

The Influence of E-Money, Debit Cards, and Paylater on the Financial Decisions of FEBI Students at UIN North Sumatra in the Industrial Revolution 4.0 Era

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Abstract

This research explores the impact of perceived usefulness (PU), perceived ease of use (PEOU), attitude toward using (ATU), and behavioral intention to use (BI) on the decisions made by FEBI UINSU students in using e-money, debit cards, and payment services. The study population consisted of all active FEBI students enrolled at the State Islamic University of North Sumatra, totaling 4,523 individuals. A sample of 44 students was selected for the study. Employing a quantitative approach, data were collected using a Likert scale, and analyzed through the IBM SPSS Statistics 25 software. The findings revealed that each independent variable, both individually and collectively, had a significant influence on student decision-making. These results suggest that students' perceptions of usefulness, ease of use, attitudes, and intentions toward financial technology are key factors in shaping their transaction decisions in the context of the Industrial Revolution 4.0.

Keywords: *Influence of E-Money, Debit Cards, and Paylater on the Financial Decisions of FEBI Students, UIN North Sumatra in the Industrial Revolution 4.0 Era*

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INTRODUCTION

Technological advances have simplified activities, including financial transactions. Various payment systems are now available, reducing reliance on credit cards, although they are still used. Furthermore, with the Industry 4.0 transformation, significant updates have occurred in various sectors, including payment systems. The Industrial Revolution 4.0 is a digital industrial era in which all components are interconnected and interact directly through digital media to create new innovations and system efficiencies.

In Indonesia, the development of digital payment systems is a key indicator of technology-based economic transformation. Technological advancements have had a significant impact on payment systems, shifting from cash-based systems to digital ones (Maulidah et al., 2024). Digital payments have attracted public attention, especially the younger generation, because they are considered easier, faster, safer, and more convenient. To support efficient and secure transactions, Bank Indonesia initiated the National Non-Cash Movement on August 14, 2014, encouraging the public to utilize non-cash payments. Popular non-cash instruments include *e-money*, *debit cards*, and *paylater*.

E-money is an electronic payment instrument whose monetary value is stored digitally. Users are required to deposit funds with the issuer before using it. This convenience makes *e-money* a primary choice for consumers for transactions such as online shopping, transportation, and bill payments. *E-money* allows consumers to make quick transaction decisions without direct physical contact.

A *debit card* is a payment card issued by a bank for use in shopping transactions or other economic activities. This card is directly linked to a bank account, offering a convenient and secure alternative to carrying cash. Its ease of use also influences consumer transaction decisions, particularly when it comes to conveniently meeting daily needs.

Paylater is a payment facility that allows consumers to buy now and pay later, similar to a credit system, but without a card. This service is widely available on e-commerce platforms and is often used by students to meet various needs instantly, as it only requires a device and internet access. *Paylater* simplifies purchasing decisions, especially for those with limited funds at the time of the transaction (Saragih and Lestari 2022).

Table 1. Total *E-money*, *Debit Card* and *Paylater* Users

Service	User Data	Growth	Information
<i>E-money</i>	Active users: 150 million+ (as of 2024)	Transactions and users continue to grow	<i>e-money</i> applications such as GoPay, OVO, and DANA will increase significantly in 2024.
<i>Debit card</i>	<i>Debit cards</i> in circulation 326 million+ units	Transaction increase of 4.28% in 2024	<i>Debit cards</i> remain popular, despite a shift to other digital payment methods such as QRIS.
<i>Paylater</i>	14.37 million users (as of June 2024)	Increased by 9.35% compared to 2023	<i>Paylater</i> is the primary choice for purchasing goods in interest-free installments over a specified period.

Source: Bank Indonesia (2024)

The table above shows that the use of digital payment services in Indonesia continues to experience significant growth. *E-money* is the dominant payment method, followed by *debit cards* and *PayLater*. This reflects the widespread adoption of digital payment systems among the public, including students.

The rapid advancement of digital technology in the Industrial Revolution 4.0 era has transformed the way people, especially students, conduct transactions and make financial decisions. As digital natives, students are very familiar with various digital payment platforms that offer convenience, speed, and flexibility. This has a direct impact on their decision-making patterns in transactions, both for academic and everyday personal needs.

In fact, many students now prefer using *e-money*, *debit cards*, and *PayLater* as their primary payment methods because they find them more practical and efficient than carrying cash. For example, when purchasing food, paying for online transportation, buying college supplies, or even for entertainment activities like online shopping or hanging out at cafes, students are more likely to make quick and spontaneous transaction decisions when digital

payment methods are available. This indicates that ease of access and speed of service impact student transaction decisions.

Another striking phenomenon is the increasing use of *paylater features* by students. Many of them use this feature to purchase goods or services without having to have the funds immediately. This convenience allows students to make quick purchasing decisions even when they don't have sufficient funds, assuming they can pay later in installments. While this may help meet short-term needs, such decisions can lead students into unhealthy consumption patterns if they don't plan their finances properly.

Furthermore, promotional features from digital service providers, such as discounts, cashback, free shipping, and ease of transaction, are often key considerations for students when making purchasing decisions. These features indirectly encourage students to make transactions quickly due to concerns about missing out on limited-time offers. This situation illustrates that psychological factors, such as FOMO (fear of missing out), can also influence students' decisions about using digital payment systems.

Based on observations and preliminary research, researchers found that UINSU students tend to make quicker purchasing decisions when using digital payments compared to cash. These decisions are influenced not only by actual needs but also by convenience, trends, and promotions. This indicates a close relationship between the development of digital payment systems and students' transaction decision-making patterns.

Previous research conducted by Siti Maulidah (2024) indicated that *e-money usage* significantly impacts consumer decisions, particularly among young people. Ease of transactions and system speed are key factors in purchasing decisions. Furthermore, research by Ahmad Naufal et al. (2023) showed that debit cards do not significantly influence purchasing decisions because most respondents found other digital transactions, such as QRIS, more practical. Furthermore, research by Saragih et al. (2022) indicated that *Paylater* has a significant impact on student purchasing decisions. Many of them are tempted to buy items not out of necessity, but because of the option to pay later.

Based on the research gap above, the results of each study differ. This demonstrates the importance of conducting new research to re-examine the impact of *e-money*, *debit card*, and *PayLater usage* on student policies, particularly at the State Islamic University of North Sumatra.

Students' interactions with digital payment systems such as *e-money*, *debit cards*, and *paylater* certainly have different impacts on transaction decision-making. Therefore, this study focuses on analyzing the impact of using these three digital payment instruments on students' transaction decisions, both partially and simultaneously. This research is also expected to provide scientific contributions in strengthening conceptual and practical understanding of financial decision-making in the digital era. Furthermore, the results of this study are expected to serve as a reference for students to be wiser in making financial decisions through digital platforms amidst the current Industrial Revolution 4.0.

In this study, the main focus is on the use of e-money, debit cards, and paylater by students. However, to analyze the influence of the three on usage decisions, researchers applied the *Technology Acceptance Model* (TAM) approach first proposed by Davis in 1986. Through this model, the three payment instruments are not treated as separate variables, but are analyzed based on how students perceive the usefulness (*Perceived Usefulness*), ease of use (*Perceived Ease of Use*), attitude towards using (*Attitude Toward Using*), and intention to use (*Behavioral Intention to Use*) of each of these services.

Thus, e-money, debit cards, and paylater become technological contexts observed through the lens of user behavior. This approach allows the study to examine not only the

types of digital payment instruments but also how students' perceptions of these services influence their decisions to use digital payment technology.

E-money

According to Bank Indonesia Regulation No. 20/6/PBI/2018, electronic money (*e-money*) is a payment instrument that must meet several requirements. Among them, *e-money* is created using funds deposited upfront by the owner to the issuer. This value is then stored in the form of a chip or through a server-based system. Funds managed by the *e-money* issuer are not categorized as deposits under applicable banking regulations (Widayat, Masudin, and Satiti 2020).

The use of E-money by students can be explained through the TAM Theory approach. In this theory, an individual's decision to use a technology, including E-money, is influenced by four main components: views on utility, ease of operation, attitudes towards use, and behavioral intentions. Students who perceive E-money as useful for speeding up the payment process, saving time, and simplifying transactions will have a greater incentive to use it. In addition, if students feel that E-money is easy to use, not confusing, and does not require much effort to operate, then the positive perception of this technology will be stronger. These two things will shape a positive attitude towards the use of E-money. Students who feel that E-money is useful and easy to use will tend to be accepting and comfortable using it. This attitude then plays a role in shaping students' behavioral intentions to use E-money in their daily lives, such as for shopping, paying bills, or conducting other digital transactions. These four aspects are interrelated and form a strong tendency for students to adopt E-money as part of their financial lifestyle in the era of the Industrial Revolution 4.0. Therefore, TAM theory is a relevant approach to understanding how students accept and decide to use E-money.

According to (Nainggolan 2022) *e-money indicators* are:

1. Benefits obtained
2. Convenience obtained
3. Trust
4. What benefits are obtained.

Debit card

A debit card is a non-cash payment instrument linked directly to the user's savings account balance. The use of *debit cards* in students' daily lives offers convenience and flexibility in transactions. High *debit card usage* among students can trigger consumer behavior, especially when transactions are made without a clear need for consideration.

Arthesa and Handiman (2009:259) argue that the development of ATM cards is very rapid and offers various conveniences for its users. The benefits include: (1) cash withdrawals via ATMs, (2) transfers of funds between accounts, both at the same bank and between banks in the same network, (3) payment of various bills such as credit cards, electricity, telephone, mobile phones, clean water, land and building taxes, (4) purchase of prepaid credit, (5) access to phone banking services, and (6) use of debit cards to make transactions to purchase goods (Akmal and Dimas 2022).

Debit card use by students can also be analyzed using the TAM theory. In this context, students' perceptions of the usefulness of debit cards, such as the perception that they facilitate transactions, speed up payments, and reduce the risk of carrying cash, are important factors driving their intention to use them. Furthermore, perceived ease of use also plays a significant role. Students who perceive debit cards as easy to use because the transaction

process is practical, uncomplicated, and can be done in many places are more likely to accept this technology in their daily lives. These two factors then shape students' attitudes toward debit card use. When they perceive debit cards as useful and hassle-free, a positive attitude emerges that makes them comfortable and confident in using them. This attitude then develops into an intention to use debit cards continuously, whether for daily needs, shopping, or other digital payments. These four aspects—usefulness, convenience, attitude, and intention—combine to form a concrete decision to use debit cards as a payment tool considered more efficient and in line with today's lifestyle. Therefore, the TAM theory provides a strong foundation for explaining how and why students accept and choose debit cards amidst technological changes and advances in payment systems in the era of the Industrial Revolution 4.0.

According to (Bilal Abdillah Rasyid and Fahrullah 2022) the *Debit card indicators* are:

1. Benefits
2. Ease of use
3. Security.

Paylater

Paylater is a financial service that allows installment payments without a credit card. This feature is currently popular among millennials and is widely used in well-known apps that offer credit with similar benefits. The "buy now, pay later" system can be used for needs such as travel, groceries, transportation, and other consumer goods. Commonly available on e-commerce platforms, Paylater doesn't require a physical card, and the registration process is quick and easy (Anisa and Saepuloh 2024).

PayLater functions similarly to a credit card, but with the advantage of a more convenient and simplified registration process. Like a credit card, this service makes it easier for consumers to meet various needs, from daily necessities to entertainment activities like purchasing airline tickets, hotel reservations, and recreation. Payments for these transactions can be made at a predetermined time, according to the due date (Sari 2021).

Student use of Paylater can be analyzed using the Technology Acceptance Model (TAM) proposed by Davis (1986). In this context, students who have a positive perception of the usefulness of Paylater services, such as the perception that this method is practical, facilitates transactions even when funds are scarce, and provides flexibility in payments, will tend to view this service as beneficial in their financial activities. On the other hand, the perception of ease of use also plays a significant role. Students who perceive Paylater as easy to use because it can be accessed directly through e-commerce applications, does not require a credit card, and the registration process is quick and simple will be more open to using this service. These two perceptions then shape students' attitudes toward using Paylater. When students perceive this service as not only useful but also not difficult, a positive attitude will emerge that encourages them to feel comfortable and confident in using it. Furthermore, this attitude will shape students' behavioral intentions, namely the desire to continue using Paylater as a payment method for various transactions. This intention is then realized in actual decisions to use Paylater services, especially in situations that require speed, convenience, and flexibility in payments. Thus, the four elements of the TAM model—perceived usefulness, ease of use, attitude toward technology, and intention to use—collectively shape individual behavior in using Paylater services. Therefore, TAM theory serves as a relevant framework for understanding how students respond to advances in financial technology, particularly in the use of Paylater, in the era of the Fourth Industrial Revolution.

Paylater indicators are:

1. Views on Benefits
2. Views on Convenience
3. View of Risk.

Student Decision

A decision is the result of an individual's thought process in selecting an action from several available alternatives. In the context of students, decisions are often associated with academic, social, and financial behavior, including decisions regarding transactions or purchases. According to Schiffman and Kanuk (2008), a purchasing decision is a person's action in selecting, purchasing, using, and evaluating a product or service based on their desires and needs. Although this concept was originally used in the general consumer world, in the context of students, decision-making can be understood as the result of rational and emotional considerations regarding the benefits, convenience, and risks of a transaction option.

In making financial decisions, students are influenced by various factors such as ease of access, social influence, and the availability of digital technology. As digital natives, students tend to be responsive to payment systems that offer convenience, speed, and flexibility. This allows them to make faster purchasing decisions when using digital payment systems such as *e-money*, *debit cards*, and *PayLater*.

The AIDDA theory was first developed by Elias St. Elmo Lewis in the early 20th century, and remains a classic model for understanding consumer decision-making. This model has been further explained and developed by marketing experts such as Kotler & Keller (2016) and Stanton, Etzel, & Walker (2009). Students' decisions in choosing payment methods such as *e-money*, *debit cards*, and *paylater* can be explained using the AIDDA theory (Attention, Interest, Desire, Decision, Action). This theory is a hierarchical model of consumer responses that describes the psychological stages of a person's decision to act on a product or service.

The first stage is attention, where students begin to realize the convenience of digital transactions offered by various payment platforms. Next, interest arises when students feel attracted to the features offered, such as cashback, ease of use, or promotions. The next stage is desire, which is when students begin to have a desire to try or use the payment method because they believe it will provide benefits or convenience. Then, students enter the decision stage, where they consciously decide to choose the payment method that is considered most appropriate to their personal needs and preferences. Finally, there is the action stage, which is when students actually make transactions using *e-money*, *debit cards*, or *paylater*. Thus, the AIDDA theory is very relevant to explain how students' psychological processes lead to transaction decisions in the context of digital payment systems in the era of the Industrial Revolution 4.0 (Kotler, P., et al., 2016).

Kotler and Keller (2016) explain that there are 5 indicators of the consumer decision-making process, namely:

1. Identify needs
2. Information collection
3. Assessment of the choices
4. Making purchasing decisions
5. Actions after purchase.

RESEARCH METHODS

This study uses a descriptive quantitative method aimed at describing the phenomena within the study object, with conclusions obtained through statistical analysis (Siregar and Pujiono 2021). The purpose of this study is to determine the influence of *e-money*, *debit card*, and *Paylater usage* on student decisions at the State Islamic University of North Sumatra during the Industrial Revolution 4.0 era.

All 4,523 active students registered at the Faculty of Economics and Business (FEB) of UINSU constituted the population of this study. The sample was taken using a simple random sampling method, a random sampling technique that allows each individual an equal opportunity to be selected. This technique provides an equal opportunity for all members of the population to be selected as a sample. According to Sugiyono, a sample is a representation of a portion of the population based on certain characteristics. The sample size in this study was 44 students, representing approximately 0.15% of the total FEBI UINSU students. The use of a 15% margin of error was chosen due to the large study population and considering the efficiency of time, cost, and effort, considering that this study is quantitative descriptive.

To determine the sample size from a population, researchers use the following Slovin formula (Hayani et al. 2024):

$$n = \frac{N}{1 + N(e)^2}$$

Explanation: *n* represents the number of samples, *N* is the total population, and *e* represents the error rate (error tolerance limit) 15% = 0.15

Looking at the formula above, it can be concluded that the total sample that will be taken in this study from the total population is:

$$n = \frac{4.523}{1+4.523(0,15)^2} n = \frac{4.523}{1+4.523(0,15)^2} = 44$$

Thus, the total sample used in this study was 44 students.

The data used in this study are primary data obtained directly from respondents through questionnaire distribution. Data collection was conducted using a Likert scale, and the respondents were Faculty of Economics and Business (FEB) of UINSU students. Data analysis procedures included validity and reliability testing, classical assumption tests such as normality, multicollinearity, and heteroscedasticity, multiple linear regression analysis, and hypothesis testing consisting of t-tests and coefficient of determination (R^2) (Stephen, 2019).

RESULTS AND DISCUSSION

Validity Test and Reliability Test

Validity testing is conducted to ensure that an instrument, such as a questionnaire, truly measures the intended variable. If the correlation coefficient (*r*) is positive, the item is potentially valid, but its significance must still be tested by comparing the calculated *r* and the table *r*. An item is considered valid and significant if the calculated *r* is greater than the table *r*; conversely, if the calculated *r* is smaller, the item is considered invalid and must be eliminated from the questionnaire. In this study, there were 44 respondents, so the reference for the table *r* using $df = N-2$ refers to Basuki and Yuliadi (2015), resulting in an *r* table value of 0.304. This value is then compared with the calculated *r* obtained through SPSS analysis.

Table 2 shows the results of the validity testing of this study.

Question Items	r count	r table	Results
<i>Perceived Usefulness (PU) (X₁)</i>			
X ₁₁	0.684	>0.304	Valid
X ₁₂	0.623	>0.304	Valid
X ₁₃	0.571	>0.304	Valid
X ₁₄	0.571	>0.304	Valid
<i>Perceived Ease of Use (PEOU) (X₂)</i>			
X ₂₁	0.571	>0.304	Valid
X ₂₂	0.571	>0.304	Valid
X ₂₃	0.684	>0.304	Valid
X ₂₄	0.571	>0.304	Valid
<i>Attitude Toward Using (ATU) (X₃)</i>			
X ₃₁	0.623	>0.304	Valid
X ₃₂	0.623	>0.304	Valid
X ₃₃	0.571	>0.304	Valid
X ₃₄	0.571	>0.304	Valid
<i>Behavioral Intention to Use (BI) (X₄)</i>			
X ₄₁	0.678	>0.304	Valid
X ₄₂	0.795	>0.304	Valid
X ₄₃	0.765	>0.304	Valid
X ₄₄	0.512	>0.304	Valid
Usage Decision (Y)			
Y1	0.762	>0.304	Valid
Y2	0.798	>0.304	Valid
Y3	0.765	>0.304	Valid
Y4	0.732	>0.304	Valid

The data was processed using the SPSS version 25 application.

Referring to the table, all calculated r values are greater than the table r, so the instrument can be declared valid and suitable for use.

Reliability testing aims to evaluate the consistency of a research instrument. An instrument is considered reliable if its Cronbach's Alpha value exceeds 0.60. The results of the reliability test for the five variables used in this study are presented in Table 3.

Table 3 Reliability Test Results

Variables	Cronbach's Alpha	Results
<i>Perceived Usefulness (PU) (X₁)</i>	0.987	Reliable
<i>Perceived Ease of Use (PEOU) (X₂)</i>	0.993	Reliable
<i>Attitude Toward Using (ATU) (X₃)</i>	0.887	Reliable
<i>Behavioral Intention to Use (BI) (X₄)</i>	0.982	Reliable
Decision on use (Y)	0.871	Reliable

Source: SPSS 25 data processing

The findings of SPSS data processing show that the reliability test is above the alpha value of 0.6 (Santoso 2018), which indicates that each statement item is consistent and will produce relatively the same answers if asked again.

Classical Assumptions

Normality Test

Table 4 Reliability Test Results

	Unstandardized Residual	Information
Kolmogorov-Smirnov Z	1,698	Normally distributed data
Asymp. Sig. (2-Tailed)	0.092	Normally distributed data

Source: SPSS data processing 25

Referring to table 4, the Unstandardized Residual value of 0.092 is greater than 0.05, so it is concluded that the data from the normality test results are normally distributed.

Multicollinearity Test

Table 5 Reliability Test Results

Variables	Tolerance	VIF	Criteria
<i>Perceived Usefulness (PU) (X1)</i>	0.189	1,045	There is no multicollinearity
<i>Perceived Ease of Use (PEOU) (X2)</i>	0.179	1,045	There is no multicollinearity
<i>Attitude Toward Using (ATU) (X3)</i>	0.159	1,045	There is no multicollinearity
<i>Behavioral Intention to Use (BI) (X4)</i>	0.148	1,045	There is no multicollinearity

Source: SPSS 25 data processing

In table 5, it is known that variables X1, X2, X3, X4 have a tolerance value greater than 0.10 and a VIF value less than 10, so it can be concluded that there is no multicollinearity.

Heteroscedasticity Test

Table 5 Heteroscedasticity Test Results

Variables	Significant	Information
(Constant)	.985	There are no symptoms of heteroscedasticity.
<i>Perceived Usefulness (PU) (X1)</i>	.987	There are no symptoms of heteroscedasticity.
<i>Perceived Ease of Use (PEOU) (X2)</i>	.996	There are no symptoms of heteroscedasticity.
<i>Attitude Toward Using (ATU) (X3)</i>	.979	There are no symptoms of heteroscedasticity.
<i>Behavioral Intention to Use (BI) (X4)</i>	.968	There are no symptoms of heteroscedasticity.

Source: SPSS 25 data processing

Based on table 6, the Glejser test shows a significance value > 0.05, so it can be concluded that the data is free from heteroscedasticity symptoms.

Hypothesis Test Results (Multiple Linear Regression, T (Partial), F (Simultaneous), and Coefficient of Determination)

Framework of thinking

TAM Model

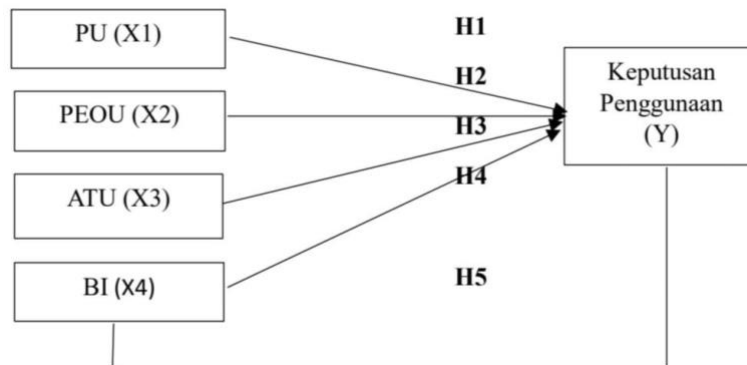


Figure 1. Thinking Framework

Multiple Linear Regression Analysis

Multiple regression analysis is used to determine or predict one variable (Ghozali, 2018).

Table 6. Results of Multiple Linear Regression Test, T-Test (Partial), F-Test (Simultaneous), and Coefficient of Determination Test

Variables	Coefficient	T (Partial)	Significant	Information
Constant	4005.534	3,727	.987	Influential and significant
<i>Perceived Usefulness (PU) (X1)</i>	71,876	1,986	.020	Influential and significant
<i>Perceived Ease of Use (PEOU) (X2)</i>	71,983	1,831	.010	Influential and significant
<i>Attitude Toward Using (ATU) (X3)</i>	72,832	1,895	.020	Influential and significant
<i>Behavioral Intention to Use (BI) (X4)</i>	73,897	1,943	.010	Influential and significant
F Test (Simultaneous)		112,941	.020 ^a	Simultan
Adjusted R Square		.900	.705	90% Positive influence

Source: SPSS 25 data processing

Based on the coefficient values, the multiple linear regression equation can be formulated as follows:

$$Y = 4005.534 + 71.876X_1 + 71.983X_2 + 72.832X_3 + 73.897X_4$$

From the data above, the following conclusions can be drawn:

1. The constant value (α) of 4005.534 represents the Y variable. This means that if all independent variables (PU, PEOU, ATU, and BI) are at zero, then the predictive value of the student's decision is 4005.534.
2. The coefficient (B) for the Perceived Usefulness (PU) variable of 71.876 indicates that every 1% increase in PU will have an impact on increasing student decisions by 71.876, provided that other variables do not change.
3. The coefficient (B) of the Perceived Ease of Use (PEOU) variable, which is 71.983, shows that a 1% increase in PEOU will encourage an increase in student decisions by 71.983, provided that other variables remain stable.
4. The coefficient value (B) of the Attitude Toward Using (ATU) variable of 72.832 means that a 1% increase in ATU will cause an increase in student decisions of 72.832, assuming that other variables do not change.
5. The coefficient (B) for the Behavioral Intention to Use (BI) variable which reached 73.897 shows that if the BI value increases by 1%, then the student's decision will also increase by 73.897, assuming that other variables remain constant.

T-test

The T-test aims to identify the significance of the impact of each independent variable on the dependent variable individually. The testing criteria applied include:

- a. If the calculated t value exceeds the t table, the independent variable has an impact on the dependent variable.
- b. On the other hand, if the calculated t is smaller than the table t, then the independent variable has no impact on the dependent variable.
- c. If the significance value (sig) is smaller than the probability level of 0.05, then the hypothesis is accepted, which means there is a significant impact between the independent variable and the dependent variable.
- d. However, if the significance value is greater than 0.05, then the hypothesis is rejected, indicating there is no significant impact between the independent variable and the dependent variable.

Based on the results listed in Table 6, the calculated t values were obtained for variables X1, X2, X3, and X4, with a reference t table value of 1.684.

Through SPSS results obtained:

1. PU (Variable X1)
In table 7 above, it is found that the calculated t of PU $>$ t table ($1.986 > 1.684$) and the significant value is $0.020 < 0.05$. Therefore, it is concluded that PU has a significant impact on Student Decisions.
2. PEOU (Variable X2)
Based on Table 7, the PEOU t-value ($1.831 >$ t-table (1.684)) with a significance of $0.010 < 0.05$, so PEOU has a significant effect on student decisions.
3. ATU (Variable X3)
Based on Table 7, the calculated t of ATU ($1.895 >$ t table (1.684)) and the significance is $0.020 < 0.05$, so that ATU has a significant effect on student decisions.

4. *BI* (Variable X4)

Based on Table 7, the calculated t_{BI} (1.943) $>$ t table (1.684) with a significance of $0.010 < 0.05$, so *BI* has a significant influence on student decisions.

F Test (Simultaneous Test)

The F-test aims to identify the simultaneous impact of independent variables on the dependent variable with a 95% confidence level ($\alpha = 0.05$). Referring to Table 7, the calculated F value reaches 112.941, which is greater than the F table of 2.46, with a significance level of $0.020 < 0.05$. This proves that *PU*, *PEOU*, *ATU*, and *BI* together have a significant influence on student decisions.

Coefficient Determination Test (R²)

The coefficient of determination (R^2) is used to explain how strong the relationship and influence given by the independent variable on the dependent variable. The results of the R^2 test show that based on Table 7, the R Square value obtained is 0.900. This figure indicates that the *PU*, *PEOU*, *ATU*, and *BI* variables together influence student decisions by 90%, while the remaining 10% is influenced by other factors not included in the scope of this study.

The Influence of *Perceived Usefulness* (*PU*) on Student Decisions at the Faculty of Economics and Business, State Islamic University of North Sumatra, Medan in the Era of the Industrial Revolution 4.0

The analysis results show that the calculated t_{PU} (1.986) $>$ t table (1.684) and a significance of $0.020 < 0.05$, so that *PU* has a significant effect on student decisions. This finding leads to the conclusion that the more positive students' perceptions of the usefulness of a technology, the more likely they are to choose and utilize it in their academic activities.

The results of this study align with the TAM framework introduced by Davis in 1989, where perceived usefulness (*PU*) is considered a key element influencing an individual's attitude and intention to accept and utilize a technology. In this context, students who perceive tangible benefits from using technology will develop a positive attitude toward it. This attitude then drives the formation of an intention to use the technology, which is ultimately realized in an actual decision. The greater the benefits students perceive from the technology they use, the stronger their tendency to continue using it consistently, both in academic activities and other daily needs.

These results are also supported by Wulandari's (2020) research, which shows that *PU* significantly influences the decision to use mobile banking among students, as well as Rahmawati's (2021) research, which found that *PU* is the dominant factor influencing students' decisions to use academic-based digital applications.

The Influence of *Perceived Ease of Use* (*PEOU*) on Student Decisions at the Faculty of Economics and Business, State Islamic University of North Sumatra, Medan in the Era of the Industrial Revolution 4.0

Through the study results, the calculated t value of the Perceived Ease of Use (*PEOU*) variable was 1.831, higher than the t table value of 1.684, with a significance level of 0.010 which is below the 0.05 limit. Thus, it is concluded that *PEOU* has a serious impact on student decisions. This indicates that the easier the technology is to use, the greater the tendency for students to decide to use the technology. The ease of use of technology encourages students to feel more confident and comfortable in interacting with digital systems, especially in academic activities in the era of the Industrial Revolution 4.0.

This finding aligns with *the Technology Acceptance Model (TAM)* proposed by Davis (1989), which states that perceived ease of use is a key factor influencing perceived usefulness, attitudes toward technology use, and ultimately, users' actual intentions and decisions. When students perceive a technology as easy to use without requiring much effort, they are more likely to accept and use it in their daily activities.

This research is supported by the findings of Wulandari (2020) which shows that PEOU has a significant influence on students' decisions in using mobile banking, as well as research by Sari (2022) which states that the ease of use of digital systems is very important in determining students' decisions in utilizing online learning platforms actively and sustainably.

The Influence of *Attitude Toward Using (ATU)* on the Decisions of FEBI Students, State Islamic University of North Sumatra, Medan in the Era of the Industrial Revolution 4.0

This study shows that t count ATU (1.895) > t table (1.684) with a significance of $0.020 < 0.05$, so that ATU has a significant effect on student decisions. The more positive students attitudes towards technology, the higher their tendency to use it in academic activities. This positive attitude reflects a good perception of the aspects of benefits, ease of use, comfort, and relevance of technology in supporting the learning process and lecture activities.

This finding aligns with the Technology Acceptance Model (TAM) developed by Davis (1989), where attitude toward using is an important mediating variable formed from perceived usefulness and perceived ease of use, and subsequently influences behavioral intention to use and actual system use. In this context, a positive attitude toward technology use reflects students' belief that the technology is useful and easy to use, thus encouraging them to have a strong intention to use it.

When students form a positive attitude towards a technology, they will feel more comfortable, confident, and motivated to use it actively in their daily activities, both academic and non-academic. Thus, attitudes towards the use of technology play an important role in strengthening students' decisions to adopt and utilize digital payment systems in the era of the Industrial Revolution 4.0. This research is strengthened by the findings of Putri (2021) which shows that students' positive attitudes towards the use of digital applications influence their decisions in choosing and using online learning technology, as well as research from Hakim (2022) which proves that attitudes toward using have a significant influence on decisions to use digital services among college students.

The Influence of *Behavioral Intention to Use (BI)* on the Decisions of FEBI Students, State Islamic University of North Sumatra, Medan in the Era of the Industrial Revolution 4.0

The results of the study showed that the calculated t -value of BI (1.943) > t -table (1.684) and a significance of $0.010 < 0.05$, so that BI has a significant effect on student decisions. This indicates that the higher the intention or desire of students to use technology, the greater the likelihood that they will actually make the decision to use it in academic activities. Strong intentions reflect psychological readiness and individual beliefs that the technology is relevant, easy to use, and provides real benefits in supporting learning activities in the era of the Industrial Revolution 4.0.

This finding is highly consistent with the Technology Acceptance Model (TAM), where behavioral intention to use is a key variable bridging the gap between user attitudes toward technology and actual use. According to Davis (1989), the stronger a person's intention to use a system, the more likely they are to actually use it.

In this context, students who have a strong intention to use digital payment technologies such as e-money, debit cards, and PayLater are more likely to implement that intention through actual usage decisions. This intention, formed from perceptions of the technology's ease and usefulness, as well as a positive attitude toward its use, plays a direct role in driving students' actual digital transaction behavior in the Industrial Revolution 4.0 era.

This research is supported by the findings of Andriani (2020) which shows that BI has a significant influence on students' decisions in using online learning platforms, as well as research by Nugroho (2022) which states that the intention to use technology has a positive relationship with the final decisions of users in various education-based digital systems.

The Influence of *Perceived Usefulness (PU)*, *Perceived Ease of Use (PEOU)*, *Attitude Toward Using (ATU)* and *Behavioral Intention to Use (BI)* on the Decisions of FEBI Students, State Islamic University of North Sumatra, Medan in the Era of Industrial Revolution 4.0

Based on the results of the simultaneous test in this study, the calculated F value was 112.941, which is much greater than the F table value of 2.46. With a significance level of 0.020 which is below the 0.05 limit, it can be concluded that the PU, PEOU, ATU, and BI variables simultaneously or together have a significant influence on student decisions. This shows that students' decisions in using technology are not only influenced by one aspect, but are the result of the interaction of various psychological factors and individual perceptions. When students feel that the technology is useful (PU), easy to use (PEOU), have a positive attitude towards its use (ATU), and have a strong intention to use (BI), then they are more likely to make the decision to actually adopt the technology in their academic activities.

These findings support the TAM framework developed by Davis (1989), which explains that perceived usefulness (PU) and perceived ease of use (PEOU) influence attitudes toward technology use (ATU), which then shape behavioral intentions (BI) and culminate in actual usage decisions. The more positive students' perceptions of the usefulness and ease of use of technology, the stronger their attitudes and intentions to use it, which ultimately drive their decision-making in using the technology.

Thus, students' decisions to use digital payment systems are the result of a series of psychological processes as described in TAM, starting with perceptions of ease and usefulness, then forming attitudes and intentions, and finally manifesting in concrete actions. This process confirms that internal factors derived from individual experience and perception are crucial in technology adoption in the Industrial Revolution 4.0 era.

These results are supported by research conducted by Wulandari (2020), Putri (2021), and Nugroho (2022), all of which show that the combination of PU, PEOU, ATU, and BI together has a significant influence on students' decisions in using digital technology, both in the context of learning and other academic activities.

CONCLUSION

Based on research and analysis, Perceived Usefulness (PU) has been proven to have a significant influence on the decisions of UIN North Sumatra students in the Industrial Revolution 4.0 Era. Similarly, Perceived Ease of Use (PEOU) has been shown to significantly influence students' decisions in using technology. Furthermore, Attitude Toward Using (ATU) also contributes significantly to their decisions. Likewise, Behavioral Intention to Use (BI) has a significant impact on determining student decisions. Overall, the four variables—

PU, PEOU, ATU, and BI—simultaneously have a significant influence on the decisions of UIN Sumatera Utara Medan students in the Industrial Revolution 4.0 Era.

References :

- Akmal, Pradana, and Pratama Dimas. 2022. "The Effect of Debit Card and Electronic Money (E-Money) Usage on Student Consumption Expenditure." *Journal of Economics and Development Economics Studies* 2. doi:10.17977/um002v8i12016p001.
- Anisa, Siti Dea, and Cepi Saepuloh. 2024. "The Influence of Paylater Use on Consumer Behavior in the Gen Z Era (Case Study in the Cipatik Village Community)." *FRIMA* (7): 501–9.
- Atika. 2020. *Islamic Microeconomics*. Medan: FEBI UIN-SU Press.
- Basuki, Agus Tri, and Imamudin Yuliadi. 2015. *Electronic Data Processing (SPSS 15 and EVIEWS 7)*. Yogyakarta: Danisa Media.
- Bilal Abdillah Rasyid, Muhammad, and A'rasy Fahrullah. 2022. "The Effect of Debit Card and E-Money Use on Consumer Behavior." *Saburai Journal of Management Science (JIMS)* 8(2): 111–22. doi:10.24967/jmb.v8i2.1708.
- Hasanah, N., Anggraini, T., & Harahap, R.D. (2022). The Influence of Lifestyle, Social Media, and Social Environment on Consumption Behavior During the Pandemic According to Islamic Economics: *MES Management Journal*, 2(1), 1–13. <https://doi.org/10.56709/mesman.v2i1.36>
- Hayani, Nur Syamsidah, Tri Inda, Fadhila Rahma, and Juliana Nasution. 2024. "The Influence of Brand Trust and Brand Image on Customer Loyalty in Using Life Insurance at Ajb Bumiputera 1912 Medan." 5(3): 1175–87.
- Maulidah, Alfi Rizka, Rini Puji Astuti, Khaerun Nisa, Wisnu Erlangga, and Endah Hambarwati. 2024. "Development of Digital Payment Systems in the Industrial Revolution 4.0 Era in Indonesia." *Al-Qardh Journal* 1(4): 798–803. doi:10.23971/jaq.v4i1.1442.
- Masito Hsb and Muhammad Arif. (2022). FACTORS INFLUENCING STUDENTS' DECISIONS TO BECOME PAYTREN PARTNERS (CASE STUDY OF ISLAMIC ECONOMICS DEPARTMENT STUDENTS, FEBI UIN NORTH SUMATERA). *El-Mal*, 3(4), 765–779.
- Muhammad Syahbudi, SEI, Barus, EE, & Barus, DS (2023). *Textbook: Islamic Economic Research Methodology*. Merdeka Kreasi Group.
- Mutia Andela Putri and Annio Indah Lestari. (2020). THE EFFECT OF PROMOTIONAL ATTRACTIVENESS, PERCEPTION OF CONVENIENCE, AND PERCEPTION OF USEFULNESS ON INTEREST IN USING BSM E-MONEY PRODUCTS. *Jesya*, 1(2), 176–188.
- Nainggolan, Hermin. 2022. "The Influence of Financial Literacy, Self-Control, and E-Money Use on the Consumptive Behavior of Production Workers at PT Pertamina Balikpapan." *Jesya (Journal of Economics & Sharia Economics)* 5(1): 810–26. doi:10.36778/jesya.v5i1.574.
- Nasution, MLI (2020). Digital Payment: Probability in Millennials (Case Study of Uinsu Febi Students). *Jhss (Journal of Humanities and Social Studies)*, 4(2), 91–95. <https://doi.org/10.33751/jhss.v4i2.2447>
- Nurjihan, Dude, Isa Ramlan, and Ismail Yulinda. 2022. "The Effect of Paylater and Flashsale Usage on Impulse Buying Behavior of Shopee Users (A Study of Shopee User Students, Management Department, Gorontalo State University)." *Management*.

- Rasyid, Muhammad Bilal Abdillah, and A'rasy Fahrullah. 2022. "The Effect of Debit Card and E-Money Usage on the Consumptive Behavior of Islamic Economics Study Program Students, Faculty of Economics and Business, UNESA." *Journal of Islamic Economics and Business* 5(2): 157–86. <https://journal.unesa.ac.id/index.php/jei>.
- Ridwan, M., Handayani, R., IMSAR, DAULAY, A., SYAHBUDI, M., & TIF, R. (2021). Islamic Microeconomics. *Journal of Islamic Economics and Business. Journal of Ecopreneur Analysis*, 1–219.
- Santoso, Sanggih. 2018. *Mastering Statistics with SPSS 25*. Jakarta: PT. Elex Media Komputindo.
- Saragih, Fadhillah Irwani, and Dini Lestari. 2022. "The Influence of Paylater Among Teenagers in North Sumatra." *Initiative: Journal of Economics, Accounting and Management* 1(4): 190–98. doi:10.30640/inisiatif.v1i4.526.
- Sari, Rahmatika. 2021. "The Effect of Paylater Usage on Impulse Buying Behavior of E-Commerce Users in Indonesia." *Journal of Business and Investment Research* 7(1): 44–57. doi:10.35313/jrbi.v7i1.2058.
- Siregar, Helly Aroza, and Pujiono Pujiono. 2021. "Analysis of the Influence of Operational Efficiency and Financing Risk on the Contribution of MSMEs to the Economy and Its Impact on the Profitability of BPRs in Indonesia." *Procuratio: Scientific Journal of Management* 9(4): 393–404. doi:10.35145/procuratio.v9i4.1642.
- Stephen, Albert. 2018. Albert Stephen as 1112046100047.
- Widayat, Widayat, Ilyas Masudin, and Novita Ratna Satiti. 2020. "E-Money Payment: Customers' Adopting Factors and the Implications for Open Innovation." *Journal of Open Innovation: Technology, Markets, and Complexity* Article 6(57): 1–14.
- Yahya, Adibah. 2021. "Determinants of College Students' Consumptive Behavior." *Journal of Entrepreneurship Development* 23(1): 37. doi:10.33370/jpw.v23i1.506.
- Yuliana, Ike Nia, and Azib. 2021. "The Influence of Electronic Money Usage on the Consumptive Behavior of Management Students at Bandung Islamic University." *Yusanto Journal of Management Proceedings*, 7(2): 353–55.