

An Empirical Study on the Adoption of “Fintech” Service: Focused on Mobile Payment Services

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Abstract. This study conducted an analysis on the acceptance of payment-type Fintech services based on the Elaboration Likelihood Model by Petty and Cacioppo [1] and by applying variables associated with the Technology Acceptance Model. In addition, it analyzed the causal relationship between CFIP (Concern for Information Privacy) and Self-efficacy by adopting them as moderating variables. The implications of this study are that in invigorating payment-type Fintech services, convenience and usefulness are the most critical influential variables in terms of use, while from an institutional aspect, government deregulation and stronger security are called for.

Keywords: Elaboration Likelihood Model, Fintech, K Pay, Mobile Payment service

1 Introduction

The proliferation of the mobile payment market, led by easy payment services, is the fastest growing among Fintech services. The creation of “Apple Pay” by Apple triggered the shaping of the mobile easy payment market. The fastest-growing Korean equivalent is “K Pay”. However, there is a relative shortage of studies on what factors induce the acceptance or denial of Fintech services. Therefore, the objective of this research is to identify the factors that compel users of “K Pay”, Korea’s representative payment and settlement service, to accept Fintech services. In order to achieve the goal of this research, this study aimed to develop a model on Fintech service acceptance by developing a model based on the Elaboration Likelihood Model (ELM) proposed by Petty and Cacioppo [1] and selecting variables of the Technical Acceptance Model (TAM) proposed by Davis [2] and several other variables. In addition, it adopted Concern for Information Privacy (CFIP), which is becoming the most aggravating problem in Korea’s financial industry, and Self-efficacy as moderating variables to examine what impact they have on Intention to Use.

2 Literature Review

2.1 Fintech

Fintech is an industry which uses mobile-centered IT technology to enhance the efficiency of the financial system. “Fintech” as a term is a compound of “finance” and “technology”, and collectively refers to industrial changes forged from the convergence of financial services and IT. In terms of financial services, it is an innovative service which provides differentiated financial services using new technologies, such as mobile, social media, and IOT. A recent example is the mobile-based payment and settlement system, which is the most representative service in Korea. In terms of industry, it refers to the phenomenon where a non-financial business uses innovative technology to provide services, such as remittance, payment and settlement, and investment, without working with a financial company. Major examples are Apple Pay and AliPay [3].

2.2 Elaboration Likelihood Model

The Elaboration Likelihood Model (ELM) developed by Petty and Cacioppo [1] is a dual process theory describing how humans accept and process information. This explains how a message aiming to change behavior can influence an individual’s acceptance of information and technology. ELM is formed based on the results of information processing through the following two routes according to the attitude of users. First, a message recipient using the central route thoroughly examines new information, and assesses its advantages and disadvantages, and implications. In contrast, those using the peripheral route choose to swiftly accept or deny a service without active thinking. Receivers using the peripheral route conduct broad cognitive thinking, but they are always affected by the peripheral cue, which enables them to make speedy decisions.

3 Hypothesis Development

In a research conducted by Schierz et al. [4] on the acceptance intention of people in Germany who were able in using mobile devices, mobility had a positive impact on acceptance intention. In addition, a research by Joo et al. [5] also found that mobility affected the acceptance intention regarding mobile services. “Perceived usefulness” may be defined as the level of utility a certain product or service has for the user. Thus, in this study, the subjective level of utility of using payment-type Fintech in daily life or task may be defined as “Perceived usefulness”. In studies by Bhattacharjee and Sanford [6] and Kim et al. [7], it was found that when a user feels “usefulness” through various factors, this has a high impact on “Intention to use”. “Perceived ease of use” may be defined by the amount of effort a user dedicates to using an information technology. But because time is a constraint condition on users,

“Perceived ease of use” refers to when a user feels it is easier to use a certain technology more than others after time is controlled. In terms of mobile banking, the study by Lee and Shin [8] claimed that technology readiness and specialized knowledge affected “Ease of use”, which in turn had an impact on “Intention to use”.

H1: Personal mobility of payment-type Fintech services have a positive (+) effect on Intention to use.

H2: Perceived usefulness of payment-type Fintech services have a positive (+) effect on Intention to use.

H3: Perceived ease of use of payment-type Fintech services have a positive (+) effect on Intention to use.

Jarvenpaa et al. [9] explained credibility as the major reason variable regarding acceptance. One of K Pay’s most salient points is the huge number of users based on the domination of a market by a messenger platform. The messenger, which provides the K Pay service, is a social messenger most used in Korea, and the K Pay function is embedded inside the application. This opens the way for many users to easily approach K Pay and see the feedback from various users, which makes it highly susceptible to social influence.

H4: Credibility of payment-type Fintech services has a positive (+) effect on Intention to use.

H5: Social influence of payment-type Fintech services has a positive (+) effect on Intention to use.

Payment-type Fintech service can be defined as a service based on mobile banking, but in many studies, the use of mobile banking raises concerns of leakage or illegal use of personal information. In a research investigating the relationship between Concern for Information Privacy (CFIP) and Intention to use, Van Slyke et al. [10] found they had a causal relationship through a medium called ‘credibility’. Bandura [11] defined ‘Self-efficacy’ as the confidence in one’s own capability to successfully carry out an assignment.

H6: Concern for Information privacy of payment-type Fintech services has a negative (-) effect on Intention to use.

H7: Self-efficacy of payment-type Fintech services has a positive (+) effect on Intention to use.

In a research on the relationship between privacy of a closed-type SNS and Continuous Intention to use, Lim & Kang [12] found that concerns of privacy had a moderating effect on Perceived Psychological Privacy, Credibility and Benefits. Perceived expectation and self-efficacy compel positive attitude in deciding a certain action, and in the end, have an impact on user satisfaction and Intention to use.

H8: The Concern for Information privacy regarding payment-type Fintech services has a moderating effect on Intention to use.

H9: Self-efficacy of payment-type Fintech services has a moderating effect.

4 Research Model

Based on the hypotheses established in this study, the following Research Model was developed as in Figure 1.

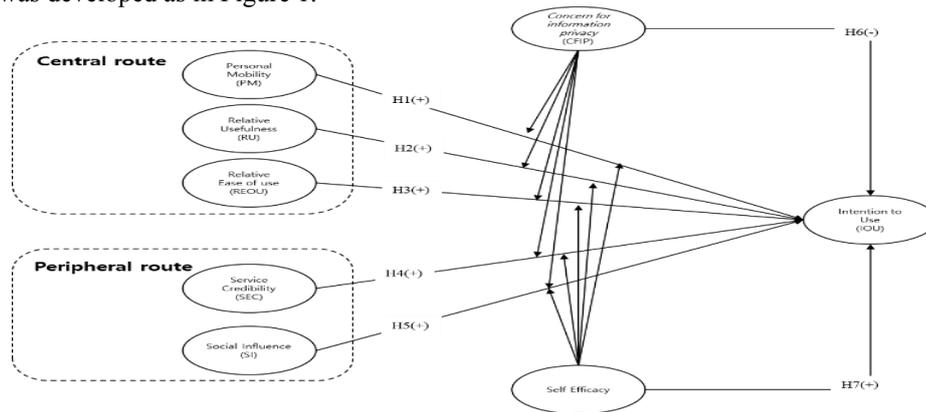


Fig. 1. Research Model

5 Conclusions

This study examined the relationship between the central and peripheral routes in the acceptance of new technology and service. It was found that the central route had a relatively higher impact compared to the peripheral route. However, the fact that mobility did not have an impact on intention to use implies that mobility is not particularly appealing to a user when carrying out a transaction. The results produced an academic implication, which supports the research results of Petty and Cacioppo [1] and Bhattacharjee and Sanford [6].

Therefore, the most critical factors in acceptance in this study were Usefulness and Ease of use, and they support the research by Venkatesh et al. [13]. Furthermore, it implies that swift registration, ease of use and a convenient UI/UX environment may act as the most significant factors in acceptance for potential users of payment-type Fintech services.

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