Doi: 01.0014/j.Interdisciplinary.2023.06.001

# Research on the willingness of Chinese mobile payment APP users to continue to use from the perspective of status quo bias

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**Abstract**

Based on the status quo bias, explore the impact of brand attachment on the continuous use of mobile payment platform users. Introducing the S-O-R model, which takes sunk costs and conversion costs as stimuli, ultimately affecting users' willingness to continue using through brand attachment. Conduct a questionnaire survey and conduct empirical analysis. Finally, it was found that sunk costs and conversion costs positively affect brand attachment, and brand attachment positively affects user willingness to use

**Key Words:** mobile payment APP, users' willingness, brand attachment, status quo bias, S-O-R model

## 1. Introduction

With the increasing number of mobile terminal device users and the continuous development of Internet applications, the payment methods of Chinese residents have undergone tremendous changes, and more and more people choose mobile payment. More convenient and flexible mobile payment has gradually become the mainstream payment method. According to iMedia Consulting's "2021 China Mobile Payment Industry Research Report", as of June 2021, the scale of China's online payment users reached 870 million. It accounts for 8 6.3% of the total Internet users. However, compared to January and February 2020, the use of mobile payment fell by 0.1%.[1] Due to cross-network externalities, it is difficult to maintain the user stickiness of a single mobile payment APP[2]. In this situation, the first problem to be solved by third-party mobile payment platforms should be how to attract new users and improve user stickiness. Given the above analysis, based on the analysis of the current situation deviation theory, this paper uses the S-O-R model to construct research on users' willingness to continue to use a mobile payment APP to help third-party platforms improve user brand loyalty.

## 2. Literature review and theoretical background

### 2.1 Factors influencing the continuous use of mobile payment

The current research stage mainly illustrates the factors users consider when choosing mobile payment. Guo Qianyu, based on (UTAUT), integrated cognitive risk theory to determine the model and proved that the significant factors affecting users' final use of mobile payment services are willing to use, convenience conditions, performance expectations, effort expectations, social impact, and cognitive risks[3]. Li Jing studied the influencing factors of consumers' mobile payment perception risk, proposed a theoretical model of mobile payment perceived risk influencing factors, and concluded that the impact of consumer cognition on psychological risk and social risk was negative and significant. Conclusion[4]. Chang Xiaolong used factor analysis, correlation analysis, and regression analysis. To find out the factors that significantly affect the use attitude of third-party payment mobile electronic wallets: perceived usefulness, perceived ease of use, perceived risk and compatibility, specifically manifested as perceived usefulness, perceived ease of use, and compatibility have a significant positive impact on the use attitude of third-party payment mobile electronic wallets, and perceived risk has a significant negative impact on the use attitude of third-party payment mobile electronic wallets[5]. Although these studies have to some extent, explained the reasons why users choose to use apps, they have never analyzed the reasons why users continue to use mobile payment platforms from the perspective of user emotions.

### 2.2 Status quo bias theory

Status quo bias explains an individual's preference to maintain the status quo, even if there are problems, and it will not be easily changed. W. Samuelson et al. believes rational decision-making, cognitive misunderstanding, and psychological commitment can lead to status quo bias[6]. After individuals make rational decisions based on Conversion Cost, considering the sunk cost effect and existing habits, they are accustomed to maintaining the status quo and eventually cause deviation due to loss aversion. This article takes sunk and switching costs as

why users continue using mobile platforms.

### 2.3 S-O-R theory

That is, "stimulus - individual physiological, psychological - response" The model believes that the consumer's behavior is composed of a series of psychological activities and actual activities, and a certain psychological motivation triggers its final purchase behavior. The stimulation from various factors will change consumer psychology, produce purchase motivation, and make a purchase decision. Mehrabian and Russell proposed the stimulus-organism-response model in 1974, which explains the psychological changes in consumers and the resulting Purchase behavior[7]. In recent years, the S-O-R theory has also been used to study third-party mobile payment apps. Sun Xiaoyang starts from the SOR theory and the presentation of price discounts; this study explores the impact of different discount methods on the willingness to use bank card payment methods in the mobile payment scenario of delivery platforms. Jiang Shan stimulates the body-response ( S-O-R) theory, starting with different stimuli amounts from the two aspects of satisfaction and user perception, it proves the perception value, and There is a positive correlation between satisfaction and their willingness to use[2]. This paper takes two theories of status quo bias as stimulus variables to study the impact of brand attachment on users' continuous use of mobile payment platforms.

## 3. Research hypotheses and models

### 3.1 Conversion Cost and sunk cost

According to the status quo bias theory, Conversion Costs and sunk costs are important factors for users to continue using existing platforms[7]. Studies have proved that user inertia is affected by transition costs and sunk costs[8], and the formation of personal habits motivates users to support the status quo[9], so users will invest more resources to maintain brand attachment[10]. Drawing on Li Liying's research on mobile reading apps, which discriminates between conversion cost and sunk cost[11], this paper defines conversion cost as the time and effort invested by users to replace the use of mobile payment platforms, and sunk cost refers to Users have invested time, energy, money, etc. in the original platform. Based on this article, the following hypothesis is made:

H1: Conversion Cost positively affects the brand attachment of mobile payment users

H2: Sunk costs positively affect the brand attachment of mobile payment users

### 3.2 Brand attachment

Brand attachment refers to the strength of the bond that connects the brand and the individual; this attachment affects people's cognitive behavior. In the field of mobile phone applications, it is found that brand attachment can significantly affect the continuous use willingness of mobile reading APP users[11]. It can be seen that Brand attachment influences users' willingness to continue to use to a certain extent, so make assumptions:

H3: Brand attachment influences mobile payment users' willingness to continue to use

Based on the above analysis and assumptions, this paper will introduce the S-O-R model based on the current quo bias theory and analyze the willingness of mobile payment users to continue to use a certain platform from the perspective of brand attachment and the model is as follows:

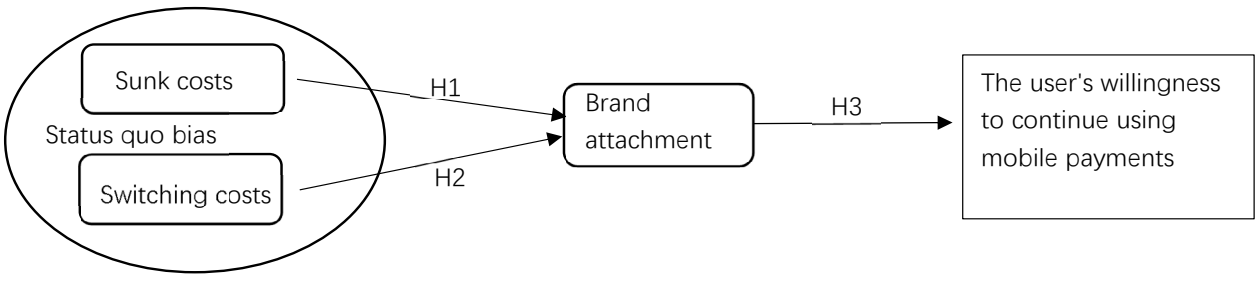


**Figure1: Hypothetical model**

## 4. Research process

### 4.1 Questionnaire design

Using the method of questionnaire research to prove the above model, the questionnaire used in this paper, based on the existing literature[12][13][14] is suitable for investigating the use of mobile payment APP modification using the Likert scale method; there are four variables, a total of 12 test questions, see the following table:

**Table1：questionnaire design**

| variable | Measurement problems |
|---|---|
| Conversion Cost (CC). | CC1: Replacing the other mobile payment APP function may not be as desired |
| | CC2: Changing to another mobile payment app takes time to get used to |
| | CC3: Replacing other mobile PPs requires more cost resources |
| Sunk cost (SC). | SC1: I've spent a lot of time and effort on this mobile payment APP |
| | SC2: I am already familiar with the use of this mobile payment APP |
| | SC3: I've taken the time to trust the platform that offers mobile payment services |
| Brand attachment (BA). | BA1: The mobile payment APP I am currently using can fully meet my personality needs |
| | BA2: The mobile payment APP provides enough functions for me to use |
| | BA3: This mobile payment APP is very suitable for my usage habits |
| Willingness to continue use (WCU). | WCU1: I will continue to use this mobile payment APP |
| | WCU2: I will recommend this mobile payment APP to my classmates and friends |
| | WC3: I will increase the frequency of use of this mobile payment APP |

## 4.2 Data Collection

The questionnaire was distributed on the questionnaire star platform; this time, 350 questionnaires were distributed, 17 invalid questionnaires were removed, and the final valid questionnaire was 333, and the questionnaire statistics are as follows:

**Table2：basic information of respondents**

| Basic information | Options | Number of samples | percentage |
|---|---|---|---|
| gender | man | 144 | 43.24% |
| | woman | 189 | 56.76% |
| age | 18-27 | 93 | 27.93% |
| | 28-45 | 195 | 58.56% |
| | Above 45 | 45 | 13.51% |
| Frequency of use | Always (every day) | 132 | 39.64% |
| | Often (weekly) | 150 | 45.05% |
| | Occasionally (monthly) | 45 | 13.51% |
| | seldom | 6 | 1.8% |

(1) Gender composition: women accounted for 56.76%, slightly higher than men. (2) Age composition: showing the characteristics of youth, 18-45 years old accounted for 86.49% (3) Regarding the frequency of use, the frequency of use of mobile payment A PP in the surveyed population is generally higher and has a relatively good representative.

**4.3.1 Measurement model reliability test**

In this paper, SPSSPRO is used to test the credit and validity of the measurement model. Existing literature studies believe Crobach's Alpha is greater than 0.7, and the combined reliability CR is greater than 0.6, indicating the scale has good reliability. The Crobach's Alpha, Combinatorial Reliability (CR), and Mean-Variance Extraction (AVE) studied in this paper are shown in the table:

**Table3：Option credit and validity research**

| variable | Crobach's Alpha | CR | AVE |
|---|---|---|---|
| Conversion Cost (CC). | 0.881 | 0.884 | 0.719 |
| Sunk cost (SC). | 0.882 | 0.885 | 0.721 |
| Brand attachment (BA). | 0.895 | 0.895 | 0.739 |
| Willingness to continue use (WCU). | 0.887 | 0.887 | 0.724 |

Crobach's alpha is greater than 0.7, and the combined reliability CR is greater than 0.6 for each variable, which is reliable and has good reliability.

#### 4.3.2 Model Fit Test

This paper uses SPSSPRO for the fitness test, as shown in the following table. The overall model indicators are within the standard value range, indicating that the model is well-adapted and can be used to study and verify the hypothesis.

**Table4：Model fit metrics**

| Common indicators | $X^2$ | df | P | Chi-square degrees of freedom ratio | GFI | RMSEA | RMR | CFI | NFI | NNFI |
|---|---|---|---|---|---|---|---|---|---|---|
| Criteria for judgment | - | - | >0.05 | <3 | >0.9 | <0.10 | <0.05 | >0.9 | >0.9 | >0.9 |
| value | 74.254 | 48 | 0.009 | 1.547 | 0.946 | 0.071 | 0.048 | 0.98 | 0.946 | 0.972 |

Note: ***, ****, * represent the significance levels of 1%, 5% and 10%, respectively

#### 4.3.3 Path analysis

In this paper, the significance of the Bootstrap repeat sampling path is tested, and the results are as follows:

（Figure2：:final research model）

Assuming that the significance test analysis (P) of H1, H2, and H3 is less than 0.05, the effect is significant. The $R^2$=0.83 of brand attachment and the $R^2$=0.786 of users' willingness to continue using mobile payment indicate that this paper has a good predictive effect[15]

## 5. Conclusion and analysis

### 5.1 Results and Discussion

With the continuous promotion of mobile payment, homogeneous mobile payment platforms are emerging one after another, and each platform must understand the motivation and needs of users if it wants to maintain the number of users. Because of this, this paper starts from the current deviation, introduces the "S-O-R" model, and explores the emotional level of users' continuous use of mobile payment APP Influencing factors. The above study found that brand attachment has a significant and decisive impact on users' willingness to continue to use mobile payments. Based on emotional factors, the study on the impact of brand attachment on the willingness to continue use by introducing brand attachment into the status quo bias is found to have a significant impact on user brand attachment, and the impact of switching cost is more significant. Indicating that the current user is invested in the software, the software is more unique, and it will generate brand dependence and increase the user's willingness to continue using the mobile payment software.

### 5.2 Recommendations

To improve user stickiness of mobile payment applications, the following suggestions are made for mobile payment operators:

Mobile payment platforms should fully consider personal emotional factors, hold regular activities through differentiated methods, appropriately increase customer investment in the platform, expand the deviation effect of the status quo, actively give customers a sense of identity and belonging, improve customers' brand dependence on the platform, and finally let customers choose to continue to use the platform.

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