and relevant accounting concepts are crucial in dealing with the accounting of cryptocurrency (Daniel & Green, 2018). When accounting the transaction in the form of digital values, the method in which transferred right or value is generated and technology utilized is not important for the time being. In fact, the economic content of the cryptocurrency, such as the rights and obligations embodied in the currency, is the one that matters. Thus, the emphasis is placed on economic reality instead of substance. Based on the Conceptual Framework for Financial Reporting 2018, the basic concepts should be borne in mind in the recognition and measurement of cryptocurrency (Hyytia & Sundvqist, 2019).

Substance over form principle

The substance over form principle is an accounting concept that ensures that the economic substance of a transaction or event should be recognized and measured in the financial statement (Hanif, 2016). The substance over legal form principle is fundamental to a faithful representation and reliability of financial information. Faithful representation is achieved when the information included in the financial statement encompasses quality of neutrality, free from material error, completeness, and reliability. Faithful representation ensures that the financial statements prepared represent the economic phenomenon clearly (Tan & Low, 2017). By requiring financial statement preparers to actively assess the economic reality of a transaction or event that needs to be accounted for, they will find it burdensome to

explain the transaction in a way that does not fairly represent the substance of the situation (Sixt & Himmer, 2019).

True and fair view principle and disclosures

The International Financial Reporting Standards (IFRS) views that true and fair presentation as one of the most crucial accounting principles, regardless of the new standards or the standards which they replace (Financial Reporting Council, 2014). Financial statements must provide a true and fair view of the net assets, financial position as well as the results of operations. Fair presentation of financial statements can be achieved through compliance with IFRS. If an entity is unable to achieve the requirement due to special circumstances, additional information which is material should include the notes on financial statements to satisfy the true and fair requirement principle. Therefore, disclosures are considered an essential part to meet the true and fair requirement principle. By applying this rule, assessment of any rights associated with each type of cryptocurrency, in terms of its economic content, is relatively important to help in providing true and fair accounting. In some cases, the legal form of the transactions is valid; nonetheless, to provide a fair view of the financial report, the principle of substance over form shall be applied. Determining the significant risks and rewards associated with cryptocurrency is an integral part in establishing appropriate accounting treatment. Tan & Low (2017) argue that a faithful representation of the transaction also depends on the business model of the entity. The fact that cryptocurrency is available in various types and forms has urged appropriate disclosures on recognition and measurement methods applied for each type of cryptocurrency to help users obtain a true and fair understanding of it (Sixt & Himmer, 2019).

According to Sixt & Himmer (2019), the Concept Framework for Financial Reporting should be set as a basis to record any cryptocurrency transaction. This is essential to ensure that the account recorded faithfully represents the transaction and the information provided is relevant and reliable. Therefore, the hypothesis developed is :

H_2: The basic concept of a Conceptual Framework has a significant impact on the accounting treatment of cryptocurrency.

Legal Aspects of Cryptocurrency Recognition

The nature of cryptocurrency of not being regulated by any authorities that provides financial freedom and privacy has attracted many people to use it. The anonymous nature of the cryptocurrency provides opportunities for some members of the public to abuse it for illegal activities such as money laundering, terrorism, and tax evasion (Kethineni & Cao 2019; Yusof & Al-Harthy 2018). Many security experts worry that the cryptocurrency will slowly become criminal currency (Baron, O'Mahony, Manheim & Dion-Schwarz, 2015). Gandal et al. (2018) found out that suspicious trading is highly related to the rise in price of cryptocurrency itself. According to a study carried out by Ernst and Young, the transaction anonymity of cryptocurrency urges the rise of operational risks. Hence, this has urged the government to come up with suitable regulations without affecting the freedom of transactions (Breu & Seitz, 2018). Thus, this has theoretically led to the government embarking on a critical examination related to cryptocurrency. Many countries have actively executed regulations related to cryptocurrency (Brown-Hruska & Wagener 2018; Haig 2018; Miseviciute 2018).

The government has applied a mixed approach to regulate cryptocurrencies in 2015. Some countries explicitly banned the application of cryptocurrency whereas some countries have come up with a regulation to monitor the transaction of cryptocurrency. In addition, there is no single approach on the recognition of cryptocurrency from the legal aspects (Fomina, Moshkovska, Avhustova, Romashko, & Holovina, 2019). Some countries such as the United States view cryptocurrency as a commodity where enterprises which are involved in cryptocurrency exchange need to obtain a license to keep records of all their transactions. Besides that, Japan has recognized cryptocurrency to have the same function as the national currency (Fomina et al., 2019). The authorities in Japan have also decided to regulate the circulation and taxation of cryptocurrency in the country. In 2018, the Accounting Standards Board of Japan started to be involved in the practical management of cryptocurrency accounting and has implemented some related standards as part of the GAAP. In contrast, cryptocurrency is not legally recognized in Switzerland. All the transactions are treated as payment facilities but not a commodity (Fomina et al., 2019). The underlying reason that a mixed approach is being adopted by different governments is

that they do not want to overwhelm the Fintech sector with new regulations which will eventually affect the transaction of cryptocurrency (Peter, 2015). Moorthy (2018) also stated that the regulation of cryptocurrency is needed to address the unstable market of cryptocurrency. The market of cryptocurrency fluctuates based on the market demand and market speculation of investors. In addition, the issue where no parties can provide further assistance to rectify problems that arise during the transaction has also called for the need for regulation for the system.

In Malaysia, the central bank has announced that cryptocurrency is not recognized as legal tender in the country. Meanwhile, the Malaysian government exercises a warm approach in handling transactions related to cryptocurrency (Moorthy, 2018). Government and related authorities are in the midst of determining methods to regulate the system. Numerous debates have been going on among the financial bodies and policymakers for the past few years. On 27th February 2018, new legislation, namely, Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) have been enforced (Moorthy, 2018). This legislation aimed to impose an obligation to individuals who engage in cryptocurrency transactions; thus, promoting greater transparency in such transactions (Haig, 2018). Starting from 31st January 2019, the Securities Commission Malaysia (SC) (2019) has amended the Guidelines on Recognized Markets. A new requirement has been introduced for electronic platforms that provide digital asset services. The revised guidelines stipulate that individuals should register themselves as a recognized market operator under SC to conduct a digital asset platform. The revision of guidelines is part of the initiative by the regulator to protect digital assets traders and promote innovation (Tan, 2019). Despite cryptocurrency not being regulated, individuals and businesses who are involved in cryptocurrency trading are required to comply with the Income Tax Act 1967 (The Star, 2019). Any income accruing and derived from Malaysia is subject to tax charges. The Inland Revenue Board (IRB) has also stated that "all traders should adhere to the Malaysian tax requirement by keeping proper records for audit purposes and disclose any transactions from the cryptocurrency trading when requested by IRB".

Each country has recognized different legal status concerning the use of cryptocurrency in their countries. How transactions of cryptocurrency are recorded and disclosed in accordance with the applicable requirements

is eventually a legal matter which needs to be looked into (McGuire & Massoud, 2018). Therefore, the following hypothesis is developed:

H_3: Legal status and regulation of cryptocurrency have a significant impact on the accounting treatment of cryptocurrency.

Accounting Measurement of Cryptocurrencies

Accounting measurement is one of the crucial parts in accounting transactions. The measurement of cryptocurrency appears as an issue that need to be explored. The model that is applied for measurement should result in a faithful representation of information to users. Due to the nature of cryptocurrency which has high volatility, scholars and professional accountants support that cryptocurrency should be measured at fair value. An empirical study of Ram et al. (2016) argues that measurement using the cost model does not provide useful information and does not achieve fair presentation. On the other hand, fair value measurement may help to communicate the volatility in the price of cryptocurrency and such information are of interestto users. Measurement using fair value is favorable especially when a cryptocurrency is being used for a store of wealth or investment purposes (Ram et al., 2016). This is further supported by a study done by Prochazka (2018) who views that fair value is the most relevant source to reflect useful information for financial information users, especially when cryptocurrency holds for investment purposes. This is because that is the value investor will transact in exchange for other goods or services or realize for the investment. In this case, the entity needs to apply the IFRS13 Fair value measurement. If there is an active market, level 1 valuation can be performed (Leopold & Vollmann, 2018).

To measure cryptocurrency using fair value, it needs to meet the accounting definition and the standards' criteria. In theory, it is argued that the transaction of cryptocurrency can be reflected in the financial statements as Cash or cash equivalents (IAS7), Financial assets (IAS32), Intangible assets (IAS38) or Inventory (IAS2) (Daniel & Green 2018; Grant Thornton, 2018). There are many possibilities for classification of cryptocurrency; yet, the accounting standard-setters still lag in delivering the right accounting framework to cryptocurrency users as there is no accounting standard that best fits cryptocurrency due to its nature and function. Prochazka (2018)

claimed that the selection of the accounting model shall be determined with reference to the purpose of acquiring cryptocurrency. The accounting model to be used when cryptocurrency is used as means of payment may be different from cryptocurrency that is held for investment purposes.

Despite cryptocurrencies serving as a medium of exchange, it is often argued that cryptocurrencies cannot be measured under IAS7 because cryptocurrency is subject to severe volatility (Sixt & Himmer, 2019). Meanwhile, some argue that cryptocurrencies are yet to be widely accepted as a medium of exchange, because some countries have banned the use of cryptocurrencies (Fomina et al., 2019). Thus, it cannot be measured under IAS 7. According to Leopold & Vollmann (2018), it does not meet the definition of the financial asset because there is no contractual relationship for the exchange of cryptocurrencies. As a result, cryptocurrency cannot be classified and measured at fair value under the IAS32. Furthermore, it is proposed that cryptocurrency generally meets the accounting definition of intangible assets under IAS38 Intangible Assets (KPMG, 2019). The initial measurement of intangible assets should be at initial cost. When an entity acquires cryptocurrency through paying cash or cash equivalents, the measurement is relatively straightforward. However, the IAS38 does not apply to cryptocurrency that is held by an entity for sale in the normal course of business (Daniel & Green 2018; McGuire & Massoud, 2018). Instead, it will fall within the scope of the IAS2 Inventories. IAS 2 does not explicitly define commodities, yet its description corresponds to the economic model of holding cryptocurrency for reselling purposes. The inventory will be carried at a lower cost and net realizable value. An exception applies to commodity broker-traders. In such circumstances, the entity needs to recognize any change in the fair value less costs to sell during the period of change in the financial statements.

Most of the time, cryptocurrency is received in exchange for goods or services. In such circumstances, the entity needs to assess the relevant accounting standards. For instance, when cryptocurrency is accepted in the exchange of goods or services, the entity is likely to record the transaction in accordance with the IFRS 15 Revenue from Contract with Customers. According to IFRS 15, when a customer promises to pay consideration in a form other than cash, the entity should measure the non-cash consideration, which can be a cryptocurrency, using a fair value method.

Figure 1 shows the research framework proposed by the researcher for this study. The research framework is proposed based on the literature review above.

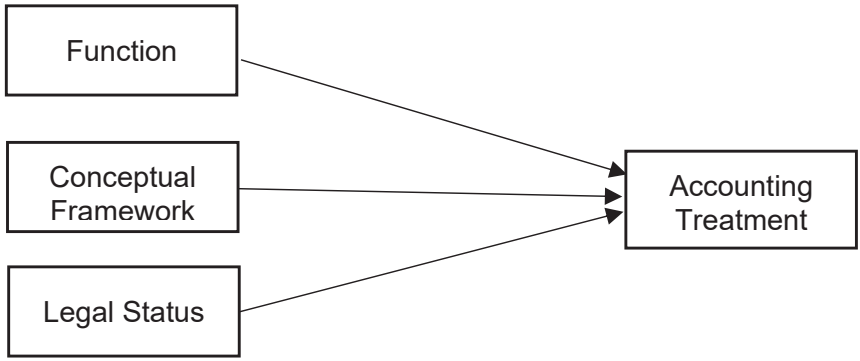

Figure 1: Research Framework
(Source: Developed from research)

METHODOLOGY

Population and Sample

According to statistics done by the Malaysian Institute of Accountants (2020), there are more than 36,000 qualified accountants in Malaysia. In this study, targeted respondents were individual accountants in Malaysia. The criteria that had been developed during the selection of respondents were the accountants who have knowledge of cryptocurrency and can provide their perspectives, since not every accountant is exposed to cryptocurrency. This is to ensure that the data outcome is not distorted and is reliable. The non-probability sampling method, namely, purposive sampling, was used during the data collection process. In this method, respondents are selected based on their knowledge and expertise related to the research topic (Etikan & Bala 2017). The purposive sampling method helps researchers to select respondents who were able to provide desired information to meet the current research objectives (Sekaran & Bougie, 2013). In this context, the respondents were required to have a certain level of understanding about accounting standards and measurement choices to answer the questionnaires. Hence, the researcher asked respondents' familiarity with cryptocurrency in the questionnaire. According to Green

(1991), the sample size of quantitative research can be determined by using Harris' rule-of-thumb, N≥50+8m, where N signifies the sum of participants and m signifies the sum of independent variables utilised in the research. This study contains three independent variables which included functions, Conceptual Framework, and legal practices. Thus, the suggested sample size of this study must be more than or equal to 74, which is derived from the equation of N≥50+8(3). In total, 181 questionnaires were collected from respondents personally and through the google form survey. The researcher successfully approached accountants from different states. In total, the samplesize was 119 respondents. The response rate was about 66%, which means that the sample size requirement was met.

This survey successfully approached 53 males and 66 females local respondents. Most of the respondents are bachelor degree holders, which represented 89.1% of the sample size. The remaining sample size comprised respondents who had the highest education level of diploma and masters and above, which constituted 0.8% and 10.1% accordingly. In relation to professional qualifications, most of the respondents have pursued the ACCA (37.8%) and accounting degree (36.1%). The remaining respondents have pursued the CPA, ICAEW, and CIMA. 43.7% of the respondents were somewhat familiar with cryptocurrency, followed by 33.6% of respondents who were slightly familiar with cryptocurrency. Respondents who were moderately and extremely familiar with cryptocurrency constituted 21% of the sample size.

Research Instrument and Measurement

This research mainly focussed on primary data which was collected through a questionnaire survey. Close-ended questions were prepared for the questionnaire. The measurement used in each question is a 6 point Likert-style rating scales, where 1 = strongly disagree; 2 = disagree; 3 = slightly disagree; 4 = slightly agree; 5 = agree and 6 = strongly agree. 6 points Likert scales were employed in the questionnaire for each variable as it enhanced the reliability and preciseness of measurement as there was no neutral or middle choice included. Elimination of a neutral choice ensured that the Likert scale categories are developed similarly as physical measurement and fit well with statistical models (Nemoto, 2014).

Convergent reliability assesses the degree to which a measure is positively related to the alternative measures of similar conceptual variables. Outer loadings of indicators and the average variance extracted (AVE) were used to measure convergent reliability. A high outer loading reflects that the associated indicators have many similarities. According to Hair, Hult, Ringle and Sarstedt, (2017), a AVE value which is greater than 0.5 (>0.5) is considered sufficient. This is because more than half of the indicators' variance is explained by the construct. Table 1 shows that most of the dependent variables have out loading which is greater than 0.7, except for AT1 and AT11. The researcher decided to keep these two items in the model as they didnot affect the AVE and the values were close to 0.7. In relation to all the three independent variables, all the items had outer loadings which were greater than 0.7, except for FT3 and CF4. The items were kept in the model as information reliability is considered as one of the important components in the function of cryptocurrency and the Conceptual Framework. Thus, removing the item might affect content validity. In addition, Afthanorhan (2013) argues that factor loading which is higher than 0.5 (>0.5) is considered acceptable; thus, it can be retained in the model. The remainder FT1, FT2, FT9,CF1, CF2, LS1, LS2, LS3, LF4, AT2, AT3, AT9, AT10 were removed due to low loadings. Based on Table 1, the Cronbach's Alpha value of each variable was greater than the desirable level. The variables 'function' and 'accounting treatment' have the same highest value, which is 0.867. The values of Conceptual Framework and legal status are also acceptable, which are 0.798 and 0.848 respectively. Since cryptocurrency's research still at its exploratory stage, a value between 0.6 to 0.7 is accepted (Hair, et al. 2017). Furthermore, all the variables' AVE value is greater than 0.5 as recommended by Hair et al. (2017). The variable 'function' had the highest AVE value of 0.602. In contrast, 'accounting treatment' had the lowest AVE value of 0.519. Since all the variables met the acceptable level of AVE, it indicated that there is sufficient convergent validity for the construct.

Table 1: Reflective Measurement Model

Constructs	Items	Loadings	AVE	Cronbach's Alpha
Function	FT3	0.666	0.602	0.867
	FT4	0.752		
	FT5	0.814		

	FT6	0.730		
	FT7	0.772		
	FT8	0.897		
Conceptual Framework	CF2	0.741	0.552	0.798
	CF3	0.741		
	CF4	0.683		
	CF5	0.806		
	CF6	0.737		
Legal Status	LS5	0.724	0.619	0.848
	LS6	0.759		
	LS7	0.820		
	LS8	0.846		
	LS9	0.780		
Accounting Treatment	AT1	0.693	0.519	0.867
	AT4	0.720		
	AT5	0.721		
	AT6	0.776		
	AT7	0.743		
	AT8	0.714		
	AT11	0.677		
	AT13	0.714		

Note: FT1, FT2, FT9 CF1, CF2, LS1, LS2, LS3, LF4, AT2, AT3, AT9, AT10 and AT12 were deleted due to low loadings

Discriminant validity assesses whether the measure of constructs that are not supposed to be highly related to each other shows results that they are not highly correlated to each other (Hair et al., 2017). HTMT values which are close to 1 indicate that there is no discriminant validity. Discriminant validity can be assessed using the Fornell-Larcker criterion. According to Fornell-Larcker (1981), the criterion for Fornell-Larcker is "the value of the square root of AVE must be higher than the construct's highest correlation with any other construct model". Table 3 shows the Fornell-Larcker extracted for all the latent variables. The value at the top of each variable, which indicates that the value of AVE's square root, are greater than the value of other remaining latent variables. The values are 0.720, 0.743, 0.776 and 0.787 respectively. Based on Kline's (2011) criterion, the HTMT value should not exceed a threshold of 0.85 in order to conclude that

there is discriminant validity. In addition, Henseler, Ringle, and Sarstedt, (2015) stated that liberal criterion aims to determine the HTMT inference. When the 90% bootstrap confidence interval's range does not contain value of 1, it indicates that the discriminant validity is established. As shown in Table 2, all the values were lower than threshold of 0.85. Using the liberal criterion, the interval range for every construct fall outside of 1. Thus, the present study had achieved sufficient discriminant validity.

Table 2: Fornell- Larcker

	Accounting Treatment	Conceptual Framework	Function	Legal Status
Accounting Treatment	0.720			
Conceptual Framework	0.510	0.743		
Function	0.428	0.371	0.776	
Legal Status	0.461	0.156	-0.015	0.787

Note: Diagonals represent the square root of the AVE while the off-diagonals represent the correlations

Table 3: Heterotrait-Monotrait Ratio (HTMT)

	Accounting Treatment	Conceptual Framework	Function	Legal Status
Accounting Treatment				
Conceptual Framework	0.605 CI.85 (0.395, 0.775)			
Function	0.476 CI.85 (0.292, 0.668)	0.420 CI.85 (0.268, 0.580)		
Legal Status	0.516 CI.85 (0.312, 0.704)	0.207 CI.85 (0.111, 0.325)	0.091 CI.85 (0.082, 0.082)	

RESULTS AND DISCUSSION

Results

The Partial Least Square (PLS) path analysis was utilized for data analysis in the present study (as shown in Table 4 and Figure 2). Table 4 shows that the R^2 value of the dependent variable (Accounting Treatment) for this research is 0.492. It reflects that 49.2% of the variation in 'Accounting Treatment' is explained by the variance in all the 3 independent variables, which are Function, Conceptual Framework, and Legal Status. The remaining 50.8% is due to other factors.

T-statistics from bootstrapping were used to assess the significance of the hypotheses. The empirical findings explained that all H1 to H3 are statistically significant. In the present study, the function of cryptocurrencies significantly affects the accounting treatment where t-value (4.336> 2.58, p<0.01) Result also shows that the Conceptual Framework affects the accounting treatment of cryptocurrencies as t-value (4.738>2.58, p<0.01). In addition, legal status has significant impact towards the accounting treatment of cryptocurrencies, t-value 5.968>2.58, p<0.01). Hence, all H1, H2, H3 are accepted. In other words, the independent variables have a significant relationship with the dependent variable at a confidence interval of 99%. Therefore, there are relationships between the independent variables (Function, Conceptual Frameworks, and Legal Status) and the dependent variable (Accounting treatment of cryptocurrency). It reflects that the independent variables are the factors that influence accounting treatment of cryptocurrency.

The influence of predictor constructs towards endogenous constructs in multiple regression is determined through the computation of F2 (Hair et al., 2017). F2 values of 0.35, 0.15, and 0.02 represent a larger, medium, and small effect sizes accordingly. Table 4 shows that the effect size of all the independent variables are greater than 0.15. Legal Status has the highest effect size of 0.326, followed by Conceptual Framework and Function which have 0.179 and 0.164 respectively. Since all the values are greater than 0.15, it reflects the effect size of all independent variables on the endogenous latent variables is considered medium.

Q2 is used to identify the predictive relevance. This is important to accurately estimate data which are not included in estimating the model. Q2 value which is greater than 0 reflects the model's predictive relevance for the endogenous construct. The result of Q2 for the study is shown in Table 4. The researcher applied an omission distance value of 6. The result of blindfolding procedures derives Q2 value of 0.239, which is greater than 0.

Furthermore, q2 is used to measure the effect size of Q2. It assesses the relative contribution of exogenous constructs towards the Q2 value of the endogenous latent variable. According to Hair et al. (2017), the value of 0.02, 0.15, and 0.35 reflects a small, medium, and larger predictive relevance accordingly. In the present study, all the 3 variables hada q2 value

of above 0.02; thus, they have small predictive relevance for the endogenous construct of this study. The variable 'Legal Status' showed the highest value of 0.108 whereas 'Conceptual Framework' and 'Function' were 0.059 and 0.051 respectively.

Table 4: Path Coefficients and Hypothesis Testing

Hypothesis	Relationship	Standard Beta	Standard Error	t-value	Decision	R2	f2	Q2	q2
H1	Function -> Accounting Treatment	0.312	0.072	4.336	Supported	0.492	0.164	0.239	0.051
H2	Conceptual Framework -> Accounting Treatment	0.330	0.070	4.738	Supported		0.179		0.059
H3	Legal Status -> Accounting Treatment	0.414	0.069	5.968	Supported		0.326		0.108

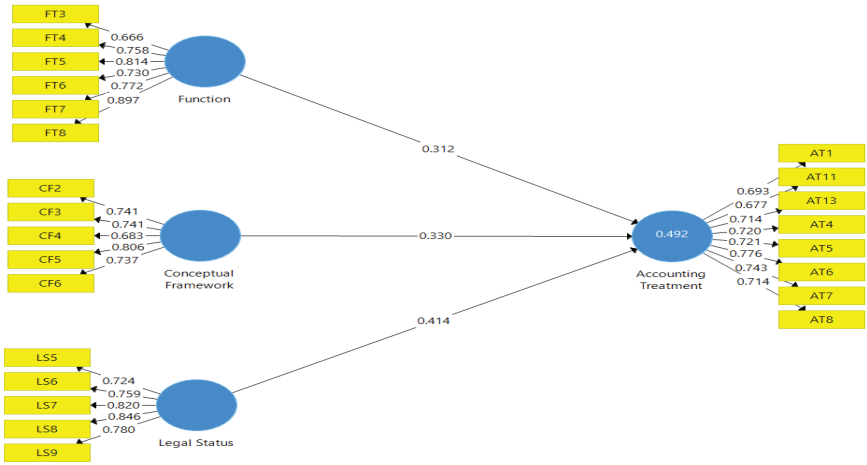

Figure 2: Structural Model
(Source:Developed from research)

Based on the findings in Table 4, the function of cryptocurrency's impact on the accounting treatment of cryptocurrency was found to be significant, with a path coefficient of 0.303 and p-value of 0.00. Since the p-value is smaller than the 0.05 significance level, it reflects that different methods of cryptocurrencies affect the way it should be accounted for. The

result is consistent with studies of Leopold & Vollmann (2018), Prochazka (2018), and Sixt & Himmer (2019), as well as articles published by professional accounting firms such as KPMG (2019) and Grant Thornton (2018). For instance, it is agreed by the majority of the respondents that cryptocurrency can be used for speculative purposes. This is because cryptocurrencies which have high price volatility are often used as investment vehicles as mentioned by Luther (2016). Thus, respondents have agreed that cryptocurrencies should be measured at fair value, especially when there is an active market. In addition, a study by Sixt & Himmer (2019) argued that it is appropriate to measure cryptocurrencies at market value, such as fair value, because cryptocurrencies are traded in a market where information is observable. Besides that, 76.5% of the respondents agreed that the cryptocurrencies can be used for ordinary courses of business, of which 91.6% agreed that it will be treated under IAS2 Inventories. Under IAS 2, cryptocurrencies will be accounted at 'fair value less cost to sell with the changes in fair value through profit or loss'. 93.3% of the respondents have agreed with the measurement. Sixt & Himmer (2019) and KPMG (2019) have also proposed such measurement when cryptocurrencies are traded in ordinary business. Based on the discussion above, it shows that the different purposes of holding and utilizing cryptocurrencies may affect its accounting treatment. The results of the findings are also well supported by past studies and articles.

Similarly, the present study found out that there is a significant relationship between the basic concept of Conceptual Framework and accounting treatment of cryptocurrency. As argued by Tan & Low (2017) and Sixt & Hammer (2019), the Conceptual Framework for Financial Reporting should be set as the basis to record any cryptocurrency transaction. This is important to ensure that the transactions are faithfully presented and information provided is relevant and reliable. A study by Hyytia & Sundvqist (2019) also found out that financial information provided for users should be relevant and useful. Thus, both relevance and faithful representation concepts are crucial when accounting for cryptocurrencies. This is also supported by most of the respondents of this study. 95% of the respondents agreed that it is important to present transactions related to cryptocurrencies whereas 100% of the respondents agreed that information included should be relevant. This is essential as stakeholders rely on information in financial reports to make well-informed decisions. It is believed that measuring

cryptocurrencies using the fair value helps to enhance the usefulness of financial information as Barth (2006) argues that the fair value measurement enables financial preparers to meet some of the qualitative characteristics of financial reporting. When accounting for cryptocurrency, the concept of faithful representation is vital to ensure that information is prepared in a way that takes into consideration economic substance which varies with the reporting entities. The concept of relevance is also important when preparing financial information. However, financial preparers need to exercise judgement to assess whether the information disclosed is relevant to the users. This is because the concept of relevance may vary for shareholders who strongly reject the use of cryptocurrency compared to other shareholders who do not find this issue significant. Shareholders who are against the use of cryptocurrency may find it important for the company to communicate whether they are holding cryptocurrencies, as the information may affect such persons' financial decisions. In this case, the information related to cryptocurrencies is relevant; however, such information is not relevant for shareholders who do not find holding cryptocurrencies an issue, as the information is unlikely to affect their financial decisions. Therefore, there are many challenges related to accounting for cryptocurrencies that need to be resolved in order to provide relevant and useful information. As a result, the above basic concepts of Conceptual Framework appear as the factors that may affect the accounting treatment of cryptocurrency. Standard-setters should ensure that the guidelines for accounting of cryptocurrency met these criteria to enhance the quality of accounting.

The present study also showed that there is a significant relationship between the legal status and regulation of cryptocurrency and its accounting treatment. The standard setters need to take note of the legal aspects when identifying the accounting treatment for cryptocurrencies. Whether or not a country accepts cryptocurrencies as a medium of exchange may affect the way cryptocurrencies can be accounted for. This can be seen when the function of the medium of exchange is one of the criteria under IAS7 Cash and Cash Considerations. The fact that some countries explicitly banned the use of cryptocurrencies in their countries reflects that such currencies are not widely accepted as medium of exchange. Therefore, regulators cannot simply allow cryptocurrencies to be classified and measured under IAS7.

Furthermore, since the regulations in Malaysia have demonstrated that the onus is on the cryptocurrencies (Moorthy, 2018), it is advised that cryptocurrencies holders provide voluntary disclosures which help to enhance transparency of transactions. The Inland Revenue Board has implemented new regulations that require individuals or businesses that are involved in cryptocurrency trading to disclose the transactions made. This is to ensure that there are proper records for audit purposes. In addition, the financial statements prepared should meet the requirements of AMLA as businesses that are involved in cryptocurrencytransactions are subjected to obligation as the reporting institutions under AMLA. Therefore, the way cryptocurrencies are accounted for should be able to reflect the true and fair view of the transactions. Financial information preparers of entities must ensure that the transactions of cryptocurrencies are recorded and disclosed in a way that complies with laws and regulations. In this case, the auditor plays an important role in ensuring that the entity prepares its financial statement while complying with laws and regulations. The responsibilities are outlined in the ISA 250 Consideration of Laws and Regulations in an Audit of Financial Statements. Auditors should detect whether their audit clients who are involved in exchange of cryptocurrencies have registered themselves as market operators under SC; thus, helping management to discharge their responsibilities. In short, the standard-setters and the financial information preparers need to be alert about all the existing rules and regulations related to cryptocurrencies, and ensure that all information as required by the rules and regulations are incorporated in the financial statements.

CONCLUSION

Implication of Study

Based on the results mentioned above, it is interesting to note that the result reveals the impact of different functions of cryptocurrencies, The Conceptual Frameworkand legal status and regulations have an effect on the accounting treatment for cryptocurrencies. Since there is a lack of proper guidelines on how to account for cryptocurrencies, it is believed that this study provides better insights into factors that may affect the accounting treatment of cryptocurrencies.

This paper is useful to cryptocurrency users, financial information preparers as well as professional accounting bodies, because it provides a deeper understanding of factors that influence the accounting treatment of cryptocurrency. They should assess and look into these factors while identifying the appropriate accounting treatment. Thus, they could enhance their companies or clients' accounting information quality. The financial statements information should be presented in a true and fair view, and reliable for financial information users as stressed on research objective 2.

Furthermore, this paper aimed to provide useful information to the standard setters such as the Malaysian Accounting Standard Boards (MASB) by highlighting the factors that need to be considered when they determine the most appropriate accounting guidelines for the financial information preparers and professional accounting bodies to follow. Since accounting guidelines aim to improve the reliability and comparability of financial statements, the guidelines are able to help an accountant to prepare financial statements in a manner that can achieve such objectives. Therefore, the standard setters should be concerned with the factors that matter.

Limitation and Recommendation for Future Research

There are few limitations in this study. Firstly, the outcome of this study is only applicable to the Malaysian context. This is mainly because all respondents for this study are Malaysians and it is believed that they provide their responses based on the Malaysian context. Furthermore, the legal status and requirements discussed in this study are based on the current situation in Malaysia. Secondly, the results of this study are appropriate for the current time only. Since the usage of cryptocurrencies is still subject to many arguments by different authorities, related changes might occur. In this case, future researchshould be carried out from time to time to provide relevant and reliable information. Thirdly, this study only succeeded in identifying factors that have a significant impact on the accounting treatment. Future researchis recommended to further assess whether there is a positive or negative relationship between other factors and the accounting treatment of cryptocurrencies.

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