Analysis Of The Behavior Of Using Mobile Banking Services In North Sumatra Students With The Approach: Technology Acceptance Model

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Abstrak

Penelitian ini bertujuan untuk menjelaskan analisis perilaku penggunaan layanan mobile banking pada mahasiswa se-Sumatera Utara dengan pedekatan : technology acceptance model baik secara simultan maupun parsial. Sampel yang digunakan sebanyak 450 responden mahasiswa dengan teknik pengambilan sampel mengunakan teknik proportioate stratified random sampling dengan melakukan uji hubungan dengan teknik analisis SEM (Structural Equation Model), yang akan dianalisis menggunakan alat bantu structural equation modeling dengan metode alternatif partial least square menggunakan software SmartPLS. Penelitian ini menemukan bahwa secara simultan persepsi manfaat dan persepsi kemudahan pengguna memiliki pengaruh terhadap prilaku penggunaan layanan mobile banking pada mahasiswa di Sumatera Utara. Sedangkan secara parsial persepsi manfaat dan persepsi kemudahan pengguna juga memiliki pengaruh terhadap prilaku penggunaan layanan mobile banking pada mahasiswa di Sumatera Utara. Serta persepsi manfaat lebih dominan dibandingkan persepsi kemudahan pengguna di dalam penggunaan layanan mobile banking pada mahasiswa di Sumatera Utara.

Kata Kunci: Kemudahan, Manfaat, Perilaku Penggunaan Mobile Banking

Abstract

This study aims to explain the behavioral analysis of the use of mobile banking services to students in North Sumatra with the approach: technology acceptance models, either simultaneously or partially. The sample used is 450 student respondents with the sampling technique using the proportional stratified random sampling technique by conducting a relationship test with the SEM (Structural Equation Model) analysis technique, which will be analyzed using the structural equation modeling tool with the alternative method of partial least square using the SmartPLS software. This study found that simultaneously the perceived usefulness and perceived ease of users have an influence on the behavior of using mobile banking services among students in North Sumatra. Meanwhile, partially, the perceived usefulness and perceived ease of users also have an influence on the behavior of using mobile banking services among students in North Sumatra. As well as the perception of benefits is more dominant than the perceived ease of users in using mobile banking services for students in North Sumatra.

Keywords: Usefulness, Ease Of Use, Mobile Banking Usage Behavior

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Introduction

The current 4th industrial revolution, which began in the 2000s, has made automation increasingly developed, especially in cyber-physical production systems. This has broadly surpassed technological developments known as smart factories, the internet of things industry, smart industry, or advanced manufacturing. According to (Faujan, 2018: 2) The characteristics of industry 4.0 are a combination of several recent technological developments, namely cyber-physical systems, information and communication technology, communication networks, big data and cloud computing, increasing equipment capabilities for human-computer interaction and modeling, virtualization, and simulation.

Information and communication technology along with communication networks is currently one of the most dominant things, because these two characteristics are connected to the internet. Internet is an abbreviation of inter-networking. Starting from the benefits of the internet in the community, until the internet entered the banking world. Currently, almost all banking transactions are connected to the internet, and this includes internet banking and mobile banking.

Mobile banking is the act of carrying out online financial transactions with the help of mobile telecommunication devices such as cell phones or tablets. Through cell phones, banking users can access financial and non-financial services such as balance information, transfers, bill payments. Mobile banking appears to be a popular banking channel among mobile commerce consumers. Because the potential of mobile commerce has attracted a lot of attention from researchers in investigating mobile banking among consumers (Fadlan, 2018: 83).

This study uses a model for research, namely the Technology Acceptance Model (TAM) as a basic reference in solving the problems raised in this study. (Harahap et al., 2007: 28). The Technology Acceptance Model (TAM) model was adopted and developed from the Theory of Reasoned Action (TRA) model, namely the theory of reasoned action developed by Fishbein and Azjen, with one premise that a person's reaction and perception of something will determine attitudes and behavior. that person (Andrew, 2014: 58).

The TAM model assumes that two individual beliefs, namely perceived usefulness and perceived ease of use, are the main determinants of adoption behavior (using or adopting behavior) and finally technology use. TAM includes external variables as antecedent variables, this study uses antecedents developed by Chau and Lai namely, alliance services, personalization, accessibility, and task familiarity (Kusuma, 2007: 28). The phenomenon that occurs among students who use mobile banking with banking applications

varies from one student to another. Some use BRI mobile, some use Mandiri mobile, some use Mandiri Syariah mobile, some use Muamalat mobile, and other mobile banking applications depending on the situation and conditions they experience.

To analyze the factors that influence mobile banking adoption, an appropriate approach is to use the Technology Acceptance Model (TAM). This model, developed by Davis (1989), describes two main variables - perceived ease of use and perceived usefulness - as the main factors that influence an individual's decision to accept or reject a new technology. In the context of mobile banking, these variables can describe the extent to which students find this technology easy to use and provide tangible benefits in their lives.

Previous research regarding Mobile Banking Services that has been carried out and as a reinforcement of this research. Hanif Astika Kurniawati, with the title Analysis of Interest in Using Mobile Banking with a Modified Technology Acceptance Model (TAM) Approach in 2017 stated that: "The level of student confidence that using mobile banking will improve work performance depends on the convenience provided, so that students feel mobile banking can ease banking tasks" (Kurniawati, 2017: 28).

Alifatul Laily Romadloniyah, with the title Effect of Perceived Ease of Use, Perceived Usability, Perceived Trust, and Perceived Benefits of Customer Interests in Using E-Money at Bank BRI Lamongan in 2018 stated that: The four variables have a positive effect on customer interest in using E-Money Money at Bank BRI Lamongan (Romadloniyah, 2018: 709). Based on the existing background, it can be formulated that the problem in this study is how students in North Sumatra behave in choosing mobile banking services.

Methods

This type of research is quantitative research, based on the characteristics of the problems studied, this research can be classified into comparative causal research. The location of this research was conducted on students throughout North Sumatra. Data was collected using a questionnaire which was distributed to 450 student respondents using a proportional stratified random sampling technique where the number of tertiary institutions in North Sumatra was 264, namely: 36 universities, 92 high schools, 9 institutes, 112 academies and 14 polytechnics. Analysis of the data used in this study was carried out by testing the relationship with the SEM (Structural Equation Model) analysis technique, which will be analyzed using a structural equation modeling tool with an alternative partial least square method using SmartPLS software. SEM Analysis Stages: 1). Model Development Based on Theory, 2). Arrange Path Diagrams, 3). Building Equations and Structural Measurements, Equations built from diagrams.
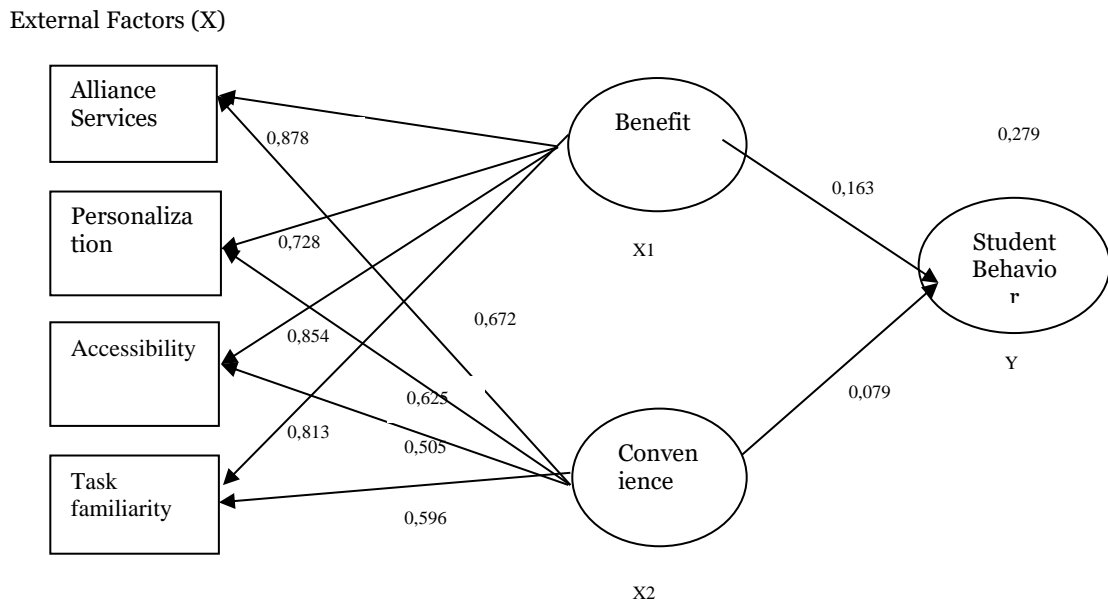
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Result And Discussion

The results of calculations using SmartPLS obtained the full model path diagram as follows:

Figure 2. Full Model Path Diagram

The overall equation model for the effect of perceived benefits and perceived ease of use on behavior using mobile banking services can be written in a structural equation as follows:

$$Y = 0{,}163\ X1 + 0{,}079\ X2 + e \ldots\ldots\ldots\ldots \tag{1}$$

Model of Measurement of Benefit Perceived Latent Variable (X1)

Perceived benefits consist of 4 (four) indicators and the factor weight of each indicator in reflecting the perceived benefits variable is as follows:

Table 1. Factor Weight of Each Variable Indicator Perceived Benefits

| Indicator	*Loading Factor*	R^2	t_{count}
Alliance Services (X1.1)	0,878	0,770	26,162
Personalization (X1.2)	0,728	0,623	13,726
Accessibility (X1.3)	0,854	0,729	17,372
Task Familiarity (X1.4)	0,813	0,703	15,669
Composite reliability(CR)= **0,892**			

Average Variance Extracted(AVE) = **0,734**

(Source : Output SmartPLS)

From the table it can be seen that all factor weight values for each indicator are greater than 0.5 and also the results of the test show that the tcount value is greater than the critical value of 1.96. This data shows that the four indicators are significant in reflecting the latent variable of perceived benefits.

The Composite Reliability (CR) value for the perceived benefit latent variable is 0.892 indicating the level of suitability of the indicators in reflecting the perceived benefit latent variable is greater than recommended, which is 0.70. The Average Variance Extracted (AVE) value is 0.734 which indicates that on average 73.4% of the information contained in the four indicators can be reflected through the latent variable of perceived benefits.

This can also be seen from the path diagram of the 4 (four) indicators and the factor weights of each indicator of perceived benefits:

Figure 3. Variable Path Diagram Of Perceived Benefits
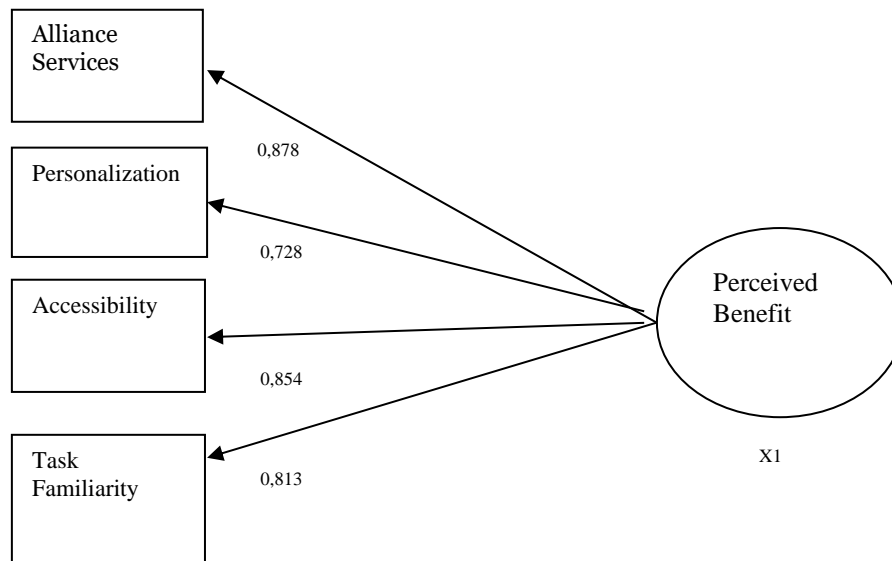
Based on Figure 3, the variable path diagram of the perception of the benefits of alliance service contributions is 0.878, personalization is 0.728, accessibility is 0.854 and task skills is 0.815 on perceived benefits. All of these positive contributions indicate a unidirectional relationship to perceived benefits.

User Perceived Ease of Use Latent Variable Measurement Model (X2)

Perceived ease of use consists of 4 (four) indicators and the factor weight of each indicator in reflecting the variable perceived ease of use is as follows:

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Table 2. Factor Weight of Each Indicator Perceived User Ease Variables

| Indicator	Loading Factor	R^2	t_{count}
Alliance Services (X1.1)	0,672	0,677	18,213
Personalization (X1.2)	0,625	0,523	14,772
Accessibility (X1.3)	0,505	0,497	12,317
Task Familiarity (X1.4)	0,596	0,510	14,626
Composite reliability(CR)= **0,706**			
Average Variance Extracted(AVE) = **0,653**			

(Source : Output SmartPLS)

From table 2 it can be seen that all factor weight values for each indicator are greater than 0.5 and also the results of the test obtained tcount values are greater than the critical value of 1.96. This data shows that the four indicators are significant in reflecting the latent variable of perceived user convenience.

The Composite Reliability (CR) value for the perceived user convenience latent variable is 0.706 indicating the level of suitability of the indicator in reflecting the perceived user convenience latent variable is greater than the recommended value of 0.70. The Average Variance Extracted (AVE) value is 0.653 which indicates that on average 65.3% of the information contained in the four indicators can be reflected through the latent variable perceived user convenience.

This can also be seen from the path diagram of the 4 (four) indicators and the factor weights of each indicator of perceived user convenience:

Figure 4. Variable Path Diagram Of Perceived Ease Of Access
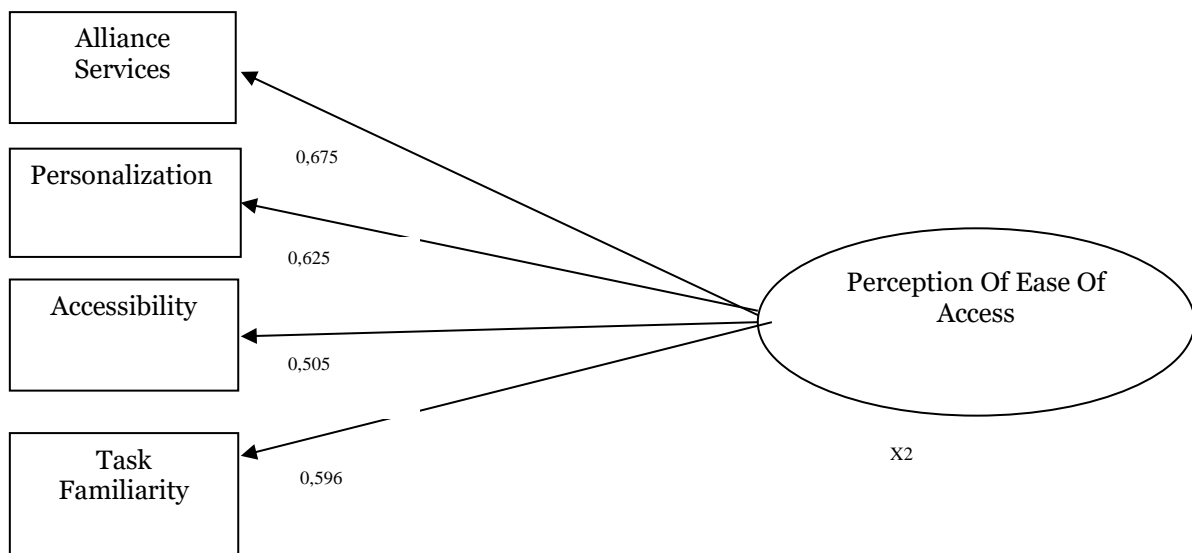
Based on Figure 4, the variable path diagram of perceived ease of access contributes 0.675 to alliance services, 0.625 for personalization, 0.505 for accessibility, and 0.596 for task familiarity towards perceived accessibility. All of these positive contributions indicate a unidirectional relationship to perceived user convenience.

Testing the Structural Model (Inner Model)

The hypothesis that will be tested in this study is the effect of perceived benefits and perceived user convenience on the behavior of using mobile banking services. The hypothesis was tested using the t test with a critical value of 1.96. Through the coefficient of determination (R2) it can be seen that the sub perception of benefits (X1) and perceived ease of use (X2) on the behavior of using mobile banking services (Y) simultaneously have an effect of 27.9%. Meanwhile, the influence of each exogenous variable, namely the perceived usefulness (X1) on the behavior of using mobile banking services (Y) is 16.3% and while the variable perceived user convenience (X2) is on the behavior of using mobile banking services (Y) is 7.9% .

From these results, it is known that the perception of benefits is more dominant in the use of mobile banking services for students in North Sumatra. This result is because the benefits of using mobile banking services can make it easier for students to make various kinds of transactions. Initially, students created these personal accounts for business purposes such as buying and selling goods, facilitating transfer transactions between banks, being able to make non-cash transactions easily and quickly on mobile banking, and as a means of online shopping on the marketplace Bukalapak, Bblibli, Tokopedia and various sites. other trading.

The reason students use mobile banking is the perceived ease of use by students who often go out of town or to an area where there are no bank ATMs with mobile banking. They can process checks and non-cash transactions.

Conclusion

Based on the results of research and data analysis regarding the behavioral analysis of the use of mobile banking services in students throughout North Sumatra with the approach: Technology Acceptance Model. Then the conclusions of the research are as follows:

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1. Simultaneously the influence of perceived benefits and perceived ease of use has an influence on the behavior of using mobile banking services among students in North Sumatra.
2. Partially the perception of benefits has an influence on the behavior of using mobile banking services for students in North Sumatra.
3. Partially, perceptions of user convenience have an influence on the behavior of using mobile banking services for students in North Sumatra.
4. Perceived benefits are more dominant than user convenience in using mobile banking services for students in North Sumatra.

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