

# What influence users' e-finance continuance intention? The moderating role of trust

E-finance  
continuance  
intention

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## Abstract

**Purpose** – The purpose of this paper is to identify antecedents of e-finance continuance intention with Alibaba's Yu'E Bao as an example.

**Design/methodology/approach** – An online questionnaire was used to collect the data ( $n = 293$ ), and partial least squares structural equation modeling was employed for data analysis. Four e-finance features (perceived reputation, website quality, e-finance familiarity and situational normality) are introduced with trust acting as a moderator between the users' satisfaction and continuance intention to use an e-finance platform.

**Findings** – The results find that website quality, familiarity and situational normality can influence perceived ease of use (PEOU) and perceived usefulness (PU). PEOU and PU, together with reputation, are positively associated with confirmation which further leads to satisfaction. The positive effects that satisfaction and trust have on e-finance continuance intention are confirmed, and trust is found to be a significant moderator on the relationship between satisfaction and continuance intention.

**Practical implications** – The findings can be used to guide e-finance providers to improve their platform design and services to retain users.

**Originality/value** – This study combines the theory of trust, Technology Acceptance Model and Expectations Confirmation Theory to investigate the factors that influence the continuance intention in the context of e-finance in China.

**Keywords** Satisfaction, Trust, Technology Acceptance Model, Continuance intention, E-finance, Expectations Confirmation Theory

**Paper type** Research paper

## 1. Introduction

Over the last few years, internet technologies have dramatically transformed financial industries, giving rise to e-finance. E-finance is the provision of financial services and markets via the internet (Claessens *et al.*, 2002). For example, in the brokerage market, it is now common for customers to trade online; bank customers are also able to conduct banking activities electronically. The internet allows users to have access to financial services without temporal and spatial constraints. With advancements in mobile, cloud and big data technologies, e-finance will continue to grow and penetrate to different areas of the financial industry in the future. However, because of the huge market potential, new entries from financial and non-financial entities have intensified the competition in e-finance, and users can easily switch to other e-finance platforms. Therefore, user retention is a crucial issue for e-finance providers to stay competitive.



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Previous literature has covered extensively user's continuance and customer retention in information technology adoption and e-commerce (Chiu *et al.*, 2009, 2014; Lin and Lekhawipat, 2014); yet limited attention has been paid to the context of e-finance. E-finance heavily relies on information technology platforms; thus, the use of e-finance services can be similar to the adoption of related technology. Meanwhile, the consumption of e-finance services involves online transaction, and thus is closely related to e-commerce. Sharing the characteristics of information technology, e-commerce product and financial services, e-finance is a unique phenomenon where the factors that influence its users' continuance intention remain unclear. Therefore, this study aims to understand what factors influence users' continuance intention of an e-finance platform.

Previous literature has referred to Technology Acceptance Model (TAM) in explaining user's adoption of information technology and has used Expectations Confirmation Theory (ECT) to explain consumer's repurchase in e-commerce (Gefen *et al.*, 2003; Benbasat and Barki, 2007; Brown *et al.*, 2014; Bhattacharjee, 2001). However, few studies have explored their combined effects in shaping user's continuance intention. Considering that e-finance incorporates the characteristics of information technology and e-commerce product, it is necessary to combine both theories. Moreover, trustworthiness is a crucial element for financial services, especially for e-finance which involves internet-related technologies. Although existing works have studied trust and its effects on consumer repurchase intention (i.e. Gefen, 2000; Kim and Benbasat, 2010; Fang *et al.*, 2014), there is no literature to date which examines the role of trust in retaining customers' continued usage of an e-finance platform. To better understand user retention in e-finance, this study integrates TAM, ECT and trust as the theoretical foundation and investigates the factors that influence users' continuance intention of e-finance platforms. Because e-finance is a novel information technology, users' perception on e-finance platform features tends to depend on the technology itself and users' experiences with other technologies. Thus, this study adds website quality, familiarity and situational normality as antecedents of TAM. Moreover, e-finance platforms can also be considered as e-commerce vendors, and therefore reputation is of great importance. The reputation of e-finance platform also reflects users' perception on platform features, and this study uses reputation to represent users' expectation on the platform. Specifically, this study uses Yu'E Bao as a typical example of e-finance platforms. Yu'E Bao allows customers to invest their idle balance in the money market fund with a minimum investment of RMB1 and no time restrictions or maturity regulations for fund redemption. Since its launch in June 2013, Yu'E Bao enjoyed a huge surge in popularity in China, and by March 2014 it has accumulated more than RMB400bn of assets, making up approximately more than 30 percent of the total money market fund assets in China (Cheng, 2014).

This study has the following contributions. First, it proposes and empirically tests the proposed antecedents of continuance intention in the context of e-finance in China. Second, this study incorporates the features of e-finance with TAM and ECT, respectively. While website quality, familiarity and situational normality are found to have significant effects on perceived ease of use (PEOU) and perceived usefulness (PU), reputation is confirmed to influence confirmation. Moreover, our study combines TAM and ECT and finds that PEOU and PU are positively associated with the level of confirmation. Furthermore, we integrate trust in ECT and confirm trust as a significant moderator in the relationship between satisfaction and continuance intention. Practically, this study provides useful insights that can assist e-finance providers to design and manage their platforms to retain users.

## 2. Theoretical frameworks

### 2.1 Technology Acceptance Model (TAM)

TAM, developed by Davis (1989), is one of the most widely accepted theoretical models in the information systems (IS) literature. It is based on the expectancy-value theory and the

theory of reasoned actions. It explains users' intention to use an information technology in the more specific context of IS (Davis, 1989). There are two underlying variables, namely, PU and PEOU which determine the intention of users to accept or reject an IT. PU refers to the degree to which individuals perceive the usage of a particular IT to be beneficial for them, while PEOU relates to the rate in which the usage of an IT would be free of effort.

TAM has been adopted to understand the acceptance and usage of information technology and has also been applied in understanding user behavior in online shopping (Bonera, 2011; Wallace and Sheetz, 2014). However, one main issue in the literatures is that TAM alone could not fully explain consumers repurchase intentions. Benbasat and Barki (2007) suggested that investigating antecedent variables affecting PU and PEOU can be a way to develop TAM further. Thus, in the context of e-finance, it is necessary to understand what e-finance features may serve as antecedents of TAM. In addition, combining TAM with other theoretical models would provide a more holistic understanding in explaining users' continuance intention of information technology, especially in an e-finance context. Hence, this paper will adopt TAM as one of the main theoretical foundations in forming the theoretical model explaining continuance intention of e-finance platform.

### 2.2 Expectations Confirmation Theory (ECT)

ECT was developed by Oliver (1980). The theory posits a process to examine the repurchase intentions of customers when they purchase a product or service, they will compare the *ex post* perceived performance with the *ex ante* expected performance. They then engage in another process to determine a degree of confirmation level of the intended performance of the product, which may affect the resulting degree of customers' satisfaction. The level of satisfaction will subsequently affect the extent which customers may repurchase the said product or service, higher satisfaction associated with higher likelihood of intention to repurchase and vice versa.

The ECT has been widely utilized to study consumers' post-purchase attitudes and behaviors (e.g. Oliver, 1980; Dabholkar *et al.*, 2000). However, e-finance services and consumer products, although sharing some common characteristics, are not entirely the same. For e-finance services, users' perceived performance is closely related to their perceptions of e-finance platforms. As a result, PU and PEOU in TAM are important elements of the perceived performance in ECT. Hence, ECT is combined with TAM to understand the continuance intention in e-finance.

### 2.3 Trust

Trust is generally defined as the belief in the other party having a high level of ability, integrity and benevolence. Trust functions as an important variable which determines a lasting relationship between business entities and their customers (Berry and Parasuraman, 2004). Previous studies have indicated that trust is an important determinant in examining repurchase intention of customers. Specifically in the context of e-commerce, it is difficult to minimize opportunistic behaviors of the vendors in an online setting (e.g. false advertising, inaccurate information representation and privacy concern) (Schefter and Reichheld, 2000), and thus trust becomes a critical factor to blanket this issue (Gefen, 2000; Schefter and Reichheld, 2000). In e-finance, both the online setting and the nature of financial services involve uncertainties and risks, thus highlighting the importance of trust. This study includes trust in the research model and investigates its moderating role in influencing e-finance continuance intention.

## 3. Research model and hypotheses development

Considering that e-finance is an integration of information technology, e-commerce product and financial service, this study proposes a research model that incorporates TAM and ECT. Given the nature of financial services, the effect of trust is considered in the research

model together with four variables related to e-finance features, namely, website quality, familiarity, situational normality and reputation. This study theorizes that for e-finance, website quality, familiarity and situational normality will have an influence on the PEOU and PU. This is in accordance with previous literature which highlights the importance of identifying antecedents of TAM (Benbasat and Barki, 2007). PEOU, PU and reputation are then hypothesized to be antecedents of confirmation which, in turn, affects satisfaction. Trust and satisfaction are further hypothesized to positively influence continuance intention of e-finance platform, where trust moderates the relationship between satisfaction and continuance intention. The research model is shown in Figure 1.

### 3.1 Effect of website quality on PEOU and PU quality

System quality is a way of measuring the characteristics of an e-commerce system regarding its usability, availability, reliability and response times. It has a significant influence on users' intention to use IT systems (DeLone and McLean, 2003). System quality along with information quality point to a set of attributes that correlate with the technology a user uses and evaluates. The user comes up with beliefs regarding these attributes and the beliefs end up representing the user's evaluation of the object with those same attributes (Ajzen and Fishbein, 2000). The more a user has positive evaluations of a technology, the more likely that the user will utilize that technology (Cenfetelli and Schwarz, 2011). When users believe a system is of high quality, they perceive that the system will have positive attributes, such as easy to use and give a good consuming experience, and these will increase the likelihood of system adoption (McKnight *et al.*, 2002).

Within the e-finance context where the quality of a website may influence the user's experience in using an e-commerce platform, it may affect the PEOU and PU of the platform

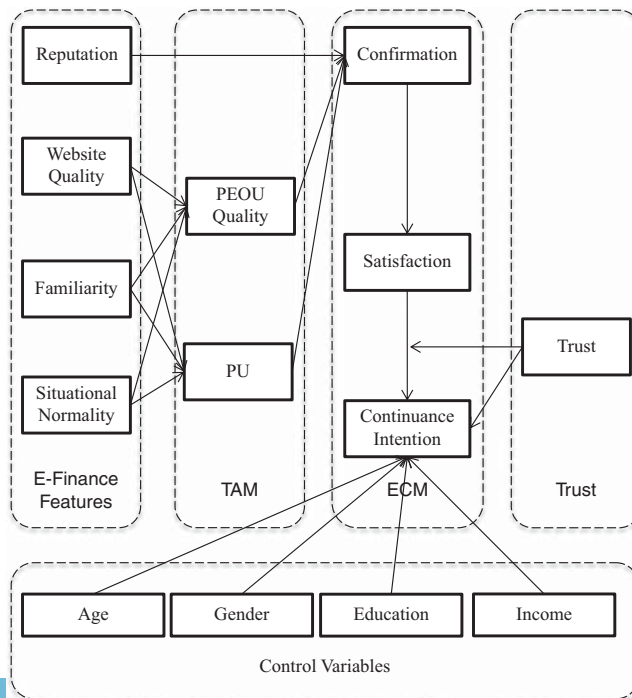


Figure 1.  
The proposed  
research model

(Fathema *et al.*, 2015). This is similar to findings from previous studies including Ha and Stoel (2009) who found that website attributes associated with the quality of the online shopping experience may influence users' PEOU of the system. Gu *et al.* (2009), Hausman and Siekpe (2009) and Fathema *et al.* (2015) have also found that computer factors including system capability and quality are determinants of PU. Hence, we posit that the quality of the Yu'E Bao website may influence the PEOU and PU of users:

*H1a.* Website quality is positively associated with the PEOU of an e-finance platform.

*H1b.* Website quality is positively associated with the PU of an e-finance platform.

### 3.2 Effect of e-finance familiarity on PEOU and PU

Familiarity as explained by Gefen *et al.* (2003, p. 63) is one's understanding of an entity, often based on previous interactions, experience and learning of "the what, who, how, and when of what is happening." A high level of familiarity results in an increased trust in business relationships by reducing social uncertainty and increasing the understanding of what is taking place in the present (Kumar, 1996; Gefen, 2000). In the e-commerce context, as the website is agreed to be a manifestation of an IT artifact (McCoy *et al.*, 2009; Lee and Kwon, 2011), familiarity refers to how well a customer understands the procedures involved in using a website, such as in what situation and how to go about inputting sensitive information like credit card details (Gefen, 2000).

Familiarity draws from previous experience and eliminates complexity, helps users bypass all non-useful process and information and enables a system to be utilized in an easier and more useful manner. Hence, increased familiarity also improves other factors that are important in transactions mediated by an IT artifact, such as the PEOU and PU of the users. This is because an increased familiarity implies a certain level of accumulated knowledge derived from previous successful experience with the system (Gefen, 2000). Therefore, we posit that a higher familiarity of an e-finance apparatus will influence the users' degree of PEOU and PU:

*H2a.* Familiarity is positively associated with the PEOU of an e-finance platform.

*H2b.* Familiarity is positively associated with the PU of an e-finance platform.

### 3.3 Effect of situational normality on PEOU and PU

McKnight *et al.* (1998, p. 478) defined situational normality as "the belief that success is likely because the situation is normal." When users perceive the level of situational normality as high, they assume that the environment where the transaction will take place is favorable, well ordered and appropriate. This leads to a perceived higher likelihood of the transaction being successful if it is to be conducted by the users. A high level of situational normality perceived by the users also infers that vendors have the attributes of competence, integrity and benevolence, hence leading to an assurance that a transaction can be successfully conducted over the specific IT artifact provided by that vendor (McKnight *et al.*, 2002). McKnight *et al.* (1998, 2002) have also postulated that perceived situational normality is associated with the level of users' comfort when conducting activities in an online environment, hence affecting their perceived favorability and likely success when purchasing products online.

This concept has been tested and verified in various studies (Shen *et al.*, 2015; Gefen *et al.*, 2003). In an online setting, user's expectation of a website is based on their previous experiences on other similar websites (Chen *et al.*, 2010; Koo *et al.*, 2011). If they find that there is sufficient situational normality associated with the online environment, they will find it easier to trust and make use of the website (Gefen *et al.*, 2003). Likewise, if they conclude that the

website differs in its procedures and processes to websites they have previously used, they tend to be more cautious and as a result may choose not to use the website (Gefen *et al.*, 2003). In an e-finance context, situational normality is an important antecedent to PEOU and PU because to use an e-finance service, users need to utilize an IT system which provides that particular financial service in an online setting. Hence, we propose that:

*H3a.* Situational normality is positively associated with the PEOU of an e-finance platform.

*H3b.* Situational normality is positively associated with the PU of an e-finance platform.

### 3.4 PEOU and PU on confirmation

TAM posits that the intention to adopt a new IT is influenced by two beliefs in the form of PU and PEOU of the technology (Davis, 1989). Websites, the medium in which various online services, such as e-commerce (Wei *et al.*, 2009; Luo *et al.*, 2012; Fang *et al.*, 2014), e-government (Koh *et al.*, 2008) and e-banking (Yu and Asgarkhani, 2015), are provided can be considered as IT artifacts (Gefen *et al.*, 2003). PEOU and PU have now been accepted to have a significant and positive relationship with the intention to adopt IT technologies (Brown *et al.*, 2012; Chong *et al.*, 2010; Gefen and Straub, 2000).

One interesting point to consider, however, is to examine whether PEOU and PU may confirm the users' presuppositions about an IT artifact. In this instance, confirmation refers to a cognitive representation of the evaluation of whether or not a consumer's expectations of a vendors products and services have been met (Bhattacharjee, 2001; Lee and Kwon, 2011). Bhattacharjee (2001) has noted that the perceived performance of an IT system that is used may affect the extent of which their *ex post* performances are confirmed. In an e-finance context, users will usually have an initial assumption on the type of services that they will receive from utilizing the product via the website. Thus, the users already have an *ex ante* PEOU and PU of the e-finance service even before its initial use. Drawing on this premise, we propose that when these *ex ante* PEOU and PU match the *ex post* PEOU and PU of the users, these will subsequently increase the degree of confirmation that the users have about the e-finance system:

*H4a.* PEOU is positively associated with the confirmation of an e-finance platform.

*H4b.* PU is positively associated with the confirmation of an e-finance platform.

### 3.5 Effect of reputation on confirmation

Reputation is commonly equated with a brand's equity and credibility, which has been considered as an imperative asset for organizations that require a long-term investment of effort and resources from consumers (Jarvenpaa *et al.*, 2000; McKnight *et al.*, 2002). Vendors are very motivated to gain and maintain a good reputation since consumers will trust vendors who have greater reputations (Ahuja, 2000). Previous studies (Hsu, Chuang and Hsu, 2014; Kim *et al.*, 2004; McKnight *et al.*, 2002) have shown that reputation is significantly considered by users when carrying out transactions online. These studies imply that users have a presupposition on what their expected outcome of transactions will be depending on their perceived reputation of the vendor.

A recent study by Zhang *et al.* (2015) noted that in the context of online group-buying behavior, a confirmation of the *ex ante* perceived reputation will lead to subsequent *ex post* perceived reputation. Primarily because customers can confirm or disconfirm their initial perceived reputation of vendors only after they have confirmed the benefits of engaging in the group-buying activity. In an e-finance setting, however, users generally already have a certain level of *ex ante* perceived reputation of the e-finance service provider before they decide to use the service and prefer to utilize an e-finance apparatus with the higher *ex ante* perceived reputation than the weak one in the first instance. Only after e-finance users

engage and utilize the service will they then be able to confirm whether the service provided by an e-finance platform is comparable *vis-à-vis* their initial *ex ante* perceived reputation. Hence, we propose that:

H5. Perceived reputation is positively associated with the confirmation of an e-finance platform.

### 3.6 Effect of confirmation on satisfaction

While satisfaction, as defined by Oliver (1981), refers to “the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer’s prior feelings about the consumption experience,” in an e-commerce context satisfaction specifically refers to “the evaluative outcome of first-hand transaction experience” (Fang *et al.*, 2014). These definitions highlight the link between the psychological state achieved by consumers (satisfaction) and a cognitive appraisal of the expectation performance discrepancy (confirmation). When there are low initial expectations and a high-perceived post-consumption performance, the result is a greater level of confirmation, which subsequently has a positive influence on customer’s satisfaction. It will also lead to disconfirmation in the event where there is a high initial expectation and a low post-consumption performance (Bhattacharjee, 2001).

In an e-finance context, satisfaction shows the extent of a consumer’s pleasure or disappointment in the transactional performance about his/her initial expectations (Chiu *et al.*, 2012). When customers believe that the benefits gained from a transaction outperform their expectations, they will achieve satisfaction (Recker, 2010). Previous studies (Lin *et al.*, 2005; Bhattacharjee, 2001; Chen *et al.*, 2010; Lee and Kwon, 2011) have all discovered significant links between the degree of confirmation and satisfaction. This is because with a high level of confirmation, users previously held *ex ante* performance of the IT system has been confirmed by the actual *ex post* performance. This will subsequently lead to users’ satisfaction on the said IT system. Because an e-finance platform delivers service through an IT system, we propose that this relationship would be applicable in an e-finance context:

H6. Confirmation is positively associated with the satisfaction of an e-finance platform.

### 3.7 Effect of satisfaction on continuance intention

To reduce cognitive effort, consumers try to form a set of beliefs through their past experiences that can be easily retrieved to infer in new situations (Kim *et al.*, 2005). When a customer is satisfied with a vendor, it implies that the customer is happy with the vendor’s equitable outcomes, and welfare of the customer from their previous experience (Fang *et al.*, 2014). Satisfaction also shows us the perception of a trusted party’s effective performance about how reliable they are and how well they performed in previous transactions (Ganesan, 1994), this indicates that the trusted party has the integrity and can deal with future transactions successfully. Therefore, satisfactory and fruitful past transactions are able to improve customer confidence for future transactions with the vendors and stimulate their intention to repurchase products or services offered by that preferred vendor (Mayer *et al.*, 1995).

Based on ECT, satisfaction of an IT system will positively affect their continuance intention toward the same IT system (Bhattacharjee, 2001; Brown *et al.*, 2014). Many studies have since confirmed this relationship (Halilovic and Cicic, 2011; Zhang *et al.*, 2015; Lee and Kwon, 2011). We hypothesize that similar with e-commerce services that utilize an IT artifact, an e-finance service that offer its service via an IT system will also have its users’ continuance intention to use the service based on their overall satisfaction with their experience in using the said service:

H7. Satisfaction is positively associated with the continuance intention to use an e-finance platform.

### 3.8 *The role of trust on satisfaction and continuance intention*

Trust involves believing that trusted parties will act accordingly with the expectations of the person trusting them by showing their integrity, benevolence and ability (Luhmann, 1979; Mayer *et al.*, 1995). Trust is a major factor that governs exchange relationships marked by vulnerability, uncertainty and dependence (Bradach and Eccles, 1989). Trust also increases the success of transactions as it reduces uncertainties that are usually difficult, and sometimes impossible, to achieve rationally (Luhmann, 1979). Studies on trust have established that trust is forged through institutional factors such as guarantees and safety nets (Shapiro, 1987; Gefen *et al.*, 2003). Therefore, trust reduces perceived risks, so it becomes manageable by letting consumers to subjectively eliminate potentially undesirable actions by the trusted party (Mayer *et al.*, 1995).

Several studies (Gefen, 2002; Li *et al.*, 2006; Lim *et al.*, 2006; Fang *et al.*, 2014) have all found trust to be a significant predictor of online purchase and repurchase intention, both initial and subsequent purchases. Deriving from these studies, we propose that in an e-finance context, trust should have a positive influence on users' continuance intention to use the platform:

*H8a.* Trust is positively associated with the continuance intention to use an e-finance platform.

One question that has not been addressed in previous literature, however, is the moderating role of trust on the relationship between users' satisfaction and their continuance intention to use an IT artifact. Since both trust and satisfaction have been shown to have a positive influence over continuance intention to use an IT platform, it is fair to assume that both would have an augmented effect on continuance intention. However, in this study, we propose that trust will negatively moderate the relationship between users' satisfaction and subsequent continuance intention because as discussed in the literature review section on trust, trust increases the likelihood of individuals to repurchase or reuse a product due to reduced risks associated with higher level of trust. In an e-finance context, trust is important because it ensures that all transactions conducted through the system are secure and will not lead to a loss of financial assets of the users. We hypothesize that this relationship trumps the relationship between satisfaction on the product and its subsequent intention to use, leading to its negative moderating effect on satisfaction and continuance intention:

*H8b.* Trust negatively moderates the relationship between satisfaction and continuance intention.

## 4. Methodology

In accordance to the previous literature (Koo *et al.*, 2011; Fang *et al.*, 2014; Luo *et al.*, 2012; Gefen *et al.*, 2003), a survey was designed to test the proposed theoretical model.

### 4.1 *Research design and setting*

Our theoretical model was tested in the context of Yu'E Bao users in Mainland China. We argue that Yu'E Bao is an appropriate representative of an e-finance platform since it is the first financial platform provided by Alibaba utilizing the IT artifact in an online setting. Testing the model on Yu'E Bao users as research subjects would provide a better generalizability of the findings.

The measurement items of key constructs in this study were adopted from previous well-established studies (Fang *et al.*, 2014; Gefen *et al.*, 2003). Our original questionnaire was designed in English. Because all of the research subjects are from Mainland China, the questionnaire was translated into Chinese. The translated questionnaire was checked and validated by other two experts in IS whose mother language is Chinese, and then



subsequently translated back into English to ensure the consistency of the content validity of the translated questionnaire (Brislin, 1970).

The questionnaire was designed and distributed via Qualtrics.com. This firm provides a slider-type scaled response to a question which encourages participants to drag a bar to indicate their level of preference rather than to select a pre-determined scaled point. Although past research has adopted different scaling points (Fang *et al.*, 2014 adopted a seven-point Likert scale, for example), we designed a ten-point sliding scale with two decimal points for all of the 49 items with 1 referring to strongly disagree while 10 referring to strongly agree. This semantic-differential type utilizes an ordinal scale in which the variability of the response is much higher than the traditional scaling technique (Himmelfarb, 1993). For example, a participant could select a value of 5.23 in a scale of 1–10, as opposed to choosing a pre-determined value of 1–10 with an exact one-point scaling. This scale provides a more reliable finding in a cross-cultural research context, especially when one is researching subjects from collectivist cultures, where utilization of semantic-differential type scale could yield a considerably more accurate finding and minimize biases in extreme response style as opposed to individuals from individualist cultures (Rocereto *et al.*, 2011). These bipolar pairs of the adjective (five points each) have also been proven to maintain reliable findings that are very similar to the more traditional Likert-type measurement, hence our rationale for utilizing this scale for our study (Friborg *et al.*, 2006).

After designing our initial questionnaire, a pilot study was conducted among ten Yu'E Bao users from a large university in Mainland China. No items were dropped after the pilot study. Additional six items were included in the questionnaire for personal information, with three items provided in a multiple choice questions (gender, monthly personal income and education) and the other three items provided in a blank type question (age, the length of the period of use of Yu'E Bao and the average account balance in Yu'E Bao). All items are provided in Table AI. Based on the pilot test, we found preliminary evidence validating the consistency and accuracy of the scales. We proceeded with the main data collection after the pilot study has been conducted satisfactorily.

#### 4.2 Data collection

The questionnaire was distributed using the random sampling technique. This method can provide every Yu'E Bao user with the same probability in participating in the survey, hence improving the generalizability of the findings (Cohen, 1988). Because we are trying to measure the users' continuance intention on an e-finance platform, responses were only counted if the subjects had used Yu'E Bao. In total, 319 responses were collected, and after screening the responses from those who had never used Yu'E Bao before, 293 responses were valid for further analysis.

### 5. Analysis and results

We used partial least squares structural equation modeling (PLS-SEM) to test our research model with the data collected. PLS-SEM is considered the “most fully developed and general system” (McDonald, 1996, p. 240). Additionally, it can model factors and composites, and thus is favored by researchers in various fields including IS (Marcoulides and Saunders, 2006), strategic management (Hair, Sarstedt, Pieper and Ringle, 2012) and marketing (Hair, Sarstedt, Ringle and Mena, 2012). It is also seen as the preferred statistical tool for research that looks into success factors (Albers, 2010). In this study, SmartPLS 3.0 was used to perform the analysis, and the results are presented in the following section.

#### 5.1 Respondents' profile and characteristics

The profile of the Yu'E Bao users involved in the study cuts across all major demographics. In total, 61.8 percent of the respondents were male while female respondents made up the

remaining 37.9 percent. The age range of the participants was between 18 and 67 with the mean age being 31. In terms of the educational level of the respondents, 53.8 percent indicated that they had a Bachelor's degree. The results also show that the income level of the respondents was mostly between RMB7,000 and RMB10,000 (26.3 percent), followed closely by those earning between RMB5,000 and RMB7,000 (25.3 percent), and RMB3,000 and RMB5,000 (21.2 percent). Table I shows the extent to which the respondents fit into various demographics, and the results are also similar with those of previous studies (Wamba *et al.*, 2017; Alalwan *et al.*, 2017; Ozturk *et al.*, 2016).

### 5.2 Assessment of measurement model

The measurement model was assessed to ensure that the measurements in this study were valid and reliable. Following the recommendations of Hair *et al.* (2014) and Wu and Chuang (2010), we tested the indicator reliability, internal consistency reliability, convergent validity and discriminant validity.

We examined the indicator reliability of our data by checking indicators' outer loadings (Hair *et al.*, 2014). All outer loadings were found to exceed the required value 0.7. The internal consistency reliability was assessed by examining the values of Cronbach's  $\alpha$  and composite reliability. Both values must exceed 0.7 to confirm the internal consistency

Demographic characteristics	<i>n</i>	%
<i>Gender</i>		
Female	111	37.90
Male	181	61.80
Missing	1	0.30
Total	293	100
<i>Age</i>		
18–25	92	31.40
26–35	121	41.20
36–45	48	16.28
46–55	22	7.51
55 or older	5	1.71
Missing	5	1.71
Total	293	100
<i>Education</i>		
High school	22	7.50
Diploma	66	22.60
Bachelor's degree	157	53.80
Master's degree	40	13.70
Doctorate degree	7	2.40
Missing	1	0.30
Total	293	100
<i>Income (RMB)</i>		
3,000 or less	32	10.90
3,000–5,000	62	21.20
5,000–7,000	74	25.30
7,000–10,000	77	26.30
10,000–15,000	27	9.20
15,000–20,000	6	2
20,000 or more	13	4.40
Missing	2	0.70
Total	293	100

**Table I.**  
Respondents  
demographic  
characteristics

reliability (Nunnally, 1978). As shown in Table II, the values of Cronbach's  $\alpha$  ranged from 0.821 to 0.973 and the values of composite reliability ranged from 0.907 to 0.978, thus confirming the high reliability of the data.

The convergent validity was assessed by measuring the average variance extraction (AVE) (Hair *et al.*, 2011, 2014). The value of AVE must exceed 0.50 to confirm convergent validity (Choi and Choi, 2009; Wu and Chuang, 2010). Table II shows that the AVE values of all constructs met the criteria and thus confirmed the convergent validity. To evaluate the discriminant validity, both cross-loadings and the Fornell–Larcker criterion were examined. None of the cross-loadings was greater than their corresponding outer loading, and Table III shows that a construct's correlations with other constructs were all smaller than the construct's AVE square root (Fornell and Larcker, 1981; Hair *et al.*, 2011, 2014). Therefore, the results confirmed the discriminant validity.

### 5.3 Common method bias

Before proceeding to examine the structural model, we followed the recommendations of Chin *et al.* (2012) and examined our data set for any common method bias that may result in the structural model being inflated. Several methods have been proposed and become established for testing common method bias (Harman, 1976; Podsakoff *et al.*, 2003; Bagozzi *et al.*, 1991). To test for any bias, we carried out the Harman's single-factor inspection on our complete data set (Harman, 1976). The results confirmed that no single factor was able to emerge alongside the single factor which accounted for 47.129 percent of the variance which is below the 50 percent mark as recommended by Podsakoff *et al.* (2003). We also followed the recommendation of Bagozzi *et al.* (1991) who suggested that another evidence for common method bias is the presence of high correlations ( $> 0.90$ ). An assessment of our correlation table (Table III) confirms that there is no correlation between two variables that surpasses the cut-off value of 0.9. Thus, the collected data have no issues of common method bias.

### 5.4 Assessment of structural model

After examining the measurement model, we assessed the structural model to test the hypotheses (Dinev and Hart, 2006; Fang *et al.*, 2014). Following recommendations of Hair *et al.* (2014), we assessed the collinearity between constructs (Goodhue *et al.*, 2011), significance and relevance of structural model relationships, the level of  $R^2$  (Carter and Russell, 2003) and the effect of  $f^2$  (Cohen and Cohen, 1983).

High collinearity between constructs may lead to an exaggerated estimation of path coefficients and thus should be avoided (Henseler *et al.*, 2016; Goodhue *et al.*, 2011). To measure the level of collinearity, we examine the VIF values between the constructs.

Construct	Cronbach's $\alpha$	Composite reliability	Average variance extraction (AVE)
Confirmation	0.934	0.95	0.791
Familiarity	0.864	0.907	0.711
Moderation effect of trust	0.957	0.933	0.48
PEOU	0.973	0.977	0.843
PU	0.972	0.978	0.899
Continuance intention	0.821	0.917	0.847
Reputation	0.947	0.962	0.862
Satisfaction	0.923	0.945	0.813
Situational normality	0.936	0.954	0.839
Trust	0.882	0.919	0.744
Website quality	0.944	0.952	0.687

**Table II.**  
Assessment of  
Cronbach's  $\alpha$ ,  
composite reliability  
and average variance  
extraction

**Table III.**  
Fornell–Larcker  
criterion

	Confirmation	Familiarity	PEOU	PU	Continuance intention	Reputation	Satisfaction	Situational normality	Trust	Website quality
Confirmation	0.889									
Familiarity	0.732	0.843								
PEOU	0.764	0.800	0.918							
PU	0.801	0.781	0.838	0.948						
Continuance intention	0.608	0.510	0.588	0.562	0.920					
Reputation	0.732	0.768	0.797	0.800	0.618	0.929				
Satisfaction	0.767	0.624	0.690	0.718	0.587	0.692	0.901			
Situational normality	0.472	0.428	0.465	0.514	0.353	0.486	0.438	0.916		
Trust	0.699	0.749	0.702	0.695	0.54	0.736	0.681	0.367	0.863	
Website quality	0.705	0.816	0.794	0.756	0.543	0.804	0.668	0.511	0.686	0.829

Collinearity exists when the VIF value exceeds 5.00. The VIF values in this study fell between 1 and 4.001, all below 5.0, indicating that there was no collinearity issue.

We then examined the structural model using a bootstrapping technique specifying 500 subsamples. As shown in Table IV, all our hypotheses were supported and the control variables (age, gender, education and income) were not significant. In addition, the  $R^2$  values were substantial for PEOU ( $R^2 = 0.704$ ) and confirmation ( $R^2 = 0.679$ ), and moderate for PU ( $R^2 = 0.673$ ), satisfaction ( $R^2 = 0.588$ ) and continuance intention ( $R^2 = 0.391$ ). The results show us that website quality, familiarity and situational normality together explained 70.4 percent of the total variance in PEOU and 67.3 percent of variance in PU. Moreover, 68 percent of the variance in confirmation was explained, together with 58.8 percent of variance in satisfaction and 39.1 percent in continuance intention. The results of  $R^2$  indicate that the structural model had accepted level of predictive accuracy.

The  $f^2$  indicates the extent to which a predictor variable has an effect on the endogenous variable (Henseler *et al.*, 2009). Cohen (1988) interpreted  $f^2$  values of 0.02, 0.15 and 0.35 as small, medium and large effects at the structural level, respectively. Results from Figure 2 show that situational normality has close to a small effect in producing  $R^2$  for PEOU ( $f^2 = 0.013$ ). Moreover, the moderation effect of trust on the relationship between satisfaction to continuance intention, the relationship of reputation to confirmation, PEOU to confirmation, trust to continuance intention, situational normality to PU, website quality to PU and satisfaction to continuance intention were also found to have small effect sizes ( $f^2 = 0.016, 0.027, 0.045, 0.053, 0.062, 0.071$  and  $0.113$ ). In addition, the relationships between website quality and PEOU, PU and confirmation, familiarity and PEOU, and familiarity and PU had effect sizes of 0.155, 0.168, 0.229 and 0.239 correspondingly, implying that the predictors of the relationships had medium effects in producing the  $R^2$  for their endogenous constructs. Furthermore, 1.428 is the effect size for predictive value of confirmation on satisfaction, suggesting that confirmation had large effect in producing the  $R^2$  for satisfaction.

To further interpret the moderating effect of trust, the interaction of trust and satisfaction on continuance intention was plotted. As shown in Figure 3, when satisfaction increases, continuance intention increases more rapidly for users with low level of trust

Hypothesis	Path coefficient	Remark
H1a: website quality → PEOU	0.390***	Accepted
H1b: website quality → PU	0.278***	Accepted
H2a: familiarity → PEOU	0.451***	Accepted
H2b: familiarity → PU	0.483***	Accepted
H3a: situational normality → PEOU	0.073**	Accepted
H3b: situational normality → PU	0.165***	Accepted
H4a: PEOU → confirmation	0.239***	Accepted
H4b: PU → confirmation	0.465***	Accepted
H5: reputation → confirmation	0.169***	Accepted
H6: confirmation → satisfaction	0.767***	Accepted
H7: satisfaction → continuance intention	0.479***	Accepted
H8a: trust → continuance intention	0.327***	Accepted
H8b: moderation effect of trust	-0.135***	Accepted
<i>Controls</i>		
Age	-0.040ns	
Gender	-0.029ns	
Education	0.038ns	
Income	0.025ns	
<b>Notes:</b> * $p < 0.10$ ; ** $p < 0.05$ ; *** $p < 0.01$		

**Table IV.**  
Results of hypothesis  
testing

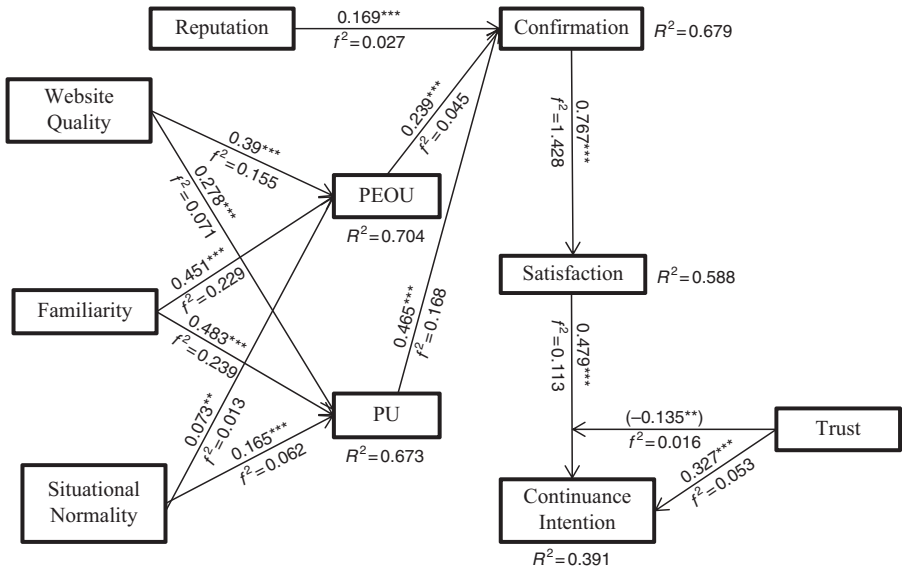
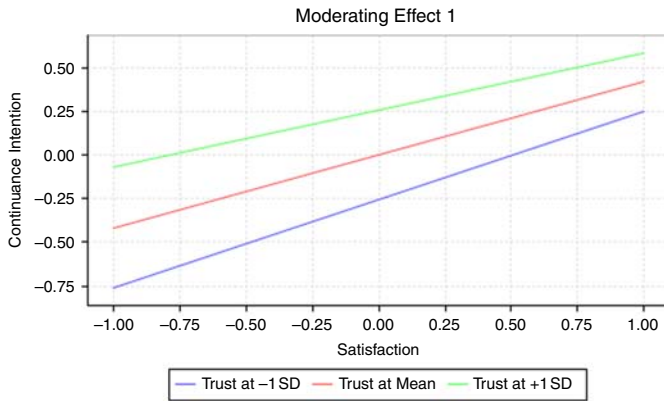


Figure 2. Results of research model

Notes: \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

Figure 3. Moderating effects of trust on the relationship between satisfaction and continuance intention



(mean-standard deviation) than for users with high level of trust (mean + standard deviation). This means, satisfaction has greater influence on continuance intention when trust is lower. It is also shown in the figure that, for same level of satisfaction, high level of trust is associated with high level of continuance intention.

## 6. Discussions

The study examined the factors that influence users' continuance intention toward an e-finance platform by employing the TAM, ECT and trust as a moderator to satisfaction and continuance intention.

Based on the results, we found that website quality, familiarity and situational normality are positively associated with both the PEOU and the PU of the e-finance platform.

The findings suggest that an e-finance platform with high-quality website that users find familiar and is perceived to have sufficient situational normality is more likely to be considered useful and easy to use. Because websites are important tools for e-finance platform and carry important information, the quality of the website should exemplify system quality and information quality. Our results are consistent with the findings of previous research which show that both system quality and information quality have positive and significant relationships with PEOU and PU (Ahn *et al.*, 2007). Moreover, referring to previous research, Wu and Wang (2005) found that a system's consistence with users' previous experiences is an important influencer on PU, whilst Gu *et al.* (2009) found that situational normality has a significant effect on PEOU. This study confirms their findings in e-finance context and extends their works by associating familiarity with PEOU and associating situational normality with PU.

PEOU and PU, together with reputation, are found to positively relate to confirmation. This indicates that a user's perception of e-finance platform performance – both based on previous usage experience and brand reputation – will influence the level of confirmation. Moreover, the path coefficients of PEOU and PU are larger than that of reputation. One possible explanation is that users may perceive e-finance as highly important and thus are more likely to rely on systematic processing when evaluating the platform (Maheswaran *et al.*, 1992). Systematic processing leads to more elaboration. As a result, factors that involve more elaborations, such as the PEOU and PU of the platform, tend to be more influential. In contrast, reputation of the platform is more likely to be evaluated heuristically, and thus is less influential for the evaluation of e-finance platform (Maheswaran *et al.*, 1992).

Our results also show that confirmation has positive effects on satisfaction which is further positively related to continuance intention. Such relationships are consistent with the findings from the repurchase intention-related literature, thus confirm ECT in the context of e-finance continuance intention (Oliver, 1980; Dabholkar *et al.*, 2000; Lin *et al.*, 2005).

In addition, while previous research usually studied trust as an antecedent of satisfaction (Hsu, Chang *et al.*, 2014; Wu, 2013; Fang *et al.*, 2011), our results as illustrated in Figure 3 indicate that trust has negative moderating effects on the relationship between satisfaction and continuance intention. As displayed in Figure 3, when trust in the platform is low (blue line), the role of satisfaction increases and should be high for users to have positive continuance intention. Moreover, as the level of trust becomes higher (red and green lines), the role of satisfaction is reduced and its influence on users' continuance intention becomes less significant.

This suggests that as the trust between the users and an e-finance platform increases, the extent to which their continuance intention is influenced by their satisfaction in previous transactions will subsequently decrease. This implies that a high level of trust may mitigate the negative influence of low satisfaction on users' continuance intention. This finding might be explained by the fact that our research is conducted within the context of e-finance platform in China where trust might play a more important role than satisfaction in the handling of financial services.

## 7. Conclusions, contributions and future research

Retaining the usage of e-finance platform is crucial for the success of e-finance. This study combines TAM, ECT and trust to investigate the antecedents of continuance intention of an e-finance platform. We found that website quality, familiarity and situational normality are positively related to PEOU and PU. PEOU and PU, together with reputation, then have positive effects on confirmation. Confirmation is found to further be positively associated with satisfaction that leads to continuance intention, and the relationship between satisfaction and continuance intention is negatively moderated by trust.

This study has several contributions to previous literature. First, this is one of the first studies that empirically examined the antecedents to continuance intention of an e-finance

services platform. Although previous studies on continuance intentions have examined various IT artifacts, none have dealt with a unique e-finance technology such as Yu'E Bao, which has enjoyed an incredibly rapid success followed by a waning user base and a decline in the accumulated capital. Second, our study provides theoretical contributions to existing continuance intention studies by applying and extending TAM and ECT, and contextualizing it within the framework of e-finance. This complies with various researchers emphasizing the importance of contextual certainty in theory building, where the goal of producing a good theory does not rely simply on good deduction of extant theory, but also from nuances that could be obtained from specific case studies that are examined in a contextualized frameworks (Blut *et al.*, 2015; Lacity and Khan, 2016; Whetten, 2009). Third, in this study, four salient features of an e-finance were identified as antecedents to the TAM and ECT. Website quality, familiarity and situational normality have been designated as determinants for PEOU and PU. Further reiterating calls from researchers on the importance of identifying antecedents to TAM (Benbasat and Barki, 2007) while maintaining parsimony in the theory-building phase (Eisenhardt, 1989; Eisenhardt and Graebner, 2007). Furthermore, perceived reputation was incorporated to be associated with confirmation, while trust was employed as an influencing factor to continuance intention and a moderator to the relationship between satisfaction and continuance intention, thus extending the ECT.

Moreover, our study has found that PEOU, PU and reputation have a significant influence on the degree to which users will find that an e-finance platform confirms what they expected it to be. It is in accordance with what has been found by Halilovic and Cicic (2011) and Hsu and Chiu (2004), PU has an overall impact in the shaping of a user's continuance intention. However, findings contradict Bhattacharjee (2001) who concluded that while PEOU may influence initial usage decision, it does not impact the continuance decision.

In addition, our study also contributes to the trust-related literature by confirming the negative moderation effect trust has on the relationship between satisfaction and continuance intention. In previous studies that combine trust and ECT, trust is often considered as an antecedent of satisfaction. However, we extend the roles of trust by considering and confirming its moderation effect in ECT.

This study also has several practical implications. First, based on our finding, e-finance providers should put more efforts in building the trust with their users. With high level of trust, users may choose to stay with the e-finance platform even if they encounter dissatisfaction in the short term because the experience of the dissatisfactory transaction is balanced out by the high level of trust. To build trust, managers need to ensure their platforms have the ability to fulfill desirable functions. In addition, managers also need to establish an approachable and responsive customer service system, where the service provider should be trained to act honestly and care about the users. Second, e-finance providers should carefully design high-quality websites with features that users are familiar with. The e-finance providers should try to make their websites attractive, fast and stable for users to make transactions, and implement a clear and well-organized design to facilitate navigation and information searching. While designing the website, e-finance providers should seek to ensure the features and functions of their websites are consistent with their users' habits and prior experiences. To do so, they can consider their users' demographic information, understand their usage of internet, track user browsing behaviors and conduct user surveys to learn their habits. Moreover, e-finance providers should take actions to offer sufficient situational normality. The operation processes and interactions in the e-finance platform should be designed in the same way as most other typical e-finance platforms. The type and amount of information required and provided by the platform should also be the same as with other similar platforms.



Future research can extend this study in the following directions. First, this is one of the first studies to propose and examine a theoretical model that identifies factors influencing users' continuance intentions in e-finance context. Further studies are needed to confirm the validity and generalizability of our findings. Second, further studies might be able to extend this study by identifying some culture-sensitive variables about our theoretical model (Eisenhardt and Graebner, 2007). Because Yu'E Bao is a Chinese e-finance product, our research subjects are from China, and hence we do not yet know whether our model may yield similar results in other contexts, especially when taking into account that research subjects from other countries whose cultural backgrounds may significantly differ from those of the Chinese. Finally, although we have explained our reasons for choosing Yu'E Bao as a representative of an e-finance platform, further research examining other companies which offer similar services in different cultural backgrounds would benefit the literature tremendously by providing a comparative insight into how our theoretical model may or may not hold true when applied to e-finance apparatus other than Yu'E Bao, in a possibly different cultural context.

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### Further reading

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Measurement items	
	Continuance intention (RI) (adapted from Bhattacharjee, 2001)
RI1	I plan to add more money to my Yu'E Bao account
RI2	I will continue to leave my money in Yu'E Bao account
	Trust in Yu'E Bao (TY) (adapted from Gefen <i>et al.</i> , 2003)
	Based on the precious experience, what do you think about Yu'E Bao:
TY1	I believe that Yu'E Bao knows where to invest my money
TY2	I believe that Yu'E Bao knows how to avoid risks
TY3	Yu'E Bao is not opportunistic
TY4	Yu'E Bao knows its customers
	Satisfaction (S) (adapted from Bhattacharjee, 2001)
	Based on the precious experience, how do you feel about your Yu'E Bao:
S1	Very dissatisfied/Very satisfied
S2	Very displeased/Very pleased
S3	Very frustrated/Very contented
S4	Absolutely terrible/Absolutely delighted
	Confirmation (C) (adapted from Bhattacharjee, 2001)
C1	My experience with depositing money in Yu'E Bao was better than what I expected
C2	My experience with removing money from Yu'E Bao was better than what I expected
C3	The service level provided by Yu'E Bao was better than what I expected
C4	Overall, the most of my expectations of Yu'E Bao were confirmed
C5	Overall, I feel my experiences with Yu'E Bao have been excellent
	Perceived usefulness (PU) (adapted from Davis, 1989)
PU1	Buying Yu'E Bao improves my ability to manage my idle cash
PU2	Buying Yu'E Bao improves my productivity in managing my idle cash
PU3	Buying Yu'E Bao improves my effectiveness in managing my idle cash
PU4	I would find that Yu'E Bao is useful in managing my idle cash
PU5	Yu'E Bao makes it easier to manage my idle cash
	Perceived ease of use (PEOU) (adapted from Davis, 1989)
PEOU1	Learning to operate Yu'E Bao would be easy for me
PEOU2	It is easy to get Yu'E Bao to do what I want it to do
PEOU3	My interaction with Yu'E Bao is understandable
PEOU4	Yu'E Bao is flexible to interact with
PEOU5	It would be easy to become skillful at depositing money in Yu'E Bao account
PEOU6	It would be easy to become skillful at removing money from Yu'E Bao account
PEOU7	I find Yu'E Bao easy to use
PEOU8	It is easy to remove the interest from my Yu'E Bao account
	Familiarity (F) (adapted from Gefen, 2000)
F1	I am familiar with Yu'E Bao through online social medias, such as Wechat and Weibo
F2	I am familiar with Yu'E Bao through depositing money in Yu'E Bao
F3	I am familiar with Yu'E Bao through removing money from Yu'E Bao
F4	I am familiar with Yu'E Bao through doing business with the other part of Alibaba Group (the parent company of Yu'E Bao)
	Website quality (WQ) (adapted from DeLone and McLean, 2003)
WQ1	Yu'E Bao's website is well organized
WQ2	Yu'E Bao's website is easy to navigate
WQ3	Yu'E Bao's website is easy to find information that I want
WQ4	Yu'E Bao's website is fast in transaction
WQ5	Yu'E Bao's website is interesting
WQ6	Yu'E Bao's website is exciting
WQ7	Yu'E Bao's website is entertaining

Table AI.  
(continued) Questionnaire items

Table AI.

	Measurement items
WQ8	Yu'E Bao's website has a clear layout
WQ9	Yu'E Bao's website has high attention-grabbing ability
	Reputation (R) (adapted from Jarvenpaa <i>et al.</i> , 2000)
R1	Yu'E Bao has an excellent online reputation
R2	Yu'E Bao has an excellent public image
R3	I hardly hear negative news about Yu'E Bao
R4	Yu'E Bao has an excellent reputation among my friends
	Situational normality of Yu'E Bao (SN) (adapted from Gefen <i>et al.</i> , 2003)
SN1	The steps of depositing money in Yu'E Bao are typical of other similar websites
SN2	The steps of removing money from Yu'E Bao are typical of other similar websites
SN3	The information requested of me at the website is the type of information most similar type websites request
SN4	The nature of the interaction with the website is the type of information requested by similar type websites
	Individual information
	1. Your gender is: male/female
	2. Your age is _____
	3. Your highest education degree is _____
	4. Your monthly income is around (yuan): lower than 3,000/3,000–5,000/5,000–7,000/7,000–10,000/10,000–15,000/15,000–20,000/more than 20,000

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