Analysis of Factors Affecting Student Interest in Using Mobile Banking
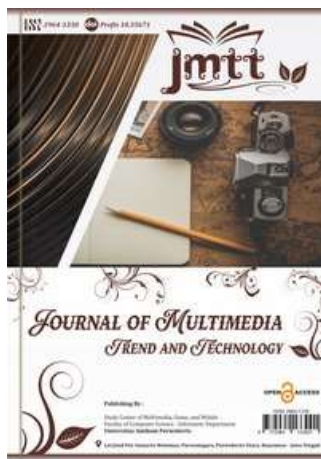
Novita Dea Pratiwi [1*], Arin Fronika Fariasih [2], Iftinan Hanan Andiahman [3], Tyas Pratama Puja Kusuma [4]

[1,2,3,4] Department of Informatics, Faculty of Computer Science, Universitas Amikom Purwokerto, Purwokerto, Indonesia.

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ABSTRACT

Study aims to analyze the effect of trust, compatibility, perceived risk, risk acceptance, and satisfaction on students' interest in using mobile banking applications. Mobile banking has become one of the most widely used digital financial solutions due to its convenience and practicality, especially among young users who are familiar with technology. This research employs a quantitative approach using multiple linear regression analysis. The data are derived from a secondary dataset titled "COGENT ADOPTION M-BANKING PLS," which contains survey responses from 219 students who use mobile banking services. The analysis results reveal that satisfaction, compatibility, and trust significantly influence students' interest in using mobile banking, while perceived risk and risk acceptance show no significant effect. The coefficient of determination (R^2) value of 0.570 indicates that the model explains 57% of the variation in students' interest in mobile banking adoption. These findings highlight the importance of user trust, system suitability, and satisfaction as key factors in sustaining mobile banking usage. The study contributes both theoretically and practically by enriching the understanding of technology acceptance behavior among students and providing insights for banking institutions to enhance application design, strengthen security systems, and develop more user-oriented mobile banking strategies.

*Corresponding Author:

Novita Dea Pratiwi
Department of Informatics, Faculty of Computer Science, Universitas Amikom Purwokerto, Purwokerto, Indonesia.
Email: *novitadeapratiwi2@gmail.com*

INTRODUCTION

The development of financial technology has fundamentally changed the face of the banking industry, shifting from conventional services to more dynamic digital offerings [1][2]. Students, as part of Generation Z, born in the digital age, represent a highly potential market segment for the use of mobile banking applications. Their desire for speed and ease of access means that mobile banking is no longer just an option but a primary necessity to support daily transaction activities, from paying tuition fees to online shopping [1][4].

Trust is a key pillar determining the extent to which students are willing to entrust their financial management to digital platforms. Without confidence in the bank's credibility and the security of its systems, students tend to hesitate to adopt this technology [3]. Furthermore, the compatibility or suitability of the application to their lifestyle and device needs also plays a crucial role. Applications that align with students' smartphone usage habits will be more easily accepted and integrated into their daily routines [5].

However, behind this convenience, a perceived risk often presents a major obstacle. Students are acutely aware of potential threats such as personal data hacking, transaction failures, and cyber fraud. This high level of perceived risk is inversely proportional to their intention to use; the greater the fear of potential loss, the more reluctant they are to actively transact [6]. Therefore, the bank's ability to mitigate these fears significantly determines the level of service adoption among academics [7].

Despite the risks, students' risk acceptance is also influenced by their perceived benefits. If the convenience offered is perceived as significantly greater than the potential dangers, students will tend to accept these risks as part of modernization [6][8]. This tolerance for risk typically arises when the application's security system is deemed adequate and the bank guarantees consumer protection, allowing students to feel more secure in exploring the available features [9][10].

Another equally important factor is user satisfaction stemming from previous experiences. This satisfaction encompasses the aesthetics of the application interface (UI/UX), speed of response, and the lack of technical issues during use [11][12]. Students who are satisfied with mobile banking services tend to have high loyalty and a continued interest in continuing to use the application. Satisfaction acts as a positive catalyst, strengthening their belief that this technology truly adds value to their lives [13][14].

Overall, students' interest in using mobile banking applications is the result of a complex interaction between trust, technological suitability, and assessments of risk and satisfaction. Understanding these variables is crucial for banking institutions to design more targeted marketing strategies and system development. By optimizing the balance between security and convenience, mobile banking can become a dominant and sustainable financial solution for the younger generation in the future [15][16][17].

The rapid advancement of technology has transformed modern lifestyles, driving people's dependence on quick information access through digital devices, particularly smartphones [18]. This technological evolution has also reshaped the banking industry, which now adapts to customer needs through mobile banking—a digital service enabling users to conduct transactions such as payments, transfers, and balance inquiries without visiting a bank. Among university students, mobile banking serves not only consumptive purposes but also supports academic and entrepreneurial activities. However, the level of utilization among students remains varied, influenced by factors such as trust, satisfaction, compatibility, perceived risk, and risk acceptance [19][20]. Despite its convenience, challenges persist, including concerns over data security, negative user experiences, and limited digital literacy.

According to the Technology Acceptance Model (TAM) (Davis, 1989), technology adoption is primarily driven by perceived usefulness and ease of use. Yet, recent studies have extended TAM by incorporating psychological dimensions such as trust and risk perception to better explain behavioral intention in digital finance contexts. In Indonesia, prior studies (Amin, 2008; Wulandari & Lestari, 2021) have emphasized the critical roles of trust and service quality in shaping students' mobile banking adoption [13]. Therefore, this study aims to empirically analyze the influence of trust, compatibility, perceived risk, risk acceptance, and satisfaction on students' intention to use mobile

banking, thereby enriching the literature through the application of an extended TAM framework within the Indonesian higher education context [14][17][19].

METHOD

A. Abbreviations and Acronyms

This study involves five main constructs: Trust (TR), Compatibility (COM), Satisfaction (SAT), Perceived Risk (PR), and Risk Acceptance (RA). TR reflects users' confidence in mobile banking reliability and security; COM indicates the alignment of the service with users' habits; SAT measures users' contentment with app performance; PR represents perceived uncertainty or potential losses; and RA captures users' willingness to tolerate such risks for convenience.

B. Measurement Scale

All constructs were measured using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), adapted from validated instruments in previous TAM-based studies. This scale provides reliable, standardized data for quantitative analysis and is widely used for assessing behavioral intention in technology adoption research.

C. Unit of analysis

The unit of analysis comprises 219 Indonesian university students who actively use mobile banking applications. The dataset, titled COGENT_ADOPTION_M_BANKING_PLS, was obtained through a structured survey using purposive sampling. Students were chosen because they represent digitally literate users and early adopters of financial technology. The research applies a multiple linear regression model:

$$Intention = \beta_0 + \beta_1(TR) + \beta_2(COM) + \beta_3(PR) + \beta_4(RA) + \beta_5(SAT) + \varepsilon \qquad (1)$$

The model was estimated using Ordinary Least Squares (OLS) in Python's *Statsmodels* library.

D. Assumption Testing and Common Errors

Model validation included VIF (<5) for multicollinearity, Shapiro–Wilk for normality, Breusch–Pagan for heteroscedasticity, and Durbin–Watson (1.5–2.5) for autocorrelation. The model achieved R^2 = 0.570, indicating that 57% of students' behavioral intention can be explained by the five predictors, confirming a robust and valid model for behavioral analysis.

RESULT

A. Identify the headings

The regression analysis identified satisfaction (β = 0.451, p < 0.001), compatibility (β = 0.246, p = 0.001), and trust (β = 0.126, p = 0.023) as significant predictors of students' intention to use mobile banking, with satisfaction being the most influential factor. This indicates that students tend to adopt mobile banking when they feel satisfied with their experience, perceive the app as compatible with their lifestyle, and trust its reliability. Conversely, risk acceptance (p = 0.635) and perceived risk (p = 0.493) were insignificant, suggesting that digital-native students, who are familiar with technology, are less affected by security concerns. The model's R^2 value of 0.570 shows that 57% of behavioral intention variance is explained by the five variables, indicating a strong model fit. These findings align with previous studies on Generation Z and Indonesian university students, which highlight satisfaction, usability, and trust as dominant factors in mobile banking adoption. As users become more digitally mature, expectations shift from mere functionality to personalized, seamless user experiences supported by reliable systems. The minimal effect of risk-related factors reflects increasing digital risk resilience, where users' familiarity with secure online environments and the presence of enhanced app protections (e.g., encryption, biometrics) reduce perceived threats. Overall, the results underscore

that user satisfaction, compatibility, and trust are the primary drivers of mobile banking adoption among students, while risk factors play a diminishing role in this demographic.

B.   Visualization and Interpretation

The results of the analysis using multiple linear regression show that three of the five independent variables have a significant influence on student interest in using mobile banking, namely satisfaction, compatibility and trust. This can be seen from the p-value of the three which have the greatest influence with a coefficient value of 0.451 and a t-statistic of 5.817, which means that the higher the level of satisfaction of mobile banking application users, the higher their interest in continuing to use the application. Compability also has a significant effect with a coefficient of 0.246 and a t-statistic of 3.290, indicating that the more the application matches the needs and lifestyle of students, the more their interest in using mobile banking increases. Trust also has a very significant and positive effect with a coefficient of 0.126 and a p-value of 0.023, which means that students who feel confident in the security and reliability of the application will be more interested in using it. The R-squared value of 0.570 explains that this regression model is able to explain that about 57% of the variation in the dependent variable, namely student interest in using mobile banking. This is a strong enough number to show that the five variables have contributed to student interest. These results are also supported by data visualizations, such as the correlation heatmap that shows a strong relationship between satisfaction, compatibility, and trust to intention. The regression coefficient bar graph reinforces the analysis results by showing the strength of the influence of each variable. The following is a table of multiple linear regression results:

Table 1.   Regresion analysis result

Variable	Coefficient	Std.Error	t-Statistic	P-value	Significance
Intercept	0.454	0.250	1.817	0.071	Not Significant
Risk Acceptance	0.033	0.070	0.476	0.635	Not Significant
Compatibility	0.246	0.075	3.290	0.001	Significant
Satisfaction	0.451	0.078	5.817	0.000	Significant
Trust	0.126	0.055	2.295	0.023	Significant
Perceived Risk	0.021	0.031	0.687	0.493	Not Significant

The regression results (Table 1) show that satisfaction (β = 0.451, p = 0.000), compatibility (β = 0.246, p = 0.001), and trust (β = 0.126, p = 0.023) significantly influence students' intention to use mobile banking, as indicated by their t-statistics (5.817, 3.290, and 2.295). Meanwhile, risk acceptance (β = 0.033, p = 0.635) and perceived risk (β = 0.021, p = 0.493) were insignificant, suggesting that these factors have minimal impact on students' adoption behavior. The intercept (β = 0.454, p = 0.071) also showed no significant effect. Overall, these findings confirm that satisfaction, compatibility, and trust are the key determinants of mobile banking usage intention, while risk-related variables play a limited role among digitally experienced student users.
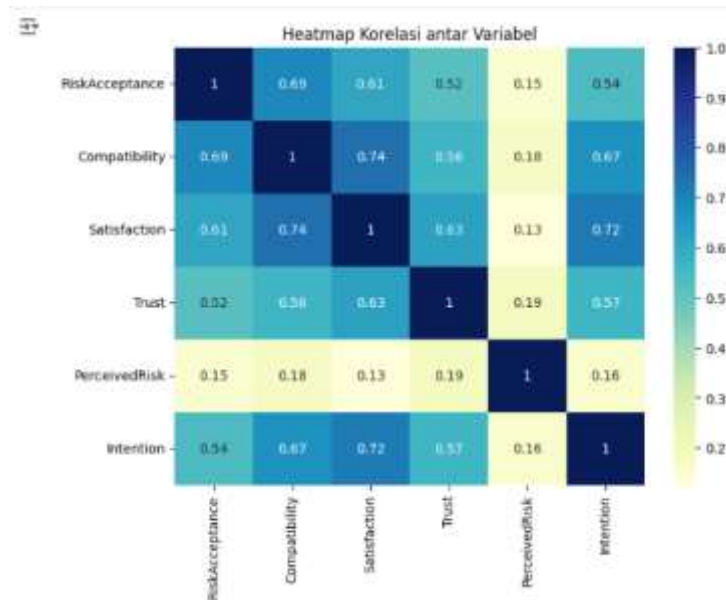
Figure 1. Correlation Heatmap of Variables

The correlation heatmap (Figure 1) shows that satisfaction (r = 0.72), compatibility (r = 0.67), and trust (r = 0.57) have the strongest positive correlations with intention to use mobile banking, consistent with the regression results. Risk acceptance (r = 0.54) shows moderate correlation but is not significant, while perceived risk (r = 0.16) has a very weak relationship. Satisfaction also correlates highly with compatibility (r = 0.74) and trust (r = 0.63), suggesting interconnected effects among positive user perceptions Overall, the heatmap confirms that satisfaction, compatibility, and trust are key drivers of mobile banking adoption, while risk factors play a minimal role among tech-savvy students.
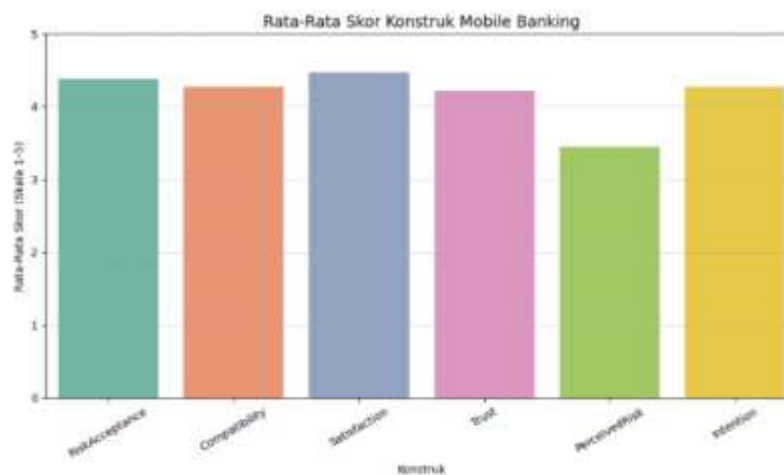

Figure 2. Figure II. Contruct mean scores

Figure 2 shows that all constructs scored positively on a 5-point Likert scale, with satisfaction highest (≈4.4), followed by intention, risk acceptance, and compatibility (≈4.1–4.3), while trust was slightly lower but still above average. Perceived risk had the lowest score (≈3.45), indicating minor concerns about security. Overall, students viewed mobile banking favorably, with satisfaction and compatibility as key drivers of intention, while risk concerns had minimal influence—supporting previous statistical findings.
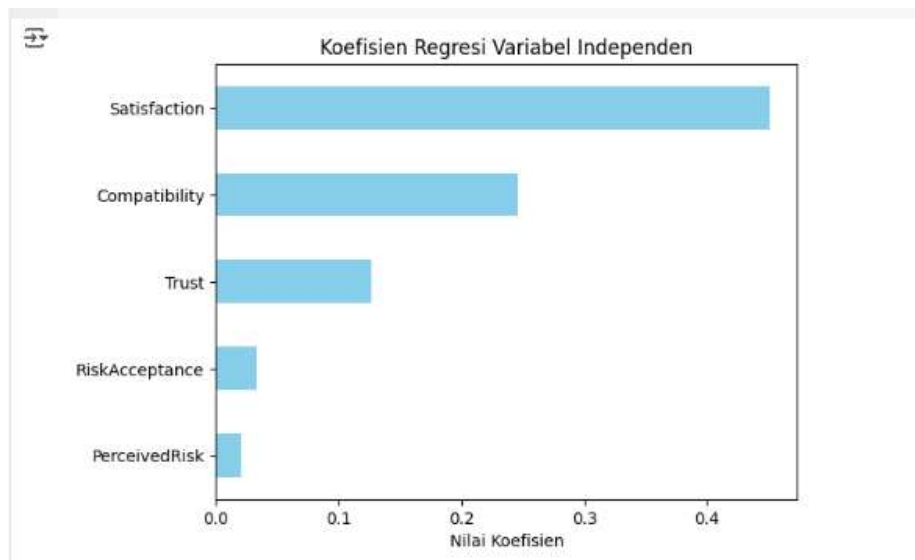
Figure 3. Bar graph of regression coefficients

Figure 3 shows the standardized regression coefficients, highlighting satisfaction (β = 0.451) as the strongest predictor of students' intention to use mobile banking, followed by compatibility (β = 0.246) and trust (β = 0.126). In contrast, risk acceptance and perceived risk have minimal influence, confirming their limited role. Overall, the figure emphasizes that positive user experience, lifestyle alignment, and trust drive mobile banking adoption among students, while risk factors play a minor part.

CONCLUTIONS

This study concludes that satisfaction, compatibility, and trust significantly influence students' intention to use mobile banking, with satisfaction as the strongest predictor. In contrast, perceived risk and risk acceptance show no significant effect, likely due to students' high digital literacy and familiarity with online financial platforms. These findings highlight that positive user experience, lifestyle fit, and system reliability are key drivers of adoption, while risk concerns are minimal among young users. Further studies are recommended to examine these factors across different age groups, regions, or cultural settings, and to conduct longitudinal research tracking how satisfaction, trust, and risk perceptions evolve with ongoing technological and regulatory changes in digital banking.

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