ACCEPTANCE OF QR CODE PAYMENT TECHNOLOGY IN MOBILE BANKING APPLICATIONS AMONG KASETSART UNIVERSITY'S STUDENTS

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Abstract - This research aims at studying the acceptance of QR-code payment technology in mobile banking applications among Kasetsart University's students. With 405 undergraduate students as its sample, this quantitative research used questionnaires in data collection. Data was then analyzed statistically through frequency, percentage, mean, standard deviation, and multiple regression analysis. According to findings, perceived ease of use, perceived usefulness and attitude toward using the QR-Code payment technology in mobile banking applications influence students' intention to use this payment technology at the statistical significance level of 0.05. Together, these three factors can explain 27 per cent of the variation in students' intention to use QR-code payment technology in mobile banking applications.

Keywords - Acceptance, QR-Code payment , Perceived ease of use, Perceived usefulness

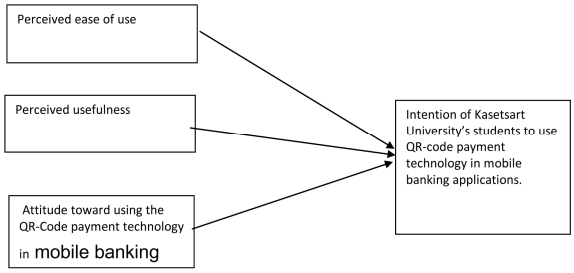
I. INTRODUCTION

The Thai government has implemented "Thailand 4.0" policy to drive Thailand forward and ensure that the country efficiently keeps pace with global trends. The Thailand 4.0 model has been designed to bring Thailand out of the middle-income trap, inequality trap, and imbalance trap for the ultimate goal of ushering Thailand towards security, prosperity and sustainability. In response to the Thailand 4.0 policy, the Bank of Thailand launched Standard QR Code on 30 August 2017. Developed to modernize the country's banking and financial systems and speed up their work flow, Standard QR Code promises to stimulate Thai economy and answer to the needs of small and medium enterprises in Thailand 4.0 era.

Standard QR Code is a type of QR codes. Though developed from barcode, Standard QR Code is easier-to-use and can contain more information. Today, Standard QR Code has thus been widely used in various different ways. One of them is for making payments at shops. Standard QR Code payment technology enables its users to access information from websites by just scanning a code via a compatible mobile application and smartphone. In Thailand, such technology so far has been experimented mainly in Bangkok. In launching the Standard QR Code, the Bank of Thailand has worked closely with commercial banks so as to ensure that they have the same standards. Consumers and shops can make and accept QR payments via credit cards, debit cards, bank accounts, or compatible services of local and foreign non-bank operators. The launch of Standard QR Code aims at spurring Thai economy and facilitating Thailand's transformation into a "cashless society" just like developed nations. The Thai government and the Thai private sector have now been trying to promote Thais' acceptance of technologies and the use of QR Code payments. It is indeed interesting to find out if such promotion resonates with the Technology Acceptance Model (TAM), which has long been developed to predict technology acceptance.

QR Code payments have started to catch on in Bangkok, at present. Still, some groups of Thais remain skeptical and still refuse to use this technology. The researcher is interested in determining the acceptance of QR code payment technology in mobile banking applications among Kasetsart University's students based on the TAM. This research is thus conducted to study students' behaviors and factors affecting their acceptance of QR code payment technology in mobile banking applications.

Objectives



1. To study the influence of perceived ease of use, perceived usefulness and attitude toward using the QR-Code payment technology in mobile banking applications among Kasetsart University's students; and

2. To study factors that can predict the intention of Kasetsart University's students to use QR-code payment technology in mobile banking applications.

Hypothesis

Perceived ease of use, perceived usefulness and attitude toward using the QR-Code payment technology in mobile banking applications influence the intention to use such technology.

II. METHODOLOGY

The research titled "Acceptance of QR Code Payment Technology in Mobile Banking Applications among Kasetsart University's Students" is a quantitative research using survey research method.

Population and Sample

Population of this research are undergraduate students of the Kasetsart University. The size of the sample is determined based on Taro Yamane's formula at the confidence level of 95 per cent and error of five per cent. Following the calculation and through Multi Stage sampling, the sample was consisted of 405 students.

After the data are collected and verified, they are encoded and processed with statistical computer software. The statistical methods used in this research study are:

1. Descriptive Statistic Analysis: The researcher uses this method through Frequency Distribution, Percentage, Mean and Standard Deviation.
2. Inferential Statistic Analysis: This is used in analysing data with the goal of testing the hypothesis. The Multiple Regression Analysis method is used to explain the efficiency in predicting different factors, at the statistical significance level of 0.05.

III. RESULTS AND DISCUSSION

Regarding general information of the sample, the research has found that 61.0 per cent of sample members are female and 39.0 per cent others are male. About 32.3 per cent of sample members are first-year students. Regarding income, 46.4 per cent of students in the sample have received between Bt5,000 and Bt10,000 a month from their parents. Regarding QR Code payment technology in mobile banking applications, 33.8 per cent use the Siam Commercial Bank's application while Kasikornbank's application is the second-most popular with 20.0 per cent of sample members using it.

Regarding channels whereby they receive information on QR code payment technology by mobile banking applications, the majority or 57.3 per cent of respondents say they have received information from advertising/PR media. Some 21.8 per cent others say they have got information from people in their close circle (parents, relatives, friends, and girlfriends/boyfriends).

Scores of perceived use of ease stand at 3.73, perceived usefulness at 3.75, and attitude toward using the QR-Code payment technology in mobile banking applications at 3.80. These scores are in high level.

Table 1 Results of the multiple regression analysis show the influence of perceived use of ease, perceived usefulness, and attitude toward using the QR-Code payment technology in mobile banking applications on the intention of Kasetsart University's students to use the technology.

Factors influencing the intention of Kasetsart University's students to use QR-Code payment technology in mobile banking applications	b	β	t	Sig
Perceived ease of use regarding QR-Code payment technology in mobile banking applications	.259	.174	2.920	.004
Perceived usefulness of QR-Code payment technology in mobile banking applications	.222	.128	2.019	.044
Attitude towards using QR-Code payment technology in mobile banking applications	.488	.292	4.449	.000
R^2 = .282, Adjusted R^2 = .277, Sig F = .000*				

*** Significant at the 0.05 level**

The multiple regression analysis reveals perceived use of ease, perceived usefulness and attitude towards using QR-Code payment technology in mobile banking applications have influenced the intention of Kasertsart University's students to use this payment technology at the statistical significance of 0.05. Together, they can explain 27 per cent of variation in the intention to use the QR-Code payment technology in mobile banking applications. The attitude towards using the technology had the standardized regression coefficient at 0.292 or has the biggest influence on students' intention to make QR code payment via mobile banking applications. The perceived use of ease comes next in terms of influence on the intention, with its standardized regression coefficient at 0.174. As for perceived usefulness, its standardized regression coefficient is at 0. 128 and thus it has least influence of all the three factors on students' intention to use QR-Code payment technology in mobile banking applications.

According to the findings, attitude towards using the QR-Code payment technology in mobile banking applications, perceived use of ease, and perceived usefulness have influenced the intention to use QR-Code payment technology in mobile banking applications among Kasetsart University's students. The findings are in line with the Technology Acceptance Model (TAM). Davis (1989) explained that people would be motivated to accept technology by three factors: 1) Perceived ease of use, which refers expectations that technology or system must be easy-to-use and does not require much efforts on the part of users; 2) Perceived Usefulness, which refers to beliefs that the technology will add efficiency (Agarwa and Prasad, 1997; Chau, 1996; Igbaria et al, 1995); and 3) Attitude Toward Using the system or people's inclination to negatively or positively respond to technology, which affect their behaviors.

In conclusion, the better the attitude towards QR Code payment technology in mobile banking applications and the greater the awareness of the ease of use and usefulness, the higher possibility for people to embrace QR code payment technology. Although the number of QR code payment users has been rising in Thailand, such users are mostly concentrated in Bangkok and big cities only. This is very likely because the majority of Thais still do not know about the ease of use and usefulness of this new technology.

RECOMMENDATIONS

1. Relevant organizations such as the Bank of Thailand and commercial banks should boost public awareness of the ease-of-use and usefulness of QR Code payment technology in mobile banking applications, because it will give people good attitudes toward such technology and increase its acceptance; and
2. Banks should develop QR code payment technology in mobile banking applications further so that it becomes even easier to use. When people find the technology more convenient, acceptance of such technology will grow.

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