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Comparative Analysis of the Use of Digital Payment Tools Between Indonesia and Taiwan

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ABSTRACT

This study aims to analyze the comparative of the use of digital payment tools between Indonesia and Taiwan, especially for Indonesian Student in Taiwan. In this study, primary data was obtained directly from respondents through a questionnaire regarding perceived usefulness and perceived ease of use. The researchers conducted an online questionnaire survey in Taiwan, employing IBM SPSS 25 for model validation and hypothesis testing. Data were analyzed using descriptive statistical techniques, and the results show that Perceived Usefulness and Ease of Use affect the behavioral intention of Digital Payment Tool users in both countries. From the descriptive statistical analysis carried out, it can be proven that Indonesian students studying in Taiwan prefer to use QRIS compared to LinePay, and it can prove to occur due to factors that are in accordance with the variables used in this study. The findings of this study can prove valuable for digital payment service providers seeking to enhance customer satisfaction.

Keywords: Perceived Usefulness, Perceived Ease of Use, Behavioral Intention

1. Introduction

According to HSBC Business Go (2023) In Indonesia, the type of electronic payment that is commonly accepted is digital payment. Digital payment are nothing new for the majority of technology-savvy Indonesians. There are many digital payment services available in Indonesia, the five largest include ShopeePay, OVO, Dana, GoPay and QRIS. Digital payment have become part of the daily lives of Indonesian people, especially among Millennials. Millennials are one of the most users in using digital or electronic payment because this applications has many benefits in the payment process, easy and practical is also one of the reasons. Millennials believe that using digital wallets can help increase economic growth in Indonesia. Accord- ing to Raflah (2021) In order to thrive in a highly competitive market, a corporation must employ solely strategic management techniques to ena- ble it to rival other businesses in the space.

According to Mayanti (2020) QRIS (Quick Response Code Indonesian Standard) is the normalization of the Quick Reaction Code (QR Code) as an installment strategy innovation established by Bank Indonesia since January 2020. This standard was created to provide a simpler and more productive non-cash installment strategy. This exploration plans to dissect public recognition of the use of the Quick Response Indonesian Standard as an innovation to utilize the non-cash installment strategy using the Unified Theory of Acceptance and Use Technology 2 method.

Based on BankIndonesia Regulation No.21/18/2019 on the implementation of international standard international QRIS standard as a payment, starting January 1, 2020 Bank Indonesia requires all non-cash payment service providers to switch to the QRIS (Quick Response Code Indonesian Standard) system. Response Code Indonesian Standard system. The function of the system is to read for all electronic money applications in Indonesia. So that this can make it easier to transact using electronic money.

Taiwan, one of the developed countries that has the best technological development in Asia, makes this country a destination for many students to study, including students from Indonesia. According to Rapyd, Taiwan has the highest Facebook penetration rate globally, and as a result, ecommerce businesses like Rakuten Taiwan have shifted to social commerce in the country. Then in terms of online payments, Taiwanese people tend to prefer credit cards or Pay-on-pickup. However, digital payments have become an increasingly popular payment option for consumers in Taiwan, providing a safe and convenient way to make purchases both online and offline.

According to Lian and Li (2021) In Taiwan, various digital payment applications have been launched by financial institutions (17 organizations), payment companies (8 organizations), retailing companies (38 organizations), communications companies (6

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organizations), and Internet service providers (7 organizations). Among financial services, the development of digital payment has attracted considerable attention from researchers, businesses, and government. The Taiwanese government set a target to increase the penetration rate of mobile payments to 90% by 2025 and focus on three main policies: development of infrastructure, expansion of digital payment application fields, and enhancement of the experience marketing of digital payment services. Some digital payments used by Taiwan are LinePay, JKoPay, WeChat Pay, Alipay, Android Pay, Apple Pay, Rakuten Pay, and Samsung Pay.

According to Lian and Li (2021) LinePay is one of the most popular digital payment service providers in Taiwan. Consumers can add value, transfer, gift money, pay online and in physical stores, and pay by credit card using their mobile devices. Stores can provide QR codes to scan customers' QR codes (LinePay mini), pay on the website or app, or integrate with POS systems. These services are tightly integrated as one service. Therefore, most Indonesian students studying in Taiwan use these services when adopting digital payments.

The main cause of the non-cash payment system that is currently favored by Millennials, especially students, because the main factor is the benefits obtained by digital wallet users such as are the benefits obtained by digital wallet users such as a more efficient payment process that is more efficient so that users use non-cash payment technology in daily transactions to make it faster when making transactions, discount promos that are often offered by digital wallet users. transactions, discount promos that are often offered at the beginning of the month, the middle to the end of the month also attracts many users to use promos when transacting. to use promos when making transactions. This also applies to students who are studying abroad, especially in economically developed countries such as Taiwan, they are required to be able to use digital payment tools in order to survive and adapt to the advanced technology in the country.

2. Methodology

The location of this research is in Taichung City, Taiwan. Focuses on International students from Indonesia studying in Taiwan or members of the Indonesian Student Association (PPI Taiwan). The type of data used in this study is quantitative data (questionnaire) because the data obtained will be in the form of numbers. From the figures obtained will be further analyzed in data analysis. According to Darmawan (2013), the data source is the subject from which the research data is obtained. In this study, the data sources used are primary data and secondary data. The population in this study were all Indonesian students who used QRIS and LinePay as payment tools in Taiwan. The sample is part of the number and characteristics of the population. From the calculations, the minimum sample size is 96.04 and the authors used a sample of 110 respondents. the sampling technique in this study is to use probabilistic sampling technique based on the concept of random selection. The research use data collection technique questionnaire. The collected data will be processed data processing. This study use a likert scale as a measurement scale. This study have two independent variable and one dependent variable. And the research aims to compare how factors such as perceived usefulness and ease of use affect users' behavioral intentions in both countries. Then it only uses the Normality Test.

In this study, author used the associative hypothesis. With the form of a causal relationship, namely a causal relationship between two or more variables that explains the effect of changes in value variations on one or more other variables. Meanwhile, quantitative research aims to test a theory by presenting facts and statistical data regarding the comparison of the use of digital payment tools among Indonesian students in Taiwan.

Tabel 1. Definisi variabel dan indikator

Variable	Description	Indicator	Scale
Perceived Usefulness (X1)	According to Noviarni (2014), perceived usefulness refers to the subjective perception of users regarding the potential of a specific application system to enhance performance within an organizational setting.	1. Accelerate work and Makes job easier 2. Improve job performance and Increase productivity	Likert 1= SD 2= D 3= N 4= A 5= SA
Perceived ease of use (X2)	Perceived ease of use leads to the term to what extentusers believe a website or digital payment application, users do not need to use a lot of effort to understand, learn, or operate it or also called ease of use when using a system.	1. Time efficiency 2. Ability to perform transactions 3. Ease of internet operation banking 4. Flexible usage	Likert 1= SD 2= D 3= N 4= A 5= SA
Behavioral intentions (Y1)	Behavioral Intention is the behavior of someone who is loyal or loyal to a company so that they are willing to recommend it to others because they have received good service from the company.	1. Sustainable intentions 2. Confidence to recommendations Future usefulness	Likert 1= SD 2= D 3= N 4= A 5= SA

Source: Processed data, 2023

3. Result and Discussion

In general, this study shows significant comparative results. Descriptive statistical test results show that Perceived Usefulness and Perceived Ease of Use affect the behavioral intention of Digital Payment Tool users in Indonesia and Taiwan. From this research, it can be concluded that respondents have a closer relationship with QRIS in Indonesia than with LinePay in Taiwan. This can be shown by interesting findings where Perceived Usefulness between QRIS and LinePay which has the same indicators but has a much different Likert scale value, Perceived usefulness on QRIS (X1) has a mean value of 4.43 while for the Perceived usefulness variable on LinePay (X1) has a mean value of 3.87.

Tabel 3.1 Distribusi Frekuensi Variabel Perceived Usefulness pada QRIS

Indicator	Indicator Questions		Frequency Distribution on QRIS					Total	Mean	Category
			SA	A	N	D	SD			
			5	4	3	2	1			
Accelerate work and makes job easier	PU QRIS 1	Freq	64	41	3	2	0	110	4,52	Very High
		Score	320	164	9	4	0	497		
Improve job performance and Increase Productivity	PU QRIS 2	Freq	51	49	8	2	0	110	4,35	Very High
		Score	255	196	24	4	0	479		
Total			115	90	11	4	0	220	4,43	Very High
			575	360	33	8	0	976		

Source: Processed data, 2023

Tabel 3.2 Distribusi Frekuensi Variabel Perceived Usefulness pada LinePay

Indicator	Indicator Questions		Frequency Distribution on LinePay					Total	Mean	Category
			SS	S	N	TS	STS			
			5	4	3	2	1			
Accelerate work and makes job easier	PU LinePay 1	Freq	25	50	33	2	0	110	3.89	High
		Score	125	200	99	4	0	428		
Improve job performance and Increase Productivity	PU LinePay 2	Freq	26	45	37	2	0	110	3.86	High
		Score	130	180	111	4	0	425		
Total			51	95	70	4	0	220	3,87	High
			255	380	210	8	0	853		

Source: Processed data, 2023

This shows that the mean value of QRIS is greater than LinePay, thus identifying that the data distribution results are quite good. This is because the mean is a very high reflection of deviation, causing the data to show normal results and not cause bias. This also applies to the Perceived Ease of Use variable on QRIS (X2) has a mean value of 4.32 while for the Perceived Ease of Use variable on LinePay (X2) has a mean value of 3.80.

Table 3.3 Distribusi Frekuensi Variabel Perceived Ease of Use pada QRIS

Indicator	Indicator Questions		Frequency Distribution on QRIS					Total	Mean	Category
			SA	A	N	D	SD			
			5	4	3	2	1			
Time Efficiency	PEU QRIS 1	Freq	53	49	6	1	1	110	4,38	Very High
		Score	265	196	18	2	1	482		
Ability to perform transactions	PEU QRIS 2	Freq	47	50	12	1	0	110	4,30	Very High
		Score	235	200	36	2	0	473		
Ease of internet operations banking	PEU QRIS 3	Freq	45	56	8	1	0	110	4,32	Very High
		Score	225	224	24	2	0	475		

Flexible usage	PEU QRIS 4	Freq	43	56	10	1	0	110	4,28	Very High
		Score	215	224	30	2	0	471		
	Total		188	211	36	4	1	440	4,32	Very High
			940	844	108	8	1	1901		

Source: Processed data, 2023

Table 3.4 Distribusi Frekuensi Variabel Perceived Ease of Use pada LinePay

Indicator	Indicator Questions		Frequency Distribution on QRIS					Total	Mean	Category
			SA	A	N	D	SD			
			5	4	3	2	1			
Time Efficiency	PEU LinePay 1	Freq	28	45	34	3	0	110	3,89	High
		Score	140	180	102	6	0	428		
Ability to perform transactions	PEU LinePay 2	Freq	25	46	37	2	0	110	3,85	High
		Score	125	184	111	4	0	424		
Ease of internet operations banking	PEU LinePay 3	Freq	21	41	44	3	1	110	3,71	High
		Score	105	164	132	6	1	408		
Flexible usage	PEU LinePay 4	Freq	24	41	41	4	0	110	3,77	High
		Score	120	164	123	8	0	415		
	Total		98	173	156	12	1	440	3,80	High
			490	692	468	24	1	1675		

Source: Processed data, 2023

Meanwhile, the QRIS Behavioral Intentions variable (Y) has a mean value of 4.26 and the Behavioral Intentions variable on LinePay (Y) has a mean value of 3.75, from this it can be concluded that respondents prefer to use QRIS as their digital payment tool according to ease of use and usefulness so as to cause behavioral intentions to other users to use the digital payment tools.

Table 3.5 Distribusi Frekuensi Variabel Behavioral Intentions pada QRIS

Indicator	Indicator Questions		Frequency Distribution on QRIS					Total	Mean	Category
			SA	A	N	D	SD			
			5	4	3	2	1			
Sustainable Intentions	BI QRIS 1	Freq	39	67	4	0	0	110	4,32	Very High
		Score	195	268	12	0	0	475		
Confidence to recommend ations	BI QRIS 2	Freq	40	52	17	0	1	110	4,18	Very High
		Score	200	208	51	0	1	460		
Future Usefulness	BI QRIS 3	Freq	42	61	5	1	1	110	4,29	Very High
		Score	210	244	15	2	1	472		
	Total		121	180	26	1	2	330	4,26	Very High
			605	720	78	2	2	1407		

Source: Processed data, 2023

Table 3.6 Distribusi Frekuensi Variabel Behavioral Intentions pada LinePay

Indicator	Indicator Questions		Frequency Distribution on QRIS					Total	Mean	Category
			SA	A	N	D	SD			
			5	4	3	2	1			
Sustainable Intentions	BI LinePay 1	Freq	19	52	36	2	1	110	3,78	High
		Score	95	208	108	4	1	416		
Confidence to recommend ations	BI LinePay 2	Freq	19	43	45	2	1	110	3,70	High
		Score	95	172	135	4	1	407		
Future usefulness	BI LinePay 3	Freq	21	47	41	0	1	110	3,79	High
		Score	105	188	123	0	1	417		
	Total		59	142	122	4	3	330	3,75	High
			295	568	366	8	3	1240		

Source: Processed data, 2023

Based on descriptive statistics, the indicator Accelerates work and makes work easier on the perceived usefulness variable in the QRIS application is the highest category compared to other indicators and has been perceived as very good or very high, namely 4.52. This shows that, if digital payment tools have efficiency functions such as speeding up work and making work easier, of course this will have an impact on meeting good quality criteria and can affect behavioral intentions.

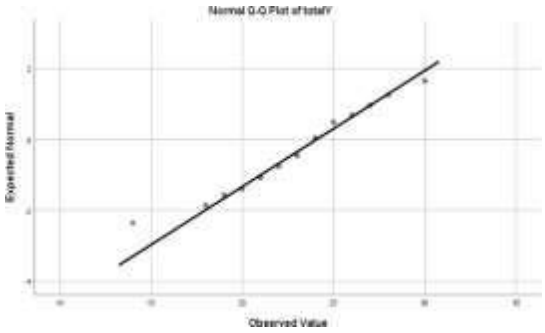
The results of this study were found to be in line with the results of previous research entitled "A Comparative Study of China and US Users" by Hankun et al. It is proven that user attitudes towards online payments increase significantly by increasing perceived ease of use and perceived usefulness in both Taiwan and Indonesia. In addition, it is also evident that increasing perceived ease of use in both countries significantly increases perceived usefulness. Thus, perceived ease of use and perceived usefulness are two important factors that influence users' attitudes towards online payments.

There are several facts that support why QRIS digital payments have a higher value than LinePay, namely in a study entitled "FinTech in Taiwan: a case study of a Bank's strategic planning for an investment in a FinTech company" by Long Hung et al. mentioned that compared to other countries, Taiwan lags behind in the financial digitization revolution in terms of practical development, customer adoption, and legislation. It seems that banks in Taiwan have been protected for too long. Banks, tech companies, and customers are not "FinTech ready." In 2015-2016, Apple pay, LinePay, WeChat pay, Alipay, and domestic third-party companies introduced various innovative payment methods through TSM, HCE, TSP, and QR Code technologies (Financial Supervisory Committee 2016c). However, based on TFSB statistics, credit cards are still the most popular payment method. Most of the transactions counted as mobile payments are credit card transactions linked to apps.

From the descriptive statistical analysis carried out, it can be concluded that in the comparison research between the two digital payment tools QRIS and LinePay, Indonesian students studying in Taiwan prefer to use QRIS compared to LinePay, and it can be proven to occur due to factors that are in accordance with the variables used in this study.

Based on the normality test results in Figure 3.1 using the Q-Q plot analysis method, it is known that the dots almost follow a straight line, it can be concluded that the residual values have followed a normal distribution. Then the statement for research hypothesis can be accepted.

Gambar 3.1 Hasil Normality Test



Source: Processed data, 2023

4. Conclusion

Partially, the results showed that the variables perceived usefulness and perceived ease of use have a positive and significant relationship with behavioral intention. A positive relationship means that the higher the quality of the perceived usefulness and perceived ease of use facilities, the higher the level of behavioral intention and if the lower the quality of perceived usefulness and perceived ease of use, the lower the level of behavioral intention, and from the research that has been done, the level of perceived usefulness and ease of use of the QRIS digital payment tool is higher in frequency than the LinePay digital

payment tool, this shows that from the comparison of the two payment tools, QRIS has better perceived usefulness and perceived ease of use than LinePay.

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