Understanding User's Switching Intention on Mobile Payment Platforms

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Abstract. With the development of mobile payment (m-payment) service, the competition accordingly increases among m-payment market. Users face multiple choices when adopting m-payment services. It is critical for both scholars and m-payments providers to understand what the underlying factors can influence user's switching from one incumbent m-payment platform to another. To solve this question, we employ a push-pull-mooring (PPM) framework to build the research model. We propose that user's dissatisfaction on incumbent m-payment provider is the main push factor for user's switching. The attractiveness of alternative and peer influence are the pull factors influencing user's switching. Cognitive lock-in, as the mooring factor, could influence switching intention directly. Additionally, we posit that cognitive lock-in can moderate the effects of both push and pull factors on user's switching intention. This study will use survey methodology and structural equation modelling approach to test the hypotheses.

Keywords: Mobile Payments, Switching Intention, Push-Pull-Mooring (PPM).

1   Introduction

In recent years, mobile payments (m-payments) have been rapidly gaining popularity among mobile users globally. The flourishing of m-payments escalates the intensive competition among different m-payment platforms. While there is a general upward trend in the m-payment market, the success of m-payment platform largely depends on consumer's initial adoption and continuous use intention. However, due to the low switch cost and abundant choices, consumers can easily change from one m-payment platform to another, or in most cases, they can have more than one m-payment platform at the same time. Hence, it is necessary for service providers to understand what factors may trigger user's switching among various platforms. Although prior literatures have shed some light on the antecedents of consumer's adoption on m-payment, there is few, if any works, have investigated user's switching intention. To fill this research gap, this study will draw on the theoretical lens of push-pull-mooring (PPM) framework to explore the factors that influence user's switching choices among m-payment platforms.

2 Literature Review

2.1 Mobile Payment Adoption

M-payment is summarized as "payment for goods, services, and bills with a mobile device such as mobile phone, smartphone, or personal digital assistant by taking advantage of wireless and other communication technologies" [1].

The prior m-payment adoption studies are mostly focused on initial adoption, while the post-adoption topic is relatively unexplored. The theoretical foundations are commonly based on four perspectives: technology acceptance model (TAM) [2-4], unified theory of acceptance and use of technology (UTAUT) [5, 6], diffusion of innovation (DOI) theory, and other mixed theories or models [7, 8].

Regarding the post-adoption, Zhou indicates that the m-payment continuous intention is positively related with trust, flow, and satisfaction [9], Yang et al provide a holistic view across pre-adoption to post-adoption from behavioral beliefs, social influence, and personal traits perspectives [10].

To the best of our knowledge, the m-payment post-adoption, specifically in terms of switching intention, is yet investigated before. The few pieces of research on continuous intention, though provide some important hints, are not enough to reveal the full mechanism of user's switching cross m-payment platforms. Therefore, this study may enrich the literatures of m-payment switching research.

2.2 User Switching Behavior

Switching is one of the unfavorable post-adoption behavior which draws much attention in IS research. It refers to the user's migration from one e-service provider to an alternative one [11]. The switching behavior not necessarily equals to user's abandonment of incumbent IS provider [12], but may involve a dynamic process that user decrease the use of incumbent provider by increasing the use of alternative provider [13].

Although the amount of switching behavior studies is continuously growing recently, no consensus has been made in terms of theories or frameworks [14]. Push-Pull-Mooring paradigm is one of the most frequently used lens to measure user IT switching behavior. By applying PPM framework, Wu et al. investigate the users switching intention on personal cloud storage service [15]; Sun et al. explore the key determinants of user's switching intention on mobile instant massage apps [16]; Chang et al. measure the consumer channel switching intention from physical to mobile stores [17].

This study will adopt the PPM framework in the context of m-payment by combining the relevant theories and constructs into push, pull, and mooring factors. The study may contribute to the literatures on user switch behavior, and further yield some implications for service providers to design more effective strategies in terms of user retaining.

3 Research Model

We build our research model based on PPM framework. Specifically, push factors relate to the limitations of original IT providers, while pull factors associate with the attractiveness of alternative choices. In addition, mooring factors cover the personal, cultural and social variables which may moderate the switching decision.
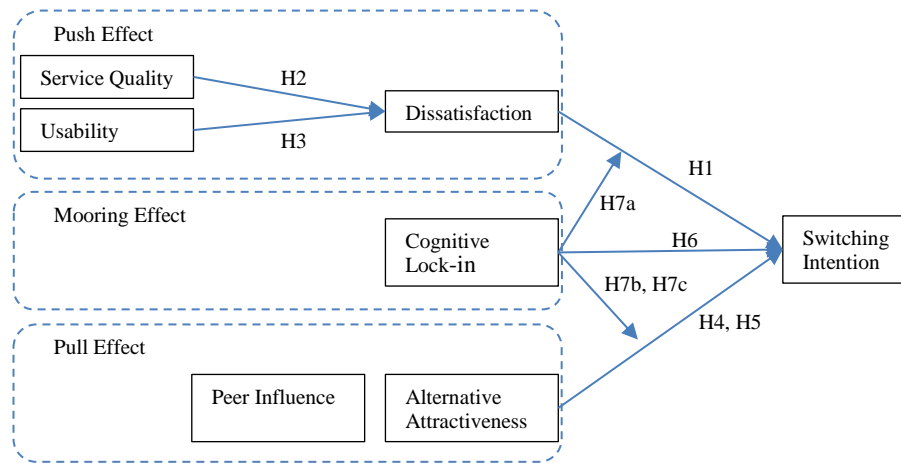

Fig. 1. Research Model

3.1 Push effects

The prior studies investigate the relationship between dissatisfaction and switching behavior, and the findings show that dissatisfied customers are more likely to generate switching intention [16, 18]. Therefore, we propose that the dissatisfaction can enhance user's switching intention in m-payment environment.

H1: User's dissatisfaction has positive effects on switching intention.

In mobile context, service quality is one of the most critical factors putting direct positive effects on consumer's satisfaction and indirect influence on usage intention [19, 20]. Usability, from product perspective, emphasize the ease for using certain technology artifact to accomplish the goals. The positive correlation relationship between usability and end-user's satisfaction has been validated by many studies [21-23]. Applying these findings to m-payment context, it is reasonable to argue that, the low level of user's perceived service quality or the low level of user's perceived usage all can result in user's dissatisfaction, which may further trigger user's switching intention. Thus, we posit the below hypotheses.

H2: Service quality of incumbent m-payment has negative effects on dissatisfaction.
H3: Usability of incumbent m-payment has negative effects on dissatisfaction.

3.2 Pull effects

Alternative attractiveness, referring to the user's perceptions regarding the availability of alternative choices in the market, is examined as an important predictor of switch behavior [24].In the competitive m-payment market, users do have multiple choices. When users perceive the key attributes of alternative m-payment provider is better than the original one, users are likely to switch. Hence, we posit that alternative attractiveness has positive effects on user's switching intention.

H4: Alternative attractiveness has positive effects on switching intention.

Peer influence is regarded as the positive predicator for user's adoption of new technology [25, 26]. M-payment is an emerging payment tool. We think that the quick diffusion of m-payment itself may heavily relay on peer influence. Additionally, with the trends that m-payment applications are embodying more and more social network elements or functions, m-payment is creating social ties between users besides the pure monetary transactions. Consequently, one user's m-payment behavior can put influence on other users via social bonds. Thus, we argue that peer influence can be a predicator for user's switching intention in m-payment context.

H5: Peer influence has positive effects on switching intention.

3.3 Mooring effects

Status quo bias theory has shown a good explanation ability on individual's disproportionately stickiness with the status quo in decision making [27]. Status quo bias leads to cognitive lock-in, which is defined as "consumers decreased propensity to search and switch after an initial investment" [28, 29]. Based on the definition, we argue that it is preferable for users staying at initial m-payment platform than switching to alternative ones, under the effects of lock-in. Thus, we posit the hypothesis below.

H6: Cognitive lock-in has negative effects on switching intention.

The prior study also suggests that, besides the direct effects on switching intention, the cognitive lock-in can influence switching intention indirectly via user's perceived sacrifices and benefits [29]. Following this logic, we further argue that cognitive lock-in makes user overestimate the sacrifices and underestimate the benefit to switch. In another word, cognitive lock-in can be a negative moderator both for push and pull effects. Therefore, we propose the following hypotheses.

H7a: Cognitive lock-in negatively moderates the effects of dissatisfaction on switching intention.

H7b: Cognitive lock-in negatively moderates the effects of alternative attractiveness on switching intention.

H7c: Cognitive lock-in negatively moderates the effects of peer influence on switching intention.

4   Methodology

This study will use survey methodology to collect data and employ structural equation modeling (SEM) to assess the theoretical model. We plan to recruit 200-300 participants who have experience of using more than one m-payment service before to participate the study. Each participant will be requested to answer a survey questionnaire with items to measure his or her switching intention on m-payments. All the measures of the constructs are adapted from the mature instruments from prior studies. The measurement items from Sun [16] will be adapted to measure switching intention, dissatisfaction and alternative attractiveness respectively. The items from Chang [17] ,Lee [21], Huang [26] ,and Li [29] will be adapted to measure service quality, usability, peer influence, and cognitive lock-in. The survey questionnaire will also capture user's demographic information and his or her experience of using m-payment services. Based on the data collected, the PLS method will be used to estimate the research model and test the hypotheses.

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