

Trust, Technology Awareness and Satisfaction Effect into the Intention to Use Cryptocurrency among Generation Z in Malaysia

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Abstract

Due to the current inclination of central bank of Malaysia to regulate the usage of digital currencies in early 2018, this paper investigates the factors affecting Malaysian Generation Z attitude and intention to use cryptocurrency in their financial decisions. Quantitative method has been applied and a sample of 230 final year students of Universiti Kuala Lumpur business school has been used. The investigation detected a significant impact of the awareness and trust into the attitude -which in support of the satisfaction with cryptocurrency service- can create an intention to use cryptocurrency.

Keywords: Trust, technology awareness, Cryptocurrency, Generation Z

1. Introduction

While the idea of electronic cash goes back to 1980s but till 2017 the central banks didn't proceed to regulate the digital currencies due to the wide believe of the high-risk level associated with adopting this type of monetary system. This belief didn't stop the financial policy makers from thinking about the need if not to adopt at least to regulate the usage of it.

The nature of this monetary system and it's relying on the internet usage made it more common among internet users which are mostly young age population, as survey conducted in Spring 2015 across 40 different countries, found that 68% of adults in Malaysia reported to use the internet which is higher than the global average of 67%, and the Asia-Pacific median of 58%, moreover the people aged 18 to 34 are reported as more likely to use internet as compared to those aged 35 and older (Poushter & Stewart, 2016). Furthermore the study conducted by Malaysian Communications and Multimedia Commission (MCMC) found that more than one third (41.7%) of internet users used internet for financial activities (increased from 36.2% in the previous year) (Communications, 2017).

Heading towards regulating the usage of cryptocurrency by BNM didn't come just because of the global orientation moving in this way, it was also initiated in response to the market move towards adopting this technology as it shows like a fantastic way to quick wealth. This reason enhanced the need to investigate the intention towards this new technology especially among the Generation Z who are also known as the 'hyper-connected' generatio [1].

2. Review of Literature

2.1. Generation Z and Technology Adoption:

Many previous studies indicated the generation time line definitions but not all had the same categorizing range. Based on

Malaysia historical context, Comeau and Tung proposed new age group labels ranged from generation #1 (1943- 1960) to generation #4 (2005 -up to date) which is equal to the range of baby boomers to generation Z in the US context [2]. Furthermore, the group Inheritors (born after 1990) has been applied to the whole Malaysia by a qualitative study conducted in 2016 to define actual generation cohorts in the Malaysian context [3]. While labelling the latest generation varies among researchers but in majority confirmed that the newest generation are advanced into Internet and communications technologies [4].

2.2. Cryptocurrency acceptance based on age at individual level:

The lack of information about the Cryptocurrency users made it not possible to determine the average age of them. Bohr and Bashir in their study into Bitcoin use, found that the highest frequency of the Bitcoin users aged in their mid-twenties, this result has been concluded from the pool which has been posted into one of the famous related Bitcoin site "bitcointalk.org" shows that age range of 22 to 30 years old represented 46.7% of the respondents ("What is the average age of Bitcoin investors/users?," 2016). Likewise, the centre for Generational Kinetics, which is the leader in generational research and solutions in its latest survey that was conducted online from January 11, 2017 to January 18, 2017, with 2004 US respondents concluded that z generation (born from approximately 1996 to 2015) are smarter with money. Obviously, it's clear that teenagers are more receptive to new technologies and easily get along with them.

2.3 Underpinning Theories and Hypothesis Conception:

The perception of awareness initially used in the early phase of an innovation diffusion theory (IDT) proposed by [5]. Later IDT has been used in studies related to technology usage where the

positive influence of awareness into attitude towards technology has been confirmed [6,7].

In addition to technology awareness, trust is found to positively influence users' attitude towards new technology adoption. With the purpose to more efficiently elucidate and anticipate human behaviours towards information technology usage, Davis (1985) adapted the theory of reasoned action (TRA) and proposed technology acceptance model (TAM), which has been adapted later by many technology usage studies [8,9,10,11,12].

[13] in their study about the adoption of Fintech service among industrial engineers in Taiwan, found that if the Fintech enterprise provided safe and secure transaction system this will create high level of brand and service trust in Fintech service, which will boost the customer's positive attitude toward using Fintech service. This result aligned with other studies which found that the availability of trust when adopting the new technology has direct effect on consumer's purchasing attitude [14].

Additionally, the effect of consumer attitude into intention to use, adopt or repurchase has been established by many customers' behaviour studies [15,16,17,18]. More factors have been found to effect intention like the study of Pandža Bajs (2015), which found that the satisfaction has positive and direct influence on future behavioural intention. Furthermore, a study conducted in 2016 to investigate the factors motivated customers to adopt Fintech service, this study relied on the Regulatory Focus Theory (RFT) to propose that satisfaction and trust have a positive and direct effect on intention to use but the results are not yet published [19,20,21,22].

3. Research Methodology:

3.1. Instrument Development, Population and Sampling:

To test the research model empirically a quantitative method was applied, and primary data were collected by online questionnaire (appendix A). Using the year of birth as the only context of generation labels could be problematic [27] nonetheless having a baseline to structure the research based on it is more important. In this study the researcher considered the definition of z generation as those whose year of birth is 1995 onward as scanned by one of big market campaign managed as collaborative efforts among decision lab, OMD and media prima in 2015 [30].

This study was conducted over a period of five weeks at the end of 2017, on last year students in business school of university of Kuala Lumpur as its targeted respondents, out of more than 350 students just 230 of them were interested to join this survey while just 139 responses used for further analysis due to the year of birth constraint. The respondents were 109 females and 30 males, 74% of them have a moderate experience of internet and computer while just 23% are expert and 3% have novice experience. About their experience with cryptocurrency the majority 76% have no experience of cryptocurrency while 21% have some experience and just 3% are experienced regarding cryptocurrency.

3.2. Data Analysis:

SPSS 22 was used for data preparation and descriptive analysis, while structural equation modelling (SEM SmartPLS 2) has been used to do the necessary testing. Throughout questionnaire preparing stage, both face and content validity were conducted.

Convergent Validity: To ensure the convergent validity the three estimations which have been suggested by [23] have been used, firstly, all the items' factor loadings must be higher than accepted value [24]. Secondly, the composite reliability was examined [25,26] (range from 0.939 for BI to 0.975 for BA). Thirdly, the average variance extracted (AVE) has been calculated with AVE

values ranged between 0.734 and 0.930 the condition of value higher than 0.5 [28,29] was fully met

Discriminant Validity: To ensure that the measures are more related to their own respective construct, the square root of AVE was examined and confirmed the discriminant validity of the outer model [31]. To conclude, construct validity was established in this study by confirming content validity, convergent validity, and discriminant validity.

4. Conclusion and Future Research

Due to the technical nature of the cryptocurrency, the increase in the level of technology awareness assumed to be important and have positive effect into attitude, this assumption has been supported by this study results. Additionally the need to have technology awareness reflects high support to the fact of difficulty to market this type of currencies among old generation whom reported to be less educated in term of using the new technology [32, 33, 34, 35, 36, 37, 38]. Additionally, this study supported the importance of high trust level as main predictor for attitude which can be caused due to the lack of government regulatory. Furthermore, insuring customer satisfaction is another factor which has positive impact into creating intention among Generation Z in Malaysia to use the Cryptocurrencies.

The focus of this study on Generation Z, and studying specific factors, open the door in front of other researchers to adopt the proposed model and apply it on different category of respondents, or by studying the effect of other variables as perceived usefulness and perceived ease of use in collaboration with the suggested ones to inspect the intention towards using the crypto currency.

References

- [1] Aggarwal, R., & Chanda, U. Optimal duration of advertising campaigns for successive technology generations using innovation diffusion theory. *International Journal of Operational Research*, 28(3), 415–428, (2017).
- [2] Ajzen, I. Constructing a TPB questionnaire: Conceptual and methodological considerations, (2002)
- [3] Amfani-Joe, C. E., Okonkwo, L., & Osagede, E. A. Socio-demographic Structures of Families as Predictors of Time Management by Working Housewives in the Federal Capital Territory (FCT), Abuja, Nigeria. *International Journal of Social Sciences Perspectives*, 3(1), 1-6, (2018).
- [4] Arora, N., & Rahul, M. The impact of trust on online shopping attitude among women shoppers in India. *International Journal of Technology Transfer and Commercialisation*, 15(3), 360–381, (2017).
- [5] Bagozzi, R. P., & Yi, Y The degree of intention formation as a moderator of the attitude-behavior relationship. *Social Psychology Quarterly*, 266–279, (1989).
- [6] Bohr, J., & Bashir, M. Who uses bitcoin? an exploration of the bitcoin community. In *Privacy, Security and Trust (PST)*, 2014 Twelfth Annual International Conference on (pp. 94–101), (2014).
- [7] Chang, Y., Wong, S. F., Lee, H., & Jeong, S. P. What motivates chinese consumers to adopt FinTech services: a regulatory focus theory. In *Proceedings of the 18th Annual International Conference on Electronic Commerce: e-Commerce in Smart connected World* (p. 40), (2016).
- [8] Chin, W. W. How to write up and report PLS analyses. In *Handbook of partial least squares* (pp. 655–690). Springer. (2010).
- [9] Chuang, L.-M., Liu, C.-C., & Kao, H.-K. The adoption of fintech service: TAM perspective. *Int J Manag Adm Sci*, 3, 1–15, (2016).
- [10] Comeau, J. D., & Tung, L. C. Re-defining the concepts of generational labelling perspective from Malaysia. (2013).
- [11] Communications, M. INTERNET USERS SURVEY 2017, 1–800, (2017).
- [12] Davis, F. D. A technology acceptance model for empirically testing new end-user information systems: Theory and results. *Massachusetts Institute of Technology*, (1985).

- [13] Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, 35(8), 982–1003, (1989).
- [14] Dinev, T., & Hu, Q. The centrality of awareness in the formation of user behavioral intention toward protective information technologies. *Journal of the Association for Information Systems*, 8(7), 386, (2007).
- [15] Eltayeb, M., & Dawson, M. Understanding user's acceptance of personal cloud computing: Using the Technology Acceptance Model. In *Information technology: New generations* (pp. 3–12). Springer, (2016).
- [16] Ey, T. H., Com, R. E., & Dy, G. E. T. R. E. A. Genzilla, (2015).
- [17] Farnam, Javad, Gholam Reza Miri, and Mahsume Hafez Rezazade Satisfaction Assessment of the Quality of Life of Urban Families and their Roles in the Development of Zabol." *International Journal of Geography and Geology* 5(2), 26-33, (2016).
- [18] Fornell, C., & Larcker, D. F. Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 382–388. (1981).
- [19] Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123, (2017).
- [20] Kapil, Y., & Roy, A. Critical evaluation of generation Z at workplaces. *International Journal of Social Relevance&Concern*, 2, 10–11, (2014).
- [21] Nwibere, B. M. Interactive Relationship between Job Involvement, Job Satisfaction, Organisational Citizenship Behaviour, and Organizational Commitment in Nigerian Universities. *International Journal of Management and Sustainability*, 3(6), 321-340, (2014).
- [22] Pandža Bajs, I. Tourist perceived value, relationship to satisfaction, and behavioral intentions: The example of the Croatian tourist destination Dubrovnik. *Journal of Travel Research*, 54(1), 122–134, (2015).
- [23] Poushter, J., & Stewart, R. Smartphone ownership and internet usage continues to climb in emerging economies. *Pew Research Center*, 22, (2016).
- [24] Rathore, S. Adoption of digital wallet by consumers. *BVMISR's Journal of Management Research*, 8, 69–75. <https://doi.org/10.1108/JIBR-10-2015-0112>, (2016).
- [25] Rogers, E. M. Lessons for guidelines from the diffusion of innovations. *Joint Commission Journal on Quality and Patient Safety*, 21(7), 324–328, (1995).
- [26] Romli, A. A. N., & Ismail, S. Quality Management Practices towards Customer Satisfaction in Local Authority Public Services Website. *International Journal of Public Policy and Administration Research*, 1(3), 80-93, (2014).
- [27] Ryan, B. The College Choice Paradox; What Really Matters. *International Journal of Educational Technology and Learning*, 2(1), 32-35, (2018).
- [28] Ryu, H.-S. What makes users willing or hesitant to use Fintech?: The moderating effect of user type. *Industrial Management & Data Systems*, (just-accepted), 0, (2018).
- [29] Svendsen, G. B., Johnsen, J.-A. K., Almås-Sørensen, L., & Vittersø, J. Personality and technology acceptance: the influence of personality factors on the core constructs of the Technology Acceptance Model. *Behaviour & Information Technology*, 32(4), 323–334, (2013).
- [30] Sweeney, A. M., & Moyer, A. Self-affirmation and responses to health messages: A meta-analysis on intentions and behavior. *American Psychological Association*, (2015).
- [31] Ting, H., Lim, T.-Y., de Run, E. C., Koh, H., & Sahdan, M. Are we Baby Boomers, Gen X and Gen Y? A qualitative inquiry into generation cohorts in Malaysia. *Kasetsart Journal of Social Sciences*, (2017).
- [32] Tung, L. C., & Comeau, J. D. Demographic Transformation in Defining Malaysian Generations: The Seekers (Pencari), The Builders (Pembina), The Developers (Pemaju), and Generation Z (Generasi Z). *International Journal of Academic Research in Business and Social Sciences*, 4(4), 383, (2014).
- [33] Oronye, E. D. An assessment of the level of awareness of climate change and variability among rural farmers in Taraba State, Nigeria. *International Journal of Sustainable Agricultural Research*, 1(3), 70-84, (2014).
- [34] Gilad, E. Developing Pre-Service Teachers Awareness and Change of Gender-Oriented Perceptions. *International Journal of Education and Practice*, 2(11), 250-263, (2014).
- [35] Binti Rahim, N. F., Shafii, Z., & Shahwan, S. Awareness and perception of muslim consumers on halal cosmetics and personal care products. *International Journal of Business, Economics and Management*, 2(1), 1-14, (2015).
- [36] Owolewa, O. O., & Adepoju, O. F. Basic Literacy and Attainment of Good Health and Well-Being among Young Adults in Ekiti State, Nigeria. *International Journal of Emerging Trends in Social Sciences*, 4(1), 1-8, (2018).
- [37] Bashir, I., Ismat, S., & Mahmood, B. Employee-employer relationship Empowerment and Interpersonal Trust in Private Educational Institutions and Its Impact on Overall Profitability of an Organizations. *International Journal of Asian Social Science*, 2(3), 262-270, (2012).
- [38] Lim, Y. J., Osman, A. B., & Halim, M. S. B. A. Perceived usefulness and trust towards consumer behaviors: a perspective of consumer online shopping. *Journal of Asian Scientific Research*, 4(10), 541, (2014).

Appendix A: Items Used to Measure the Model Variables

Technology Awareness (TA)	I follow the news about the Cryptocurrency technology
	I follow the developments of the Cryptocurrency technology
	I discuss with friends and people around me issues of Cryptocurrency usage.
	I read about the problems of Cryptocurrency usage.
Brand and Service Trust (BST)	I have confidence in Cryptocurrency Service provided
	I believe the transaction process of Cryptocurrency is correct
	I believe the transaction results of Cryptocurrency are correct
	I believe the transaction system of Cryptocurrency is secure
Customer Satisfaction (CS)	The results I get from Cryptocurrency usage is very satisfying
	I am very satisfied with using Cryptocurrency
	My interaction with Cryptocurrency is very satisfying.
Behavioral Attitude (BA)	I think it is very convenient to use Cryptocurrency anytime
	I think it is very convenient to use Cryptocurrency anywhere
	I think using Cryptocurrency is a good idea
Behavioral Intention (BI)	I intend to periodically use Cryptocurrency
	I want to use the services where can pay by Cryptocurrency
	I want to use Cryptocurrency to pay for my purchases