



Factors Influencing Adoption of Cryptocurrency-based Transaction from an Islamic Perspective

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Keywords: *blockchain, cryptocurrency, bitcoin, behavioral intention, sharia compliance.*

GJCST-G Classification: *H.2.4*



FACTORS INFLUENCING ADOPTION OF CRYPTOCURRENCY BASED TRANSACTION FROM AN ISLAMIC PERSPECTIVE

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Abstract- This paper presents a user study of “perception of the cryptocurrency-based transaction from the Islamic views”. The motivation lies with the fact that some users of cryptocurrency-based transaction raised concern on the nature of transactions with Bitcoin. Specifically, some argued that Bitcoin can be easily used for illegal purposes. Therefore, “Technological Acceptance Model” was adopted and quantitative research methodology was utilized, to formulate and test some hypothesis that will lead to an establishment of a model. Sample of 306 participants was used in the study. The result of the hypothesis testing indicates that “Behavioral Intention to Use Cryptocurrency from the Islamic perspective” is influenced directly by Shari’ah Compliance, Perceived Ease of Use, Emotionality, Perceived Usefulness, and Financial Concern. As evident from the analysis, Emotionality is influenced directly by Financial concern and Shari’ah Compliance. Whereas, Behavioral Intention is influenced indirectly by Financial Concern. The sample is general and does not specify a specific group of study. This study has contributed to understanding the Islamic issues behind the implementation of Cryptocurrency. This study adopted.

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I. INTRODUCTION

Shari’ah represent the pathways Muslims perceived any affairs of “human being” and/or human-to-human as well as human-to-environment should be performed. In many cases, human being activities are naturally Shari’ah-based for examples speaking only the truth and preventing yourself from a threat. Conventionally, performing these activities is described are the basis for common sense. Therefore, Shari’ah can simply represent the act of applying common sense. It is only when certain things are preformed out of the Sharia’ah pathways that the issue of Shari’ah compliance was raised, even though some of the events might be part of some common sense, but critical analysis brings about the implementation of Sharia’ah

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consequences. Cryptocurrency has emerged as a way of making a transaction with money easier and faster. This aid in preventing the complications faced during the other forms of transactions with money. Consequently, makes life better and improve the standard of human-to-human transactions with money. For the fact that Shari’ah represents a blueprint on Muslims affairs, this new way of a transaction with money (cryptocurrency) even though it’s easier, is currently facing Shari’ah setbacks. Sharia compliance in a transaction with cryptocurrency-based requires the application of principles of the Islamic law of contract. This is one of the most important factors, cryptocurrency could rely on.

Currently, there are many research studies on investigative the permissibility, in a transaction with a cryptocurrency-based system (Habib and Adekunle, 2019). Nakamoto (2008) makes it clear that cryptocurrency is intended for peer-to-peer monetary transactions, eradicating a central authority. Practically, the transactions involved raises a lot of doubt. In some cases, it is described as a system with no value, it is not an asset or commodity and it’s not like other currencies such as fiat money. Moreover, uncertainty issues arise where volatility and obscurity in the transaction with the cryptocurrencies become obvious. Another issue is if the Islamic Rules of Jurisprudence and Fundamentalism criteria are followed or not.

This current research followed a pattern of the previous approach on the implementation of the cryptocurrency-based transaction and the speculation as either its right or wrong from an Islamic perspective. The research particularly aims at addressing the situations surrounding the legitimization of cryptocurrency-based systems from an Islamic perspective. It’s a hypothesis-testing based research, where a model is proposed. The model was developed from a conceptualization of the: “Sharia’ah Compliance”, “Financial Concern”, “Emotionality”, “Perceived Ease of Use”, and “Perceived Usefulness” impact toward “Behavioural Intention” of the use of cryptocurrency systems from an Islamic perspective. The research is a user study, where the Shariah point of view on the cryptocurrency-based transaction and the uncertainty issues related to the area are studied. The main contributions dwell on recognizing the permissibility effects for resolving the uncertain issues.

II. RELATED WORK

When addressing the Islamic perspective, it means examining to what extent something contributes to the attainment of maqasid al shariah. If a practice does not help realize the fundamental objectives of Islamic law, it is found to be un-Islamic and if practice helps realize the fundamental objectives, it is found to be Islamic. Shari'ah-compliance entails that a financial product or activity complies with the requirements of the Shari'ah. Islamic finance derives its principles from the Shari'ah, which is based on the Qur'an and the Sunnah. The key defining characteristics in the application of Shari'ah to financing structures are that transactions should be based on tangible assets and should not involve interest (riba). Shari'ah principles also prohibit uncertainty (gharar), speculation or excessive uncertainty (maysir) and gambling (qimar).

Sifat and Mohamad (2018) explain that the objectives of the Shari'ah are fixed and unchangeable and applicable in all times and places even though the discipline of Islamic economics and finance has grown in politico-economic importance over the past three decades. According to Todorof (2018), the introduction of FinTech in Islamic banking can increase its general competitiveness and inclusiveness by incorporating a greater number of products and services, lowering their existing price and closing the credit gap that exists in many Muslim countries. Nurhisam (2017) argues that when viewed from the perspective of Islamic law, the issuance of money as a means of transaction in a country constitutes a matter protected by Islamic law. Evans (2015) observes that cryptocurrency might be a more appropriate medium of exchange in Islamic banking and finance than the interest-backed central bank fiat currency, especially in cross-border trade. Zubaidi and Abdullah (2017) caution that the area of digital currencies and blockchain requires further research from a Shari'ah perspective to facilitate a better understanding on the topic, yet acknowledge the possibility of introducing a Shari'ah-compliant digital currency once all the issues on validity have been addressed and resolved. Similarly, Muedini (2018) argues that cryptocurrencies are highly compatible with Islamic finance and can provide solutions to problems of government-controlled currencies. Unlike traditional fiat, the supply of digital currencies is fixed, thereby eliminating the issue of uncertainty and also inflation. In opposition, Kameel and Meera (2018) examine the implications of Bitcoin in Islamic finance and question its acceptance as a medium of exchange based on its compliance with Shari'ah and find that cryptocurrency contains a certain prohibited element of gambling and uncertainty. Oziev and Yandiev (2018) assume a middle position by defining the status of cryptocurrency in the financial system by determining the extent of its influence and comparing the characteristics of paper

money and cryptocurrencies before concluding that using cryptocurrency is permissible, albeit with strict reservations.

III. RESEARCH METHODOLOGY

This study adopts a quantitative research methodology to yield a valid quantitative result that will be generalized. Several experts in the area of quantitative research were consulted to review the 103 proposed items. Their review and recommendations were very useful in developing the final items. The objective of this research is to investigate cryptocurrency user acceptance based on the three theories of the technology acceptance model, the theory of reasoned action, and deindividuation to identify the factors that indirectly influence cryptocurrency behaviour. The results of the collected data analysis by the analysis techniques are presented. Firstly, the descriptive statistics are presented including the respondents' cryptocurrency awareness background. Secondly, the findings of the exploratory factor analysis are reported. Thirdly, the results of the assessment of the measurement model, the structural model, and the hypotheses testing using partial least square structural equation modelling are analyzed and explained in detail.

IV. MEASUREMENT MODEL ESTIMATES

The measurement model consists of the indicators and the paths that connect them to their latent variables which they intend to measure as shown in Figure 5.5: The assessment of the measurement model specifies the relationship between the indicators and their latent variables (Henseler, Ringle, and Sinkovics, 2009). The purpose of assessing the measurement model is to evaluate its validity and reliability and thus evaluate the inner path model estimates (Henseler et al., 2009).

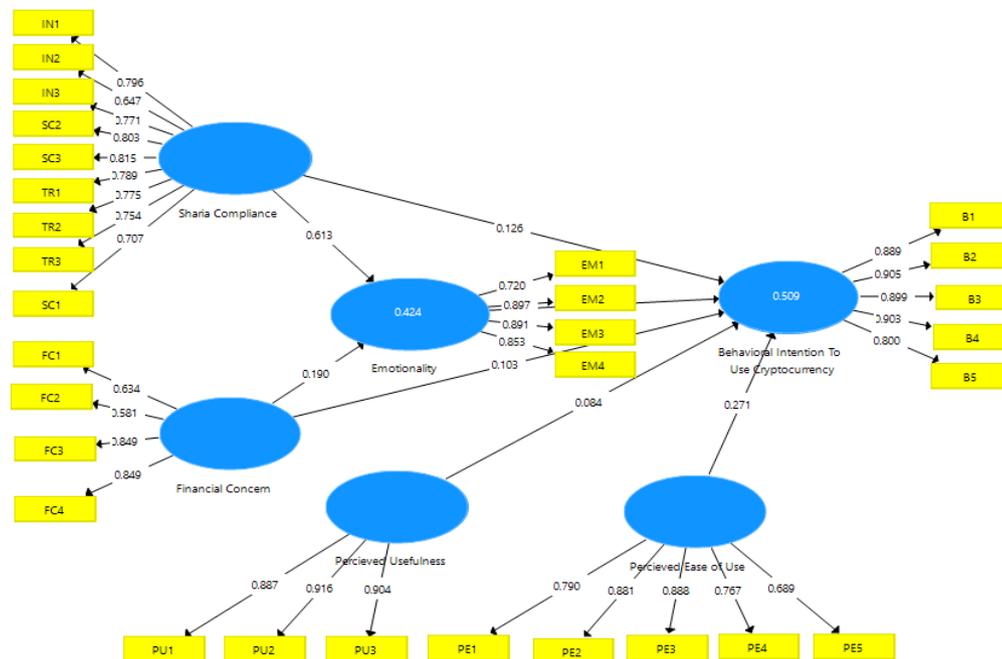


Fig. 1: Research measurement model

a) *Internal consistency reliability*

The internal consistency reliability of the measurement model is evaluated using Cronbach's alpha and composite reliability (CR). For the measurement model to have satisfactory internal consistency reliability, the Cronbach's alpha and composite reliability of each construct should exceed the recommended value of 0.70 (Hair et al., 2010; Hair et al., 2017).

Table 1: Composite reliability and Cronbach's alpha

| Construct | CR ^c | Cronbach's alpha |
|-----------------------|-----------------|------------------|
| Shari'ah Compliance | 0.926 | 0.910 |
| Financial Concern | 0.824 | 0.756 |
| Emotionality | 0.907 | 0.862 |
| Perceived Ease of Use | 0.902 | 0.863 |
| Perceived Usefulness | 0.93 | 0.887 |
| Behavioral Intention | 0.945 | 0.927 |

As shown in the table, the CR values ranged from 0.824 to 0.945, while Cronbach's alpha values ranged from 0.838 to 0.927. All values were above the recommended threshold value of 0.70. Also, comparing the CR values with the Cronbach's alpha values indicates that the CR was indeed a stronger measuring criterion for assessing the internal consistency reliability. Based on the results of Cronbach's alpha and CR, the indicators used to measure the constructs in this research had satisfactory internal consistency reliability.

b) *Convergent validity*

Convergent reliability is assessed using the average variance extracted (AVE) comparable to the

proportion of variance explained in factor analysis (values between 0 and 1). AVE > 0.5 (Fornell and Larcker, 1981).

Table 2: Average variance extracted

| Construct | AVE ^b |
|-----------------------|------------------|
| Sharia Compliance | 0.583 |
| Financial Concern | 0.545 |
| Emotionality | 0.711 |
| Perceived Ease Of Use | 0.65 |
| Perceived Usefulness | 0.815 |
| Behavioral Intention | 0.775 |

The analysis shows that the AVE for the constructs ranged from 0.583 to 0.815, exceeding the recommended threshold value of 0.5. These results demonstrate that the measurement model has adequate convergent validity and indicates that the measures used were robust.

c) *Discriminant validity*

Discriminant validity is the extent to which a given construct does not correlate with other constructs that are different from it (Joe F Hair, Sarstedt, Ringle, and Mena, 2012).

d) *Discriminant validity at the construct level*

For examining the discriminant validity at the construct level, (Fornell and Larcker, 1981) criterion is used. The discriminant validity is established when the square root of the construct AVE exceeds the correlations between the construct and all other constructs (Ahmad, 2012; Ismail, Hamid, and Idris,

2012) The AVE value for each construct is calculated using PLS algorithm test, while the square root of the AVE value is calculated manually. Table 3 displays the constructs discriminant validity. The bolded diagonal

values in the Table are the square roots of the AVE, while the non- bolded off-diagonal values are the intercorrelation values between the constructs.

Table 3: Inter-correlation matrix

| | BI | EM | FC | PEOU | PU | SC |
|-----------------------|-------|--------------|--------------|--------------|--------------|--------------|
| Behavioral Intention | 0.88 | | | | | |
| Emotionality | 0.633 | 0.843 | | | | |
| Financial Concern | 0.227 | 0.222 | 0.738 | | | |
| Perceived Ease of Use | 0.624 | 0.614 | 0.147 | 0.806 | | |
| Perceived Usefulness | 0.58 | 0.668 | 0.106 | 0.709 | 0.903 | |
| Sharia Compliance | 0.571 | 0.623 | 0.052 | 0.698 | 0.686 | 0.763 |

***The diagonals are the square roots of the AVE of the latent variables and indicate the highest in any column row

e) Discriminant validity at the indicator level

Another method to evaluate the discriminant validity of the measurement model is at the indicator level. The discriminant validity is examined by the loading of each indicator relating to all construct correlations (Henseler et al., 2009). The results in the table showed that all indicators loaded higher on their

constructs compared to the other constructs. This confirmed that the discriminant validity at the indicator level was established. Therefore, the results of the cross-loadings demonstrated that the second assessment of the measurement model discriminant validity was satisfactory. Accordingly, the measurement model established its discriminant validity.

Table 4: Indicator item cross-loading

| | BI | EM | FC | PE | PU | SC |
|-----|--------------|--------------|--------------|--------------|--------------|--------------|
| B1 | 0.889 | 0.565 | 0.224 | 0.523 | 0.474 | 0.504 |
| B2 | 0.905 | 0.516 | 0.221 | 0.524 | 0.487 | 0.487 |
| B3 | 0.899 | 0.542 | 0.210 | 0.500 | 0.473 | 0.434 |
| B4 | 0.903 | 0.562 | 0.221 | 0.519 | 0.497 | 0.465 |
| B5 | 0.800 | 0.586 | 0.129 | 0.653 | 0.6 | 0.598 |
| EM1 | 0.573 | 0.720 | 0.025 | 0.66 | 0.695 | 0.688 |
| EM2 | 0.518 | 0.897 | 0.226 | 0.48 | 0.536 | 0.492 |
| EM3 | 0.488 | 0.891 | 0.258 | 0.432 | 0.493 | 0.442 |
| EM4 | 0.524 | 0.853 | 0.267 | 0.444 | 0.473 | 0.417 |
| FC1 | 0.045 | 0.042 | 0.634 | 0.063 | 0.02 | 0.07 |
| FC2 | 0.014 | 0.155 | 0.581 | 0.091 | 0.063 | 0.028 |
| FC3 | 0.207 | 0.176 | 0.849 | 0.126 | 0.047 | 0.011 |
| FC4 | 0.243 | 0.207 | 0.849 | 0.127 | 0.143 | 0.093 |
| PE1 | 0.445 | 0.425 | 0.121 | 0.790 | 0.53 | 0.494 |
| PE2 | 0.513 | 0.496 | 0.111 | 0.881 | 0.577 | 0.596 |
| PE3 | 0.571 | 0.501 | 0.054 | 0.888 | 0.586 | 0.63 |
| PE4 | 0.556 | 0.604 | 0.17 | 0.767 | 0.632 | 0.618 |
| PE5 | 0.399 | 0.427 | 0.149 | 0.689 | 0.523 | 0.44 |
| PU1 | 0.484 | 0.577 | 0.141 | 0.639 | 0.887 | 0.59 |
| PU3 | 0.534 | 0.616 | 0.054 | 0.634 | 0.904 | 0.655 |
| PU2 | 0.550 | 0.615 | 0.096 | 0.649 | 0.916 | 0.612 |
| SC1 | 0.391 | 0.441 | 0.000 | 0.447 | 0.511 | 0.707 |
| SC2 | 0.400 | 0.474 | 0.056 | 0.487 | 0.528 | 0.803 |
| SC3 | 0.410 | 0.482 | 0.065 | 0.504 | 0.531 | 0.815 |
| TR1 | 0.462 | 0.491 | 0.006 | 0.544 | 0.524 | 0.789 |
| TR2 | 0.513 | 0.521 | 0.011 | 0.531 | 0.526 | 0.775 |
| TR3 | 0.379 | 0.506 | 0.104 | 0.523 | 0.538 | 0.754 |
| IN1 | 0.511 | 0.491 | 0.059 | 0.615 | 0.51 | 0.796 |
| IN2 | 0.366 | 0.321 | 0.075 | 0.502 | 0.429 | 0.647 |
| IN3 | 0.461 | 0.515 | 0.004 | 0.627 | 0.603 | 0.771 |

In the conclusion of the measurement model, All the above results of the measurement model assessment substantiated that all the construct measures are reliable and valid. Consequently, based on these results, the measurement model was satisfactory for the next stage of analysis and evaluation, i.e. assessment of the structural model.

V. STRUCTURAL MODEL ESTIMATES

The structural model consists of the constructs, also known as latent variables, and the paths that connect them. Assessment of the structural model specifies the relationship between the latent variables (Henseler et al., 2009). The purpose of the structural model assessment is to evaluate its validity (Skaik and Othman, 2015) and path estimates (Henseler et al., 2009). and thus tests the proposed hypotheses (Ahmad, 2012) The assessment process is conducted using the

following analyses: coefficient of determination, path coefficients, effect size, and predictive relevance.

After assessing the measurement model, the analysis proceeded to determine the explanatory power of the model and to test the research hypothesis. This involved the performance assessment of the structural model. The structural model consisted of the constructs, also known as latent variables, and the paths that connect them as shown in Figure 2. Assessment of the structural model specifies the relationship between the latent variables (Henseler et al., 2009). The purpose of the structural model assessment is to evaluate its validity (Ahmad, 2012) and path estimates (Henseler et al., 2009). and thus test the proposed hypotheses (Ismail et al., 2012). The assessment process is conducted using the following analyses: coefficient of determination, path coefficients, effect size, and predictive relevance.

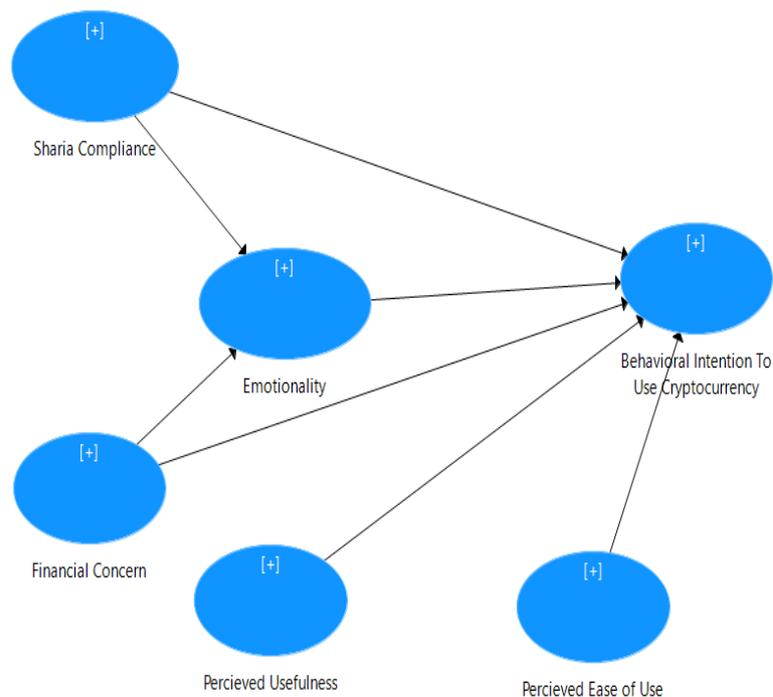


Fig. 2: Research structural model

a) Coefficient of determination

The coefficient of determination refers to the amount of variance in the dependent variables that are explained or predicted by the independent variable (Ahmad, 2012). Thus, it evaluates the regression function's goodness of fit against the empirically obtained manifest variables (Götz et al., 2010). The larger the coefficient of determination (R²) value is, the larger the percentage of variance explained (Götz et al., 2010) with R² value usually varying between 0 and 1 (Hair et al., 2010). Using PLS algorithm test, the R² values of the dependent variables are displayed in Table 5.

Table 5: R square values

| Construct | R ² | Power |
|--|----------------|-------|
| Behavioral Intention to Use Cryptocurrency | 0.509 | Large |
| Emotionality | 0.424 | Large |

Based on the results above, Behavioral Intention to Use Cryptocurrency is 50.9% predicted by Emotionality. Meanwhile, Emotionality itself is 42.4% predicted by Shari'ah Compliance and Financial Concern. Finally, the results show that the R² values for both Behavioral Intention to Use Cryptocurrency and Emotionality are large.

b) Path coefficients

Each path connecting two latent variables in the structural model represents a hypothesized relationship. Estimating the path coefficient explains the strength of the relationship between the latent variables and supports or refutes the hypothesis (Ahmad, 2012).

The recommended values for estimating the magnitude of the path coefficients are 0.02, 0.15, and 0.35 indicating small, medium, and large relationships

respectively (Cohen, 1988). In PLS-SEM, the PLS algorithm test is conducted to evaluate the path coefficient sign and magnitude.

According to Hair Jr et al., (2017) , the significant t-statistic values for a two-tailed test are 1.65 (p-value 0.1), 1.96 (p-value 0.05), and 2.59 (p-value 0.01). Accordingly, the bootstrapping test using 5,000 resamples was performed. Table 5.6 shows the path coefficients and t-statistics.

Table 6: Path coefficients and t-statistics

| Independent Variable | Dependent Variable | Path Coefficient | T-value | Path magnitude |
|-----------------------|----------------------|------------------|---------|----------------|
| Emotionality | Behavioral Intention | 0.307 | 4.677 | Large |
| Financial Concern | Behavioral Intention | 0.11 | 1.812 | Medium |
| Financial Concern | Emotionality | 0.19 | 3.152 | Medium |
| Perceived Ease of Use | Behavioral Intention | 0.274 | 3.643 | Medium |
| Perceived Usefulness | Behavioral Intention | 0.081 | 1.081 | Small |
| Shari'ah Compliance | Behavioral Intention | 0.126 | 2.022 | Medium |
| Shari'ah Compliance | Emotionality | 0.612 | 16.329 | Large |

All path coefficient estimates ranged from 0.081 to 0.612 establishing small, medium and large relationships between the hypothesized constructs. Moreover, the t-statistics values ranged from 1.081 to 16.329 demonstrating significant levels. According to Kock (2015), a path coefficient value below the recommended minimum value indicates it is too weak to be considered relevant from a practical point of view, which may occur with large sample sizes.

Based on the above tests involved in assessing the structural model of the research, the results demonstrated that the structural model was adequate and valid. Therefore, as indicated by researchers and experts in PLS (Chin, 2010; Götz et al., 2010; Urbach and Ahlemann, 2010; Hair et al., 2017), once the quality of the model was confirmed, the next stage was to test the hypothesized relationships among the model constructs.

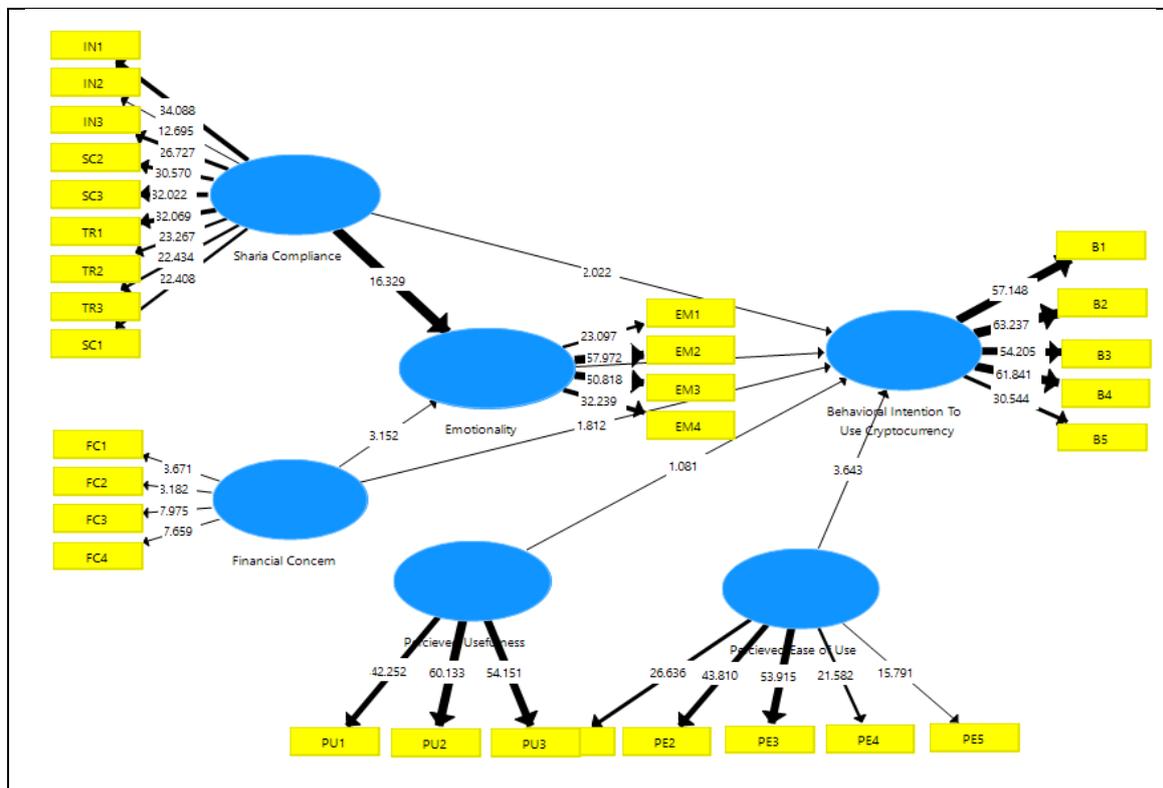


Fig. 3: Hypothesis testing: Bootstrapping direct effect result

VI. HYPOTHESES TESTING

The research hypotheses are tested using the results obtained from the path coefficient assessment in the structural model. To test the hypotheses, both path estimates and t-statistics with their p-values are used to support the hypothesis. Path coefficients provide us with an overview of results including standard errors,

bootstrap mean values, t-values and p-values through bootstrapping. Path coefficient values of 0.02, 0.15, and 0.35 indicate small, medium, and large relationships respectively (Cohen, 1988). Meanwhile, significant t-values for a two-tailed test are 1.65, 1.96, and 2.59 at p-values 0.1, 0.05, and 0.01 respectively (Hair et al., 2017).

Table 8: Hypotheses testing with path coefficients, t-statistics, and significance levels

| No. | Hypothesis | Std beta | T Statistic | P Values | Result |
|-----|---|----------|-------------|----------|-------------|
| H1 | Shari'ah Compliance -> Behavioral Intention to Use Cryptocurrency | 0.126 | 2.022 | 0.043 | Supported |
| H1a | Shari'ah Compliance -> Emotionality | 0.612 | 16.329 | 0.000 | Supported |
| H2 | Financial Concern -> Behavioral Intention to Use Cryptocurrency | 0.11 | 1.812 | 0.07 | Unsupported |
| H2b | Financial Concern -> Emotionality | 0.19 | 3.152 | 0.002 | Supported |
| H3 | Perceived Usefulness -> Behavioral Intention to Use Cryptocurrency | 0.081 | 1.081 | 0.28 | Unsupported |
| H4 | Perceived Ease of Use -> Behavioral Intention to Use Cryptocurrency | 0.274 | 3.643 | 0.000 | Supported |
| H5 | Financial Concern -> Emotionality -> Behavioral Intention to Use Cryptocurrency | 0.058 | 2.75 | 0.006 | Supported |
| H6 | Shari'ah Compliance -> Emotionality -> Behavioral Intention to Use Cryptocurrency | 0.187 | 4.463 | 0.000 | Supported |
| H7 | Emotionality -> Behavioral Intention to Use Cryptocurrency | 0.307 | 4.677 | 0.000 | Supported |

Based on the analysis, it shows that Behavioral Intention to Use Cryptocurrency from the Islamic perspective is influenced directly by Shari'ah Compliance ($\beta = 0.126$, t-value = 2.022, p-value = 0.043), Perceived Ease of Use ($\beta = 0.274$, t-value = 3.643, p-value < 0.001), Emotionality ($\beta = 0.307$, t-value = 4.677, p-value < 0.01). Therefore, H1, H2b and H4 are accepted.

On the other hand, Perceived Usefulness ($\beta = 0.081$, t-value = 1.081, p-value = 0.28) and Financial Concern ($\beta = 0.11$, t-value = 1.812, p-value = 0.07) presented non-significant positive effect on BI. Therefore, H3 and H2 are not accepted.

As evident from the analysis, Emotionality is influenced directly by Financial concern ($\beta = 0.19$, t-value = 3.152 at P level < 0.002) and Shari'ah Compliance ($\beta = 0.612$, t-value = 16.329, p-value < 0.001). Therefore, H2b and H1a are accepted.

Meanwhile, Behavioral Intention is influenced indirectly by Financial Concern ($\beta = 0.058$, t-value = 2.75, p-value = 0.006) and Shari'ah Compliance ($\beta = 0.187$, t-value = 4.463, p-value = 0.043). Therefore, H5 and H6 are supported

VII. ASSESSMENT OF MEDIATING RELATIONSHIP

A variable is considered a mediator if the influence of the independent variable on the dependent variable decreases when the mediator is introduced

simultaneously with the independent variable as a predictor of the dependent variable (Baron and Kenny, 1986). In this research, the model is characterized by its complexity for containing one mediator, Emotionality. In each case, some independent variables affect the mediating variable, which in turn affects the dependent variable. This leads to forming a chain of relations among the independent, mediating and dependent variables (Baron and Kenny, 1986).

Mediation assessment provides accurate information whether a mediating variable mediates the relation between two other variables. Mediation variable mediates the relation between two other variables (MacKinnon and Fairchild, 2009).

a) Mediator emotionality

According to Henseler et al., (2009), measuring the direct and indirect relationships between independent and dependent latent variable is another important evaluation of a structural model. In this study, the assessment started by assessing the influence of Shari'ah Compliance and Financial Concern on Behavioral Intention to Use Cryptocurrency from the Islamic Perspective. The results showed that Shari'ah Compliance positively influenced Behavioral Intention to Use Cryptocurrency from the Islamic Perspective. On the other hand, Financial Concern had an indirect and positive influence on BI. To test the mediating effect of Emotionality, it was included in the relationship between the independent variables and Behavioral Intention to

Use Cryptocurrency from the Islamic Perspective. The result showed that Emotionality positively influenced Behavioral Intention and was influenced by Shari'ah Compliance, yet not by Financial Concern.

Moreover, the results showed that the addition of the mediating variable Emotionality has increased the coefficient values of Sharia Compliance, Financial Concern on Behavioral Intention. Table 14 shows the results indicating that while Emotionality partially mediated between Financial Concern and Shari'ah Compliance on Behavioral Intention to Use Cryptocurrency from the Islamic Perspective.

Table 9: Result of the mediating effect of emotionality

| IV | DV | B and T-Values Without Mediator | B and T-Values with Mediator | Mediating Effect |
|----------------------|----|---------------------------------|------------------------------|------------------|
| Financial Concern -> | BI | $\beta 0.11$ / t: 1.812 | $\beta 0.058$ / t: 2.75*** | Full |
| Sharia Compliance -> | BI | $\beta 0.126$ / t: 2.022** | $\beta 0.187$ / t: 4.463*** | partial |

b) Total effect

In addition to measuring the mediating effect of the mediators, Hair Jr et al., (2017) recommend another criterion to be considered when addressing the mediators' effect. The sum of direct and indirect effects is referred to as the total effect. The interpretation of total effects is particularly useful in studies aimed at exploring the differential impact of several driver constructs on a criterion construct via one or more mediating variables.

Table 10 shows the total effects of the structural inner model path relationships as generated by SmartPLS using the PLS algorithm test.

Table 10: Total effects of the structural inner model

| Path | Value | Effect Size |
|---|-------|-------------|
| Emotionality -> Behavioral Intention | 0.307 | Large |
| Financial Concern -> Behavioral Intention | 0.11 | Small |
| Financial Concern -> Emotionality | 0.19 | Medium |
| Perceived Ease of Use -> Behavioral Intention | 0.274 | Large |
| Perceived Usefulness -> Behavioral Intention | 0.081 | Small |
| Shari'ah Compliance -> Behavioral Intention | 0.126 | Medium |
| Shari'ah Compliance -> Emotionality | 0.612 | Large |

VIII. PRINCIPLE FINDING AND DISCUSSION

The research was designed using a quantitative research approach through employing an online survey, a web-based questionnaire was developed based on the research objectives and questions. Follow up

reminders were sent to ensure attaining the required sample size. The sample was collected from 307 and from the population those who targeted are with some knowledge of cryptocurrency.

The data were analyzed by using the partial least square structural equation modelling technique. The analysis process involved an assessment of the measurement model to evaluate the reliability and validity of the items used, assessment of the structural model to evaluate its validity, the path coefficient estimates, and test the research hypotheses and assessment of the mediating factors. The results of the research provided empirical support for the conceptualized research model, with 7 hypotheses out of 9 being supported.

The results revealed that Behavioral Intention to use cryptocurrency from the Islamic perspective was positively associated with Shari'ah Compliance, Financial Concern, Perceived Ease of Use, and Emotionality, which collectively explained 50.9% of the Behavioral Intention to use cryptocurrency from the Islamic perspective. Meanwhile, the results found that Financial Concern and Perceived Usefulness did not have a significant positive impact on Behavioral Intention but have been an indirect effect on BI through Emotionality. Overall, the model was able to explain 50.9% of the variance in Behavioral Intention to use cryptocurrency from the Islamic perspective

In this study, Shari'ah Compliance has been found to positively influence Behavioral Intention to use cryptocurrency from the Islamic perspective ($\beta = 0.126$, t-value= 2.022, p-value = 0.043) and Emotionality ($\beta = 0.612$, t-value = 16.329, p-value < 0.001). This result indicates that for one unit increase in Shari'ah compliance and Emotionality, BI will increase by 0.126 and 0.612 respectively. This result is consistent with previous studies (Abdullah and Wahab, 2015; Lu et al., 2016; Ribadu and Wan Ab. Rahman, 2017). For example, Abdullah and Wahab (2015) stated that religious obligation was the strongest predictor of the intention to use Islamic personal financing.

In this study, Sharia Compliance refers to denotes obedience to Shariah law. Any cryptocurrency system is required to operate in conformity with the principles of the Islamic law of contract and must be devoid of fundamentally prohibited elements as a prerequisite.

Sharia Compliance has become one of the most important factors to make users adopt cryptocurrency in their daily life operations. A lot of thought on this issue. As previously found from the literature from researchers and scholars that, cryptocurrency and bitcoin are not permissible meaning it is prohibited in Islamic law while Other scholars look it as permissible.

Cryptocurrency is a digital payment currency and peer-to-peer (P2P) technology to create and

manage monetary transactions as without to central authority as reported by (Nakamoto, 2008). This indicates that cryptocurrency such as bitcoin is just replacement of the normal fiat money. However, most of the people look cryptocurrency as a new form of money that raises a lot of thought on it. Some people wondering that has no value, not an asset, commodity and it's not like other currencies such as dollars and ringgit. This indicates that Gold and Silver are the basis of money in Islam; when they are not available, it is accepted to use banknotes or even a stamped skin' as said by Imam Malik in Mudawwana he said that "if a skin people consider it as currency and they accepted it, it could be accepted as currency even a skin" The difference between Cryptocurrency and the banknotes is that; Cryptocurrency is not from the government but rather it is from hidden individuals so, it has no insurance or guarantee when particular risk happened.

From the sharia point of view, uncertainty issues Such as, volatility, obscurity, ambiguity, the status of cryptocurrencies (commodity, financial asset, Currency) and not regulated by the government which surround the Cryptocurrency have let some peoples to doubt or not involve on the cryptocurrency transactions. The Uncertainty factors (Gharar) behind the cryptocurrency is one of the major factors that if its resolve, then will influence people to intend to use cryptocurrency. Also, from the Islamic Rules of Jurisprudence and Fundamentalism, One out of the five main rules "Harm must be eliminated". Because the value of cryptocurrency can be speculative, it is unclear what a person is buying and what the result of the entire bitcoin venture is going to be. No authorities to blame if attackers get access to your Wallet or lose your wallet private key. Therefore, these kinds of issues can be considered as uncertainty "gharar" and from shariah, harm must be removed according to rules of sharia. This specified that from the Shariah point of view the major purpose of cryptocurrency its uncertainty and also there is "addarar" harm This indicate the issues of uncertainty is very important when it comes to the sharia. Scholars need to look carefully before making it permissible or impermissible for after resolving and removing uncertain factors, then more people will engage and use cryptocurrency.

From the finding of this Paper, Financial Concern ($\beta = 0.19$, t-value= 3.152, p-value = 0.002) presented a positive influence on Emotionality. This indicates that as financial concern increases by one unit, Emotionality will increase by 0.19. This result is consistent with the previous studies (Abramova and Böhme, 2016; Ryu, 2018). For instance, Ryu (2018) stated that financial risk had a positive impact on perceived risk meaning that losses in cryptocurrency transactions were common due to its price volatility and security issues. Therefore, increased security in such financial transactions would positively influence

behavioural intention to use cryptocurrency. On the other hand, Financial Concern did not present a significant direct influence on behavioral intention to use cryptocurrency from the Islamic perspective ($\beta = 0.11$, t-value = 1.812, p-value = 0.07).

Within this study, Perceived Ease of Use was proved to have a significant positive influence on Behavioral Intention to use cryptocurrency from the Islamic perspective ($\beta = 0.274$, t-value= 3.643, p-value < 0.001). This indicates that as perceived ease of use increases by one unit, BI will increase by 0.274. This finding is aligned with previous studies (Abramova and Böhme, 2016; Durodolu, 2016; Shahzad, Guoyi, Jian, and Shahbaz, 2018; Shiau and Chau, 2016). According to the analysis, there is a lack of user-friendliness when using Cryptocurrencies. From the viewpoint of sending or receiving cryptocurrencies is still cumbersome and holding cryptocurrencies is lead to many risks such as volatility and attacked. Users need to be able to have more confidence in the availability of their funds. Therefore, they need to undertake additional measures to protect their computers and mobile devices To boost their influence on cryptocurrency.

On the other hand, Perceived Usefulness presented a non-significant positive effect on BI ($\beta = 0.081$, t-value= 1.081, p-value = 0.28). This finding becomes different with (Han and Moon, 2011) These indicate that the participants are more concern with other highly associated variables compared to Usefulness.

From the goal of this study is to examine whether shariah compliance and financial concern can indirectly influence behavioral intention to use cryptocurrency from an Islamic perspective. From the results reported that Emotionality mediates the relationships between Sharia Compliance and Financial concern. More specifically, Emotionality fully mediated with financial concern while sharia compliance has been partially mediated. The finding reveal that Behavioural intention is influenced indirectly through emotionality by Financial Concern ($\beta 0.058$, t-value= 2.75 at P level < 0.006) and Sharia Compliance ($\beta 0.187$, t-value= 4.463 at P level < 0.043). this result is consistent with the studies of Ryu, (2018) that investigated the mediation between financial concern and legal concern, were legal risk had a highly negative effect on the Fintech continuance intention.

From this study Emotionality ($\beta = 0.307$, t-value= 4.677, p-value < 0.001) was identified to have a significant positive influence on Behavioral Intention to use cryptocurrency from the Islamic perspective. This indicates that as emotionality increases by one unit, BI will increase by 0.307. This result is consistent with the studies of Lu, Fan and Zhou (2016). In that study, they found the perception of others having a positive impact on trust in online sellers.

From the goal of this study is to examine whether shari'ah compliance and financial concern can indirectly influence behavioral intention to use cryptocurrency from an Islamic perspective. The outcome reveals that Emotionality fully mediated with financial concern while sharia compliance has been partially mediated this lead Emotionality to have a positive influence on behavioral intention to use cryptocurrency from the Islamic perspective. These indicate that there is a big role of Fatwa centres Such as Muftis, Majma'al Fiqh to come out with good solutions according to the Islamic principles that will fit cryptocurrency and eliminate all harm related to it. A lot of fatwas are based on assumptions, not strong bases. Even though, their fatwas will play a strong influence on users to adopt cryptocurrency because their opinions will influence users to make a transaction with cryptocurrency. A lot of Fatwa based on assumption No strong bases that addressed the issue of cryptocurrencies. Similarly goes to the financial expert their role through emotionality to give a clear advertisement for people to show them which is the exactly good cryptocurrency to make them aware of how to deal with such currencies. The more they simplified the rules and remove this all uncertainties related to cryptocurrency the more will influence people behavior to adopt cryptocurrency from the Islamic perspective. Therefore, Good opinions of sharia expert and Financial expert will strongly influence user's behavior intentions to adopt cryptocurrency.

This study gains some support from three main theories, Technology Acceptance Model (TAM), Theory of Reason Action (TRA), and de-individuation Theory. Financial Concern is one of the major construct used in this study, which was adopted from Ryu (2018) The result of that study which examined the relationship between financial concern and Fintech continuous intention Indicated that Financial Risk positively associated with Perceived Risk. this is not consistent with the outcome of this study.

Perceive Ease of use, is one of the major construct used in this study, which was adopted from Abramova and Böhme, (2016). The result of that study which examined the relationship between Perceived Ease of use and with user engagement in bitcoin. Specified that perceived ease of PEU factor influences user engagement in bitcoin transactions positively. Hence, this is consistent with the outcome of this study.

Perceived Usefulness, is one of the major construct used in this study, which was adopted from Han and Moon (2011). The result of that study which examined the relationship between Perceived usefulness and with continuous intention to use Internet Protocol Television (IPTV). Specified that perceived ease of PEU factor influences user engagement in bitcoin transactions positively. Hence, this is not consistent with the outcome of this study.

Emotionality is one of the major construct used in this study, which was adopted from De-individuation theory by Prentice-Dunn and Rogers, (1983). He theorized that, through his studies on the impact of a "crowd," a loss of personal responsibility in crowds leads to an inclination to behave primitively and hedonistically by the entire group. This resulting mentality, The idea of a "group mind" is comparable to the shared autism theory, which holds that individuals within a group may develop shared beliefs that have no basis in reality.

IX. CONCLUSION

This study evaluates the issues concerning cryptocurrency-typed (Bitcoin) implementation from an Islamic perspective. A hypothesis has been formulated and evaluated by quantitative research methodology. Smart PLS is used to investigate the determinants that influence the continuous knowledge-sharing intention of the members within business online communities. This tool is utilized in this study as an analytical tool. Hence hypothesis testing was carried out. The findings reveal that Behavioral Intention to Use Cryptocurrency from the Islamic perspective is influenced by many factors namely: Shari'ah Compliance, Perceived Ease of Use, Emotionality, Perceived Usefulness, and Financial Concern. However, Emotionality towards Islamic belief is influenced directly by Financial concern and Shari'ah Compliance in the implantation of cryptocurrency. Furthermore, Behavioral Intention is influenced by Financial Concern. This study has contributed to understanding the Islamic issues behind the implementation of cryptocurrency. The impact of this study will resolve some claims that cryptocurrency and Bitcoin are harams based on the fact that the issuer of Bitcoin is unknown and has neither an official government nor a central authority behind it.

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