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Factors Influencing the Acceptance of Blockchain Technology and Cryptocurrency for Financial Transactions among Millennials in Malaysia

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Abstract

This study addresses the growing importance of promoting blockchain technology and cryptocurrency adoption within the financial sector, particularly among Malaysian millennials. Despite its significance, there is limited research on millennials' acceptance of blockchain-based financial transactions in Malaysia. This study aims to bridge this gap by exploring critical behavioural factors that impact cryptocurrency usage within this demographic. To gather insights, a survey was conducted among Malaysian millennials, resulting in 110 fully completed questionnaires, which were analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM 4.0). The findings reveal four primary drivers influencing millennials' adoption of blockchain-based applications: security and control, transaction processing, perceived usefulness, and attitude. Notably, attitude emerged as the most influential factor, explaining 71.6 percent of the variance in cryptocurrency acceptance. These results underscore the complex interplay of factors that shape millennials' acceptance of blockchain technology and cryptocurrency in financial transactions. Consequently, identifying these acceptance factors is crucial for industry players seeking to understand and cater to millennials' preferences in digital finance. To support these insights, this study proposes an innovative model that integrates the Technology Acceptance Model (TAM) with specific external variables related to blockchain technology characteristics, such as security control and transaction processing, providing a comprehensive framework for future research and industry applications.

Keywords: Blockchain Technology, Cryptocurrency Transactions, Millennial Adoption, Financial Technology (Fintech), Technology Acceptance Model (TAM)

Introduction

Currently, researchers are actively discussing the adoption of blockchain technology and cryptocurrency for financial transactions as a popular and relevant topic (Albayati et al., 2020; Jariyapan et al., 2022; Miraz et al. 2022). The lives of millennials are greatly influenced by technological advances such as personal computers, tablets and smartphones. The financial sector has incorporated technological progress by introducing innovative financial products and services solutions, including the rise of blockchain technology and cryptocurrencies. The increasing popularity of blockchain technology and cryptocurrencies (such as Bitcoin, Ethereum, and Litecoin) is causing a transformation in both the global economy and the financial sector (Albayati et al., 2020). Nonetheless, financial technology is challenging to forecast, prompting the requirement for research to explore the factors that influence the adoption of financial technology and cryptocurrencies. Consequently, it is imperative to conduct a study that comprehends the aspects affecting the adoption of digital financial transactions, particularly among millennials in this nation.

In Malaysia, the trend of accepting blockchain technology is gaining ground. According to Miraz et al (2022), the emergence of cryptocurrencies in Malaysia has brought about a new paradigm shift in current financial transactions. Cryptocurrency has been popular since its first entry into the world after the 2008 global financial crisis. Then cryptocurrency started being involved in Malaysia in 2012. It is traded through posting on BitcoinMalaysia.com since Malaysia did not have many authoritative statistics and official records of cryptocurrency use in the earlier use of cryptocurrency (Nawang & Azmi, 2020). The official news published by the New Straits Times (Yusof, 2021) says a global cryptocurrency company, Luno Malaysia, has achieved a new milestone with over RM1 billion of digital assets under its management since the company was established in Malaysia in 2019. This shows that many investors are active in business transactions using cryptocurrency in Malaysia. This report shows that investors in Malaysia understand how these business transactions are conducted. This intriguing finding has motivated researchers to conduct a quantitative study that scrutinizes the factors affecting the adoption of financial transactions utilizing blockchain technology and cryptocurrency.

In recent days, blockchain technology has emerged as a central focus for many newly developed platforms, particularly in the context of financial applications (Anser et al., 2020; Ter et al., 2021; Nuryyev et al., 2020; Sohaib et al., 2020). However, the acceptance rate of cryptocurrency among young adults has still not been recorded in previous studies. This concern prompts an inquiry into the rationale behind the behavioural inclination of millennials to utilize cryptocurrencies integrated with blockchain technology. At the same time, most individuals still rely on conventional banking services, which are costlier, slower, and offer limited privacy and control. In the last ten years, there has been considerable advancement in the adoption of novel information technology services by users. Theoretical and empirical evidence has been accumulated, validating the technology acceptance model (TAM). Many authors and researchers are working hard to demonstrate that TAM is an effective model for discovering user acceptance of new technologies. A novel proposal model that combines with TAM is presented in the studies to investigate user acceptance. The TAM model provides robust support for user acceptance and behaviour about new technologies by locating the appropriate tools for making sound decisions that may impact the level of achievement attained by implementing a new system.

To assess the factors influencing blockchain acceptance, a set of customer behaviour indicators was identified to understand their impact on adoption decisions. Consumers play a crucial role in determining whether or not to engage with new transaction technologies, influencing the uptake of blockchain applications. This study examines five constructs—security control, transaction processing, perceived usefulness, perceived ease of use, and attitude—for their direct and indirect roles in blockchain adoption within the fintech sector, as shown in Figure 1. These constructs were chosen based on market insights and the distinct characteristics of blockchain technology. These interrelated factors provide a comprehensive view of what drives consumer acceptance of blockchain technology.

This study aims to investigate the intentions and behaviours of young adults regarding cryptocurrency transactions facilitated by blockchain technology. It also seeks to identify additional factors influencing young adults' adoption and resistance toward blockchain-based financial applications. The proposed model integrates the Technology Acceptance Model (TAM) with external factors unique to blockchain technology, as illustrated in Figure 1. To support this analysis, a survey was conducted among young adults of diverse ethnic and educational backgrounds. The findings provide valuable insights into young individuals' behavioural intentions and acceptance of emerging financial technologies.

Literature Review

Technology Acceptance Model (TAM)

This study centres on the behavioural intention of young adults towards cryptocurrency transactions that utilize blockchain technology. The authors considered using the TAM model to research this, but as was said previously, the TAM model cannot stand alone as the single instrument for conducting an appropriate evaluation. (Aayati et al., 2020). An integrated model will be developed as the main objective of this proposed research. The theory of reasoned action (TRA) model, whose purpose is to comprehend and make sense of the application of information technology in a variety of settings and locations of business, is the source from which the TAM model was derived (Montano & Kasprzyk 2015). The TRA and the TAM postulate that a person's behaviour can be explained by analysing their intentions towards the activity they intend to carry out. It was revealed that there was a strong connection between attitude and intention. People's intentions can be described as their attitude toward the new technology, reflected in their behaviour.

Perceived ease of use (PEoU) and perceived usefulness (PU) are essential in evaluating attitudes and behaviours toward information technology use. The technology acceptance model (TAM) explicitly distinguishes the two primary constructs, PU and PEoU, as separate variables. (Albayati et al., 2020). Assumed in the TAM model, the user can decide based on an optional perspective on the behaviour intended by the user. Using TAM, the user is helped to make the proper decisions so that the acceptance of examining actions and procedures is successful. As a result, studying attitudes about new technology among young adults can be significantly aided by looking at TAM's two essential components (perceived ease of use and perceived usefulness). Several studies and scholars have recognized the technology acceptance model (TAM) as a beneficial tool in technology. To learn more about how young adults' attitudes regarding new technology are influenced by TAM (perceived ease of use and perceived usefulness), researchers might turn to studies of user attitudes. Several studies and investigations of the use of technology have shown favour for the TAM (Albayati et al., 2020;

Arias-oliva et al., 2019; Nuryyev et al. 2020; Walton & Johnston 2018). Thus, it has been proven that TAM is consistently used in cryptocurrency and blockchain technology studies.

According to the TAM, promising findings were obtained in the calculation of behavioural intention to utilise the new technology (Madden et al., 1992). However, TAM cannot explain all new technologies. Thus, it must be tailored to meet the needs of the current technology approach. Experts in the field of blockchain technology have weighed in on these issues, and they describe the unique qualities and structure of the system. Additional constructs have been introduced to cover all of the current advances in the FinTech field and meet the study's objectives on time. The new model (illustrated in Figure 1) will be presented in two parts in this paper, each explained in detail. The first part consists of the core constructs of the TAM, including behavioural intention, attitude, perceived usefulness, and perceived ease of use. The second part encompasses the external influences of security and control and transaction processing.

Behavioural Intention

The intention to use cryptocurrency refers to an individual's purchasing intention, which is determined by the likelihood of purchasing (Takaya, 2016). In other words, intention is a metric for determining the factors influencing a desired behaviour. It also indicates the level of effort a person is willing to exert to carry out a specific behaviour (Teo & Zhou, 2014). Since this study examines the acceptance factor of financial transactions using cryptocurrency, the behavioural intention factor has been used to measure the objective of this study. Findings from previous studies also support that this variable is used because it has proven the measurement level's effectiveness (Anser et al., 2020; Ter et al., 2021; Nuryyev et al., 2020; Sohaib et al., 2020). The findings stated that behavioural intention can measure buying intention, purchase intention and also encourage actual usage (Almarashdeh, 2018; Arias-oliva et al., 2019; Gazali et al., 2018; Schaupp & Festa, 2018; Walton & Johnston, 2018; Yeong et al., 2019)Based on past findings, behavioural intention was used to measure the main objective of this study.

Attitude

Attitude pertains to the user's favourable or unfavourable emotions towards the new technology. (Porter & Donthu, 2006). The theory of reasoned action prompted researchers to investigate the user's belief system, which is characterized as an attitude towards using and exploring technology systems, to identify the actual behaviour (Madden et al., 1992). When individuals formulate their behavioural intentions, they consider their attitudes towards each alternative in a given situation. However, making choices based on attitudes does not seem to involve individuals' predictions of whether they will engage in multiple activities. By taking into account desires and the underlying motivations, the significant outcome of the intended behaviour can be determined. As mentioned in several studies, combining the attitude value with normative beliefs under the average of anticipation can influence the attitude. A high need for social influence processing has been proposed to accept a new system. Furthermore, adopting new technology can change attitudes towards it, changing communication patterns, organizational structure, and work location. As a result, the TAM model and other research results have confirmed the relationship between attitude and behavioural intention and the effects between them. Therefore, the following hypothesis is proposed:

H1: Attitude has a positive and significant impact on the intention to use cryptocurrency transactions supported by blockchain technology.

Perceived Usefulness

The concept of perceived usefulness refers to the notion that individuals tend to select a technology based on the effort required to use it and the benefits it offers (Lim & Benbasat 2000). In addition, the perceived usefulness of cryptocurrencies has been demonstrated to significantly impact their utilisation in terms of efficiency in financial transactions. The subjectivity of perceived usefulness means that the user's capabilities mainly influence it and cannot solely account for adopting a specific technology. Therefore, the authors of this study aim to explore how perceived usefulness is associated with consumers' attitudes towards adopting cryptocurrencies, particularly in the context of investment. Prior research suggests that if individuals find a system impressive and notice an improvement in their job performance, they are more likely to view the system as applicable and develop a positive attitude towards it (Lanlan et al., 2019). Therefore, it is thought necessary to include in this research model a model that will give millennials advantages in making investment decisions using cryptocurrency. It is suggested that perceived usefulness is used for the following hypothesis.

H2: Perceived usefulness has a positive and significant impact on the attitude toward cryptocurrency transactions supported by blockchain technology.

Perceived Ease of Use

Perceived ease of use is the extent to which an individual or consumer perceives a system to be easy to use (Lanlan et al., 2019). Perceived ease of use refers to the extent to which an individual perceives that using a system will require minimal mental effort and is easy to understand. In addition, perceived simplicity of use indicates that users understand that using the system will require minimal effort. As a result, perceived ease of use has the inverse meaning of high complexity. Consumers' willingness to use a system may be limited by its complexity (Chong et al., 2010). Hence, ensuring customers perceive the system as easy to use is crucial in facilitating financial transactions without requiring excessive time and effort to operate the developed system. With the availability of perceived ease of use, it is predicted that it will be a factor that can encourage millennials to do financial transactions quickly and efficiently. Thus, the present study posits the subsequent hypothesis.

H3: Perceived ease of use has a positive and significant impact on Attitudes toward cryptocurrency transactions supported by blockchain technology.

Security and Control

Security and control is a service that ensures the protection of people, information and assets (Brooks, 2010). Online payment systems must implement rigorous and reliable security measures to protect users from potential losses. However, individuals who engage in online transactions often have concerns about the overall security of the platforms they use to send or receive money (Nadeem et al., 2021). However, it has been suggested that due to blockchain technology, it is unlikely that cryptocurrency will be hacked. Nonetheless, this does not suggest that investing in it is without risk since various hazards are associated with the trading process (Apostolaki et al., 2016)Therefore, awareness of security and control significantly affects an investment if it involves investing online. Service providers need to emphasize this issue not only in investments but also in financial transactions.

A previous study defined security as a situation that has the possibility of causing economic problems, violation of privacy, fraud and many more (Balta-Ozkan et al. 2013). In order to protect users from any potential losses, online payment systems implement strict and reliable security measures. Users who engage in online transactions may be concerned about the overall security of the platforms they use to transfer or receive money. The level of security provided by an online system can positively or negatively affect users, influencing their decision to adopt or reject the system. Therefore, every online payment system firmly commits to its security protocols to minimize unpredictability. According to the previous researcher, the cryptocurrency system is considered safe when compared to other payment apps or methods, and it also provides the service for international fund transfer (Kawase & Kasahara 2020). The statements above can decrease the cryptocurrency user's confidence and perceived usefulness. Therefore, the hypothesis proposed as follows:
H4. Security and control have a positive and significant impact on the perceived usefulness of cryptocurrency transactions supported by blockchain technology.

Transaction Processing
Transaction processing is a process of system where that collects and processes business transaction data into financial information by using modern facilities (Nastura & Muqorobin 2020). Transaction processing is essential for the daily operation of a company because it enables communication between consumers and financial institutes. In terms of investment, the ability of transaction processing to satisfy customers, especially young adults, about price information, price adjustments, payment methods, and invoicing is crucial. Furthermore, the service provider can easily communicate online with the customer. Investor consumers in financial activities do not necessarily need complex information technology gadgets to access reliable data for online financial transactions. For instance, if a customer asks about a particular product at a bank or financial institution, an employee or banker can quickly locate it on a display screen in a web or mobile application within seconds and provide the customer with information about its availability (Yuhelmi et al. 2020). Therefore, it cannot be denied that online transaction processing is beneficial for millennials when conducting financial transactions.
H5. Transaction processing has a positive and significant impact on the perceived usefulness of cryptocurrency transactions supported by blockchain technology.

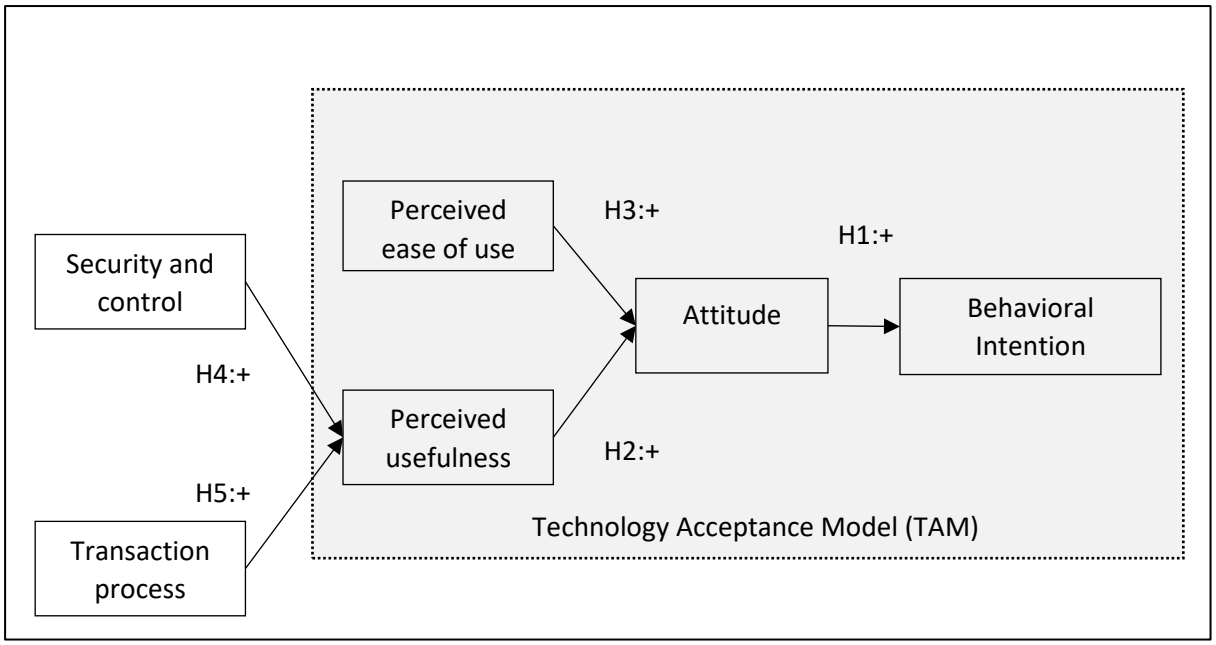

Figure 1. Propose research model

Research Methodology

The participants in this study were young Malaysian adults between 18 and 38 years old. A non-purposive sampling technique was utilized to ensure the collected data were reliable and relevant to the study's nature. The sample size was determined using G-Power 3.0 analysis (Faul et al., 2007). The G-Power 3.0 analysis software was utilized to calculate the minimum number of participants needed for the study. The effect size of f square 0.15, alpha error pro- 0.05, power Gf 0.95, and two tested predictors were taken into account, which resulted in a minimum sample size of 107 respondents. However, 250 questionnaires were distributed, and after screening for validity, 110 of them were deemed suitable for analysis. Figure 1 illustrates the research framework, which consists of six examined variables. The variables were assessed using multiple items (Hayduk & Littvay, 2012), and the hypotheses were examined by analyzing the data using SmartPLS 4.0 (Ringle et al., 2022).

Finding and Discussion

This study included 110 participants, all millennials from Malaysia, with a majority (73.6 percent) identifying as female and the remaining (26.4 percent) as male. The age distribution shows that 75.5 percent were between 18-22 years, while 24.5 percent fell within the 23-38 age range. Ethnic representation was diverse, with the largest group (33.6 percent) being East Malaysians from Sabah and Sarawak, followed by Malays (24.5 percent), Chinese (23.6 percent), Indians (13.6 percent), and other ethnicities (4.5 percent). Most respondents reported monthly incomes below RM2,500, and 84.5 percent held a degree as their highest educational qualification. Table 1 provides a detailed summary of the respondents' profiles, illustrating the demographic composition of the study sample.

Table 1
Respondents' Profile

Variable		Frequency	Percent
Gender	Male	29	26.4
	Female	81	73.6
Age	18-22	83	75.5
	23-38	27	24.5
Ethnicity	Malay	27	24.5
	Chinese	26	23.6
	Indian	15	13.6
	Sabah Native	34	30.9
	Sarawak Native	3	2.7
	Others	5	4.5
Income	Less than RM2,500	99	90.0
	RM2,501- RM3,169	5	4.5
	RM3,170 and above	6	5.5
Education	SPM/O Level	2	1.8
	STPM/A-Level/Diploma	11	10.0
	Degree	93	84.5
	Master	1	0.9
	PhD	2	1.8
	Others	1	0.9

Measurement Model Assessment

The results of construct reliability (CR) and convergent validity testing are presented in Table 2. The table displays that the constructs (or variables being studied) have demonstrated high and satisfactory internal consistency and average variance extracted (Roldán & Sánchez-Franco, 2012) (AVE) to validate the convergent validity (Hair et al. 2017). Table 3 presents the application of the HTMT (Heterotrait-Monotrait) criterion to evaluate discriminant validity (Ringle et al., 2022). At the HTMT level of 0.85, the results indicate that discriminant validity is confirmed (Diamantopoulos & Siguaw, 2006)Therefore, there is no concern regarding the presence of multi-collinearity among the items loaded on distinct constructs in the outer model, and it is suitable to proceed with evaluating the structural model to test the study's hypotheses.

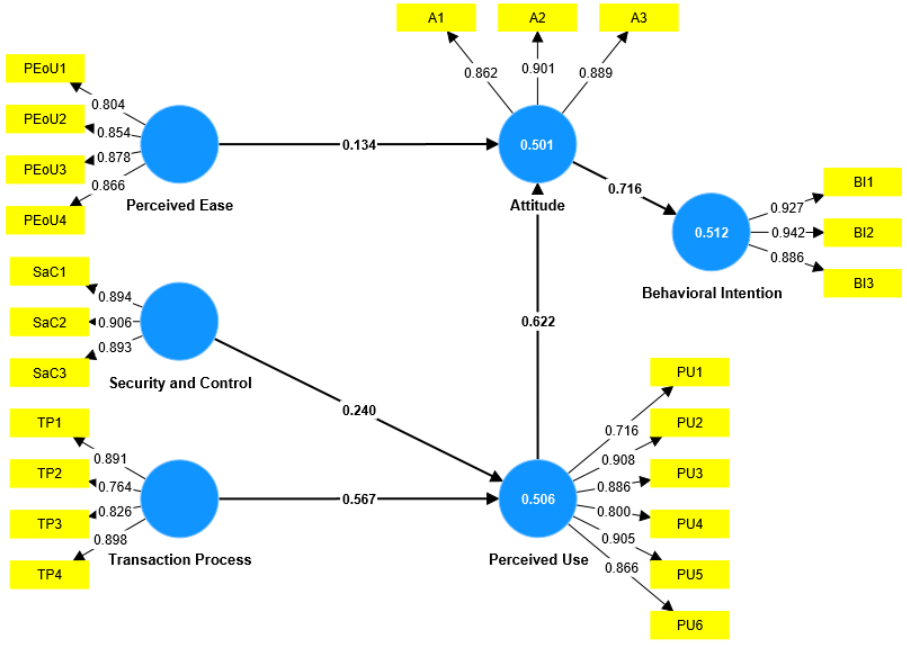

Figure 2. Measurement Model

Table 2
Results of the Measurement Model

Model construct	Items	Loadings	CR	AVE	Convergent Validity (AVE>0.5)
Attitude	A1	0.862	0.915	0.782	YES
	A2	0.901			
	A3	0.889			
Behavioural Intention	BI1	0.927	0.942	0.844	YES
	BI2	0.942			
	BI3	0.886			
Perceived Ease of Use	PEoU1	0.804	0.913	0.724	YES
	PEoU2	0.854			
	PEoU3	0.878			
	PEoU4	0.866			
Perceived Usefulness	PU1	0.716	0.939	0.722	YES
	PU2	0.908			
	PU3	0.886			
	PU4	0.800			
	PU5	0.905			
	PU6	0.866			
Security and Control	SaC1	0.894	0.925	0.805	YES
	SaC2	0.906			
	SaC3	0.893			
Transaction processing	TP1	0.891	0.910	0.716	YES
	TP2	0.764			
	TP3	0.826			
	TP4	0.898			

* No item was removed from the analysis since all items had loading composite reliability greater than 0.708 (Hair et al. 2017).

Table 3
Heterotrait-Monotrait (HTMT) Ratio of Correlations

	Attitude	Behavioural Intention	Perceived Ease	Perceived Use	Security and Control	Transaction Process
Attitude						
Behavioural Intention	0.808					
Perceived Ease	0.547	0.521				
Perceived Use	0.774	0.666	0.619			
Security and Control	0.480	0.570	0.406	0.559		
Transaction Process	0.759	0.607	0.653	0.755	0.531	

Criterion: Discriminant validity is considered to be established when the HTMT value is less than or equal to 0.85 (Kline 2011)

Structural Model Assessment

A 5000-bootstrap data resampling was carried out to evaluate the hypotheses (Hair et al., 2017). Table 4 presents the evaluation of the Beta values for each path relationship, representing the path coefficient. The results indicate that four out of the five hypotheses were confirmed. Specifically, the research showed that security control and transaction processes significantly influenced perceived ease of use. Moreover, perceived ease of use was found to impact attitude significantly. Finally, the study also found that Attitude influences behavioural intention. Hypotheses 1, 3, 4, and 5 were supported. Table 4 presents the model's quality and the path coefficients, represented by beta values, for each path relationship. The results indicate that four out of five hypotheses were supported, revealing that security control and transaction process influence perceived use, and perceived use affects attitude. Additionally, all significant relationships have moderate effect sizes. Moreover, the predictive relevance values for all five dependent variables are more significant than zero, indicating that the independent variables can predict millennials' behavioural intention, as shown by Q^2 using the blindfolding procedure (Hair et al., 2017).

Table 4
Results of Structural Model

Paths	Beta	S. E	t-value	p-value	LLCI	ULCI	Decision	f2	R2	VIF	Q2
H1: Attitude -> Behavioral Intention	0.716	0.051	14.115	0.000	0.632	0.798	Supported	1.050	0.512	1.000	0.320
H2: Perceived Ease -> Attitude	0.134	0.109	1.233	0.109	-0.034	0.319	Not Supported	0.024	0.501	1.494	0.415
H3: Perceived Use -> Attitude	0.622	0.086	7.207	0.000	0.477	0.760	Supported	0.519		1.494	
H4: Security and Control -> Perceived Use	0.240	0.078	3.075	0.001	0.110	0.365	Supported	0.091	0.506	1.279	0.479
H5: Transaction Process -> Perceived Use	0.567	0.079	7.149	0.000	0.439	0.698	Supported	0.510		1.279	

Note: **p<0.01, *p<0.05, Bias Corrected, LL=Lower Limit, UL=Upper Limit
p-value of 0.01, 0.05 (Hair et al. 2017)
$f^2 \geq 0.35$ consider Substantial (Cohen 1989)
$R^2 \geq 0.26$ consider Substantial (Cohen 1989)
Lateral Collinearity: VIF ≤ 3.33 (Diamantopoulos and Siguaw 2006) or ≤ 5.0 (Hair et al. 2017)
$Q^2 > 0.00$ consider large (Hair et al. 2017)

Discussion

The acceptance of financial transactions through blockchain technology and cryptocurrency is explained in this study using the Technology Acceptance Model (TAM), which considers both internal factors (such as perceived ease, perceived usefulness, and attitude) and external factors (such as security and control, transaction process). This current study contributes to the success of the awareness campaign among the millennials towards applying service innovation in the financial sector to further improve financial knowledge in this country. Researchers believe that these millennials need attention paid to by financial industry players to make services based on blockchain technology successful and accepted in the future. This situation occurs because of the broad exposure and skilful use of today's technology, allowing these millennials to make investments by only using smartphone applications. Therefore, industry players in the financial sector need to study the main factors that drive these millennials to use cryptocurrencies (Miraz et al., 2022; Schaupp et al., 2022)This study will guide researchers and financial investors in identifying critical factors to be considered. In this study, several factors are considered worthy of attention, namely, internal factors (perceived use, perceived ease, and attitude), which are the main pillars of this study (Albayati et al., 2020). Meanwhile, external factors include security control and transaction processes, which can give millennials confidence and comfort.

Awareness of the acceptance factor of financial transactions among millennials cannot be underestimated by financial industry players who will be able to identify behaviour in making financial transactions. Industry players need help to identify acceptance factors for using cryptocurrencies in blockchain technology-related service innovation, especially post-Covid-19 pandemic, to ensure sustainable adoption of cryptocurrency among social communities (Jariyapan et al., 2022; Yeong et al., 2022). Therefore, it should be studied to identify the factors influencing these millennials to continue using cryptocurrencies (Abbasi et al., 2021;

Nadeem et al., 2021). In this study, two external factors affect perceived use, namely transaction process and security and control, which will help millennials perform financial transactions efficiently and safely (Nadeem et al., 2021). At the same time, attitude plays a vital role in millennials' use of blockchain technology transactions. A person's desire to invest and make transactions starts from the user's or financial investor's positive attitude. With the availability of new data-based research, we can provide detailed information on millennials' acceptance of cryptocurrency investments. Therefore, security control factors and the ease of the transaction process should be given attention, which has been proven to increase the acceptance of financial transactions using cryptocurrencies.

Conclusion

This study highlights millennials as a critical target group for the financial sector's efforts to promote blockchain technology and cryptocurrency adoption in financial transactions. The findings indicate that, despite limited experience in managing financial services, millennials show a high level of acceptance for conducting transactions with blockchain-based technologies. This positive response reflects the effectiveness of industry players' ongoing awareness campaigns to familiarise this demographic with blockchain innovations. Key factors, including perceived ease of use, security and control, transaction processing, and attitude towards the technology, powerfully shape acceptance among millennials.

Four primary factors, security and control, transaction processing, perceived usefulness, and attitude, were crucial in influencing millennials' decisions to adopt blockchain and cryptocurrency in their financial transactions. These insights underscore the importance of addressing security-related and usability concerns to encourage adoption within this age group.

For future research, it is recommended that the scope be expanded to include older adults and respondents with more financial experience. This would broaden the sample and yield more affluent, diverse findings valuable to researchers and industry practitioners. Further investigation into other influential factors could shed light on ways to enhance millennials' financial literacy and improve their investment decision-making. This would enable the financial sector to better cater to millennials' evolving economic needs and support informed, sustainable financial behaviours in Malaysia.

Theoretical and Contextual Contribution

This study makes significant theoretical and contextual contributions to the literature on technology adoption, specifically within blockchain technology and cryptocurrency. Theoretically, by integrating the Technology Acceptance Model (TAM) with domain-specific variables such as security control and transaction processing, this research extends the applicability of TAM to the blockchain context. It introduces a nuanced understanding of how these external variables interact with traditional constructs such as perceived usefulness and attitude, offering a richer, more tailored framework for future studies. The findings that highlight the critical role of attitude and its substantial explanatory power (71.6 percent of the variance in cryptocurrency acceptance) provide valuable insights that refine and expand the predictive capability of TAM in financial technology adoption research.

Contextually, this study addresses a significant gap by focusing on Malaysian millennials, a demographic underrepresented in blockchain and cryptocurrency literature. Millennials are critical drivers of technological change, and understanding their preferences provides strategic insights for stakeholders in Malaysia's fintech sector. The research offers practical implications for policymakers, financial institutions, and technology developers seeking to foster greater acceptance and utilization of blockchain-based financial solutions. This study informs targeted strategies that align with millennials' needs and expectations by pinpointing specific motivators such as security, control, and transaction efficiency.

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