Analyzing Gen Z's Intention to Use Digital Banking: The Role of Perceived Usefulness, Attitude, and Perceived Behavioral Control

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Abstract: The purpose of this study is to analyze the factors that influence the behavior of Generation Z in the Jabodetabek region when using digital banking services. In this study, the three primary variables that evaluate perceived usefulness, attitude, and perceived behavioral control. Data collection was conducted through a convenience sampling method, with respondents selected from the Z generation in Jabodetabek. The data that was collected was subsequently analyzed using the Structural Equation Modeling-Partial Least Squares (SEM-PLS) method with the SmartPLS4 to evaluate the relationship between the variables. This study has shown that a higher likelihood intension to use digital banking services is associated with an increase in perceived usefulness, attitude, and perceived behavioral control regarding digital services. The findings of this study offer the banking sector valuable insights for the development of more effective strategies to stimulate the adoption of digital banking among Generation Z, particularly in the Jabodetabek region.

Keywords: Generation Z; Digital Bank; Intension to Use

INTRODUCTION

The development of digital technology has changed the way individuals interact with financial services, including digital banking. This transformation is accelerating with the increasing penetration of the internet and the use of smartphones worldwide, including in Indonesia. Digital banking offers various conveniences for its users, such as 24/7 accessibility, faster transactions, and integration with various other financial services. In Indonesia, digital banking continues to grow along with the increasing trust of the public in technology-based services. Generation Z, which is the age group that grew up in the digital era, has become one of the main user segments of digital banking in the Jabodetabek region.

Due to their digital nativeity, Generation Z adopts technology at a faster pace than previous generations. However, their decision to utilize digital banking services is not solely dependent on technological factors; it is also influenced by psychological and social factors. Venkatesh et al. (2021) have conducted numerous studies that demonstrate the significant influence of perceived simplicity of use and perceived utility on an individual's intention to utilize digital technology. In addition, the adoption of digital-based financial services among the younger generation can be influenced by risk factors, subjective norms, and perceived behavioral control (Zhao et al., 2022).

Although many studies have discussed the adoption of digital technology in the banking sector, they tend to emphasize general user populations and technological factors. For instance, Oliveira et al. (2014) integrated the Unified Theory of Acceptance and Use of Technology (UTAUT) and Task-Technology

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Fit (TTF) models to examine mobile banking adoption, but their study did not specifically target Generation Z. Similarly, Mortimer et al. (2015) analyzed mobile banking adoption based on perceived trust, ease of use, and service quality, yet focused on the broader young adult population without isolating the behavioral nuances of Generation Z. Ahmed et al. (2014) also identified major challenges influencing mobile banking adoption, mainly highlighting technology-related concerns such as security and usability, rather than psychological or social motivations. Therefore, studies that specifically examine the factors influencing Generation Z's intention to use digital banking services, particularly in a dynamic and technology-driven region like Jabodetabek, remain limited. Several factors that have previously been shown to be influential, such as ease of use, perceived benefits, and risks, need to be re-evaluated in the context of Generation Z who have unique characteristics in digital decision-making (Wang & Dai, 2020). Additionally, the behavioral patterns of digital banking consumers in Indonesia are complicated by regulatory changes and accelerated technological advancements (Winasis et al., 2020)

Based on existing research, although several studies have explored digital banking adoption (Oliveira et al., 2014; Ahmed et al. 2014) most have focused on general user populations without isolating Generation Z as a unique segment. Furthermore, research such as by Kurniawan and Kelly (2024) highlights that studies in Indonesia tend to emphasize technological readiness and security factors, with limited attention to psychological and social influences on adoption behavior. Therefore, there is a critical need to specifically investigate Generation Z's digital banking adoption behavior in the dynamic Indonesian context, particularly in Jabodetabek. This study aims to fill this research gap.

This paper uses the Structural Equation Modeling-Partial Least Squares (SEM-PLS) technique and a quantitative approach to investigate, using the perceived usefulness, attitude, and perceived behavioral control, the desire to use digital banking. It is anticipated that the findings of this study will offer the banking industry valuable insights for the development of services that are more in line with the preferences of Generation Z. Additionally, they will address the voids in previous research conducted on the adoption of digital banking in Indonesia.

LITERATURE REVIEW

Digital Banking

Digital banking, which involves the transformation of traditional banking services into a digital platform, allows users to conduct a diverse array of financial transactions through electronic devices without the necessity of visiting a physical branch office. This transformation is influenced by the rapid advancement of information technology, the digitization of financial services, and the increasing use of mobile devices and the internet. Digital banking facilitates the administration of personal and business finances by offering adaptability, expediency, and accessibility, as per Aulia (2020). Digital banking in Indonesia is experiencing rapid growth due to the proliferation of services from a wide range of financial institutions, including traditional banks that have transitioned to digital services and fintech companies that provide banking solutions without physical offices (Sebayang et al., 2024). In Indonesia, the data suggests that the utilization of digital banking services is on the rise in tandem with the increasing prevalence of non-cash transaction behaviors and the adoption of technology. Although digital banking services provide numerous advantages, problems persist, including cybersecurity, user trust in the digital banking system, and personal data protection. Therefore, it is crucial to comprehend the factors that influence the adoption of digital banking, particularly among Generation Z, the largest potential user segment in the future.

Technology and Generation Z in Banking

Generation Z, which was born between the mid-1990s and early 2010s, is referred to as a "digital native" due to their upbringing in a digital age. They have high expectations for services that are fast, efficient, and easily accessible via mobile devices. This generation is more familiar with technology and tends to seek banking solutions that are automated, fast, and flexible (Agárdi & Alt, 2022).

In the context of digital banking, Generation Z tends to trust technology-based services more than conventional banking methods. Generation Z is very technologically savvy, but their decisions on how they utilize digital banking services still reflect psychological, social, financial, and psychological factors. A study from Almaiah et al. (2023) suggests that subjective criteria from friends and family might influence Generation Z's desire to utilize digital banking technology. Moreover, influencing Generation Z's embrace of digital banking is ease of access, confident system performance, and good user experience.

Technology Acceptance Model (TAM)

Among the most used theories in the study of technological acceptance is the Technology Acceptance Model (TAM). Proposed by Davis (1989), this paradigm asserts that two key factors define whether one accepts technology: perceived utility (PU) and perceived ease of use (PEOU). While PU shows the degree to which a person thinks that using technology will boost their productivity and efficiency, PEOU shows the degree to which people regard the technology as user-friendly. A person's tendency to utilize digital banking services is much influenced by their perceived usefulness (PU), within the scope of digital banking. PEOU helps customers in the meanwhile to accept new technologies. When the system is user-friendly, users are far more likely to utilize it without running into major technological difficulties (Nurahmasari et al., 2023).

User attitude is an additional factor that is being progressively considered in TAM studies, in addition to PU and PEOU. Individuals who maintain a positive attitude toward technology are more likely to have a higher intention to use it. This attitude can be developed through the perception that the service is user-friendly and beneficial, as well as through positive experiences with digital technology.

Research Model Using Combined TAM-TPB

Along with the development of research in the field of technology adoption, several studies have combined elements of TAM with the Theory of Planned Behavior (TPB) to understand user behavior more comprehensively. TPB, developed by Ajzen (1991), emphasizes that in addition to PU and PEOU, other factors such as attitude, subjective norm, and perceived behavioral control (PBC) also play a role in shaping a person's intention to use new technology.

In the context of digital banking, the TAM-TPB model allows for a broader analysis of the factors that influence the adoption of this service. PU remains the main factor determining whether someone will use digital banking services, but other factors such as ATT and PBC have also been shown to play an important role in shaping user intentions. A study by Silanoi et al. (2023) shows that Generation Z not only considers the benefits of technology, but also psychological aspects such as self-confidence in using digital banking systems and the influence of their social environment.

Therefore, this paper investigates how PU, ATT, and PBC support Generation Z's desire to utilize digital banking services using a TAM-TPB strategy. This approach offers a more all-encompassing knowledge of how psychological and technical aspects affect user behavior in implementing digital banking. 5. Evolution of Hypotheses Drawing on the literature review, this paper suggests the following hypotheses:

- **H1:** Perceived Usefulness (PU) has a positive influence on Intention to Use (IU) digital banking.
- **H2:** Attitude (ATT) has a positive influence on Intention to Use (IU) digital banking.
- **H3:** Perceived Behavioral Control (PBC) has a positive influence on Intention to Use (IU) digital banking.
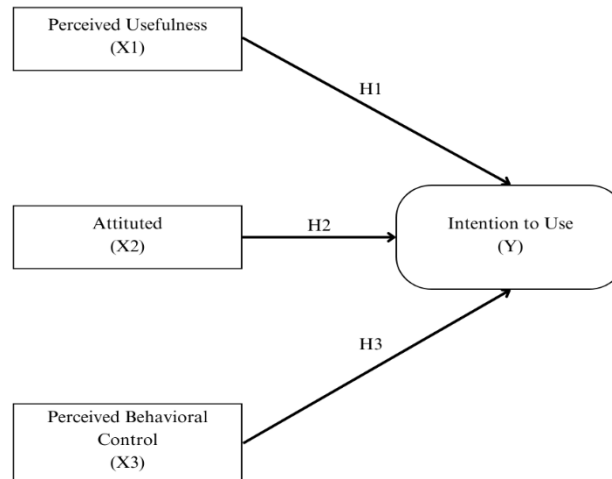
RESEARCH METHODOLOGY

Using the convenience sampling technique which lets respondents be chosen depending on availability and ease of access, data collecting was done online using The main research variables including Perceived Usefulness (PU), Attitude (ATT), Perceived Behavioral Control (PBC), and Intention to Use (IU) were measured in the second part of the survey, which comprised six items covering demographic information meant to identify the traits of the respondents. The survey was initially divided into two main parts: the first part covered demographic information, which consisted of six items, with the purpose of identifying the characteristics of the respondents. The second part measured the main research variables, which consisted of 27 items.

Each item was assigned a score on a 5-point Likert scale, with 1 indicating strong disagreement and 5 indicating strong agreement. This scale was developed to assess respondents' preferences for digital banking solutions and the extent of their opinions. Specifically targeted for this research were Generation Z residents of the Jabodetabek area. The convenience sample approach was used to guarantee that the respondents of the questionnaire suited for the aims of the study. It was achieved by means of screening questions to guarantee that the questionnaire was only completed by those with past knowledge or inclination for digital banking solutions. The survey was distributed through various social media platforms and digital communication channels to reach participants more widely and effectively.

Before completing the survey, respondents were given information about the background and objectives of the study as well as instructions for answering the questionnaire. After completing the demographic section, they proceeded to questions related to the main variables of the study. Data collection took place from January to February 2025, with the hope of obtaining a sufficient sample size for accurate statistical analysis. The data obtained were analyzed using the Structural Equation Modeling-Partial Least Squares (SEM-PLS) approach through SmartPLS 4 software. The SEM-PLS approach was chosen because of its flexibility in handling data with non-normal distributions and its ability to evaluate relationships between complex latent variables (Hair et al., 2021). By using this method, the study can test the validity and reliability of the measurement model and analyze the influence of research variables more deeply and comprehensively (Becker et al., 2022).

RESULTS AND DISCUSSION

This study explores the intention of Gen Z in the Jabodetabek area to use digital banking services by analyzing demographic factors and previous experience with digital banking. A total of 250 respondents

were initially surveyed, with an equal distribution of 50 participants from Jakarta, Bogor, Depok, Tangerang, and Bekasi. Data was collected during January and February of 2025. However, only 236 replies were considered suitable for study followng data cleansing and validation. There were 120 valid replies from female participants (50.8%) and 136 from male participants (57.6%). This study will investigate key demographic aspects, including age, education level, employment, and area, to enhance understanding of the characteristics of Gen Z respondents about their use of digital banking. The following overview delineates the demographic characteristics of the respondents.

Measure	Value	Frequency	Percentage (%)
Gender	Male	125	50
	Female	125	50
Age	26-27	74	29.6
	17-19	73	29.2
	23-25	53	21.2
	20-22	50	20
Education	High School/Equivalent	74	29.6
	Diploma	65	26
	Bachelor's degree	50	20
	Master's degree or above	61	24.4
Occupation	Student	74	29.6
	Full-time work	64	25.6
	Part-Time work	59	23.6
	Not working	53	21.2
Area	Jakarta	50	20
	Bogor	50	20
	Depok	50	20
	Tangerang	50	20
	Bekasi	50	20
Ever used Digital Banking Services	Yes	236	94.4
	No	14	5.6

Reflecting the characteristics of Generation Z, the demographic survey shows that most of the respondents, 31.4% are between the ages of 17 and 19 and are predominantly students. According to their educational background, most participants have a high school diploma or equivalent certification, therefore indicating their current level of academic or early professional development. Notably, 94.4% of respondents possess expertise with digital banking, demonstrating a significant degree of exposure and familiarity with these services. This indicates that Gen Z in Jabodetabek exhibits a pronounced preference for digital financial services, a vital element in comprehending their propensity to utilize digital banking.

This study employed SmartPLS 4 for data processing, with 27 questions designed to assess three primary variables: Perceived Usefulness (PU), Attitude (ATT), and Perceived Behavioral Control (PBC) about the Intention of Use (IU) of digital banking. Each independent variable has 9 questions intended to assess respondents' perceptions of digital banking services utilization. SmartPLS is used because of its capability in Partial Least Squares Structural Equation Modeling (PLS-SEM), which is very suitable for analysis with limited sample size and data that does not fully meet the assumption of

normal distribution. In SmartPLS, the tests carried out include convergent validity and construct reliability, where the requirements that must be met are: (1) Outer loading must be more than 0.5, (2) Composite Reliability (CR) more than 0.7, and (3) Average Variance Extracted (AVE) more than 0.5 to show that the indicators in each variable can explain the latent variables well. The following table presents the results of the analysis of construct validity and reliability that have been tested in this study:

Variable	Item Code	Outer Loadings	CA	CR	AVE
PU	PU2	0.588	0.821	0.900	0.623
	PU3	0.611			
	PU4	0.573			
	PU5	0.637			
	PU6	0.569			
	PU7	0.579			
	PU8	0.552			
	PU9	0.597			
ATT	ATT1	0.625	0.812	0.895	0.61
	ATT2	0.59			
	ATT3	0.681			
	ATT4	0.663			
	ATT5	0.644			
	ATT6	0.573			
	ATT7	0.639			
	ATT8	0.686			
	ATT9	0.663			
PBC	PBC1	0.632	0.83	0.91	0.645
	PBC2	0.7			
	PBC3	0.668			
	PBC4	0.608			
	PBC5	0.627			
	PBC6	0.688			
	PBC7	0.619			
	PBC8	0.609			
	PBC9	0.684			
IU	IU1	0.625	0.825	0.905	0.618
	IU2	0.648			
	IU3	0.609			
	IU4	0.583			
	IU5	0.548			
	IU6	0.565			
	IU7	0.56			
	IU8	0.694			
	IU9	0.558			

The analysis in the table above indicates that every variable in this study satisfies the criteria of validity and dependability. Every indicator's outer loading is more than 0.5, hence each one of them makes enough contribution to explain the hidden variables. With a Cronbach's Alpha (CA) score for every variable larger than 0.7, the research tool exhibits strong internal consistency. Furthermore, for every

variable the Composite Reliability (CR) score is greater than 0.7, therefore suggesting good internal consistency between items in one construct. With a value over 0.5, the average variance extracted (AVE) also satisfies the criteria as it indicates that the latent variables can explain more than half of the variation of their indicators. Therefore, the tools utilized in this study have satisfied the validity and dependability criteria, hence they may be applied for additional investigation of the elements influencing the desire to use digital banking among Generation Z in Jabodetabek.

In the analysis using SmartPLS 4, the R-Square (R^2) value is used to measure how much the independent variables in the model are able to explain the dependent variable. The R^2 value ranges from 0 to 1, with the following general interpretation categories: 0.19 (weak), 0.33 (moderate), and 0.67 (strong). The higher the R^2 value, the greater the model's ability to explain the dependent variable. In addition, there is the Adjusted R-Square, which is a corrected version of R^2 to avoid overfitting when the number of independent variables increases. The following are the results of the R-Square analysis in this study.

Variabel	R-Square	R-Square Adjusted
Intention of Use (IU)	0.817	0.811

Based on the analysis results, the R-Square value was obtained as 0.817, indicating that 81.7% of the variability in Intention to Use (IU) can be explained by Perceived Usefulness (PU), Attitude (ATT), and Perceived Behavioral Control (PBC). Meanwhile, the Adjusted R-Square of 0.811 indicates that after being adjusted for the number of predictor variables, the model still has a high level of clarity. The R^2 value approaching 1 indicates that the model has very good predictive power in explaining the intention to use digital banking among Gen Z in Jabodetabek.

In the SmartPLS 4 Partial Least Squares Structural Equation Modeling (PLS-SEM) study, the path coefficient is used to assess the strength of the link between the independent and dependent variables in the research model. The path coefficient (β) value indicates the direction and magnitude of the influence of the independent variable on the dependent variable, with a range of values between -1 to +1. The higher the β value, the greater the influence of the independent variable on the dependent variable. In addition, significance testing is done by looking at the p-value, where the relationship is considered significant if the p-value < 0.05. The following are the results of the path coefficient analysis in this study.

Path	Std. Beta	Std. Dev	T-Value	P-Value	Decision
PU → IU	0.325	0.054	6.019	0	Significant
ATT → IU	0.374	0.071	5.242	0	Significant
PBC → IU	0.305	0.077	3.972	0	Significant

Based on the results of the analysis, all relationships between independent variables (PU, ATT, and PBC) on Intention to Use (IU) are significant with a p-value = 0.000 (<0.05). This result is in line with the Theory of Planned Behavior (TPB) (Ajzen, 1991), which states that attitudes, subjective norms, and behavioral control influence a person's intention to adopt a behavior, including digital banking among Gen Z Jabodetabek. Attitude (ATT) has the greatest influence on IU ($\beta = 0.374$), indicating that a positive attitude towards digital banking is the main factor in its adoption. This finding is supported by Raza et al. (2021), which shows that a more positive attitude towards financial technology increases the intention to use it. Perceived Usefulness (PU) shows a significant influence ($\beta = 0.325$), indicating that persons who believe digital banking is beneficial are more likely to utilize it. This is consistent with Oliveira et al. (2020), stated that evident advantages drive users to move to digital services. Perceived Behavioral Control (PBC) has the lowest but significant impact ($\beta = 0.305$). The study by Khan et al. (2023) found that ease of access and control increases the propensity to adopt digital banking. Although

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Generation Z is already conversant with technology, data security and accessibility remain important considerations. PU, ATT, and PBC are contributing significantly to the intention to use digital banking among Gen Z. Therefore, service providers need to improve service benefits, create positive user experiences, and ensure easily accessible platforms so that digital banking adoption is increasingly widespread.

CONCLUSION

This study analyzes the factors that influence the intention of Generation Z in Jabodetabek in using digital banking services. The results of the analysis show that Perceived Usefulness (PU), Attitude (ATT), and Perceived Behavioral Control (PBC) have a significant influence on Intention to Use (IU) of digital banking. Attitude towards digital banking services (ATT) is the most dominant factor, indicating that positive perceptions about this service can increase the intention to use it. In addition, PU plays an important role in encouraging the use of digital banking, where the higher the benefits perceived, the more likely users are to adopt it. Though less than the other two elements, PBC also has a major impact as Generation Z still gives access to services top importance. Particularly in terms of establishing marketing plans and creating services more in line with Generation Z tastes, the findings of this study have significant ramifications for the digital banking sector. By improving the perception of advantages, guaranteeing that their platforms are easily accessible and utilized by the younger generation tech-savvy, and therefore boosting the adoption of their services by banks and digital banking service providers, may help to enhance their acceptance.

Although this study presents perceptive examination of the factors influencing Generation Z's inclination to use digital banking, certain limitations should be considered. Using a convenience sample method, this study may not fully represent the Jabodetabek Generation Z group. Furthermore, this study just took into account three primary variables (PU, ATT, and PBC), therefore additional elements such perceived risk, trust, and the impact of social media and peers might also be important in deciding the desire to utilize digital banking.

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