



Beyond Ease Of Use: Risk Perception As Primary Barrier To Parental Adoption Of Fintech Cards In Banyumas Schools

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ABSTRACT

This study examines the factors influencing parents' acceptance of the CAZH CARDS fintech application used for educational payment systems in Banyumas Regency, Indonesia. Specifically, the study investigates the effects of relative advantage, perceived ease of use, perceived benefits, perceived risk, and suitability of need on parents' adoption decisions. A quantitative research design was employed using purposive sampling, involving 100 parents from elementary and junior high schools partnering with PT CAZH. Data were collected through structured questionnaires and analyzed using binary logistic regression and univariate logistic regression. The findings indicate that relative advantage, perceived ease of use, perceived benefits, and suitability of need were not significant predictors of parents' acceptance of the application. In contrast, perceived risk emerged as the only significant determinant, suggesting that concerns regarding transaction security and reliability outweigh positive evaluations of innovation characteristics. These findings extend technology adoption literature by demonstrating that risk perception plays a dominant role in educational fintech adoption and highlight the importance of strengthening trust, security, and transparency to increase parents' acceptance of digital payment systems.

INTRODUCTION

The development of financial technology (fintech) in Indonesia has experienced significant growth in recent years. In 2023, the fintech sector in Indonesia will grow by 20% annually, or worth IDR 1,000 trillion. Fintech offers a variety of innovative solutions in important aspects such as payments, loans, and investments, which not only make it easier for people to conduct financial transactions, but also provide wider access to those who were previously marginalized

from traditional financial services. With increasing internet penetration and widespread smartphone adoption, fintech has become the main choice for many people, including parents in Banyumas Regency, who can now manage their finances more efficiently and transparently. Along with this rapid development, understanding the factors that encourage individuals to adopt fintech has become an important research issue because user acceptance determines the successful implementation and sustainability of fintech services. Previous studies consistently demonstrate that users' behavioral intention to adopt fintech is strongly influenced by their perceptions of the technology and its ability to provide value in daily activities (Cahyadi et al., 2024; Wijaya et al., 2025). Consequently, investigating user acceptance has become an essential topic in fintech research, particularly in different implementation contexts where user characteristics and service objectives may vary.

This rapid development indicates that users increasingly prioritize convenience, efficiency, and security when conducting financial transactions. Consequently, fintech implementation has gradually expanded beyond commercial financial services into various sectors, including education. Given that parents and guardians are primarily responsible for supporting their children's educational expenses, their willingness to adopt digital financial technology has become increasingly important. Educational institutions have begun implementing fintech-based payment systems to facilitate tuition payments, activity fees, book purchases, and other educational transactions through digital platforms. Such systems not only simplify financial transactions but also improve transparency by enabling parents to monitor payment records and better plan educational expenditures. Therefore, adopting fintech-based payment systems is expected to support more effective financial management while strengthening communication between schools and parents (Hassan & Binti Abu Bakar, 2025; Ridatul Fitri & Isra Hayati, 2025).

One example of this innovation is the CAZH CARDS fintech payment system, which is specifically designed to facilitate financial transactions within educational institutions. Through this application, parents can make online payments, monitor educational expenses, and access financial information related to their children's education in a more efficient and transparent manner. In addition to functioning as a payment platform, CAZH CARDS also provides integrated financial information that supports communication between schools and parents. Accordingly, the application is expected to improve parental involvement in educational financial management while contributing to a more transparent and accountable educational ecosystem.

Despite these potential benefits, parents' acceptance of school-based fintech applications cannot be assumed automatically. Previous studies have shown that technology acceptance is influenced by several factors, including digital literacy, perceived usefulness, perceived ease of use, perceived benefits, trust, and perceived risk (Alfian et al., 2023; Hassan & Binti Abu Bakar, 2025). Parents may hesitate to adopt digital financial applications because of concerns regarding transaction security, personal data protection, and the reliability of digital financial services. Furthermore, differences in digital literacy and previous technological experience may influence parents' confidence in utilizing fintech applications. These findings indicate that the successful implementation of fintech in educational settings depends not only on technological innovation but also on users' perceptions and readiness to adopt digital financial services.

Previous studies have extensively investigated fintech adoption using various technology adoption theories, particularly the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI). Most empirical studies reported that perceived usefulness, perceived ease of use, perceived benefits, and trust positively influence users' intention to adopt fintech services, whereas perceived risk tends to discourage technology adoption (Perwitasari, 2022; Setiawan et al., 2023; Wijaya et al., 2025). However, previous findings remain inconsistent across different technological contexts and user groups, suggesting that the influence of innovation characteristics may vary depending on the implementation environment. Moreover, most existing studies have focused on mobile banking, e-wallets, and general digital financial services, while relatively limited attention has been given to fintech applications specifically developed to

support educational financial management involving parents as the primary decision makers. This condition indicates the existence of a research gap that requires further investigation, particularly in the context of school-based fintech payment systems.

Accordingly, this study aims to address the existing research gap by examining parents' acceptance of the CAZH CARDS fintech payment system. Unlike previous studies that primarily investigated commercial fintech services, this study focuses on fintech implementation within educational institutions by simultaneously examining the influence of suitability of need, relative advantage, perceived benefits, perceived ease of use, and perceived risk using a logistic regression approach. Therefore, this study is expected to contribute to the literature on technology adoption by providing empirical evidence regarding parents' acceptance of school-based fintech applications while offering practical recommendations for fintech developers and educational institutions in improving the implementation of digital payment systems. Based on the identified research gap, this study aims to examine the factors influencing parents' acceptance of the CAZH CARDS fintech application and to analyze the role of innovation characteristics in explaining fintech adoption within educational payment systems.

LITERATURE REVIEW

Theoretical Foundation

Various theories have been developed to explain technology adoption in fintech research. Recent studies indicate that users' adoption behavior is influenced by perceived usefulness, perceived ease of use, innovation characteristics, perceived risks, and resistance toward technological change (Alfian et al., 2023; Gopinath & Sezhian, 2025; Pian Ta, 2025; Sinha et al., 2021). These findings demonstrate that researchers continue to employ several theoretical frameworks to explain technology adoption from different perspectives.

The Technology Acceptance Model (TAM), introduced by Davis (1989), remains one of the most widely applied frameworks for explaining users' behavioral intentions through perceived usefulness and perceived ease of use, particularly in fintech research (Pian Ta, 2025). Likewise, the Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2003) extends TAM by incorporating social influence and facilitating conditions, making it suitable for explaining technology adoption across different contexts. Meanwhile, the Diffusion of Innovations (DOI) theory proposed by Rogers (2014) explains that innovation characteristics, such as relative advantage, compatibility, complexity, trialability, and observability, determine users' adoption decisions. Recent studies continue to apply DOI in fintech research because these innovation characteristics significantly influence users' acceptance of digital financial services (Lampo, 2022). In addition, Perceived Risk Theory explains that users consider financial, privacy, and security risks before adopting new technologies, and recent empirical evidence confirms that perceived risk remains one of the strongest barriers to fintech adoption (Sinha et al., 2021).

Furthermore, Innovation Resistance Theory, initially proposed by Ram and Sheth (1989) and further developed by Talke and Heidenreich (2014), explains that users may resist technological innovations because of functional and psychological barriers. Recent studies have also highlighted that innovation resistance continues to influence users' reluctance to adopt fintech applications (Gopinath & Sezhian, 2025). Since this study examines parents' acceptance of the CAZH CARDS fintech application through relative advantage, perceived ease of use, suitability of need, perceived benefits, and perceived risk, the Diffusion of Innovations (DOI) theory serves as the primary theoretical foundation, while TAM, UTAUT, Perceived Risk Theory, and Innovation Resistance Theory provide complementary perspectives for explaining technology adoption behavior.

Relative Advantage

According to Rogers (2014), relative advantage refers to the degree to which an innovation is perceived as being superior to the idea or technology it replaces. Innovations that provide greater efficiency, convenience, effectiveness, or economic value are generally adopted more rapidly because users perceive clear benefits from their utilization. In the context of financial technology, relative advantage can be reflected in the ability of digital payment systems to simplify financial transactions, reduce transaction time, improve financial transparency, and facilitate financial management. Recent studies have consistently reported that users are more likely to adopt fintech services when they perceive greater advantages compared with conventional payment methods (Ahmed et al., 2025; Musyaffi, 2024). Therefore, when parents perceive that the CAZH CARDS fintech application provides greater advantages in managing educational payments than traditional payment methods, they are expected to demonstrate a higher level of acceptance toward the application.

H1: Relative advantage positively influences parents' acceptance of the CAZH CARDS fintech application.

Perceived Ease of Use

Perceived ease of use is one of the fundamental constructs introduced by Davis (1989) in the Technology Acceptance Model (TAM). It is defined as the degree to which an individual believes that using a particular technology requires minimal effort. Technologies that are easy to understand, learn, and operate tend to increase users' willingness to adopt them because they reduce the complexity associated with technology usage. In fintech applications, perceived ease of use is reflected in the simplicity of transaction procedures, user-friendly interfaces, and the accessibility of application features. Previous empirical studies have demonstrated that perceived ease of use significantly encourages users' intention to adopt fintech because applications that are easier to operate improve users' confidence and overall experience (Nurdin et al., 2023; Purwanto et al., 2024). Accordingly, parents who perceive the CAZH CARDS fintech application as easy to use are expected to show greater acceptance of the application.

H2: Perceived ease of use positively influences parents' acceptance of the CAZH CARDS fintech application.

Perceived Benefits

Recent studies have consistently identified perceived benefits as one of the key determinants influencing users' intention to adopt fintech services. Users are more likely to accept digital financial technologies when they perceive that the technology provides tangible advantages, such as greater convenience, improved efficiency, reduced transaction costs, and enhanced financial . These findings suggest that users evaluate fintech not only based on its functionality but also on the practical value it delivers in supporting their daily financial activities.

The concept of perceived benefits refers to users' perceptions of the positive outcomes obtained from using a particular technology. According to Arora (2018), perceived benefits represent the positive consequences experienced by users, including convenience, economic value, and product or service advantages. Similarly, Agyei et al. (2020) describe this construct as expected benefit, emphasizing that users tend to adopt technology when they expect it to improve their performance or provide meaningful value. Earlier research by (Agyei et al., 2020) also demonstrated that users adopted e-commerce because of the benefits it offered, including cost savings and increased efficiency. Therefore, within the context of the CAZH CARDS fintech application, parents who perceive greater benefits from using the application for managing educational payments are expected to demonstrate higher levels of technology acceptance.

H3: Perceived benefits positively influence parents' acceptance of the CAZH CARDS fintech application.

Perceived Risk

Recent studies have consistently identified perceived risk as one of the main barriers influencing users' intention to adopt fintech services. Users tend to hesitate to adopt digital financial technologies when they perceive potential risks related to financial loss, transaction security, privacy protection, or the misuse of personal information. These findings indicate that although fintech offers various advantages, users' concerns regarding security and uncertainty may reduce their willingness to adopt digital financial services.

Perceived Risk Theory explains that users evaluate the potential negative consequences associated with using a technology before making adoption decisions (Armanditya & Rahmiati, 2020). The perceived risks may include financial risk, privacy risk, security risk, and performance risk, all of which influence users' confidence in utilizing digital technologies. Previous studies have demonstrated that higher perceived risk significantly reduces users' intention to adopt fintech because concerns regarding transaction reliability and personal data protection discourage technology acceptance. In the context of the CAZH CARDS fintech application, parents may be reluctant to use the application if they perceive that it poses risks to the security of financial transactions or personal information. Therefore, lower perceived risk is expected to increase parents' acceptance of the CAZH CARDS fintech application.

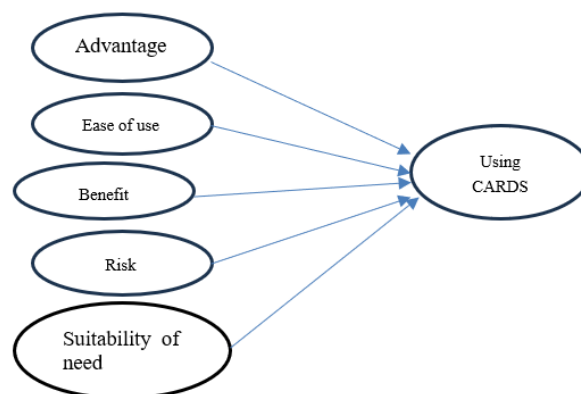
H4: Perceived risk negatively influences parents' acceptance of the CAZH CARDS fintech application.

Suitability of Needs

Suitability of need refers to the extent to which an innovation meets users' personal needs and effectively supports their daily activities. Users tend to adopt technologies that provide practical solutions to the problems they encounter and align with their expectations and requirements. Within the context of educational financial management, parents are more likely to adopt fintech applications when they perceive that the system adequately supports tuition payments, educational expense monitoring, and communication with schools. Applications that correspond to users' needs are generally perceived as more useful and valuable because they directly address existing problems. Previous studies have suggested that technologies demonstrating high compatibility with users' needs and lifestyles tend to achieve higher adoption rates (Marco & Arifin, 2024). Therefore, the greater the suitability of the CAZH CARDS fintech application to parents' educational financial management needs, the greater the likelihood that parents will accept and utilize the application.

H5: Suitability of need positively influences parents' acceptance of the CAZH CARDS fintech application.

Figure 1. Hypothesis Research



METHODS

This study employed a quantitative research design to examine the factors influencing parents' acceptance of the CAZH CARDS fintech application. A quantitative approach was considered appropriate because this study aimed to test the effects of relative advantage, perceived ease of use, perceived benefits, perceived risk, and suitability of need on parents' acceptance of fintech applications within educational payment systems. Primary data were collected through a structured questionnaire and analyzed using binary logistic regression. Binary logistic regression was selected because the dependent variable was dichotomous, representing parents who accepted or rejected the use of the CAZH CARDS fintech application.

Sampling

The target population consisted of parents of elementary and secondary school students in Banyumas Regency whose schools had partnered with PT CAZH in implementing the CAZH CARDS fintech payment system. The unit of analysis was individual parents who had experience with the application and had participated in school socialization activities regarding its implementation. A purposive sampling technique was employed to ensure that respondents possessed sufficient knowledge and experience related to the investigated technology. Respondents were selected based on the criterion that they had attended the school socialization program introducing the CAZH CARDS fintech application. The minimum sample size was determined using the Slovin formula, resulting in a minimum sample of 100 respondents, which was considered sufficient to represent the target population.

Data Collection

Primary data were collected using a structured questionnaire distributed to parents who met the predetermined sampling criteria. The questionnaire consisted of closed-ended questions measured using a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to data collection, respondents had received information regarding the objectives, features, and implementation procedures of the CAZH CARDS fintech application through school socialization activities. This process ensured that respondents possessed adequate understanding of the application before completing the questionnaire.

Measurement

The questionnaire items were adapted from previously validated measurement instruments derived from the Technology Acceptance Model (TAM), Diffusion of Innovations (DOI), Unified Theory of Acceptance and Use of Technology (UTAUT), Perceived Risk Theory, and Innovation Resistance Theory. The measurement items were modified to fit the context of the CAZH CARDS fintech application while preserving the conceptual meaning of each construct. The independent variables included relative advantage, perceived ease of use, perceived benefits, perceived risk, and suitability of need, whereas the dependent variable was parents' acceptance of the CAZH CARDS fintech application. Prior to hypothesis testing, the questionnaire was evaluated through validity and reliability testing to ensure the quality of the measurement instrument. The results indicated that all questionnaire items met the validity requirements, while the reliability test showed Cronbach's alpha values greater than 0.70 for all constructs, indicating satisfactory internal consistency and confirming that the instrument was appropriate for subsequent statistical analysis.

Data Analysis

The collected data were analyzed using binary logistic regression because the dependent variable consisted of two categories: acceptance (coded as 1) and rejection (coded as 0) of the CAZH CARDS fintech application. Binary logistic regression was employed to estimate the

probability of parents accepting the fintech application based on the independent variables, namely relative advantage, perceived ease of use, perceived benefits, perceived risk, and suitability of need. The analysis enabled the identification of the magnitude and direction of the influence of each predictor variable on parents' acceptance of the application while controlling for the effects of the remaining variables. All statistical analyses were performed using IBM SPSS Statistics, and statistical significance was determined at the 5% significance level ($p < 0.05$).

RESULTS

Respondent Profile

Table 1. Respondent Profile

Characteristics	Category	n	%
Gender	Male	16	16.0
	Female	84	84.0
Age	24–39 years	53	53.0
	40–55 years	39	39.2
	>55 years	8	7.8
Education	< Bachelor's Degree	27	27.0
	Bachelor's Degree	65	65.0
	Master's Degree	8	8.0

Table 1 presents the demographic characteristics of the respondents. A total of 100 parents of elementary and junior high school students from schools partnering with PT CAZH participated in this study. The majority of respondents were female (84.0%), indicating that mothers were more actively involved in responding to the survey regarding the use of the CAZH CARDS fintech application. In terms of age, most respondents were between 24 and 39 years old (53.0%), followed by those aged 40–55 years (39.2%), while respondents older than 55 years accounted for only 7.8% of the sample. Regarding educational background, most respondents held a bachelor's degree (65.0%), followed by respondents with education below the bachelor's level (27.0%) and a master's degree (8.0%). Overall, these findings indicate that the respondents were predominantly adults with relatively high educational attainment, suggesting that they possessed sufficient capacity to understand and evaluate the implementation of the CAZH CARDS fintech application.

Validity and Reliability Analysis

Table 2. Validity and Reliability Test

Variable	Corrected Item–Total Correlation	Cronbach's Alpha if Item Deleted	Decision
Suitability of Need	0.797	0.691	Valid
Relative Advantage	0.904	0.643	Valid
Perceived Benefits	0.894	0.662	Valid
Perceived Ease of Use	0.894	0.663	Valid
Perceived Risk	-0.569	0.969	See note
Overall Reliability	—	Cronbach's Alpha = 0.801	Reliable
Standardized Alpha = 0.791			
Number of Items = 5			

The validity and reliability assessment indicates that the research instrument generally possesses acceptable measurement quality. The corrected item-total correlation values for Suitability of Need, Relative Advantage, Perceived Benefits, and Perceived Ease of Use ranged from 0.797 to 0.904, demonstrating strong relationships between each construct and the overall measurement scale. These results indicate that the questionnaire items adequately represent their respective constructs and are suitable for measuring respondents' perceptions of the CAZH CARDS fintech application.

However, the Perceived Risk construct produced a negative corrected item-total correlation (-0.569), indicating that respondents' responses to this construct differed from the pattern observed for the other innovation characteristics. This finding suggests that perceived risk represents a distinct dimension of technology evaluation rather than a positive innovation attribute. Despite this difference, the overall reliability analysis produced a Cronbach's alpha value of 0.801, exceeding the recommended threshold of 0.70, indicating satisfactory internal consistency of the measurement instrument. Therefore, the questionnaire was considered sufficiently reliable to support subsequent statistical analyses.

Correlation Analysis

Tabel 3. Pearson Correlation

	Suitable of need	Advantage	Benefit	Ease of use	Risk r
Suitable of need	1				
Advantage	.847**	1			
Benefit	.849**	.920**	1		
Ease of use	.861**	.923**	.950**	1	
Risk	-.306**	-.198*	-.258**	.276**	1

Table 3 presents the Pearson correlation coefficients among the study variables. The analysis reveals that Suitability of Need, Relative Advantage, Perceived Benefits, and Perceived Ease of Use are positively and significantly correlated with one another ($p < 0.01$), indicating that respondents who perceived the CAZH CARDS fintech application as beneficial also tended to perceive it as easier to use, more advantageous, and more compatible with their educational payment needs. The strongest positive relationship was observed between Perceived Benefits and Perceived Ease of Use ($r = 0.950$, $p < 0.01$), suggesting that respondents closely associated the practical benefits of the application with its ease of operation. This finding indicates that the positive characteristics of the innovation reinforce one another in shaping users' overall evaluation of the fintech application.

Conversely, Perceived Risk demonstrated negative and statistically significant correlations with all other variables. The strongest negative association was found between Perceived Risk and Suitability of Need ($r = -0.306$, $p < 0.01$), followed by Perceived Ease of Use ($r = -0.276$, $p < 0.01$) and Perceived Benefits ($r = -0.258$, $p < 0.01$). These findings indicate that respondents who perceived greater financial or security risks tended to report lower evaluations of the application's usefulness, ease of use, advantages, and suitability for their needs. In other words, increasing perceptions of risk were accompanied by less favorable perceptions of the application's innovation characteristics. Overall, the correlation analysis suggests that respondents evaluated the CAZH CARDS fintech application through two contrasting dimensions. On one hand, Relative Advantage, Perceived Benefits, Perceived Ease of Use, and Suitability of Need jointly represent positive innovation characteristics that strengthen one another. On the other hand, Perceived Risk functions as a contrasting dimension that weakens respondents' positive evaluations of the application. This pattern provides an initial indication that risk

perception may become an important consideration in parents' acceptance of educational fintech applications, which is further examined through logistic regression analysis.

Multicollinearity Analysis

Tabel 4. Multicollinear analysis

Variable	Tolerance
Suitable of need	.229
Advantage	.118
Benefit	.084
Ease of use	.076
Risk	.869

Before estimating the logistic regression model, a multicollinearity test was conducted to examine whether strong linear relationships existed among the independent variables. As presented in Table 4, all predictor variables produced tolerance values above the minimum acceptable threshold of 0.01 (Hair et al., 2019), indicating that multicollinearity was not detected based on the adopted criterion. Therefore, all independent variables were retained in the subsequent logistic regression analysis. Although the tolerance values satisfy the recommended threshold, the previous correlation analysis demonstrated relatively strong positive associations among Relative Advantage, Perceived Benefits, Perceived Ease of Use, and Suitability of Need. This finding suggests that respondents tended to evaluate these innovation characteristics simultaneously. Nevertheless, the multicollinearity diagnostic indicates that these relationships were not sufficiently strong to violate the assumptions of the regression model.

Logistic Regression Analysis

	B	S.E.	Sig.	Exp(B)
Suitable of need	7,606219	3494,635	0,998263	2010,661
Advantage	27,29046	4853,473	0,995514	7,11E+11
Benefit	11,4192	11614,71	0,999216	1,1E-05
Ease of use	14,59051	13927,84	0,999164	2170598
Risk	-16,5044	1414,521	0,990691	6,8E-08
Constant	-22,6622	2003,804	0,990976	1,44E-10

Binary logistic regression analysis was performed to examine the simultaneous effects of Suitability of Need, Relative Advantage, Perceived Benefits, Perceived Ease of Use, and Perceived Risk on parents' acceptance of the CAZH CARDS fintech application. As presented in Table 5, none of the independent variables demonstrated statistically significant effects on parents' acceptance of the application ($p > 0.05$). These findings indicate that the innovation characteristics included in the model were not able to independently explain parents' decisions to adopt the CAZH CARDS fintech application when analyzed simultaneously. Although the regression coefficients indicate positive relationships for Suitability of Need, Relative Advantage, Perceived Benefits, and Perceived Ease of Use, and a negative relationship for Perceived Risk, none of these relationships reached statistical significance in the multivariate model.

This finding suggests that parents' acceptance decisions may not be determined by a single innovation characteristic, but rather by their overall evaluation of the application. The absence of significant effects may also indicate that several innovation characteristics overlap conceptually, reducing their individual explanatory power when entered into the regression model simultaneously. To further investigate the individual contribution of each predictor, a univariate logistic regression analysis was subsequently conducted. This additional analysis aimed to identify whether each independent variable exerted a significant influence on parents' acceptance when evaluated separately.

Univariate Logistic Regression

Table 6. Logit Univarian Regression

	B	S.E.	Sig.	Exp(B)
Suitable of need Constant	19.403	2.307.851	.993	2,67E+11
	-21.121	2.307.851	.993	.000
Advantage Constant	18.644	2.067.758	.993	1,25E+11
	-20.922	2.067.759	.992	.000
Benefit Constant	19.476	2.393.693	.994	2,87E+11
	-21.194	2.393.693	.993	.000
Ease of use Constant	20.054	2.292.098	.993	5,12E+11
	-22.332	2.292.099	.992	.000
Risk Constant	-.479	.164	.003	.619
	1.934	.573	.001	6914

Table 6 presents the results of the univariate logistic regression analysis. Unlike the multivariate model, the univariate analysis identified Perceived Risk as the only statistically significant predictor of parents' acceptance of the CAZH CARDS fintech application ($p = 0.003$). The regression coefficient was negative ($B = -0.479$), indicating that increasing perceptions of risk reduced the likelihood of accepting the application. The corresponding odds ratio ($\text{Exp}(B) = 0.619$) suggests that each one-unit increase in perceived risk decreased the odds of technology acceptance by approximately 38.1%.

In contrast, Suitability of Need, Relative Advantage, Perceived Benefits, and Perceived Ease of Use remained statistically insignificant ($p > 0.05$), indicating that these innovation characteristics did not independently influence parents' acceptance of the application. These findings suggest that parents' adoption decisions were primarily driven by concerns regarding potential risks rather than by the perceived advantages or usability of the application.

Hypothesis Testing

Hypothesis	Statement	Result
H1	Relative Advantage → Acceptance	Not Supported
H2	Perceived Ease of Use → Acceptance	Not Supported
H3	Perceived Benefits → Acceptance	Not Supported
H4	Perceived Risk → Acceptance	Supported
H5	Suitability of Need → Acceptance	Not Supported

The hypothesis testing results indicate that only Hypothesis 4 (H4) was supported, while Hypotheses 1 (H1), 2 (H2), 3 (H3), and 5 (H5) were not supported. Specifically, Perceived Risk was the only variable that significantly influenced parents' acceptance of the CAZH CARDS fintech application ($p = 0.003$). The negative regression coefficient indicates that increasing perceptions of risk reduce the likelihood of parents accepting the application. In contrast, Relative Advantage, Perceived Ease of Use, Perceived Benefits, and Suitability of Need did not exhibit statistically significant relationships with technology acceptance. These findings suggest that parents' decisions to adopt the CAZH CARDS fintech application were influenced more by concerns regarding potential risks than by perceptions of the application's innovative characteristics. Although respondents generally perceived the application as beneficial, easy to use, advantageous, and suitable for their needs, these positive evaluations were insufficient to significantly influence their adoption decisions. Instead, perceived risk emerged as the dominant factor affecting parents' acceptance of the educational fintech application.

DISCUSSION

Innovation Characteristics Were Insufficient to Encourage Parents' Acceptance of CAZH CARDS

The findings of this study suggest that innovation characteristics, represented by relative advantage, perceived ease of use, perceived benefits, and suitability of need, were insufficient to significantly influence parents' acceptance of the CAZH CARDS fintech application. Although the correlation analysis demonstrated strong positive associations among these variables, the multivariate logistic regression analysis revealed that none of them independently predicted technology acceptance. This pattern indicates that parents generally perceived these innovation characteristics positively and consistently; however, such favorable evaluations were not strong enough to explain their actual adoption decisions once the variables were considered simultaneously. In other words, positive perceptions of the application's characteristics did not necessarily translate into behavioral acceptance.

One possible explanation for these findings is the changing landscape of digital financial services in Indonesia. The rapid diffusion of mobile banking, electronic wallets, QRIS, and other digital payment systems has transformed convenience, usefulness, and ease of use into basic expectations rather than competitive advantages. Consequently, parents may no longer evaluate a fintech application based on whether it is easy to use or provides practical benefits because these characteristics are already widely available across existing digital payment platforms. Instead, users are likely to compare CAZH CARDS with technologies that they already use in their daily financial activities, reducing the ability of conventional innovation characteristics to differentiate the application from competing fintech services.

This interpretation is supported by the correlation analysis, which showed very strong positive relationships among relative advantage, perceived ease of use, perceived benefits, and suitability of need. Rather than functioning as independent determinants, these variables appear to represent a single positive evaluation of the application. When entered simultaneously into the logistic regression model, however, their individual contributions became statistically insignificant. This suggests that parents did not distinguish these characteristics separately when making adoption decisions but instead formed an overall perception of the application's quality. Therefore, improving only one innovation characteristic, such as interface simplicity or additional payment features, may not substantially increase technology acceptance because parents evaluate these characteristics collectively rather than individually.

From a theoretical perspective, these findings provide an interesting extension to the Diffusion of Innovations (DOI) theory. Rogers argues that innovations offering greater relative advantage, compatibility with users' needs, and simplicity are generally adopted more rapidly because users perceive them as providing superior value over previous alternatives. However, the present findings suggest that the explanatory power of these innovation characteristics may decrease when the innovation is implemented within an institutional environment where technology adoption is influenced by organizational policies rather than purely voluntary consumer choice. In the context of school payment systems, parents do not necessarily adopt CAZH CARDS because it offers greater technological advantages but because it serves as the payment mechanism introduced by the educational institution. Consequently, institutional context may moderate the influence of innovation characteristics on technology adoption.

The insignificant influence of innovation characteristics also differs from several previous empirical studies conducted in broader fintech contexts. Musyaffi et al. (2024) reported that perceived financial advantages significantly encouraged digital payment adoption because users associated fintech services with improved operational efficiency and business performance. Similarly, Marco and Arifin (2024) found that perceived benefits positively influenced individuals' intention to adopt fintech by increasing convenience, flexibility, and transaction efficiency. Likewise, Nurdin et al. (2023) and Purwanto et al. (2024) demonstrated that perceived ease of

use remains one of the strongest predictors of users' behavioral intention because technologies requiring less effort are generally considered more attractive. Agyei et al. (2020) also confirmed that perceived ease of use significantly enhances users' intention to adopt digital financial services through the Technology Acceptance Model.

The discrepancy between the present study and previous findings may be explained by differences in user motivation and technology usage context. Previous studies predominantly investigated commercial fintech applications in which individuals voluntarily adopted technology to improve business performance, increase financial efficiency, or obtain economic benefits. In contrast, parents participating in this study used CAZH CARDS primarily to fulfil school payment obligations rather than to optimize their personal financial activities. Consequently, innovation characteristics that are highly influential in voluntary fintech adoption may become less important in educational payment systems where technology serves an administrative function instead of providing competitive or economic advantages.

Another possible explanation relates to the characteristics of the respondents themselves. The respondent profile indicates that the majority were adults within productive age groups and possessed relatively high educational backgrounds. Such users are generally familiar with digital payment technologies and have accumulated substantial experience using various fintech platforms. As digital literacy increases, users tend to consider convenience, ease of use, and practical benefits as minimum service standards rather than distinctive innovation attributes. Therefore, these variables may no longer differentiate one fintech application from another because respondents expect every digital payment system to satisfy these basic requirements. Under these circumstances, the decision to adopt a new educational fintech application is likely to be influenced by factors beyond traditional innovation characteristics.

Overall, these findings suggest that the classical determinants proposed by DOI and TAM remain conceptually relevant but may not be sufficient to explain technology adoption in institutional educational settings. The present study demonstrates that parents' acceptance of educational fintech applications cannot be understood solely through positive evaluations of innovation characteristics. Instead, technology adoption appears to depend on broader considerations related to users' confidence in the payment system and their perception of potential uncertainties associated with digital financial transactions. This finding provides an important indication that, in educational fintech environments, the drivers of technology acceptance may differ from those observed in commercial fintech services, thereby requiring a broader perspective in explaining users' adoption behavior.

Perceived Risk as the Primary Determinant of Parents' Acceptance

While innovation characteristics did not significantly explain parents' acceptance of the CAZH CARDS fintech application, perceived risk emerged as the only significant determinant influencing adoption decisions. This finding indicates that parents prioritize the potential consequences associated with using educational fintech applications over the technological advantages offered by the system. In the context of school financial transactions, parents are responsible for ensuring that tuition fees and other educational payments are processed accurately, securely, and transparently. Consequently, concerns regarding transaction errors, personal data protection, payment verification, and financial security become more influential than perceptions of convenience or functionality. This suggests that parents evaluate educational fintech not merely as a technological innovation but as a financial service requiring a high level of trust and reliability.

The present findings are consistent with Perceived Risk Theory, which argues that individuals tend to evaluate potential losses before deciding whether to adopt a new technology. Users may perceive several forms of risk, including financial risk, privacy risk, security risk, and performance risk, all of which can discourage technology adoption when the expected uncertainty outweighs the perceived benefits. In educational payment systems, these concerns

become even more critical because failed transactions or inaccurate payment records may directly affect students' administrative status and create additional burdens for parents. Therefore, minimizing perceived risk becomes an essential prerequisite for increasing users' willingness to adopt educational fintech applications.

Interestingly, the statistical findings suggest that perceived risk operates differently from the other innovation characteristics. Although the correlation analysis indicated that parents generally evaluated the application's advantages, benefits, suitability, and ease of use positively, these favorable perceptions disappeared as significant predictors in the multivariate model. In contrast, perceived risk remained statistically significant in the subsequent univariate logistic regression analysis, indicating that risk independently influenced parents' acceptance decisions. This pattern suggests that parents may simultaneously appreciate the application's functionality while still hesitating to adopt it because of concerns regarding transaction security and reliability. In other words, positive evaluations of innovation characteristics are insufficient to encourage adoption when users continue to perceive substantial uncertainty associated with the technology.

This finding supports the argument of Ahmed et al. (2025), who reported that perceived risk negatively influences users' intention to adopt digital financial services, whereas trust and security positively strengthen technology acceptance. Ahmed et al. emphasized that users are more willing to adopt fintech applications when providers successfully reduce uncertainty through secure payment systems, transparent transaction processes, and effective protection of personal information. The present study extends these findings by demonstrating that risk perception plays an even more dominant role within educational fintech services, where financial transactions involve children's education and require greater accountability than ordinary commercial payments.

The findings also provide an important contribution to the technology adoption literature by suggesting that institutional fintech services should not be evaluated solely through traditional innovation adoption frameworks such as the Diffusion of Innovations (DOI) theory or the Technology Acceptance Model (TAM). Although these theories successfully explain technology adoption in many commercial settings, the present study indicates that adoption decisions within educational financial systems are strongly influenced by users' perceptions of security and trust. Accordingly, the explanatory power of innovation characteristics may diminish when technology adoption occurs in contexts where financial responsibility and institutional accountability become primary user concerns. This finding highlights the importance of integrating innovation adoption theories with perceived risk perspectives to achieve a more comprehensive understanding of educational fintech adoption.

From a practical perspective, the findings suggest that improving application features alone is unlikely to substantially increase parents' acceptance of CAZH CARDS. Instead, fintech developers should prioritize strengthening system security, implementing robust data protection mechanisms, enhancing transaction verification procedures, and providing real-time payment confirmation to reduce users' uncertainty. Educational institutions also play an important role by communicating clearly how payment data are managed, protected, and verified throughout the transaction process. Transparent communication regarding security standards, complaint handling procedures, and transaction monitoring may help increase parents' confidence in using the application. Furthermore, integrating CAZH CARDS with broader academic information systems, such as attendance records, tuition statements, and student administrative services, may enhance users' trust by demonstrating the application's reliability and long-term value within the educational ecosystem.

Despite these contributions, this study has several limitations. First, the respondents were limited to parents from schools partnering with PT CAZH in Banyumas Regency, which may limit the generalizability of the findings to other educational institutions or regions with different levels of digital infrastructure and fintech adoption. Second, the study employed a cross-

sectional research design, preventing the observation of changes in parents' perceptions over time as they gain greater experience with the application. Future research is therefore encouraged to examine educational fintech adoption across broader geographical areas, compare different educational institutions, and incorporate additional determinants such as trust, digital literacy, facilitating conditions, social influence, and institutional support. Longitudinal research designs may also provide a deeper understanding of how parents' perceptions evolve as educational fintech services become increasingly integrated into school financial management. Finally, this study contributes to the growing body of educational fintech literature by demonstrating that parents' acceptance of fintech applications cannot be explained solely by innovation characteristics. Instead, perceived risk represents the primary barrier that shapes adoption decisions within educational payment systems. These findings reinforce the need for fintech developers and educational institutions to move beyond ease of use and focus on building trust, security, and reliability as fundamental strategies for increasing the acceptance of digital financial technologies in education.

CONCLUSION

This study examined the factors influencing parents' acceptance of the CAZH CARDS fintech application within educational payment systems. The findings reveal that relative advantage, perceived ease of use, perceived benefits, and suitability of need did not significantly influence parents' acceptance when analyzed simultaneously. Instead, perceived risk emerged as the only significant determinant, indicating that parents prioritize transaction security, reliability, and potential financial uncertainty over the application's technological characteristics. These findings suggest that innovation attributes alone are insufficient to encourage educational fintech adoption in institutional settings where financial accountability is a primary concern. The study contributes to the technology adoption literature by demonstrating that perceived risk plays a more dominant role than conventional innovation characteristics in explaining parents' acceptance of school-based fintech applications. Therefore, fintech developers and educational institutions should prioritize enhancing security, transparency, and user trust to encourage broader adoption of educational digital payment systems.

LIMITATION

This study has several limitations that should be considered when interpreting the findings. First, the respondents were limited to 100 parents of elementary and junior high school students from schools partnering with PT CAZH in Banyumas Regency. Consequently, the findings may not be fully generalizable to other educational institutions or regions with different demographic characteristics and levels of fintech adoption. Second, this study employed a cross-sectional research design, which captured parents' perceptions at a single point in time and did not allow changes in technology acceptance to be observed as users gained greater experience with the CAZH CARDS application. Third, the study focused on five explanatory variables—relative advantage, perceived ease of use, perceived benefits, perceived risk, and suitability of need—while other potentially important determinants, such as trust, digital literacy, facilitating conditions, social influence, and institutional support, were not included in the model. The exclusion of these variables may have limited the explanatory power of the regression model and contributed to the insignificant effects observed for several innovation characteristics. Future research is therefore encouraged to involve larger and more diverse samples, incorporate additional explanatory variables, and employ longitudinal research designs to provide a more comprehensive understanding of parents' adoption of educational fintech applications.

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