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Factors Affecting Adaptability of Cryptocurrency: An Application of Technology Acceptance Model

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ABSTRACT

The transition to a digital financial system, including the presence of cryptocurrencies, requires further exploration of the determinants of its adoption. This study analyzes the role of technology awareness and government support for use intent by utilizing the Technology Acceptance Model (TAM) framework which is extended through mediation variables: perception of benefit, convenience, and risk. Through an explanatory quantitative approach, data was collected from 190 millennial and Z participants in Indonesia using the snowball sampling technique. Path analysis is performed using IBM AMOS. The results confirm that technology awareness and government support are significant in shaping perceptions of benefits, convenience, and risks (H1–H6 supported). However, the three mediation variables did not have a significant effect on the behavioral intention in adopting crypto (H7–H9 was rejected). These findings suggest that crypto adoption among Indonesia's younger generation is driven more by non-technical factors such as Fear of Missing Out (FOMO) and short-term speculative motives, rather than rational considerations regarding the benefits of technology. Implicitly, FinTech regulators and service providers need to develop educational strategies that emphasize risk literacy more than just the technical aspects of the application.

Keyword: Cryptocurrency; TAM; Technology Awareness; Government Support; Behavioral Intention

INTRODUCTION

Market players will have to reconstruct most of their businesses as the digital economy grows. This will transform businesses around the world (Nasir et al., 2021). In this wave of transformation, the financial system accepted virtual currencies and payment infrastructure became more sophisticated. Empirical data shows that digital payment transactions surpassed US$6.75 trillion in 2021, with an annual growth of 12.24% (Patel et al., 2021). One of the biggest advancements in the digital finance sector is cryptocurrencies, which are also referred to as "cryptocurrencies". It is well-known for its ability to work in a decentralized, efficient manner, and independent of geographical location. (Zafar et al., 2021) The World Bank considers cryptocurrencies to be unreliable digital money with no intrinsic value that is not backed by any asset and cannot be considered an asset of a particular economic organization (Natarajan et al., 2017). This technique is used on blockchain systems that use cryptographic techniques to ensure the security and transparency of transactions.

The use of blockchain has accelerated the digitization of businesses around the world and enabled quick transactions between countries (Aheri Tolu et al., 2022; Han et al., 2021). Certain sectors, such as e-commerce and digital financial services, are now turning to leveraging these technologies to address issues such as fraud, high transaction fees, limited communication between buyers and sellers, and misuse of personal data (Frik et al., 2019). In this situation, the use of cryptocurrencies and smart contracts can improve the security, speed, and effectiveness of payment systems (Ismanto et al., 2019). As a result, cryptocurrencies are becoming increasingly popular among the digital community as a substitute for intermediary-free payment systems (Johar et al., 2021). However, the future of this technology depends heavily on how popular and easy it is for people to use (Doblas, 2019).

The crypto market cap continues to increase, but crypto adoption still faces many challenges. Some of the challenges are mainly related to poor understanding of technology, legal uncertainty, and lack of financial literacy (Putri et al., 2021; Arias-Oliva et al., 2019). Many individuals feel unable to use crypto without adequate technical knowledge (Dryall, 2018), while the complexity of blockchain technology itself is often a barrier for new users (Doblas, 2019). Therefore, it is necessary to examine the factors that affect behavioral intentions and adaptability to this new financial technology.

In analyzing the adoption of cryptocurrencies, this study uses the Technology Acceptance Model (TAM) framework introduced by Davis (1989). TAM is a theoretical model that is widely used to predict the acceptance of new technologies, assuming that Perceived Usefulness and Perceived Ease of Use are key factors that shape user Behavioral Intention (Tolu et al., 2022). This means that individuals who view crypto technology as beneficial and easy to use tend to have a higher interest in adopting it (Schaupp et al., 2018; Shahzad et al., 2018).

However, the conventional TAM model is considered not to be able to fully capture the complexity of adopting risk-laden financial technology such as crypto (Wibasuri et al., 2022). Therefore, this study expands the model by adding Perceived Risk as a mediator variable. This variable reflects users' concerns about potential losses or negative impacts from the use of technology (Anser et al., 2020). Several previous studies have also confirmed that risk and safety considerations also influence technology adoption decisions (Mutahar et al., 2018; Albayati et al., 2020).

In addition, the study integrates two important external factors, namely Technology Awareness and Government Support. Technology Awareness refers to the level of individual knowledge and understanding of new technologies, which has been proven to increase acceptance of digital innovations (Irfan et al., 2022). On the other hand, government support through regulations, policies, and financial literacy is considered important in building public trust in digital financial innovation (Zafar et al., 2021).

The novelty of this research lies in its critical re-examination of the TAM's core causal chain (Perception → Intention) within a unique context. Unlike prior studies that often find significant positive effects, this study hypothesizes and empirically tests the possibility that for a young, digitally native but speculatively-driven population the mediating roles of perceived usefulness, ease of use, and risk on behavioural intention could be non-significant. Instead, it proposes that external antecedents (awareness and support) directly shape perceptions, but these perceptions are overridden by non-rational factors like FOMO. Therefore, the objectives of this study are: (1) to analyze the influence of Technology Awareness on Perceived Usefulness, Ease of Use, and Risk; (2) to analyze the influence of Government Support on these three perceptions; and (3) to test the effect of these three perceptions on Behavioral Intention.

This research aims to answer several research questions related to the factors influencing the adoption of financial technology, particularly in the context of cryptocurrencies. The first question is whether Technology Awareness has a significant effect on Perceived Usefulness? Second, does Technology Awareness have a significant effect on Perceived Ease of Use? Third, does Technology Awareness have a significant effect on Perceived Risk? The next question is whether Government Support has a significant effect on

perceived usefulness? Then, does Government Support have a significant effect on Perceived Ease of Use? Then, does Government Support have a significant effect on Perceived Risk? In addition, this study also explores the effect of Perceived Usefulness on Behavioral Intention, as well as whether Perceived Ease of Use and Perceived Risk have a significant effect on Behavioral Intention.

The purpose of this study is to analyze various factors influencing the adoption of financial technology. First, this study aims to analyze the influence of Technology Awareness on Perceived Usefulness. Second, to analyze the influence of Technology Awareness on Perceived Ease of Use. Furthermore, this study also aims to analyze the influence of Technology Awareness on Perceived Risk. In addition, this study aims to analyze the influence of Government Support on Perceived Usefulness, Perceived Ease of Use, and Perceived Risk. In addition, this study will also examine the effect of Perceived Usefulness on Behavioral Intention, as well as the effect of Perceived Ease of Use and Perceived Risk on Behavioral Intention.

The benefits of this research are divided into three aspects. First, theoretically, the contribution of this research is to the development of the Technology Acceptance Model (TAM) framework proposed by Davis (1989). The development is carried out by integrating contextual factors such as risk and government support to provide a more in-depth explanation of the complex adoption of financial technology. Second, practically, the results of this research are expected to be a strategic reference for FinTech companies in developing strategies and improving user experience, which will ultimately contribute to increasing cryptocurrency adoption. Third, in policy or institutional, the findings of this research can be used by policymakers or regulators as a basis for formulating regulations that support the development of blockchain-based financial innovation, with the aim that it can be applied safely and sustainably.

METHOD

Research Design

The study adopted an explanatory quantitative approach to test the relationships between the variables proposed in the model. The selection of this approach is based on the need for numerical data that will be processed statistically to test the research hypothesis. More specifically, the design applied is causal-explanatory, with the aim of analyzing the relationship of influence and causation among the variables studied. The model developed was designed to test the impact of independent variables Technology Awareness and Government Support on the mediator variables, namely Perceived Usefulness, Perceived Ease of Use, and Perceived Risk. Furthermore, the influence of the three mediator variables was analyzed on the dependent variable, Behavioral Intention, in order to obtain a comprehensive understanding of the mechanism of technology adoption.

Population and Sample

- **Population:** The populations in this study include Millennials (born 1981–1996) and Generation Z (born 1997–2012) in Indonesia who already have an understanding of cryptocurrencies. Given the lack of a comprehensive *sampling frame*, this group is classified as *an infinite population*, so the exact number is difficult to determine.

- **Sampling Technique**: Because the target population is specific and not easily accessible, the researcher uses *a non-probability sampling technique* in the form of *snowball sampling*. The choice of this method is due to the absence of a clear *sampling frame* and the difficulty in identifying members of the population directly. Technically, sampling is carried out in a series of stages with the following stages:
  1. Identification of Key Respondents (Initial Seeds): The process begins by assigning 18 members of the researcher's private Telegram group as the initial seeds. This group serves as a starting point because it has been verified to meet all inclusion criteria (Indonesian citizens, Millennial/Z Generation, active smartphone users, and understanding crypto).
  2. Distribution and Chain Reference: The questionnaire link (Google Form) will be distributed to the 18 key respondents. After completing the fill, they will be asked to forward the link (referral) to a colleague or acquaintance in their network who has similar characteristics.
  3. Sample Expansion: The snowball mechanism will run as respondents from the first wave continue to spread the questionnaire link to their social networks, so that the range of the sample expands progressively.
  4. Determination of Sample Deadline: The researcher will carry out strict supervision of the accumulation of incoming respondent data. Sampling will be stopped when the total number of valid respondents has reached the targeted minimum limit, which is a minimum of 150 respondents.

Data Types and Sources

- **Primary Data:** Information collected directly from respondents through the dissemination of electronic questionnaires in the crypto community environment
- **Secondary Data:** This secondary data includes reports, scientific publications, and other relevant studies as support.

Data Collection Techniques

The research data was collected through an online survey with questionnaires as the main instrument. To facilitate distribution and access to respondents, the questionnaire was designed using Google Forms. The target of the research is Generation Z who are known to be active in the digital world, so the dissemination is carried out through popular social media platforms such as WhatsApp, Telegram, and Instagram. In addition, the researcher also targeted online discussion communities that discussed investment and FinTech to obtain respondents who were in accordance with the research criteria. Response measurements were carried out with a closed questionnaire using a five-point Likert scale, which aims to find out the level of inclination or opinion of respondents towards each statement. The range of assessment scores is as follows:

The research instrument used a Likert scale of 1–5, with the following categories:

1 = strongly agree,
2 = agree,
3 = neutral,
4 = disagree,
5= strongly disagree.

Validity and Reliability Tests

Before distributing the questionnaire to the main sample, which consists of 60 people, researchers will conduct initial tests of the instrument. The purpose of this trial is to ensure that any statements or questions in the questionnaire are genuine and reliable. This trial will be conducted by sending a questionnaire to 30 people who were not included in the main sample, but were equal to the study population. Data from these 30 respondents will then be analyzed using SPSS.

1. Instrument Validity Test
2. Instrument Reliability Test

Data Analysis Techniques

Considering that this study is designed to test the causal relationship between variables that are hierarchical in nature, the data analysis technique chosen is Path Analysis. Data processing is carried out using two statistical devices: IBM SPSS for data assumption preparation and testing, while structural model testing is carried out using IBM AMOS.

1. Data Assumption Evaluation (Data Screening)

Before I do the path analysis, the raw data is first processed using SPSS software to ensure that the data meets the statistical requirements (*Blue Best Linear Unbiased Estimator*). The steps taken include:

a. **Normality Test:** One of the important assumptions in path analysis is the normality of data distribution. To test this, the researchers used the Kolmogorov–Smirnov One-Sample test against unstandardized residuals. The data can be considered normally distributed if the significance value (Asymp. Sig. 2-tailed) obtained is greater than 0.05.

b. **Detection and Elimination of Outliers:** The presence of extreme data (*outliers*) can distort the results of the AMOS analysis. *Outlier* detection is carried out using *the Casewise Diagnostics* criteria on SPSS. Respondent data that had *standardized residual value* outside the standard range (Z-score > ±3.0) were categorized as *outliers* and dropped from the analysis to maintain model validity.

c. **Multicollinearity test:** is carried out to ensure that there is no high correlation between independent variables. The requirement of multicollinearity is met if the Tolerance value is greater than 0.10 and the Variance Inflation Factor (VIF) is less than 10.

d. **Heteroscedasticity test:** it is carried out by analyzing the pattern of point distribution on the scatterplot diagram between standardized (ZPRED) and standardized residual (SRESID) predictive values. The data is declared not heteroscedasticity if the points are randomly scattered, either above or below the zero value on the Y axis.

2. Path Analysis Using AMOS

Once the data is freely provided and the classical assumptions are met, the hypothesis is tested using the AMOS software in several steps:

a. **Model *Specification*:** This step describes the relationship between exogenous, intervening, and endogenous variables based on the hypothesis that has been formulated in the study.

b. **Model Feasibility Evaluation (*Goodness of Fit*):** The Goodness of Fit (GOF) criterion index is used to assess the suitability between empirical data and theoretical

models. The following model acceptance criteria are the main indicators used in this study **CMIN/DF:** A value of ≤ 2.00 or ≤ 3.00 indicates *good fit*.

GFI (*Goodness of Fit Index*): A value close to 1 (≥ 0.90) indicates an excellent model.

RMSEA (*Root Mean Square Error of Approximation*): A value of ≤ 0.08 indicates good model acceptance.

If the initial model does not meet the *fit criteria,* Model Modification is carried out by referring to the *Modification Indices* (M.I.) values suggested by AMOS, namely by correlating *error terms* that have a close relationship theoretically to reduce the *Chi-Square value*.

c. **Hypothesis Testing:** Hypothesis testing is carried out by analyzing *the value of Regression Weights*. The hypothesis is accepted if the probability value (P) ≤ 0.05 or there is a sign (***) that indicates significance at the level of 0.001. The magnitude and direction of influence between variables are seen from the value of the standard coefficient (*Standardized Estimate*).

Research Location and Time

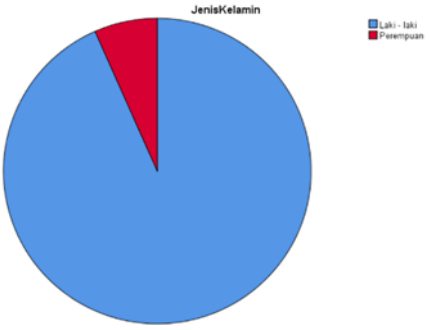
This research was conducted in Kuningan, West Java in December 2025.

Research Ethics

The researcher ensures the confidentiality of respondent data, uses the principle of informed consent, and follows the research ethics guidelines of Universitas Swadaya Gunung Jati.

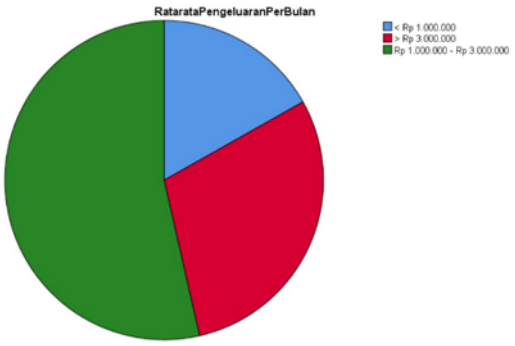
RESULTS AND DISCUSSION

Description of Respondent Characteristics



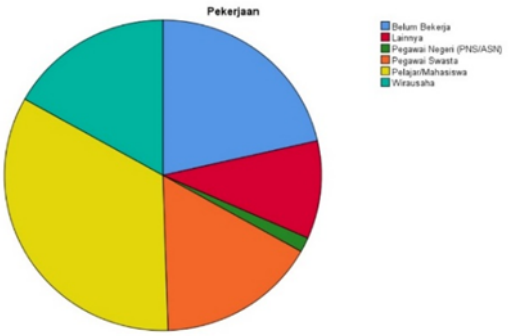
Pie chart 1 Gender

The composition of respondents was significantly dominated by male participants (93.4%), while female participation only reached 6.6%. This disparity can indicate several things, such as men's higher interest in crypto assets, greater access to survey platforms, or the influence of socio-cultural norms. This pattern of unbalanced gender participation is also often found in other studies



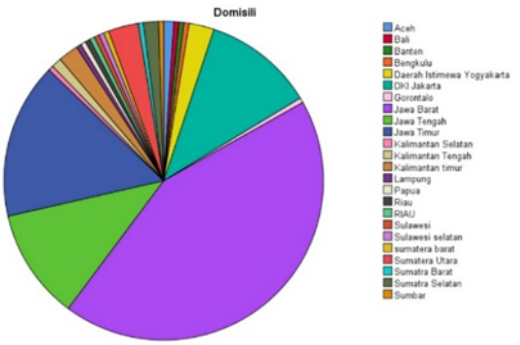
Pie Chart 2 Average Monthly Expenses

As many as 53.6% of participants had monthly expenses of IDR 1-3 million (medium category), 29.6% above IDR 3 million, and 16.8% below IDR 1 million. This distribution indicates a variation in the financial capacity of respondents, where the majority are in the middle strata with limited experimental space. investment.



Pie Chart 3 Current Jobs

As many as 33.7% of respondents are students/students and 21.4% have not worked; Both accounted for 55.1% of the sample. These findings suggest that the viewpoints represented mainly come from young people who are still in the education phase or are not yet financially independent. This profile corresponds to a general pattern where the younger generation is more responsive to the adoption of digital technology.



Pie Chart 4 Domicile

Although it was not presented tabulated after going through the data cleaning stage, the study respondents came from various provinces in Indonesia, with the highest density in West Java, DKI Jakarta, Central Java, and East Java. This distribution pattern indicates that the research findings reflect more of the views of people in regions that have relatively more advanced digital economy growth.

Instrument Validity and Reliability Test

Before the research instrument was distributed to the main respondents, a validity and reliability test was carried out on the questionnaire. The test was carried out on 30 respondents in the *pilot study* stage to ensure that the measuring instrument used really measured the construct in question (valid) and provided consistent results (reliable).

1. Validity Test Results

The validity test is measured by analyzing the Corrected Item-Total Correlation of each statement item against the total score of its variable. The criterion used is that if the value of the Corrected Item-Total Correlation > r-table is at a significance level of $\alpha = 0.05$, then the item is declared valid. With the number of trial respondents (n=30), the r-table value of 0.361 was obtained.

The test results showed that all statement items in the six research variables had a Corrected Item-Total Correlation value greater than 0.361. Full details of the validity test results are presented in Table 1 below.

Table 1

No.	Variable	Item Code	Corrected Item-Total Correlation	r-table (n=30)	Remarks
1.	Technology Awareness (X1)	X1.1	0,830	0,361	Valid
		X1.2	0,887	0,361	Valid
		X1.3	0,921	0,361	Valid
		X1.4	0,873	0,361	Valid
		X1.5	0,945	0,361	Valid
2.	Government Support (X2)	X2.1	0,760	0,361	Valid
		X2.2	0,734	0,361	Valid
		X2.3	0,768	0,361	Valid
		X2.4	0,785	0,361	Valid
		X2.5	0,663	0,361	Valid
3.	Perceived Usefulness (Z1)	Z1.1	0,855	0,361	Valid
		Z1.2	0,816	0,361	Valid
		Z1.3	0,843	0,361	Valid
		Z1.4	0,848	0,361	Valid
		Z1.5	0,860	0,361	Valid
4.	Perceived Ease of Use (Z2)	Z2.1	0,911	0,361	Valid
		Z2.2	0,887	0,361	Valid
		Z2.3	0,909	0,361	Valid

		Z2.4	**0,901**	**0,361**	**Valid**
		Z2.5	**0,852**	**0,361**	**Valid**
5.	**Perceived Risk (Z3)**	**Z3.1**	**0,747**	**0,361**	**Valid**
		Z3.2	**0,740**	**0,361**	**Valid**
		Z3.3	**0,728**	**0,361**	**Valid**
		Z3.4	**0,621**	**0,361**	**Valid**
		Z3.5	**0,617**	**0,361**	**Valid**
6.	**Behavioral Intention (Y)**	**Y1.1**	**0,597**	**0,361**	**Valid**
		Y1.2	**0,565**	**0,361**	**Valid**
		Y1.3	**0,486**	**0,361**	**Valid**
		Y1.4	**0,496**	**0,361**	**Valid**
		Y1.5	**0,507**	**0,361**	**Valid**

Based on Table 1, it can be concluded that all of the statement items (30 items) have qualified for validity with a Corrected Item-Total Correlation value ranging from 0.486 to 0.945, all of which exceed the critical limit of 0.361. Thus, research instruments are suitable for further data collection.

2. Reliability Test Results

Reliability tests were performed to measure the internal consistency of each variable using Cronbach's Alpha coefficient. A variable is declared reliable if Cronbach's Alpha value ≥ 0.70. The results of the reliability test are presented in Table 2 below.

Table 2

No.	Variable	Number of Items	Cronbach's Alpha	Remarks
1.	**Technology Awareness (X1)**	**5**	**0,961**	**Highly Reliable**
2.	**Government Support (X2)**	**5**	**0,895**	**Highly Reliable**
3.	**Perceived Usefulness (Z1)**	**5**	**0,942**	**Highly Reliable**
4.	**Perceived Ease of Use (Z2)**	**5**	**0,962**	**Highly Reliable**
5.	**Perceived Risk (Z3)**	**5**	**0,867**	**Highly Reliable**
6.	**Behavioral Intention (Y)**	**5**	**0,762**	**Reliable**

Based on Table 2, all research variables have a Cronbach's Alpha value above the minimum limit of 0.70. The highest score was obtained for the *Perceived Ease of Use* variable ($\alpha = 0.962$), while the lowest value was the *Behavioral Intention* variable ($\alpha = 0.762$) which remained in the reliable category. These results indicate that the research instrument has excellent internal consistency and is reliable for measuring each construct studied.

Classic Assumption Testing

Before conducting path *analysis* with AMOS, prerequisite testing is carried out using SPSS to ensure data quality. The total net sample used was 190 respondents after going through *the screening* process.

1. Data Normality Test

Normality testing was performed using the *Kolmogorov-Smirnov One-Sample method* at residual values. Because SEM analysis requires data to be normally distributed, the data removal process is carried out on extreme data that has *a standardized residual* value > ±3.0.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		190
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.08236426
Most Extreme Differences	Absolute	.064
	Positive	.064
	Negative	-.049
Test Statistic		.064
Asymp. Sig. (2-tailed)		.059[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Figure 5. Normality Test Results (Kolmogorov-Smirnov)

Based on Table 1, the Asymp value is obtained. Sig. (2-tailed) of 0.059. The value is greater than 0.05 (0.059 > 0.05), so it can be concluded that the residual data is NORMALLY distributed and qualified for further analysis.

2. **Multicollinearity Test**

This test aims to ensure that there is no excessive correlation between independent variables.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	7.745	.265		29.177	.000		
	TX1	.016	.020	.089	.799	.425	.418	2.393
	TX2	.032	.016	.156	2.033	.044	.890	1.124
	TZ1	-.020	.028	-.093	-.713	.477	.309	3.241
	TZ2	-.022	.031	-.102	-.733	.464	.269	3.722
	TZ3	-.018	.021	-.077	-.884	.378	.686	1.458

a. Dependent Variable: TY1

Figure 6. Multicollinearity Test Results

Based on the above results, all variables show a Tolerance value of > 0.10 and a VIF value of < 10. This shows that there is no problem of multicollinearity between independent variables in the research model.

3. Heteroscedasticity test

This test is performed to see if there is a variance disparity from the residual of one observation to another.

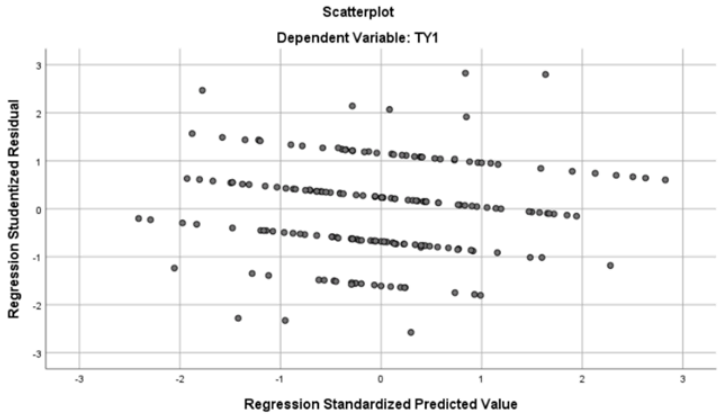


Figure 6. Scatterplot Heteroscedasticity Test

Based on Figure 6, it can be seen that the dots are randomly spread above and below the number 0 on the Y axis and do not form a definite pattern. Thus, it was concluded that heteroscedasticity did not occur.

Path Analysis Using AMOS

After the classical assumptions were met, hypothesis testing was carried out using *AMOS-based* Structural Equation Modeling (SEM).

1. Evaluation of Model Feasibility (*Goodness of Fit*)

The initial model built was modified based on *Modification Indices* by correlating *the error term* on the mediation variables (e1↔, e2↔, e2, e3, e1↔, e3) to obtain a model that fits the empirical data.

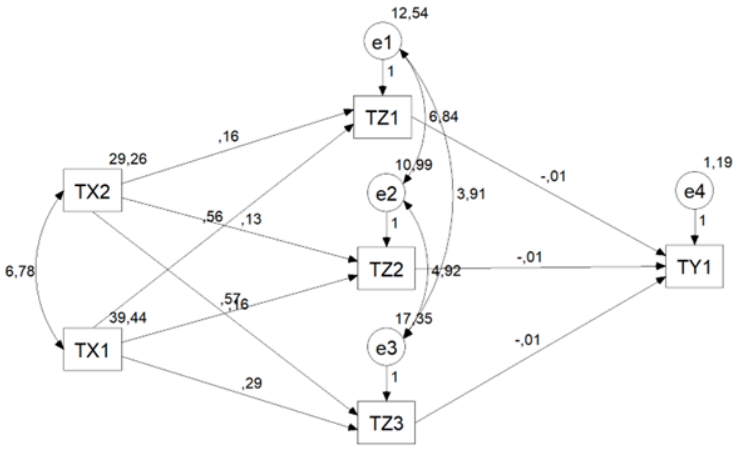


Figure 6. End Path Diagram (Modified Model)

The results of the model feasibility test (Goodness of Fit) are presented in the following table:

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	19	4,673	2	,097	2,337
Saturated model	21	,000	0		
Independence model	6	464,467	15	,000	30,964

Figure 7. CMIN Table

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,183	,992	,915	,094
Saturated model	,000	1,000		
Independence model	10,218	,522	,331	,373

Figure 8. RMR, GFI Table

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,084	,000	,186	,206
Independence model	,398	,367	,430	,000

Figure 9. RMSEA Table

The results of the *goodness of fit* test in Table 4.3 show that the proposed model has an excellent fit with the data. This can be seen from the CMIN/DF value of 2.337—which is still below the limit of 3.00—and the GFI value of 0.992 which is close to 1. Although the RMSEA value slightly exceeds 0.08 (i.e. 0.084), it is still in the category of *acceptable marginal fit*. Thus, this model is feasible to use for the hypothesis testing stage.

2. Hypothesis Test

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
TZ2	<---	TX2	,131	,045	2,870	,004	
TZ2	<---	TX1	,568	,039	14,489	***	
TZ3	<---	TX1	,289	,049	5,866	***	
TZ1	<---	TX1	,556	,042	13,272	***	
TZ1	<---	TX2	,160	,049	3,299	***	
TZ3	<---	TX2	,155	,057	2,712	,007	
TY1	<---	TZ1	-,007	,026	-,270	,787	
TY1	<---	TZ2	-,011	,028	-,404	,686	
TY1	<---	TZ3	-,013	,020	-,647	,517	

Figure 10. Regression Weights Results

The test of nine research hypotheses was carried out by looking at the probability value (P) on the *Regression Weights table*. A hypothesis is accepted if the P value < 0.05.

The results of the hypothesis test are as follows:

H1: Technology Awareness has a significant effect on Perceived Usefulness.

- **Result: ACCEPTED.** Significance value (P) < 0.05. This means that the higher a person's technological awareness of crypto, the higher their perception that crypto is useful.

H2: Technology Awareness has a significant effect on Perceived Ease of Use.

- **Result: ACCEPTED.** P value < 0.05. These findings suggest that an understanding of crypto technology contributes to the perception that the platform is easy to use.

H3: Technology Awareness has a significant effect on Perceived Risk.

- **Result: ACCEPTED.** P value < 0.05. This indicates that individuals with better technological awareness are actually better able to recognize and perceive the risks inherent in crypto assets.

H4: Government Support has a significant effect on Perceived Usefulness.

- **Result: ACCEPTED.** P value < 0.05. Government support, which is positively felt by the public, has been able to increase their confidence in the usefulness of cryptocurrencies.

H5: Government Support has a significant effect on Perceived Ease of Use.

- **Result: ACCEPTED**. P value < 0.05. Regulations and supporting infrastructure from the government have helped shape the perception that the use of crypto is easy and facilitated.

H6: Government Support has a significant effect on Perceived Risk.

- **Result: ACCEPTED.** P value < 0.05. Clear government support also affects risk perception, tending to moderate or frame the understanding of risk to be more structured.

H7: Perceived Usefulness has a significant effect on Behavioral Intention.

- **Result: DECLINED.** Significance value (P) = 0.703 (> 0.05). Interestingly, even if someone finds crypto useful, it doesn't significantly encourage their intention to adopt or invest in crypto.

H8: Perceived Ease of Use has a significant effect on Behavioral Intention.

- **Result: DECLINED.** P value = 0.555 (> 0.05). The perception that crypto platforms are easy to use has also not been shown to have a significant influence on respondents' behavioral intentions.

H9: Perceived Risk has a significant effect on Behavioral Intention.

- **Result: REJECTED**. P value = 0.473 (> 0.05). Last but not least, the perception of high risk does not significantly reduce the intention of younger generations to engage with crypto.

Discussion

1. **The Influence of Technology Awareness and Government Support on User Perception (H1-H6)**

The findings confirming the H1 to H6 hypothesis are consistent with previous literature. High Technology Awareness seems to equip individuals with a more complete understanding. On the one hand, they are able to appreciate functional benefits (Perceived Usefulness) and operational ease of use (Perceived Ease of Use). On the other hand, this knowledge actually makes them more critical and able to identify potential hazards

(Perceived Risk) more clearly (Irfan et al., 2022). This means that good education does not blind you to risks, but rather forms a more comprehensive and balanced perception.

The same is true for government support. Positive perceptions of the regulations and infrastructure provided such as supervision by *Bappebti* serve as a facilitating condition. This support not only strengthens confidence in the usability and ease of access to technology, but also provides a legal framework that makes risk perception more measurable and manageable (Zafar et al., 2021). These findings unequivocally reinforce the proposition that external factors play a crucial role in shaping users' initial beliefs, as often proposed in the development of TAM models.

No Influence of Perception (Usability, Convenience, Risk) on Intention to Use (H7-H9)

- The key and most interesting finding of this study is the rejection of the H7 to H9 hypothesis. These results are in contrast to the core proposition of Davis' (1989) Technology Acceptance Model (TAM), which places Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) as the main predictors of Behavioral Intention (BI). In addition, these findings are also not in line with various studies in the FinTech realm that often identify Perceived Risk (PR) as a significant obstacle to adoption (Wibasuri et al., 2022; Albayati et al., 2020).
- The rejection of these three hypotheses in the context of Indonesia's young generation suggests that the decision to adapt to cryptocurrencies is driven by other factors beyond rational-technological considerations. In other words, the assessment of how useful, easy, or risky a crypto asset is turns out to be insignificant in influencing their intentions. This phenomenon can be explained through several perspectives
- Dominance of Speculative Motives and Fear of Missing Out (FOMO): For most Gen Z and Millennial respondents, cryptocurrencies may be viewed more as a "viral commodity" or "quick profit opportunity" than a technological system for everyday transactions. Their intentions seem to be more strongly driven by social influence, trends on social media, and fear of missing out on moments (FOMO) than by considerations of utility or technical convenience (Anser et al., 2020). In this context, the social influence construct of UTAUT theory may have a stronger explanatory power than PU and PEOU.
- The Phenomenon of Dissonance in Investment Behavior: There are indications of cognitive dissonance where respondents are aware of high risk (PR) and may feel that the platform is complicated (low PEOU), but the drive to achieve short-term financial gains is strong. As a result, they ignore these negative signals for the sake of the expected potential returns. This pattern is in line with prospect theory in behavioral finance, where individuals often take large risks to avoid loss (loss aversion) or gain gains that are perceived as certainty.
- Contextualization of TAMs on High-Risk Assets: This study provides empirical evidence that TAMs, even in their expanded forms, have limitations when applied to highly volatile and speculatively charged assets such as cryptocurrencies. These findings open up a discussion on the need for a more comprehensive model, which integrates constructs such as speculative motive, social influence, and financial literacy more explicitly and directly, rather than just as antecedent variables.

Implied theorem

This research makes two main contributions theoretically. First, the study successfully developed the TAM model by confirming the validity of Technology Awareness and Government Support as a significant antecedent for PU, PEOU, and PR in cryptocurrency-specific contexts.

Second, and more importantly, this study offers a contextual critique of the implementation of TAM. The results show that in certain settings i.e. the adoption of speculative assets among the younger generation the fundamental causal relationship of PU/PEOU → BI may no longer apply. This opens up opportunities for the development of new theoretical models or model modifications that are more sensitive to non-technical motives and irrational behavioral dynamics in the adoption of financial technologies. Thus, these findings reinforce the call for deeper integration between technology adoption theories (such as TAM/UTAUT) and behavioral finance theories to understand the complexity of the FinTech phenomenon.

Practical and Policy Implications

Based on these findings, several practical implications can be formulated:

1. For Regulators (*OJK, Bappebti*, etc.): Financial education and literacy strategies need to undergo a shift in focus. Instead of just emphasizing technical explanations of "how blockchain works" (which only increases *awareness*), educational materials should focus more on risk management, investment psychology, and a clear distinction between speculative motives and long-term investments. Literacy that emphasizes aspects of investor behavior is very crucial.
2. For FinTech/Crypto Exchange Companies: Building an easy-to-use and useful platform is no longer enough. Companies need to be aware that many young users come because of FOMO or speculative motives. Therefore, *risk assessment*, loss scenario simulation, and reminders to invest responsibly should be a more prominent part of the app's design to protect users from impulsive decisions.
3. For Investors and Potential Users: These findings serve as a reminder to introspect. It's important to ask yourself: is the decision to enter the crypto world based on an in-depth analysis of the usefulness of its technology, or is it simply following trends? Awareness of one's own behavioral bias is the first step to preventing careless investment decisions.

Research Limitations

This research has several limitations that need to be acknowledged:

1. **Sampling Method:** The use of *snowball sampling* techniques and the composition of respondents dominated by men (93.4%) limited the generalizability of the findings. Unbalanced gender proportions and *non-probability sampling methods* have the potential to cause bias in the sample.
2. **Research Context and Timing:** The research was conducted on a specific population and time period. Motivation and perception of cryptocurrencies are very dynamic and can change drastically along with market fluctuations (*bullish* or *bearish*).
3. **Unmeasurable Variables:** This study did not directly measure key variables of behavioral finance such as *speculative intention*, *FOMO,* or financial *literacy levels*.

In fact, these variables are suspected to be the main drivers of *Behavioral Intention* in the context of this study.

CONCLUSION

Based on the research results, it can be concluded that factors such as Technology Awareness and Government Support significantly influence user perceptions of cryptocurrency, including perceived usefulness, ease of use, and risk. However, these mediating variables were not proven to significantly influence behavioral intentions to adopt or use cryptocurrency, especially among Indonesia's younger generation. This finding suggests that cryptocurrency adoption is more influenced by non-technical factors such as speculative motives and the Fear of Missing Out (FOMO) phenomenon, rather than rational considerations of the benefits or ease of use of the technology. Therefore, to increase cryptocurrency adoption among the public, especially the younger generation, educational strategies that emphasize risk literacy and understanding investment behavior need to be strengthened, rather than solely focusing on the technical aspects of applications or regulations.

Based on the findings and limitations of this study, several suggestions for future research can be made. First, it is recommended to repeat the study using a random sampling technique (probability sampling) while ensuring a balanced demographic composition, particularly in terms of gender, to enhance the external validity and generalizability of the findings. Second, future research could integrate behavioral financial variables such as speculative intention, FOMO (Fear of Missing Out), and herding behavior directly into the research model, to examine and compare their impact on Behavioral Intention against traditional TAM variables. Third, conducting a qualitative study, such as in-depth interviews or focus group discussions, would help uncover the deeper reasons, motivations, and considerations behind the intention to use cryptocurrency among younger generations, providing a richer understanding that complements the quantitative findings. Lastly, it would be valuable to explore intergenerational adoption behaviors by comparing Baby Boomers, Generation X, and Millennials/Generation Z to determine whether the pattern of neglecting considerations of Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Perceived Risk (PR) is specific to younger generations.

REFERENCES

Aheri tolu, M., Yazdanian, N., Hemmati, H., & Kordlouoie, H. (2022). Accepting Financial Transactions Using Blockchain Technology and Cryptocurrency based on the TAM Model: A Case Study of Iranian Users. *Iranian Journal of Accounting, Auditing and Finance*, *6*(2), 97–109. https://doi.org/10.22067/ijaaf.2022.41763

Albayati, H., Kim, S. K., & Rho, J. J. (2020). Accepting financial transactions using blockchain technology and cryptocurrency: A customer perspective approach. *Technology in Society*, *62*, 101320. https://doi.org/10.1016/j.techsoc.2020.101320

Anser, M. K., Zaigham, G. H. K., Imran Rasheed, M., Pitafi, A. H., Iqbal, J., & Luqman, A. (2020). Social media usage and individuals' intentions toward adopting Bitcoin: The role of the theory of planned behavior and perceived risk. *International Journal of Communication Systems*, *33*(18), e4590. https://doi.org/10.1002/dac.4590

Arias-Oliva, M., Pelegrín-Borondo, J., & Matías-Clavero, G. (2019). Variables influencing cryptocurrency use: A technology acceptance model in Spain. *Frontiers in Psychology*, *10*, 475. https://doi.org/10.3389/fpsyg.2019.00475

Doblas, M. P. (2019). Awareness and attitude towards cryptocurrencies in relation to adoption among college students in a private tertiary institution in Cagayan DeOroCity, Philippines. *International Journal of Advanced Research Publication*, *3*, 15–19.

Dryall, S. (2018). Cryptocurrencies and blockchain. In S. Chishti (Ed.), *The WealthTech Book* (pp. 158–161). John Wiley & Sons. https://doi.org/10.1002/9781119444510.ch38

Frik, A., & Mittone, L. (2019). Factors influencing the perception of website privacy trustworthiness and users' purchasing intentions: The behavioral economics perspective. *Journal of Theoretical and Applied Electronic Commerce Research*, *14*(3), 89–125. https://doi.org/10.4067/S0718-18762019000300107

Han, H., Lee, K. S., Radic, A., Ngah, A. H., & Kim, J. J. (2021). The extended self identify-based electric product adoption model and airline business strategy: A new theoretical framework for green technology products. *Journal of Travel & Tourism Marketing*, *38*(3), 247–262. https://doi.org/10.1080/10548408.2021.1906386

Irfan, E., Ali, Y., & Sabir, M. (2022). Analyzing role of businesses' investment in digital literacy: A case of Pakistan. *Technological Forecasting and Social Change*, *176*, 121484. https://doi.org/10.1016/j.techfore.2022.121484

Ismanto, L., Ar, H. S., Fajar, A. N., Sfenrianto, & Bachtiar, S. (2019). Blockchain as e-commerce platform in Indonesia. *Journal of Physics: Conference Series*, *1179*, 012114. https://doi.org/10.1088/1742-6596/1179/1/012114

Johar, S., Ahmad, N., Asher, W., Cruickshank, H., & Durrani, A. (2021). Research and applied perspective to blockchain technology: A comprehensive survey. *Applied Sciences*, *11*(14), 6252. https://doi.org/10.3390/app11146252

Mutahar, A. M., Daud, N. M., Ramayah, T., Isaac, O., & Aldholay, A. H. (2018). The effect of awareness and perceived risk on the technology acceptance model (TAM): Mobile banking in Yemen. *International Journal of Services and Standards*, *12*(2), 180–204. https://doi.org/10.1504/IJSS.2018.091840

Nasir, A., Shaukat, K., Khan, K. I., Hameed, I. A., Alam, T. M., & Luo, S. (2021). What is core and what future holds for blockchain technologies and cryptocurrencies: A bibliometric analysis. *IEEE Access*, *9*, 989–1004. https://doi.org/10.1109/ACCESS.2020.3046931

Natarajan, T., Balasubramanian, S. A., & Kasilingam, D. L. (2017). Understanding the intention to use mobile shopping applications and its influence on price sensitivity. *Journal of Retailing and Consumer Services*, *37*, 8–22. https://doi.org/10.1016/j.jretconser.2017.02.010

Patel, H., & Shrimali, B. (2021). AgriOnBlock: Secured data harvesting for agriculture sector using blockchain technology. *ICT Express*. Advance online publication. https://doi.org/10.1016/j.icte.2021.07.003

Putri, G. A., Wijayanti, A. W., & Ariani, K. R. (2021). The application of technology acceptance model to assess the role of complexity toward customer acceptance on mobile banking. In P. K. Pattnaik, M. Sain, A. A. Al-Absi, & P. Kumar (Eds.), *Proceedings of International Conference on Smart Computing and Cyber Security.*

SMARTCYBER 2020. Lecture Notes in Networks and Systems (Vol. 149, pp. 259–265). Springer. https://doi.org/10.1007/978-981-15-7990-5_25

Schaupp, L. C., & Festa, M. (2018). Cryptocurrency adoption and the road to regulation. *Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age: Dg.o '18* (pp. 1–9). Association for Computing Machinery. https://doi.org/10.1145/3209281.3209336

Shahzad, F., Xiu, G., Wang, J., & Shahbaz, M. (2018). An empirical investigation on the adoption of cryptocurrencies among the people of mainland China. *Technology in Society*, *55*, 33–40. https://doi.org/10.1016/j.techsoc.2018.05.006

Wibasuri., et al. (2022). Exploring the Impact of Relevant Factors on the Acceptance of Cryptocurrency Mobile Apps: An Extended Technology Acceptance Model (TAM-3). *International Journal of Artificial Intelligence Research*, *6*(1.1).

Zafar, S., Riaz, S., & Mahmood, W. (2021). Conducing the cashless in Pakistan using enterprise integration. *International Journal of Education Management and Engineering*, *11*(4), 12–25. https://doi.org/10.5815/ijeme.2021.04.02