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**ACCOUNTING FOR DIGITAL CURRENCY: PRELIMINARY
EVIDENCE FROM MALAYSIA**

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Malaysia, yapst@taru.edu.my*Abstract*

The increasing popularity in digital currency usage is pressuring accountants to undertake stewardship in recognizing, measuring and disclosing its transaction. Despite the increased usage, there is still a lack of guidelines in the international accounting standards resulting in accounting treatment variation for digital currency transactions. A few existing accounting standards were considered depending on the situations whether one receives, issues or trades the currency. The objective of this paper is to survey the accounting of digital currency using stewardship and neoliberalism principles. Neoliberalism requires a shift towards reporting which emphasises on “faithful representation” in providing useful information to users. This paper analysed data received from 173 accounting and finance experts working in various industries. For the application of stewardship in accounting, “Carrying amount of digital currency should be tested for impairment” scored the highest mean of 4.47, followed by “Accounting needs to reflect the future cash flow inherent in the digital currency” (mean = 4.34) and “Digital currency is recognised when there is an objective control evidence” (mean = 4.31). Neoliberalism requires a transaction to be accounted for the future application using fair value measurement. “Volatility in the digital currency’s price must be made known to users” scored a highest mean of 4.43, followed by “Emphasis should be placed on accounting the economic substance of the digital currency (mean = 4.38). The findings of this paper contribute to the literature by offering views to the standard setters and professional bodies to explore applicable accounting treatments for the digital currency.

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Keywords: Digital currency, stewardship, neoliberalism, accounting, Malaysia.

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1. Introduction

In this new era, many people know the existence of digital currency, but many may not know what exactly it is and how it works. Digital currency is known as electronic money which appears as a type of currency in the digital form. This digital currency is in an intangible form and it is different from the physical currency. It relies on cryptography and controls by a decentralized system. It is saved and recorded as money balance electronically on devices, hence it needs the Internet to transact. The digital currency is very convenient as it allows immediate and direct transactions seamlessly on making borderless ownership transfer. There are many advantages of using digital currency. Firstly, the payments in digital currencies are made directly between the transacting parties without any intermediaries. It also incurs low-cost charges or zero charge in comparison with traditional transactions made through the bank. Since digital currency is based on the electronic transactions, dealings can be recorded and maintained transparently in digital form.

Since 2008, the digital currency known as Bitcoin was used in the first transaction in 2009 by the founder - Satoshi Nakamoto. Generally, there are a few well-known digital currencies such as Bitcoin, Ethereum, Ripple, Litecoin, etc. These kinds of digital currencies are slowly becoming mainstream due to the rising popularity in the business and its possibility in affecting the future e-commerce transactions; thus, organizations and responsible parties are concerned about its accounting treatments. However, till to-date, there is no exact guidance on the accounting treatment for the digital currency transactions.

As interest in digital currencies continues to rise in Malaysia amid Bank Negara Malaysia's stance not to impose an overall ban on these cryptocurrencies; the government may soon have to consider taxing gains made from trading these assets. Countries like the U.S, Singapore and Australia do have tax treatments that accept digital currencies as payments. However, such related transactions remain tax-free in Malaysia. There have been businesses cases using the digital currency as the payment, for example, the authorities stopped Proton dealership in Selangor after they announced that it would be receiving Bitcoin and Ether as the remittance for purchase of a car. Lawyer and Tax barrister Dave stated that because Bank Negara Malaysia does not recognise the digital currency as legal tender in Malaysia – a position taken by other foreign fiat currencies; the tax authorities need to decide on the sales and service tax implications (Idris, 2018).

In many cases, digital currencies pose challenges to the traditional beliefs of money, economic relationships and investing which lead to the ultimate question – their appropriateness for financial reporting. Thus, accountants have been concerned with the treatment of digital currencies. Australian Accounting Standard Board (AASB) submitted a discussion paper to International Accounting Standard Board (IASB) and many other bodies have tried to figure out the right treatment for the transactions related to digital currencies. This highlights the lack of a standardized crypto-asset taxonomy which makes it difficult to determine the applicability of standard setters' published perspectives for recognition and measurement of digital currencies (Daniel & Green, 2018). For example, digital currencies do not fully fit in standards such as IAS 21- *The Effects of Changes in Foreign Exchange Rates*; and IFRS 9 – *Financial Instruments*. Moreover, prices of digital currencies fluctuate daily and unstable as compared to the real foreign exchange rate. Hence, it is difficult to decide whether to value them at cost or fair value (IFRS 13).

Section 2 presents the problem statement, followed by research question (Section 3), the purpose of the study (Section 4), research method (Section 5); findings and discussion (Section 6) and at last Section 7 presents the conclusion.

2. Problem Statement

Prevailing International Financial Reporting Standards (IFRS) do not denote the accounting treatment for digital currency. Before considering whether a precise IFRS might apply to a digital currency, the question that must be answered first is whether the digital currency fulfils the definition of an asset. Firms will need to evaluate whether every digital currency in holdings meets the requirements as an asset. If it meets the definition of asset, then which IFRS's asset definition does it fall under?

If digital currency is an asset, several studies discussed the following standards as accounting treatments for digital currencies: -

1. Property, Plant and Equipment (IAS 16 *Property, Plant and Equipment*)
2. Intangible assets (IAS 38 *Intangible Assets*)
3. Inventory (IAS 2 *Inventories*)
4. Cash (IAS 7 *Statement of Cash Flows*; IFRS 9 *Financial Instruments*)
5. Non-cash financial assets (IAS 32 *Financial Instruments: Presentation*, IFRS 9 *Financial Instruments*)

Some accountants consider the Bitcoin comes under IAS 16 Property, Plant and Equipment. However, the usage of Bitcoin does not result in producing goods or services that meet the assets definition under IAS 16 (Tan & Low, 2017).

A paper by Daniel and Green (2018) suggests that digital currency meets the definition of an intangible asset because it is an identifiable non-monetary asset without tangible substance. However, Tan and Low (2017) suggest that Bitcoin is not recognised under IAS 38 because it does not bring future economic benefit except for being a medium of exchange or investment.

Although digital currency proposes that it is a "currency", but it might not mean cash in accounting purposes. Considering the characteristics of Bitcoin as a (1) function of money, (2) means of exchange, and (3) monetary stock, Tan and Low (2017) suggest that Bitcoin can be considered as money and probably as 'cash or cash equivalent' as it meets the requirements as a token serving the above three functions. Nevertheless, a study done by Daniel and Green (2018) states that digital currency should not be regarded as 'cash or cash equivalent' under IAS 7 *Statement of Cash Flows* as it is not broadly accepted as a medium of exchange and it is not issued by a central bank. Moreover, digital currency possesses a longer-term lifespan and suffers substantial short-term fluctuation regularly.

Although Tan and Low (2017) proposed that digital currency can be treated as a financial asset used for investment due to its soaring future gains and historical fluctuation related to Bitcoin. However, the primary feature of a financial asset is that the holder possesses the contractual right to obtain any financial asset from another party or to trade financial assets or liabilities with another party, under circumstances that provide a possible favourable outcome to the holder. Hence, studies done by Daniel and Green (2018) proposed that the digital currency is not a financial instrument under IAS 32 and IFRS 9 as the holder of a digital currency usually does not have such contractual relationship.

According to PWC IFRS news, the digital currency should be considered as an intangible asset because it meets the definition of an intangible asset. It is an identifiable asset that can be sold, exchanged and transferred individually without physical substance (Kam, 2017). U.S. Inland Revenue Services recognised virtual currency as a property for the U.S. Federal Tax Purposes (Tan & Low, 2017). From the perspective of taxation, Bitcoin is treated as a financial asset bound by capital gains tax. Tan and Low (2017) also recommended firms that traded Bitcoin as goods and service should report their transactions based on its economic substance according to the faithful representation recognition criteria.

The measurement of Bitcoin at fair value or cost should be based on its usage. The study conducted by Ram et al. (2016) has shown that when Bitcoin is used as an accumulated wealth for short term gain; hence, the respondents reacted to the fair value measurement favourably. In contrast, when Bitcoin is used in manufacturing and provision of goods and services, the respondents preferred the cost measurement. Berchowitz (2018) commented that most accountants would agree that digital currency should be measured at fair value. Under the intangible asset standard, the digital currency can use fair value measurement if there is an active market. Otherwise, it should be measured at cost. Daniel and Green (2018) indicated that in assessing whether the active market exists, it is crucial whether there is an economic substance for an observable transaction. It is very difficult to convert digital currency into cash as most of the crypto transactions are non-cash transactions, in which one digital currency is exchanged for another. Obviously, the fair value measurement of digital currency will pose a big challenge to the accountant. Till to-date, the standard setters have not arrived at a conclusion for a precise treatment for digital currency.

3. Research Questions

Since the measurement of digital currency is posing a challenge to the accountants, till to-date, there is no precise accounting standard that could be used for its accounting treatment; hence, this study aims to find out: (1) What is the measurement of digital currency using the stewardship principle? and (2) What is the measurement for digital currency using neoliberalism principle?

4. Purpose of the Study

Neoliberalism advocated that accounting is the “information metaphor” because its main objective for financial reporting is to furnish practical data to users (Ravenscroft & Williams, 2009). It specifies that accounting must present relevant future information which emphasises on fair value and non-entity specific market prices; thus, reducing the relevance of past transactions, costs and prudence concept. This represents a shift from the “reliability” recognition to the “faithful representation” recognition in accounting (Ravenscroft & Williams, 2009). The *Conceptual Framework* (International Accounting Standards Board, 2010) acknowledged a compromise between the qualitative characteristics of reliability and relevance—more reliable information may be short of relevance; and more relevant information may be short of reliability. This thought was gone when faithful representation replaced reliability under the *Revised Conceptual Framework* (International Accounting Standards Board, 2018). Faithful representation allows the recognition of items that cannot be measured reliably which is relevant to the users’ decision making. In the financial reporting, measurement choices for an entity’s activities are very important because the

activities will determine the business model which links to measurement choices (Singleton-Green & Hodgkinson, 2010). For example, when there is assets conversion to new outputs, historical cost is more suitable. In contrast, when there is no assets conversion, it may be traded for profit resulted from changes in fair value. Some measurement bases may not be chosen but it may be relevant to users; and if so, such information should be disclosed. This argument represents the suggested accounting policy for the digital currency.

Comprehensive income is a crucial component in the financial statement; thus, any changes in net assets should be reported to users. Besides, rising emphasis on the faithful representation will lead to more pressure on presenting the transactions' economic benefits instead of emphasising on reliable measurement. Obviously, neoliberalism will cause difficulty in making choices between the entity's economic activity and entities' activities in the market. Comprehensive income and faithful representation are closely linked to the neoliberalism; thus, reporting market price changes are fundamental to the financial statement. From the Marxism's point of view, neoliberalism has been theorized as a trend for interconnection for countries and corporate power institutions. Given its significance and institutional implications, institutional analysts should be concerned and they ought to be able to overcome its implications because neoliberalism is very complex and multidimensional for any project which involved excessive changes in the institutional arenas (Ram et al., 2016).

There is no universal definition of stewardship that exists in literature, but stewardship is important because there is a need for accountability in the situation where there is a separation between the owners and the management of an organization. Accounting helps an organization to present fact which can be used to improve organization performance and provide guidance for management performance rating. This result is a clear emphasis on objective measures for financial performance and position; and allocation and determination of cost. Through the stewardship approach, the cost can be used as an estimator variable for the relevant measurement approach. Generally, cost eliminates the recognition of unrealised profits in comprehensive income based on the prudence concept; hence, the past transactions and events can be used as the predictive variables from the stewardship principle (Ram et al., 2016). The accounting policies are also grounded on the stewardship principle which assumes that the market is imperfect; therefore, reliability in financial reporting is essential. The *Revised Conceptual Framework* (International Accounting Standards Board, 2018) clearly stated that information is required to assess management's stewardship and enable users in evaluating the expected future net inflows to the entity. Both useful information are needed for resource allocation decisions making to fulfil the financial reporting objectives.

Instead of viewing stewardship and neoliberalism as opposite forces, these theoretical viewpoints can be used to show how events and transactions can be recorded in the financial statements to satisfy the users' needs. Stewardship and neoliberalism offer a theoretical reference frame to analyse the properties of digital currencies and apprising its accounting policies development. In contrast, the connection between the practicalities of the digital currency and the principles applied in informing accounting policy is made noticeable. Hence, the economic reality of the digital currency is made apparent through accounting. The above views lead to the objective of this paper: To examine digital currency's measurement from stewardship and neoliberalism principles.

5. Research Methods

This paper used the primary data collection method via a structured questionnaire. The researchers adopted and adapted the semi-structured instrument of the correspondence analysis for Bitcoin accounting (Ram et al., 2016). The structured questionnaire consists of three (3) parts, Part A solicited the application of stewardship accounting for the digital currency; Part B sought the application of neoliberalism principle for digital currency accounting. In total, there were 13 items in the questionnaire which used the Likert scale ranging from “strongly disagree” (1) to “strongly agree” (6) attached to each item in the questionnaire. Finally, Part C solicited the demographic profile of the respondents as presented in Table 1.

The researchers designed the questionnaire using the Google Forms online survey tool, then distributed it among the cryptocurrency forum websites and Facebook for responses throughout the month of August 2018. The main reason for choosing the forum websites was because those targeted respondents may be potential investors who possess good knowledge on the cryptocurrencies. The researchers emailed the questionnaire to some respondents and explained the objective and nature of this research to increase the response rate. In October 2018, responses were filtered and finally 173 replied questionnaires were identified as valid for analysis while others were discarded due to incomplete data. The researchers used SPSS procedures to analyse the data received. The Cronbach’s Alpha was used to assess the consistency among variables in a cumulative scale; the score of 0.825 is well above the generally agreed upon lower limit of 0.70 (Hair et al., 2018).

Table 01. Profiles of the respondents

Respondents’ profile	No. of respondents (N)	%
<i>Number of full-time employees</i>		
<200	106	61.3
201 – 1,000	29	16.8
1,001 – 2,000	9	5.2
2,001 – 3,000	3	1.7
3,001 – 4,000	3	1.7
4,001 – 5,000	3	1.7
>5,000	20	11.6
Total	173	100.0
<i>Annual sales turnover</i>		
< RM50,000,000	76	44.0
RM50,000,001 to < RM100,000,000	30	17.3
RM100,000,001 to < RM250,000,000	11	6.4
RM250,000,001 to <RM400,000,000	6	3.5
RM400,000,001 to <RM550,000,000	7	4.0
RM550,000,001 to <RM700,000,000	7	4.0
RM700,000,001 to <RM1,000,000,000	5	2.9
>RM1,000,000,000	31	17.9
Total	173	100.0
<i>Industry types</i>		
Consumer products	22	12.7
Industrial products	8	4.6

Construction	5	2.9
Trading/Services	64	37.0
Finance	58	33.5
Technology	10	5.8
Hotels	2	1.2
Properties	4	2.3
Total	173	100.0
<i>Organization age</i>		
<10 years	43	24.9
11 – 20 years	46	27.7
21 – 30 years	31	17.9
31 – 40 years	13	7.5
41 – 50 years	10	5.8
>50 years	28	16.2
Total	173	100.0
<i>Position of the respondents</i>		
Finance & accounting academics	36	20.8
Accounts executives	51	29.5
Accountants	35	20.2
Chief accountants	9	5.2
Financial controllers	24	13.9
Finance directors	15	8.7
Operational managers/non-accounting personnel	3	1.7
Total	173	100

6. Findings

Table 1 provides the 173 respondents' profiles, of which 98.3% are finance and accounting experts. 61.3% of the respondents' have < 200 employees working for them. The highest annual sales turnover group (44%) achieved < RM50,000,000, followed by 17.9% achieved > RM1,000,000,000 sales annually. Majority of the respondents are from the industries of trading/service (37%), finance (33.5%) and consumer products (12.7%) and they seemed to use the digital currencies more frequently for their operating activities than other industries.

In recent years, the financial reporting scene has been fundamentally shifted to the neoliberal principle. This represents that entities focus more on the faithful representation in addition to reliability in reporting. Its focus is on providing useful information for users to make decisions. Furthermore, this principle emphasises the representation of 'real-world economic phenomenon' which applies the fair-value approach. Table 2 confirms these real-world phenomena whereby "volatility in the price of a digital currency must be communicated to users" scored the highest mean value of 4.43. This is consistent with the basic principle of financial reporting where it is essential to present any net asset changes to the users of the financial information (Ram et al., 2016). As prices of digital currencies fluctuate, the changes in price should be included when recognizing the digital currency.

Table 2 shows that the financial reporting should place "emphasis in capturing the economic substances of the digital currency" (mean = 4.38) and the finding is consistent with the argument made by

Daniel and Green (2018) that economic substance is one of the main determinants for active market assessment. The neoliberalism principle also emphasized on the faithful representation of the true economic substance rather than focusing on statistical precision by using the cost approach (Whittington, 2008).

“Accounting for realised or unrealised changes in the market value” scored 3rd highest mean of 4.32. According to *IFRS 13 Fair value measurement* (paragraph 93(f)), for any asset/liability which categorised within Level 3 of fair value hierarchy and any changes in unrealised gains or losses associating with those assets/liabilities held till the end of the fiscal year should be disclosed. This is justified by the research done by Ram et al. (2016) which proposes that measurement basis under neoliberalism principle reflects the future and emphasizes on the market prices while past transactions, prudence and cost are not prioritized.

Table 02. Descriptive statistics for neoliberalism principle in accounting (selected mean > 4.00)

Scale Items	Mean	SD
Volatility in the price of digital currency on hand must be communicated to users	4.43	1.018
Emphasis should be placed on capturing the economic substance of the digital currency	4.38	0.981
The emphasis should be on accounting for realized or unrealised changes in the market value of the digital currency	4.32	0.988

The impairment test for digital currency scored the highest mean of 4.47 (Table 3). This is in line with the emphasis by CPA (2018) who stated that under the cost method, any impairment charges accounted under *IAS 36 Impairment of Assets* are to be included in the Statement of Profit or Loss. This is also consistent with the prudence concept which excludes the recognition of unrealised gains to avoid valuing assets greater than the expected future economic benefits; hence, the carrying value should not exceed the market value and is subjected to yearly impairment assessment.

Table 3 shows “Accounting needs to reflect the future cash flows inherent in the digital currency” scored 2nd the highest mean value of 4.43. The financial statements have always been a tool that presents facts about companies to facilitate corporate stewardship and to evaluate management performance (Ravenscroft & Williams, 2009). From the stewardship principle for decision usefulness, accountability demands more than forecast of future cash flows because the stewardship principle assumes that the market is imperfect where not all stakeholders have the same access to all market information; hence, reliability is essential for financial reporting.

“Digital currency should be recognised when there is objective control evidence” (mean = 4.31) and “Digital currency should be recognised when purchased or available for consumption as planned by management” (mean = 4.23) (Table 3), these results are aligned to the research done by Whittington (2008) which states that financial statements should fully reflect individual entity and the management decision specifically.

Table 03. Descriptive statistics for application of stewardship in accounting (selected mean > 4.00)

Scale Items	Mean	SD
The carrying value of a digital currency should not exceed its market price & should be tested for impairment when necessary	4.47	1.049
Accounting needs to reflect the future cash flows inherent in the digital currency only to the extent that these are reliably measurable	4.43	0.966
Digital currency is recognised when there is objective evidence that control of the digital currency vests with the reporting entity	4.31	1.002
Digital currency is recognised when purchased or available for consumption as planned by management	4.23	1.048

7. Conclusion

This paper aims to survey the accounting of digital currency using stewardship and neoliberalism principles. Main findings show that users expected the financial information providers to capture the economic substance of the digital currency by giving the true and fair view of its transactions and evidence the need for accountability in the entity from the stewardship principle. Emphasis has been placed to measure the digital currency using the market value and subjects to impairment assessment; this is neoliberalism in practice because the entity needs to account for the volatility of digital currency in the markets. This paper also provides valuable insights into accounting for digital currency and give practical suggestions for its transaction which is yet to be covered by the existing accounting standards.

Based on the preliminary findings above, the standard setters may consider assessing the scope of some existing accounting standards, for example, IFRS 13, IAS 38 and IAS 2; whether it can be amended to account for digital currency transactions or perhaps considering the possibility of creating a new standard. Besides, securities regulators may require additional disclosures outside the financial statements for users' decision making. Another area that needs urgent attention is the tax implication of digital currency transactions. Future researchers may consider the taxation consequences of using digital currency before authorities provide specific tax rules or guidelines for its transactions.

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