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## *The Effect of Ease of Use and User Trust on Mobile Payment: Social Influence As a Moderating Variable*

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### ABSTRACT

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*This study examines the impact of usability and user trust on intention to use mobile payments among Generation Z, with social influence as moderating. This study used a quantitative approach, as the method of data collected was survey and moderated regression analysis. The research showed findings that usability and user trust, have a favorable impact on the intention to use mobile payment methods. Furthermore, social influence strengthens this relationship, indicating that social support plays an important role in Generation Z's decision to use mobile payments. These findings underscore the importance of developing more user-friendly systems and community-focused marketing strategies.*

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## INTRODUCTION

Technological developments in the modern era have brought rapid growth. Technology is used to meet various human needs in various fields and make all activities more effective and efficient. The innovations resulting from this technological development are known as financial technology (fintech). Fintech has significantly increased access to financial products and transactions, enabling people to use financial services more easily and efficiently (Tohang et al., 2021). With lifestyle changes prioritizing convenience, the existence of fintech has become increasingly important. One of the biggest innovations in financial technology is mobile payment, which allows users to make payments quickly and easily via mobile devices. However, mobile payment adoption among Generation Z in Indonesia remains mixed, with ease of use and user trust being the biggest challenges.

Previous research has applied the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) to explore factors influencing technology adoption. In TAM, usefulness and ease of use are two primary factors considered, and both influence users' willingness to adopt relevant technologies. UTAUT, on the other hand, expands the TAM model by adding factors such as effort and performance perspectives, social impacts, and deteriorating conditions (Gupta, 2019).

Two key factors considered key drivers of technology adoption are ease of use and user trust. Ease of use focuses on the extent to which users find a mobile payment system easy to understand and use, while user trust refers to their confidence in the security and reliability of the system. These two factors are believed to have a significant impact on users' decisions to adopt mobile payments (Dahlberg, 2015).

Social influence is also considered an important factor that can moderate the relationship between ease of use, user trust, and mobile payment usage intention. Social influence refers to the extent to which an individual feels influenced by the opinions, recommendations, or behaviors of others in their social environment. In the context of mobile payments, social influence can come from recommendations from friends, family, or even social pressure to adopt the technology.

Previous research has shown that ease of use and trust are important factors for technology adoption, but few have examined the role of social influence as a moderating variable in this relationship. The purpose of this study is to provide a novel contribution by in-depth analyzing how social influence can strengthen or weaken the relationship between ease of use, user trust, and mobile payment intentions among Generation Z.

The logic of this research focuses on the rapid development of financial technology and the increasing use of mobile payments among Generation Z. This research also highlights certain issues, namely the varying levels of mobile payment adoption among Generation Z, influencing factors such as ease of use, user trust, social influence. To understand the factors that influence Generation Z's intention to use

mobile payments and provide recommendations to mobile payment service developers to improve their system design and marketing strategies.

## LITERATURE REVIEW

### *Technology Acceptance Model(TAM)*

The use of technology continues to grow, particularly in digital payment systems, and is accompanied by a growing need for more efficient transactions. The TAM model for the adoption of new technologies is used. This model contains two main factors. The first factor is usefulness, which focuses on the extent to which individuals believe using a technology will improve their performance or provide benefits. The second factor is perceived ease of use, which indicates that a technology requires little effort to implement (Davis, 1989).

### *Unified Theory of Acceptance and Use of Technology(UTAUT)*

The UTAUT theory was designed to describe the acceptance and utilization of technology by users (Venkates, 2003). UTAUT provides a solid theoretical framework for understanding technology acceptance, including mobile payments. Key constructs such as effort and performance expectancies, social influence, and moderating variables such as gender, age, and experience can explain differences in usage intentions.

### **Perceived Ease of Use**

Perceived ease of use reflects a favorable tendency or intention toward use and subsequently influences self-reported actual use. There is widespread recognition that perceived ease of use forms the basis for predicting end-user acceptance of computer technology. Perceived ease of use can operate indirectly through perceived usefulness. Given the widespread use of perceived usefulness and ease of use in models derived from TAM and UTAUT, the relationship between these concepts and their relative impact on intention to use mobile payment services (Davis, 1989) is important.

## Perceived User Trust

Trust is defined as consumer behavior in deciding to use mobile payments as a means of payment, influenced by incoming information from various sources, including marketing efforts and environmental factors (Yudiantara and Widagda, 2022). Perceived trust is the user's belief in digital systems and technologies, as well as in the service provider's commitment to ensuring the security and confidentiality of consumer accounts (Saputri, 2020).

## Social Influence

Users' trust in mobile payments reflects their belief that significant others around them recommend the technology. Social influence significantly impacts individuals' willingness to use mobile phones, particularly in environments with high levels of technology adoption (Slade et al., 2015). Recommendations from social circles can increase users' trust and confidence in making mobile payments. On the other hand, social pressure also has a significant negative impact on mobile phone use, particularly among Generation Z, who actively use their social networks (Zhang et al., 2022).

## Intention to Use

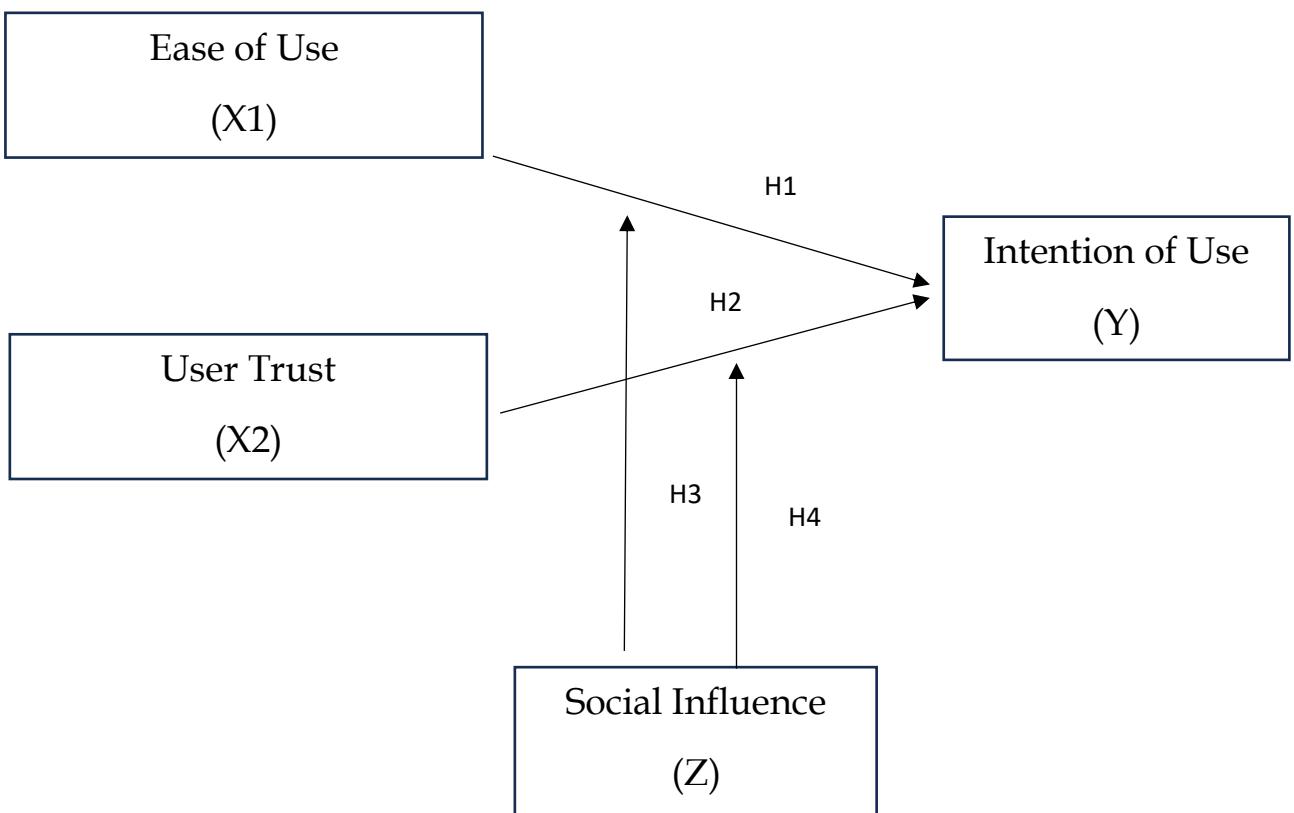
Usage intention can be defined as a person's willingness or tendency to decide to use a product, service, or technology within a certain time period. In a research context, usage intention is often analyzed in TAM, which explains that the intention to use technology is influenced by factors such as perceived usefulness and perceived ease of use (Liébana et al., 2018).

## An Empirical Study on Mobile Payment

Several empirical studies have examined the factors influencing adoption. *mobile payment* Ease of use and user trust are key factors in mobile payment adoption among the younger generation in China (Zhang et al., 2022). Social influence plays a significant role in driving mobile payment usage intentions, especially in environments with high technology adoption rates (Kumar et al., 2021). User trust and

ease of use significantly influence mobile payment usage intentions in South Korea (Lee & Kim, 2020).

## Framework of Thinking



## Hypothesis

- H1: Ease of use influences intention to use mobile payments among Gen-Z.
- H2: User trust influences mobile usage intentions payment among Gen-Z.
- H3: Social influence as a moderating variable between ease of use and mobile payment usage intentions among Gen-Z.
- H4: Social influence as a moderating variable between user trust and intention mobile payment usage among Gen-Z.

## METHODS

This study uses a quantitative method approach using TAM and UTAUT. The population studied is Generation Z, who are mobile payment users. The sampling process was carried out using a purposive sampling technique based on certain criteria, namely: (1) Respondents aged 17-27 years, (2) have experienced mobile

payments at least once in the last month, and (3) actively use smartphones. The minimum sample size in SEM-PLS research is five times the number of indicators measuring the variable (Solimun, 2022). Therefore, the minimum amount of data collected is 100 data. The data source in this study is primary data collected by the researcher through questionnaire distribution using Google Forms.

Prior to data analysis, the instrument was tested for validity and reliability. Validity was tested through confirmatory factor analysis (CFA) to ensure that each indicator accurately measures the intended construct. An indicator was considered valid if its factor loading value was greater than 0.5. Furthermore, reliability was tested by calculating Cronbach's alpha and composite reliability values. The research instrument was considered reliable if both Cronbach's alpha and composite reliability values exceeded 0.5.

The Independent Variables include Ease of Use (X1) and User Trust (X2). The Dependent Variable studied is Intention to Use (Y), while the Moderation variable applied is Social Influence (Z). The research instrument consists of questions that have been adapted to Mobile Payment technology. The questions distributed include five items representing indicators on the Ease of Use variable (X1), five items representing indicators on User Trust (X2), five items representing indicators on Intention to Use (Y), and five items representing indicators on the Social Influence (Z) variable. Each statement is measured using a Likert Scale. The method applied is Multiple Linear Regression analysis, which is processed with the SmartPLS version 4 analysis tool.

This study used SmartPLS 4 as a data analysis tool for several reasons. First, SmartPLS is suitable for data analysis involving complex structural models with moderating variables. Second, SmartPLS can address the problem of non-normally distributed data, which is common in social research. Third, SmartPLS allows the use of relatively small sample sizes, making it suitable for the needs of this study.

## RESULTS

### Evaluation Results

#### 1. Convergent Validity Test

	FACILITIES	TRUST	INTENT OF USE	SOCIAL INFLUENCE
1	.970			
2	.949			
3	.944			
4	.918			
5	.954			
1		.904		
2		.933		
3		.939		
4		.959		
5		.896		
1			.918	
2			.961	
3			.975	
4			.871	
5			.948	
1				.727
2				.926
3				.930
4				.911
5				.945

Based on the table, it can be seen that the loading factor value in all statement items is more than 0.7, so it can be explained that all statement items are convergently valid.

#### 2. Validity Test

	FACILITIES	TRUST	INTENT OF USE	SOCIAL INFLUENCE
<b>FACILITIES</b>	<b>0.947</b>			
<b>TRUST</b>	0.524	<b>0.927</b>		
<b>INTENT OF USE</b>	0.751	0.575	<b>0.935</b>	
<b>SOCIAL INFLUENCE</b>	0.138	0.233	0.228	<b>0.892</b>

The table shows that the AVE value for each variable is higher than the correlation between one construct and another. Thus, it can be concluded that all variables are discriminantly valid.

### 3. Reliability Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
<b>FACILITIES</b>	.971	.972	.978	.897
<b>TRUST</b>	.959	.969	.968	.859
<b>INTENT OF USE</b>	.964	.969	.972	.875
<b>SOCIAL INFLUENCE</b>	.933	.942	.951	.795

Based on the table above, the Cronbach's Alpha and Composite Reliability values for all variables are more than 0.7, so it can be concluded that all variables are reliable.

## Evaluation Results

### 1. R Square

	R square	R square adjusted
<b>INTENT OF USE</b>	.651	.635

Based on the table above, the R-square value for the Intention to Use variable is 0.651, indicating that the Ease of Use, Trust, and Social Influence variables are able to explain the Intention to Use variable by 65.1%. Therefore, the model is considered strong.

### 2. F Square

	INTENT OF USE
<b>FACILITIES</b>	0.085
<b>TRUST</b>	0.078
<b>SOCIAL INFLUENCE x TRUST</b>	0.032
<b>SOCIAL INFLUENCE x CONVENIENCE</b>	0.088

Based on the results above, the following conclusions can be drawn:

- The effect of ease of use on intention to use is 0.085, which is considered strong. Meanwhile, the effect of ease of use on intention to use, moderated by social influence, with a value of 0.032, is considered strong.

b. The influence of Trust on Intention to Use of 0.078 is considered strong. Meanwhile, the influence of Trust on Intention to Use moderated by Social Influence of 0.088 is considered strong.

### 3. Hypothesis Testing.

	Path	T statistics	P value	F Square
	Coefficient			
CONVENIENCE -> INTENT OF USE	0.354	2,826	0.005	0.085
BELIEFS -> USE INTENTIONS	0.333	2,714	0.007	0.078
SOCIAL INFLUENCE x CONVENIENCE -> USE INTENTION	0.438	2,708	0.007	0.095
SOCIAL INFLUENCE x TRUST -> USE INTENTION	0.256	1,73	0.008	0.088

The explanation is as follows:

a. The "ease of use" variable shows a p-value of 0.005, which is  $<0.05$ , and a positive coefficient value of 0.354. Therefore, H1 is accepted, indicating that ease of use has a positive influence on intention to use. Furthermore, the effect of ease of use on intention to use is 0.085, indicating a significant effect.

b. The trust variable obtained a p value of  $0.007 < 0.05$  and a positive coefficient value of 0.333, so H2 is accepted, namely Trust has a positive effect on Intention. The effect of Trust on intention to use is 0.078, so it has a strong influence.

c. The interaction variable Ease\*Social influence obtained p values of  $0.007 < 0.05$ , the coefficient value is positive, namely 0.438 and the f square value of 0.095 is greater than the f square value of the Ease path on Intention of use, namely 0.085, then H3 is accepted, namely Social Influence moderates the effect of Ease on Intention of use. Meanwhile, Social influence is able to moderate the effect of Ease on Intention of use by 0.095 which was originally 0.085, so it has a strong influence.

d. The interaction variable Trust\*Social Influence obtained p values of  $0.007 < 0.05$ , the coefficient value is positive, namely 0.256 and the f square value of 0.088 is greater than the f square value of the Trust path on Intention to use, namely 0.078, then H4 is accepted, namely Social Influence moderates the influence of Trust on Intention to use. Meanwhile, Social Influence is able to moderate the influence of Trust on Intention to use by 0.078 which was originally 0.088, so it has a weak influence.

**Goodness of Fit(GOF)**

	AVE	R Square
<b>FACILITIES</b>	0.897	
<b>TRUST</b>	0.859	
<b>INTENT OF USE</b>	0.875	
<b>SOCIAL INFLUENCE</b>	0.795	0.651
<b>Average</b>	0.856	0.651

$$\text{GOF value} = \sqrt{rata - rata \text{ AVE} \times rata - rata \text{ R Square}}$$

$$\text{GOF value} = \sqrt{0,856 \times 0,651}$$

$$\text{GOF value} = 0.746$$

Based on the calculation results, it shows that the combined performance of the outer model and inner model in this study can be categorized as a large GOF.

**CONCLUSION**

Based on the data, the data collected shows the following:

1. The variable "ease of use" has a positive and significant influence on the intention to use mobile payments among Generation Z.
2. The variable "user trust" also has a positive influence on the intention to use mobile payments among Generation Z.
3. The variables "ease of use" and "trust" have a positive and significant influence on mobile payment usage intention through social influence. This suggests that social influence can moderate the relationship between ease of use and trust on mobile payment usage intention among Generation Z.

**SUGGESTION**

Based on the conclusions, several recommendations can be put forward that may be useful for mobile payment system developers and other parties. The following suggestions are addressed to mobile payment system developers:

1. Improved the interface design to be more user-friendly to strengthen ease of use.

2. Strengthen system security and policy transparency to build user trust.
3. Optimize marketing campaigns involving influencers or communities to leverage social influence.

Suggestions to future researchers:

1. The research sample was extended to other generations and different geographic areas for generalization of the results.
2. Adding other variables such as perceived risk or technological innovation for a more comprehensive analysis.
3. Using qualitative methods to dig deeper into the motivations and barriers of mobile payment users.

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