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Determinants of the Adoption of Digital Payments among UiTM Machang Students

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Abstract: The FinTech sector has experienced significant disruptions due to the Covid-19 pandemic, driving the need for technological advancements to replace physical interactions and fostering the growth of FinTech in Malaysia. This evolution has extended beyond banking and has transformed payment methods, with digital payments becoming increasingly popular, replacing traditional physical transactions. This study aims to explore the influence of user expectations on the performance of digital payments in their adoption. Using the UTAUT theoretical model, the research questions seek to identify the amount of digital payments among students at UiTM Machang and examine the relationship between performance expectancy and adoption of digital payments. This study employs a questionnaire with three sections, covering demographic profiles, performance expectancy, and other variables. Descriptive analysis provides insights into the respondents' characteristics, indicating a positive perception towards digital payments as a beneficial service in day-to-day activities. The results also reveal a significant association between performance expectancy and the adoption of digital payments among UiTM Machang students, demonstrating that a higher perception of efficiency and effectiveness leads to greater adoption. This study sheds light on the factors influencing the acceptance of digital payments among higher education students, emphasizing the importance of addressing performance expectations in promoting the adoption of digital payment methods.
Keywords: Financial Technology (FinTech), Digital payment, UTAUT model, performance expectancy

I. Introduction

The combination of “finance” and “technology” is known as FinTech. The developments of technology have always had an impact on the financial sector. Moreover, the rise of digitalization causes FinTech to emerge as a critical tool for financial institutions that are used to enhance the financial services to be competitive in the worldwide market. To compete in the current high competition business environment, FinTech can be used by the financial institutions as well as businesses to achieve the competitive advantage over the rival.

Not only that, FinTech is also known for its convenient and cost-effective services, which enable users to conveniently complete their financial obligations (Oladapo I., Hamoudah et. al, 2022). Financial institutions also gain benefits from the technology development as they are able to provide more efficient and effective financial services. This growing interest in fintech has paved the way for several developments in recent years. Malaysian FinTech companies are growing in the information technology industry ("Fintechnews.my", 2020).

Money is an essential item that is very valuable. However, the advanced technology that has made money can be obtained not only physically but also through online platforms. Digital payment is one of FinTech's scope of activities apart from peer-to-peer loans, crowdfunding, blockchain and others. Digital payment is a form of payment method that is used to make payment through online platforms. This new form of payment method is more convenient as it helps users to make payment faster and available to do anywhere as long as there is internet connection. Touch n’ Go, Boost, and Grabpay are the digital payment platforms commonly used by Malaysians.

A study found that in Malaysia Fintech Report 2021, FinTech companies in the payments sector contribute the highest percentage (20%) among other sectors (Yusoff, Y. H., 2022). It stated also that Malaysia's internet banking has expanded greatly and expected to increase more in the future. This is further supported by Imson N. (2022) which stated that the growth of online banking in the year of 2020 has arrived to 112.5%. Malaysia FinTech Report 2022 reported that in 2021 the transactions involving digital payment has exceed pre-Covid level at 64.5%. According to Statista (2023), it was anticipated that there will be an increased number of digital payments users in Malaysia between 2023 and 2027 by 3.2 million users which approximately increases by 19.04%.

II. Literature Review

Digital Payment

The use of a Digital payment is considered to be more time and cost-effective than using a traditional payment method. It is also said to be more convenient (Blockchains, 2018). When money is transferred

from one payment account to another via a digital device, it is referred to as a digital payment or an electronic payment. Digital payments refer to a variety of payments made using digital tools, such as mobile payments, e-wallets, electronic payments, and QR-based payments (Alkhowaiter, 2020; Chaveesuk et al., 2021a; Musyaffi et al., 2021).

A digital transaction system allows cashless purchases of products as well as services. The usage of digital payment as a micropayment tool is thought to be the most suitable and capable of responding to the requirement for an easy and reasonably priced payment mechanism. Digital payments are an effective way to support Bank Negara in promoting the usage of digital payments or e-payments in the country. Digital payments have various types of users since nowadays the technology keeps advancing and needs users to change the traditional ways to keep pace with the advanced technology.

Determinants of the Adoption of digital payments

This study adapts the Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT consists of four primary constructs that will be most useful in determining user acceptance factors. Venkatesh (2003) identifies performance expectancy, effort expectancy, social influence, and facilitating factors as the four constructs that motivate using information systems. To understand why people choose to employ contemporary technologies in their daily work, previous researchers have extensively explored this theoretical model. This study will focus on performance expectancy only.

Performance expectancy

Venkatesh et al. (2003) stated that the degree to which an individual believes that adopting technology will help him or her improve the quality of his or her job is known as performance expectancy. Based on that definition, we can say that if the technology can assist the individual, such as can reduce the time taken to complete the payment without going to the physical store or counter to pay any transactions, the possibility for the students to accept the digital payment is increased. Users are more likely to adopt and use new technology if they think it will make their daily lives easier.

Conceptual Framework

The conceptual framework for our study, which was adapted from UTAUT, is shown below. It illustrates the link between independent variables and dependent variables.

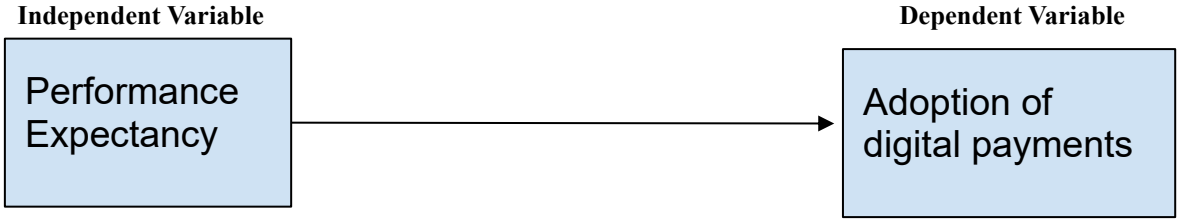

Figure 1. Proposed Conceptual Framework

Hypothesis development

The performance expectancy significantly influences the adoption of digital payments

A research by Nenad Tomic et al., 2022 revealed that performance expectancy had strong positive effects on the use of digital payments. This is also supported by research that was conducted in Yemen that revealed the adoption of digital payments also known as e-payments is significantly and positively influenced by performance expectancy. This was research by Alduais et al., 2022. Hence, the hypotheses that was developed is;

H1: The performance expectancy significantly influences the adoption of digital payments.

III. Research Method

Population sample

For this study, a sample was selected from the target population among students in UiTM Machang. A total of 35 questionnaires were distributed to the students that use digital payment in their daily life using simple random sampling methods to achieve the research objectives. This method was selected to guarantee that every element within the population size is afforded an equitable opportunity for selection. A total of 35 questionnaires were distributed, of which 30 were deemed suitable and utilised for this study.

Data Collection Method

A quantitative research method was applied as a primary research method during this study. This questionnaire will be a self-administered questionnaire. The questionnaire also will be conducted in the English language. The questionnaire will be distributed via an online survey form and through WhatsApp. This type of quantitative method is used because it collects data quickly and is affordable.

Research Instruments

The questionnaire is divided into three sections which consist of Section A and B. The first section which is Section A will include the demographic profile about the student's background. In measuring the responses to a questionnaire prepared, scale ordinal, nominal, ratio and interval are used. Section B will focus on the independent variables which is performance expectancy (PE) effect adoption digital payments. 5 Likert point scale will be used to measure the responses for Section B and C. The respondent is required to choose from 1 to 5 from strongly disagree to strongly agree.

Table 1. Demographic

Construct		**Items**
Demographic	D1	Gender Male / Female
	D2	Age 19 and below / 20-22 / 23 and above
	D3	Education level Diploma / Degree
	D4	Faculty

Table 2. Independent Variable: Performance Expectancy

Construct		**Items**
Performance Expectancy (PE)	PE1	I believe digital payments can be a useful service in my day-to-day activities.
	PE2	Using digital payments can help me perform my financial transactions more quickly.
	PE3	Using digital payments help to save time so that I can do other activities in my day-to-day
	PE4	Digital payments would bring me greater convenience.

Table 3. Dependent Variable; The Adoption of Digital Payment

Construct		**Items**
The Adoption of Digital Payment (DV)	DV1	I have a great perspective on digital payment.
	DV2	I intend to use digital payment in the future
	DV3	I often feel joy while using digital payment.
	DV4	Digital payment can replace the cash-based payment method.
	DV5	Digital payment adoption can support the existing payment method

Data Analysis

The Statistical Package for Social Sciences (SPSS) software will be used for data analysis. It is a flexible and adaptable application that can perform various data procedures. It can accommodate a wide range of variable data sets. The information analysis was executed using a descriptive methodology, employing techniques such as frequency analysis, mean calculation, and standard deviation assessment. The mean value signifies the arithmetic average of all participants' responses on the ranking scale. In contrast, the standard deviation indicates the extent to which the responses are dispersed across the scale.

IV. Results and Discussion

The results of the descriptive analysis provide the mean and standard deviation for each of the independent variables as well as the dependent variable that was taken from the questionnaire.

Demographic

The respondent's demographic data were analysed, which included gender, age, level of education and faculty at UiTM Machang, Kelantan. The questionnaires were distributed through the social media platform to 30 students to figure out the determinants of the adoption of digital payments among students.

Based on the table below, the majority of the responses were from female students at 66.7% which represents 20 respondents and the remaining 10 respondents came from male students (33.3%). Most of the questionnaires were answered by the age between 23 and above with 19 respondents (63.3%) and also 11 respondents (36.7%) were identified as coming from the age between 20 to 22 years old. The demographics also indicate that the vast majority of the respondents have the degree as their level of education were 28 (93.3) respondents and most of them were from faculty of accountancy at 20 (66.7%) respondent out of 30 respondents recorded.

Table 4. Respondents' Demographic Profile

Demographic Items	Frequency (n=30)	Percentage (%)
Gender		
Male	10	33.3
Female	20	66.7
Age		
20 to 22	11	36.7
23 and above	19	63.3
Education level		
Diploma	2	6.7
Degree	28	93.3
Faculty		
Accountancy	20	66.7
Business and Management	6	20
Computer and Mathematical Sciences	3	10
Mechanical Engineering	1	3.3

Descriptive Statistics

Table 5. Independent Variable: Performance Expectancy

Constructs	Items	Definitions	Mean	Standard deviation
Performance Expectancy (PE)	PE1	I believe digital payments can be a useful service in my day-to-day activities.	4.50	0.630
	PE2	Using digital payments can help me perform my financial transactions more quickly.	4.40	0.855
	PE3	Using digital payments help to save time so that I can do other activities in my day-to-day	4.33	0.711
	PE4	Digital payments would bring me greater convenience.	4.33	0.679

As shown in the table, PE1 scores the highest mean from the respondent as compared to others items. The mean for PE1 is 4.50 indicating that the respondents believe digital payments can be a useful service in their day-to-day activities.This fintech technology can help the respondent to increase their efficiency in terms of payments in their university life. Meanwhile standard deviation for PE1 is low which indicates that the responses were consistent where the most respondents supported that digital payment can be useful in their daily life.

As for PE2, the mean score is 4.40 which is a bit lower than PE1 can be concluded that the respondents also believe that by using digital payments can speed up their financial transactions. Next, the standard deviation for PE2 is 0.855 demonstrating the possibility that some responders have more strongly thoughts in these items than others respondents.

The mean for PE3 and PE4 is the same at 4.33. For PE3, it is suggested that the respondent also believe that digital payments can help them to save time. The respondent might find ease to use the digital payment as it can contribute to time savings so that they can focus on their other activities. The standard deviation for PE3 is 0.711 showing a moderate level in responses suggests that there may be a gap in how different respondents view the time-saving benefit of digital payments.

Meanwhile for PE4, according to the mean of 4.33, most respondents agreed that digital payments are more convenient than using traditional payment methods. The standard deviation of 0.679 indicates a generally low level of response variance, suggesting that respondents generally believe on the other expectation to adopt digital payments.

In conclusion, the research reveals that respondents saw digital payments as a beneficial service in their day-to-day activities that can enable quicker financial transactions, save time, and give better convenience. The relatively high means between the PE1, PE2, PE3 and PE4 suggested a positive perception to adopt digital payments in terms of performance expectancy as the determinants to adopt that digital payment among students. The standard deviations reveal a level of agreement or disagreement among the respondents and provide light on the consistency and diversity of replies for each question.

Table 6. Dependent Variable: The Adoption of Digital Payment

Constructs	**Items**	**Definitions**	**Mean**	**Standard deviation**
The Adoption of Digital Payment (DV)	DV1	I have a great perspective on digital payment.	4.30	0.702
	DV2	I intend to use digital payment in the future	4.17	0.747
	DV3	I often feel joy while using digital payment.	4.47	0.571
	DV4	Digital payment can replace the cash-based payment method.	4.43	0.626
	DV5	Digital payment adoption can support the existing payment method	4.43	0.568

In table 6 summarise the descriptive sample for dependent variable. DV3 have the highest mean score at 4.47 and have the lower the standard deviation at 0.51 showing that there is positive feedback while the respondent used digital payments. The second highest mean scores are DV4 and DV5 at 4.43. As for DV4, the high mean score demonstrating that most of the respondents believe digital payment can replace the existing payment methods followed with the standard deviation of 0.626 indicate that some respondents might have supported these items than others.

Meanwhile, DV5 also has the highest mean score at 4.43 compared to others with the lower standard deviation at 0.568. Next for the DV1, the mean score of 4.30 and the high standard deviation of 0.702. As for the last item which is DV2 it has the lowest mean score at 4.17 and has highest standard deviation among others at 0.747.

In conclusion, the data indicates that respondents generally have a positive view of digital payment, express a moderate intention to adopt it in the future, frequently feel joyful while using digital payment

methods, believe that it can replace cash-based methods, and perceive its adoption as a supportive measure compared to traditional payment methods.

Regression Analysis Findings

The hypothesis had been tested in this study. According to Pallant (2010) stated that the needs to verify the independent variable used to evaluate the relationship of the dependent variable are valid. In ANOVA, the significant value at 5 percent in this sense as shown in the table 4.3.1 whereas the (F=48.383, p=0.000). It can be concluded that there is sufficient evidence exists prove by this analysis which demonstrates that there is a one independent variable in the dependent variable. The independent variable of performance expectancy affects the adoption of digital payment in this study.

Table 7. ANOVA for Predictor Performance Expectancy

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.442	1	5.442	48.383	.000[b]
	Residual	3.150	28	0.112		
	Total	8.592	29			

a. Dependent Variable: DV Digital Payment Adoption

b. Predictors: (Constant): PE Performance Expectancy

Linear Regression (Performance Expectancy with Digital Payment Acceptance)

Linear regression also was conducted in this study where the relationships between a quantitative dependent variable and one independent variable was examined by using a straight line. Performance expectancy (PE) was treated as an independent variable in this study. Independent variable offered a stronger test of the degree to performance expectancy affected a dependent variable on digital payment adoption stages. Regression for performance expectancy was conducted as below:

Table 8. Linear Regression (Digital Payment Adoption)

Model	R Square	R Square Change	F Change	Sig. F Change
1	.633	.633	48.383	.000

Table 9. Table of Coefficients for Performance Expectancy (PE)

Model	IV	Beta	Sig	VIF
1	Performance Expectancy (PE)	0.796	<0.001	1.000

Table 8 above shown that when the digital payment adoption was treated as dependent variable, model 1 significantly explained 6.3% of the variance in digital adoption (F=48.383, p<0.05). The result in Table 9 also suggest that Performance Expectancy (PE) had a substantial positive effect on digital payment acceptance at Beta = (0.796, p<0.05) respectively. Therefore, hypothesis H1 is accepted.

Discussion

Relationship between the Performance Expectancy and The Adoption of Digital Payment

Performance expectancy has been discovered where it is significantly associated with the adoption of digital payment among students in UiTM Machang. It is proven by using multiple linear regression in this study. Performance expectancy is when the consumers believe that by using digital payments or e-payments will help to enhance their efficiency and effectiveness in order to complete their work tasks properly. The finding in this study is in line with a study that was done in Yemen. The study concluded that the intention to use e-payments was significantly and positively influenced by performance expectancy (Alduis et al., 2022). The students might believe that digital payments can contribute as a beneficial service in their day-to-day activities that can enable quicker financial transactions, save time, and give better convenience.

For this study as can be seen in the table 4.4.1.2 indicates a significant value of 0.000 (p<0.05). Thus, it is shown there is a significant relationship between performance expectancy and the adoption of digital payment among students. Therefore, the research questions for RO2 are answered. This can prove that performance expectancy can enhance the improvement in adoption of digital payment.

V. Conclusion

Digital payments have become the trends as the use of smartphones increases. Based on the UTAUT model, this study examines the user's behavioural intention on the adoption of digital payments. This study focuses on one independent variable which is performance expectancy which results relatively high. This shows that the students of UiTM Machang highly agree that digital payments can benefit them and provide more convenience to use. The dependent variable which is the adoption of digital payments also results relatively high which indicates that the students perceived the adoption will provide positive impacts to the existing payment method. Moreover, the results of the study shows a significant relationship between the performance expectation and the adoption of digital payments among students. Hence, it can be concluded that performance expectation can influence the user's intention in adopting digital payments.

The limitation of this study is that the study emphasises only on the performance expectancy of digital payments. There are other factors that may influence the adoption of digital payments such as the facilitating influence, social influence as well as effort expectancy. This study is conducted to contribute awareness towards the businesses on the importance of digital payments. By adopting this method, businesses will be able to be more competitive and enhance their adaptability with the technological changes that enable them to achieve competitive advantages. Not only that, this study also may help to support the existing empirical studies on the influence of the performance expectancy factors on adoption of digital payments.

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