

AN OVERVIEW OF TECHNOLOGY EVOLUTION: INVESTIGATING THE FACTORS INFLUENCING NON- BITCOINS USERS TO ADOPT BITCOINS AS ONLINE PAYMENT TRANSACTION METHOD

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ABSTRACT

Today, the technological revolution influenced the methods of payment. Most interesting is that our perception towards money is changing, and we are beginning to try forms of money which have not been used or seen previously in history of human such as cryptocurrency or digital currencies. Since the factors influence the adoption of bitcoins still unknown, this study aims to investigate the user's behavioural intention use bitcoins as a payment method. Based on the literature review, this study used Amos 18 to analyse the collected data from 161 participants. The finding indicate that all research hypotheses were supported except hypothesis measures the effect of security and control on user perceived self-efficacy to use Bitcoins. In term of measuring the user's intention to adopt bitcoins, the data analysis illustrate that all hypotheses were significantly supported. Among all constructs, the highest effect on user's intention comes from perceived trust and the lowest affect is transaction processing. This study has contributed to our understanding of current knowledge of user adoption theory in the context of cryptocurrency. Also, based on the sample uses on this study, farther data collection to compare the adoption of current bitcoins users with non-users is need it.

Keywords: *Transaction Processing, Behavioural Intention To Use, Perceived Trust, Self-Efficacy.*

1. INTRODUCTION

Today, the use of information technology in our life become very popular. The technology affect everything in our daily life. The technology revolution brings a lot of innovation to our lives. In the meanwhile, the world encountered the biggest global financial crisis. The crisis directed people and institutions to query about the state-issued currencies management, particularly, the government and financial sector.

Struggling banks and, actual banks run emphasized the possible instability of traditional financial organizations and institutions as safe places for deposits of people, whereas unexpected debt of government in a lot of countries put forward questions regarding the worth of state issued currencies in the future. This steered some to conclude that it is a necessity to create a payment system which is practical for global economic exchanges, safe, and essentially, liberated from the governments and current huge financial institutions. [1]

The technological revolution influenced everything, even the methods of payment for the goods and services and the way we store our money. Most interesting is that our perception towards money is changing, and we are beginning to try forms of money which have not been used or seen previously in history of human—digital currencies. These currencies only live in the virtual world of the computers, smartphones, or Internet. They have strange names, they are directed by unusual rules, and if we will use them we must adopt new different habits. Some of them originate from issuers we are used to, for instance, commerce platforms like Amazon or social networks like Facebook. Other digital currencies refer to the group of cryptocurrencies: those have no institution or person organizing their issuance, work through a peer-to-peer network which is decentralized, and there is no regulating authority for them.[2]

In the market, there are numerous innovative systems for money payment today, a lot of them are constructed on platforms such as the Internet, the digital storage card, and the mobile phone. These

unconventional systems of payment have continued growth, from the systems similar to PayPal, BitPesa, Google Wallet, BitPay, Apple Pay, and others [2]. The digital currency Bitcoin provides a low-cost, secure platform that can be used for electronic payments. It was established by Nakamoto (2008). In 2009, the bitcoin network was established and has developed significantly in the latest years. The bitcoin network rapid growth, along with the distinctive currency features, has encouraged governments to pay attention [3].

Beyond payment systems which rely on fiat money (currency), the increasing usage of digital currency helps for more flexible, more innovative, and faster ways and payments in services and goods financing. However, single digital currency is highlighted amongst the rest [2].

Bitcoin is the most famous digital currency nowadays. In particular, it is a cryptocurrency, that is a subcategory of the digital currency. Bitcoin is a distinctive cryptocurrency which is commonly considered as the top of its kind. Similar to many generated after it, Bitcoin utilizes the Internet power for processing transactions [2].

The systems of payment invention has the ability to considerably alter the economy, from the manner of sending cross-border remittances, to making micropayments economically sustainable, to introducing a method for online transaction which protects privacy more than any other way, to altering the method contracts are constrained. [1]. This directed some to conclude that it is the time to create a currency system which is practical for interactions of the global economic, safe, and essentially, liberated from current huge financial organizations and governments.

A key point of the economic reasoning for such currency system is based on the argument that the existing systems of international transfer are inflexible and expensive, demanding illogical expenses on companies and individuals. Beyond these economic reasons, some people, possibly affected by ideas of a libertarian, besides the necessity of a currency system which is, simply, out of the sight of governments. There are numerous socioeconomic forces which motivate the need for alternative currencies: political economy, environmentalism, localism, technology inefficiencies, speculation, financial, freedom, [1].

Historically, we are able to analyse forces which cause some exchange media to be more efficient than others in terms of those needs satisfaction. Later on

digital currencies will be considered successful if they fulfil those needs as equal as, or more than, the already used traditional currencies. Ultimately, if digital currencies gain more extensive adoption, we may possibly change all of these arguments and utilize them to argue whether traditional currency can persist long-term in the digital currencies existence. [1].

Cryptocurrency is easily created for free as an alternative currency. Nevertheless, majority of them will cease circulation with a short time. Among several competitive alternative digital currencies, only a limited number will reach a satisfactory scale, find an appropriate market or be adopted globally. Aside from the idea of takes off for national digital currencies, it is expected that number of these currencies will cease circulation due to substituting technology advancements, insufficient demand, and tighter regulation [2].

There are many questions that need to be answered according to the adoption of bitcoins. For example, yet, no one can conclude if the bitcoin privacy (hiding the users identity) would increase the adoption of bitcoins or will be used against the use of bitcoins? [4]. Hence, this work aims to study the intention of people to adoption bitcoin as a payment system. This research will focus on the factors that might influence the adoption of bitcoin, in the end of this study the researchers hope to answer the research question “into which extend the people willing to use bitcoin as payment system and what make them use it.

2. HOW BITCOINS WORK

Bitcoin is a type of currency that called virtual network currency or digital coins which allows users to transfer digital money among each other. To do the transfer, every coin consists of a must have a unique chain of digital signatures. These signatures will be stored in a digital wallet which installed on a person computer. From the digital wallet, therefore, some keys will be generated in order to send and receive coins. To make a transfer, the bitcoin owner uses the private digital key to approve the addition request of the receiver's key for a stringing of previous transactions. Then the coin will be transferred and appears in the receiver's wallet with a transactions history recorded including the current one [5].

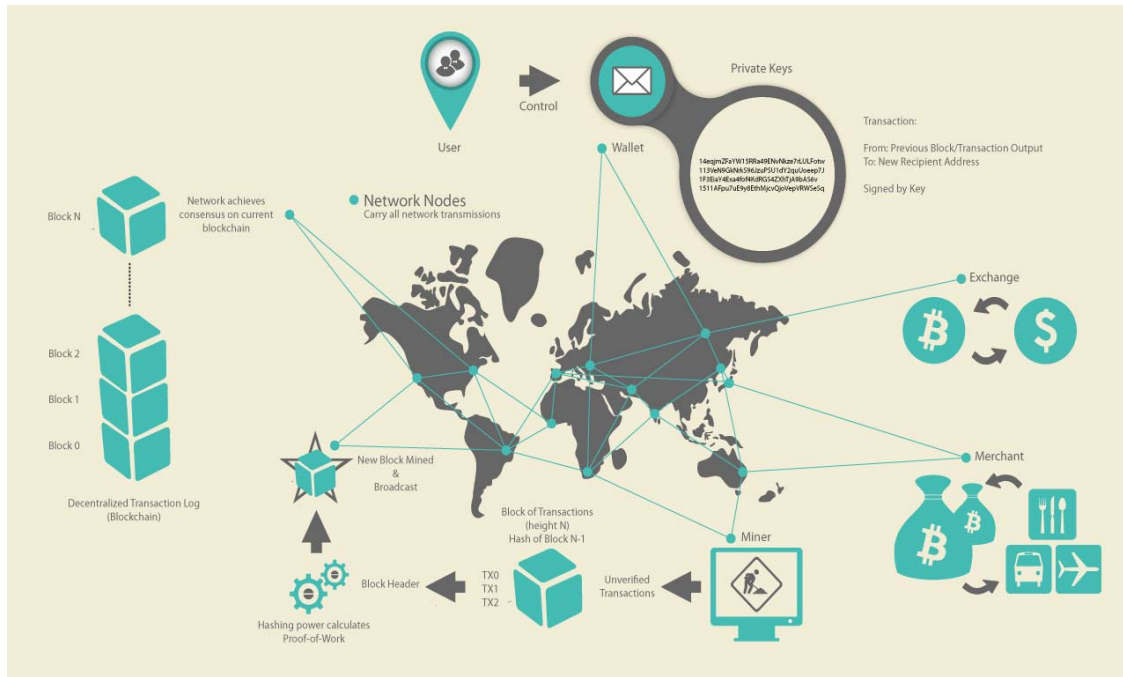


Figure 1. Bitcoin overview [5]

3. LITERATURE REVIEW AND HYPOTHESES

Since the information technology affect everything in our life, one of the famous aspect now a day is the online payment system and digital money. This study focus on the adoption of information technology specially in the case of online payment system such as Bitcoins. The bitcoin system is one of the most popular platforms for digital currency. This type of online payment still in the early stage and need more investigation because the technology always changed, and the users need, and expectation changed over the time. Hence, there are many factors that might has an influence in user adoption but this study will focus on the important aspects of bitcoin adoption such as transaction processing, security and control, perceived trust, perceived self-efficacy and behavioral intention. These factors considered to be the most influencing factors of the user adoption of new technology. The next section we going to discuss each factor and the research hypothesis.

3.1. Transaction Processing (TP)

One of the factors that might be important for the adoption of bitcoins globally is the fast and cheap transaction processing [6]. Cost of executing activities (Transaction costs) includes the such as customer service interactions, billing and shipping

[7]. According to Dumitrescu (2017), bitcoin transaction of similar value of credit card would cost at most around \$0.61. This cheap fees of transaction cost make it cheaper than normal transaction of around 5 times [8]. This cost reduction of procurement would provide a good benefit for the government which might encourage them to adopt cryptocurrencies [9]. If using bitcoin to process the payment or transactions is made ease of use and simpler than other payment methods, the adoption of bitcoins will be increased as well as the usability. Consequently, the following hypothesis is proposed:

Hypothesis 1a: Transaction Processing has a significant impact on user self-efficacy.

Hypothesis 1b: Transaction Processing has a significant impact on user behavioral intention to use Bitcoins

3.2. Security And Control (SC)

Security and Control (SC) refers to perceptions about the overall security of the Bitcoin system and controlling the privacy. Security is a very important factor for cryptocurrencies to be adopted as a mainstream currency. To enhances the security of the protocol cryptocurrencies are designed to be used in a decentralized fashion using cryptographic proof instead of relying on trust. This would make breaking the protocol significantly harder. Economically, customers transactions or the ability of using the system will increase if they perceive that their information are safe. Also, customers wants to

control all aspect of their privacy and sharing this information without form any praties would frustrate them from using the service [6].

The cryptocurrencies are deemed to be anonymous, but this make the government not happy because they can't control the citizens transition mostly a lot of attention has been given to this fact recently. There are many questions that need to be answers according the adoption of bitcoins. For example, yet, no one can conclude if the bitcoin privacy (hiding the users identity) would increase the adoption of bitcoins or will be used against the use of bitcoins? [4]. On the other hand, other researchers claimed, there is a low risk for the Bitcoin users in case of a retailer or a partner in a transaction is subject to a cyber-attack and loses traditional financial or personal data of the customers or its own. Bitcoin users are at risk only if the hackers get access to their private keys [8, 10]. Consequently, the following hypothesis is proposed:

Hypothesis 2a: Security and control has a significant impact on user self-efficacy.

Hypothesis 2b: Security and control has a significant impact on user behavioral intention to use Bitcoins

3.3. Perceived Trust (PT)

Perceived trust plays an important role in reduce perceived risks and increase the adoption of new technologies, especially for transactions involving uncertainty [11, 12]. Because cryptocurrencies is still in the early stage of adoption, users are not clear about the technical capability of cryptocurrencies and about the security and reliability of the provided services [13]. What exactly will happen when a major security breach is identified is difficult to predict?. Since cryptocurrencies are based on trust, if the trust gets broken all value of the protocol is lost [8]

As hundreds of years of monetary history have taught us, the use of any currency is built on trust and, as of today, there is simply too little experience with any of the digital currencies for them to build universal trust. We need understand the reluctance of people or businesses to jump into the unknown.

Since the cryptocurrency phenomenon is relatively new, adopting and trusting them could be a difficult choice for people, especially the older generations which are accustomed to classic money (cards, coins, notes). None of the digital currencies rivals the trust in mainstream state-issued currencies. In this respect, a key issue is that the very flexibility and scale that digital currencies promise also bring increased risk for users, especially if they are used

broadly.[1]. Hence, the following hypothesis is proposed:

Hypothesis 3a: Perceived trust has a significant impact on user self-efficacy.

Hypothesis 3b: Perceived trust has a significant impact on user behavioral intention to use Bitcoins

3.4. Perceived Self-Efficacy (SE)

In the literature, self-efficacy is viewed as the level of comfort of the user when accessing and utilizing the services. It's the users belief that he/she has the capability to perform a particular function. Self-efficacy is an important predictor of user perspective to use new services [11, 14, 15]. Perceived self-efficacy as a determinant in influencing people intention toward new services adoption [16]. Self-efficacy not only influence the user intention to use the service but also it has confirmed a significant relationship customer trust in using the service [17]. The above discussion reveals a need to ascertain the role of self-efficacy specially in term of cryptocurrencies which is still new for people. Therefore, the following hypothesis is posited:

Hypothesis 4: Self-efficacy has a significant impact on user behavioral intention to use Bitcoins.

3.5. Behavioural Intention (BI)

Since cryptocurrencies is still new for public, there is an interesting aspect of the risk in the decision-making process of using cryptocurrencies, it is about the new products. Behavioural intention is a major factor that aim to predict the user acceptance decision for using new technology [18-23].

An important question is whether cryptocurrencies will drive state-issued currencies out of business. Overall, Bitcoin and other cryptocurrencies offer a number of novel and attractive attributes. The big question, however, is whether people would care enough to switch. Even if they do, the question then is whether enough people would care to create a critical mass of adopters to make it a viable currency [1]. As a result of inter-personal communication, of a consumer specific traits, as well as intrinsic characteristics of the new products, the people they adopt differently [24]

Since the cryptocurrency phenomenon is relatively new, one can understand the reluctance of people or businesses to jump into the unknown. For the general public, the complicated algorithms and the idea of a virtual wallet might be frightening. If

use of the bitcoin remains too technical causing worldwide acceptance to fail [2]

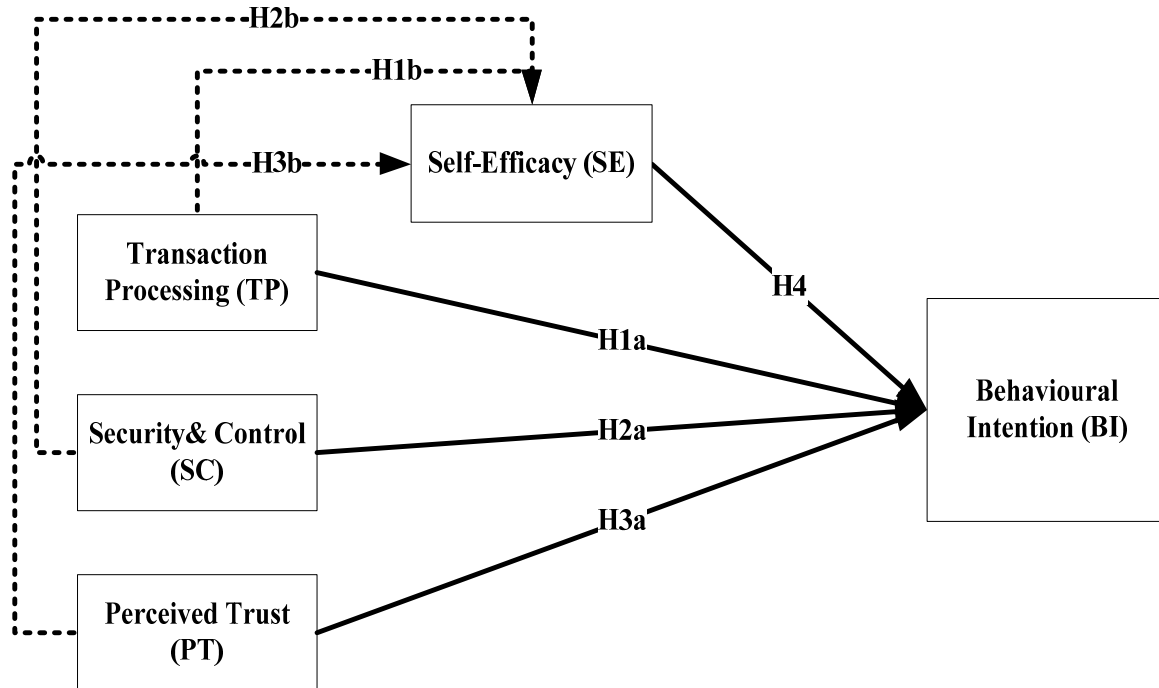


Figure 2: research model and hypothesis

4. METHOD

The research method explains the way of collecting the data and how this data analysed. This study used quantitative research technique to achieve the research goal. In this study we follow the general research method of information technology starting by collecting all related information about the scope of the study and related issues. Then, the study builds a questionnaire survey to achieve the research goal. After the questionnaire built, its sent out for review by expert in information system and online payment. Once the positive response back from reviews, all modifications were taken into account in the final copy of the questionnaire.

The questionnaire was sent out via online survey to participants. The participants were ask asked freely to participate in the survey and advice to read about bitcoins before start to know more about online payment system and digital currency. The data collection using the questionnaire started in March 2018 for two months. In the next section we will discuss the sample information and the items and constructs information.

4.1. Sample Characteristics

To investigate this adoption of bitcoins, an online questionnaire was created and posted to Facebook and websites. This recruitment process was chosen as it would reach out to respondents who are a part of the online community and already potentially contributing to the independent creative work done in places.

As a way to contextualise participants, two demographic questions were included: age and gender. The questionnaire then explored the main variables of interest, relating to the respondent's history with the bitcoins adoption. Looking towards the future, the questionnaire asked participants what their expectations were for the adoption as it continues to grow.

The online questionnaire obtained 161 responses from participants aged between 25 -34 (16.8%), 35 – 39 (66.5%), Over 50 (16.8%) years old (distribution shown in Table 1); The participants gender were 59.6% were male and 40.4% female. Although the sample is not representative of the entire cryptocurrency community, having 161 participants enables the researchers to identify trends within answers and begin to gain an insight into the cryptocurrency.

TABLE 1: SAMPLE CHARACTERISTICS

		<i>N</i>	<i>%</i>
<i>Age</i>	<i>25 - 34</i>	27	16.8
	<i>35-49</i>	107	66.5
	<i>over 50</i>	27	16.8
<i>Gender</i>	<i>Male</i>	96	59.6
	<i>Female</i>	65	40.4
<i>Total</i>		161	100

In this section we will discuss Five-point Likert scales, ranging from ‘strongly disagree’ to ‘strongly agree’, were used throughout the online questionnaire. The reliability for all items used in this study (18 items) is .949. this indication the items consistency is acceptable. In addition, the Cronbach reliabilities of all constructs were higher than 0.70 (Table 2), indicating an acceptable reliability [25]. These results exhibited support for the unidimensionality of the scales.

4.2. Items And Constructs Characteristics

TABLE 2: ITEMS AND CONSTRUCTS CHARACTERISTICS

<i>Code</i>	<i>Construct and Items</i>	<i>Mean</i>	<i>SD</i>	<i>alpha</i>
TP	Transaction Processing	3.31	.833	.905
<i>TP1</i>	The Bitcoin enables me to transfer money instantly.	3.47	.740	
<i>TP2</i>	The Bitcoin enables me to transfer money worldwide.	3.80	.934	
<i>TP3</i>	The Bitcoin enables me to transfer money with low or no transaction fees.	2.98	.844	
<i>TP4</i>	The Bitcoin enables me to easily transact money.	2.98	.844	
SC	Security and Control	2.72	.638	.739
<i>SC1</i>	The Bitcoin enables me to transfer money securely.	2.99	.847	
<i>SC2</i>	The Bitcoin empowers me with the control of my money.	2.35	.785	
<i>SC3</i>	The Bitcoin secures my identification and Partial anonymity	2.83	.726	
PT	Perceived Trust	2.43	.534	.988
<i>PT1</i>	Bitcoin has high integrity	2.50	.791	
<i>PT2</i>	Bitcoin can be trusted completely	2.51	.560	
<i>PT3</i>	The bitcoin platform is perfectly honest and truthful	2.34	.539	
<i>PT4</i>	Bitcoin transaction are more secure than credit card transaction	2.34	.539	
SE	Self-Efficacy	3.21	.769	.959
<i>SE1</i>	I feel capable of using the Bitcoin for payment	3.31	.778	
<i>SE2</i>	I feel capable of doing transaction using Bitcoin	3.31	.778	
<i>SE3</i>	I feel comfortable using Bitcoin	3.00	.844	
BI	Behavioural Intention	2.55	.548	.890
<i>BI1</i>	I want to use bitcoin instead of traditional money	2.50	.799	
<i>BI2</i>	I plan to use bitcoin in the nearest future	3.16	.723	
<i>BI3</i>	I prefer to use bitcoin for payment	2.19	.567	
<i>BI4</i>	If bitcoin is not available as a payment method at suppliers and external vendors, I will request it	2.34	.539	

Table 3 explains the correlation test among constructs. It’s obvious that except the relation between perceived trust, and security and control, all other constructs are significantly correlated. Among those factors, the larger correlation is between transaction processing and security and control (r .851), and perceived self-efficacy (r .875). This

indication shows that transaction processing can change the users perceived self-efficacy to be more comfortable to use bitcoins.

TABLE 3: CORRELATION TEST

	<i>TP</i>	<i>SC</i>	<i>PT</i>	<i>SE</i>	<i>BI</i>
<i>TP</i>	1	.851**	.365**	.875**	.766**
<i>SC</i>	.851**	1	.092	.725**	.535**
<i>PT</i>	.365**	.092	1	.543**	.699**
<i>SE</i>	.875**	.725**	.543**	1	.792**
<i>BI</i>	.766**	.535**	.699**	.792**	1

** . Correlation is significant at the 0.01 level (2-tailed).

5. HYPOTHESES TESTING

The result in table 4 shows that all conclude the hypothesis testing using Amos 18. The regression test of the model hypothesis aims to measure the

user’s behavioural intention to use bitcoins. From the table below, we can illustrate that all hypotheses were supported except hypothesis 2a which measures the effect of Security and control on user perceived self-efficacy to use Bitcoins.

Table 7: Analyzing the research hypothesis using regression test

<i>No</i>	<i>Hypothesis</i>	<i>t</i>	<i>P</i>	<i>Indicator</i>
<i>H1a</i>	Transaction processing has a significant influence on user self-efficacy to use Bitcoins.	-.414	***	Accepted
<i>H1b</i>	Transaction processing has a significant influence on user behavioural intention to use Bitcoins.	.222	***	Accepted
<i>H2a</i>	Security and control has a significant influence on user self-efficacy to use Bitcoins.	-.035	.154	Rejected
<i>H2b</i>	Security and control has a significant impact on user behavioural intention to use Bitcoins.	-1.207	***	Accepted
<i>H3a</i>	Perceived Trust has a significant impact on user self-efficacy to use Bitcoins.	1.180	***	Accepted
<i>H3b</i>	Perceived Trust has a significant impact on user behavioural intention to use Bitcoins.	2.519	***	Accepted
<i>H4</i>	Self-efficacy has a significant impact on user behavioural intention to use Bitcoins.	-.795	***	Accepted

6. DISCUSSION

This study started by looking for an answer to many question according to the bitcoins adoption. For example, yet, no one can conclude if the bitcoin privacy (hiding the users identity) would increase the adoption of bitcoins or will be used against the use of bitcoins?. Also, we don’t know if transaction processing, which considered as one of the most attractive benefit of bitcoins, would increase the user’s adoption of bitcoins or they will still worry about the unknown technology?

For the purpose of this study we basically looked into the perceived trust, self-efficacy, transaction processing and security and control as the predictors of user’s intention to adopt bitcoins. Based on this, we proposed 7 hypotheses to achieve the aim of this study.

All hypothesis is supported except security and control did not have a significant impact on perceived self-efficacy. This could be because of the user’s confidence is not directly linked to security and control or might because not all people have a good knowledge about the security and control. In our opinion self-efficacy wont be impacted by security and control because a collections of many experience that can create the self-efficacy not a onetime factor like security and control which is based on one time experience.

Measuring the user confidence of using bitcoins is the first predictors in measuring the user intention. Hence, we investigated the effect of transaction and processing as a predictor of users self-efficacy because it’s the main advantage that encourage users to adopt bitcoin, since the bitcoins charge less 5 times than credit cards charges for transaction [8].

Thus, the data analysis results illustrate that transaction processing is highly affected the perceived self-efficacy ($t = .414$, $p < 0.001$).

Measuring user's behavioral intention to use bitcoins is the main concern of this study. According to the data analysis results, the highest effect on user intention to use bitcoins is users perceived trust, were the t value is 2.519 ($p = < 0.001$) which is highly significant even more any other factors. Comparing this affect with the transaction processing effect on user intention to use bitcoins ($t = .222$, $p = < 0.001$), its seems to be more than 10 times. This result illustrate that users concerns more about the trust of the service more than the benefit they are getting from using bitcoins, such as the cost of transaction and the fast processing. Since cryptocurrencies are based on trust, if the trust gets broken all value of the protocol is lost [8]. However, the trust is the main factor that encourage people to look into the service first even before looking into the benefit of using such services.

The data analysis shows the security and control has a significant negative affect on user intention to use bitcoins ($t = -1.207$, $p = < 0.001$). This indication is because the cryptocurrencies are deemed to be anonymous and the bitcoin privacy (hiding the users identity) would decrease the adoption of bitcoins. This an answer of Spenklink (2014) about would security and control increase the adoption or it will be used against it? [4]. In the other hand, the second significant negative affect on user intention to use bitcoins is self-efficacy ($t = -.795$, $p = < 0.001$). Perceived self-efficacy as a determinant in influencing people intention toward new services adoption [16]. Also, the data analysis confirmed the results of Zhou (2012) that self-efficacy not only influence the user intention to use the service but also it has confirmed a significant relationship customer trust in using the service [17]. The correlation test between self-efficacy and perceived trust is $r = .543^{**}$, which is high significant correlation. The both negative affect discussed above related to the user experience on using bitcoins. The first people still afraid of the security issues and the control of transaction. The second people still did not have a positive confidence to use it.

6.1. Implications For Research

This study is investigated the effects of four factors that affected the user intention. The research results illustrated the significant influence of perceived trust and self-efficacy on behavioural intentions to use bitcoins, therefore, providing the field of study with

support for the use of UTAUT and TAM theory in this context [15, 26].

Furthermore, this study has contributed to cryptocurrencies research by using this model in predicting and interpreting behavioural intention to use bitcoins in the context of virtual network. The effect relationships among the constructs used in this study were empirically tested and validated. This research finding, have therefore, advanced our understanding of the adoption of bitcoins and related constructs. Self-efficacy, perceived trust, security and control, and transaction processing were all found to be significant factors in determining user behavioural intentions. In the other hand, the self-confidence to use bitcoins (self-efficacy) found to be impacted significantly by the perceived trust and transaction processing, but not impacted by the security and control of bitcoins.

6.2. Implications For Practice

The findings of this study suggested that user's behavioural intention to use bitcoins can be enhanced if the establishment of perceived trust, self-efficacy, transaction processing and security and control are effectively managed. Previous researches that use similar factors have shown support for the cause and effect relationships among those factors [4, 27].

The contribution of this research improves our understanding of user acceptance factors by validating them in the cryptocurrency context. Therefore, it is necessary for business developers and managers to implement stable strategies that would am to facilitate the development and maintenance of the factors that has a significant effect on user intention in order to increase overall adoption.

Additionally, perceived trust, perceived self-efficacy, transaction processing and security and control were found to be significant predictors of user behavioural intention. Thus, from a viewpoint of practices, this indication point out the importance of the ability to design services which are sufficient to promote the trust of the services, improve the confidence, fast and cheap transactions, and high security and control as key to evolving competitive benefit in the cryptocurrency market.

Previous studies of economics and finance indicate that users will value services by using the service more or by recommended to others. The service adoption is the main concern for users and management. In the case of bitcoins, it's a has a huge concern from the government along with users and private sectors. Since its still unknown for many people, the adoption issue is remaining the big issue

that need to be addressed to show direction for all. Hence, this study concludes that if the bitcoins target to increase the user's intention, it must first maintain the perceived trust of the services followed by giving more intention to the security and control of transaction and users privacy.

The security and control would increase the user's intention and maybe will increase the government adoption as well. In the other hand, to increase the user's intention to use bitcoins, the users must be comfortable to use it, and has a full confidence to do so. This self-confidence depends on two important factors, first is the benefit of using bitcoins (transaction processing) and secondary, perceived trust.

6.3. Research Limitations And Future Research Directions

While the study sample included non-bitcoins users, it was limited from understanding why users adopt or not bitcoins. Future studies could focus on the reasons why users not using the bitcoins widely? Also, based on the sample uses on this study, farther data collection to compare the adoption of current bitcoins users with non-users is need it. This kind of study will bring clear picture on what is the different between both samples in term of adoption based on many moderator's factors such as the user annual income and expectations, which we believe it will bring a good contribution to the field of this study and advance the current knowledge.

Since this study limited to small sample size (161), a bigger sample size will bring more valid results. Because the affect of the dependent variables can be very different in a bigger sample to more generalize the results. Future researchers can use case-based data analysis to measure affect among the model factors. This method can illustrate the different of impact of each sample and another way, ANOVA test can be used to differentiate between each construct effect.

7. CONCLUSIONS

This research adopted a modified TAM and UTAUT model to understand the factors that influence the adoption of cryptocurrency among non-users. Based on the literature review, there is many questions need to be answers regarding the bitcoins adoption. One of these question: what is the factors that affect the bitcoins adoption publicly, is it the security and control, or perceived trust, self-efficacy or transaction processing. This study discussed each of the above factors and based on that used an online survey to collect the data from 161 participants and

analysed using Amos 18 to measure the user's behavioural intention to use bitcoins.

The finding indicate that all research hypotheses were supported except hypothesis measures the effect of security and control on user perceived self-efficacy to use Bitcoins. The finding confirm that self-efficacy impacted by perceived trust more than transaction processing. In term of measuring the user's intention to adopt bitcoins, the data analysis illustrate that all hypotheses were significantly supported. Among all constructs, the highest effect on user's intention comes from perceived trust and the lowest affect is transaction processing.

This study has contributed to our understanding of user acceptance factors by validating them in the context of cryptocurrency. This study limited to non-bitcoins users, future researcher might conduct a comparison between current users and the sample of this study using the model factors which we believe will bring valid results.

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