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## The Examination on Mobile Banking's Use Behavior of Retired Chinese in Shaoxing

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### Abstract

This study aims to determine the factors that affect how retired Chinese customers use mobile banking. The conceptual framework focuses on the relationship between perceived usefulness, trust, pricing value, user satisfaction, behavioral intention and use behavior of mobile banking applications. The researcher employed quantitative method to distribute questionnaires to 450 retired Chinese in Shaoxing, who have been using the Agricultural Bank of China (ABC), China Construction Bank (CCB), and Industrial and Commercial Bank of China (ICBC)'s mobile banking applications. The nonprobability sample includes judgmental, quota, convenience sampling. Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were used for data analysis, including model fit analysis, reliability and construct validity. The results show that perceived usefulness, pricing value, trust, and user satisfaction have significant impacts on behavioral intention, and perceived usefulness has a significant impact on user satisfaction, while behavioral intention has a significant impact on user behavior. Six hypotheses were accepted to fulfill research objectives. Therefore, mobile banking application development needs to pay more attention to the perceived usefulness, pricing value, trust, behavioral intention, and user satisfaction aspects of the research and development efforts.

Keywords: mobile banking, pricing value, user satisfaction, behavioral intention, use behavior

### Introduction

With the deepening of Internet technology and the popularity of smartphones among all people, China is way ahead of all other countries in terms of smartphone users. The Chinese market will have more than 950 million smartphone users in 2022, larger than India, the United States, and Indonesia combined, which rank second to fourth (Laricchia, 2023). As an essential service in daily life, banking is undergoing unprecedented changes under the trend of the digital economy. According to the statistics of the China Banking and Insurance Regulatory Commission (CBIRC) in 2020, the off-counter business handling rate of banks and other institutional customers reached 92.24%, while in 2012, the off-counter business handling rate was 54.37%, and the scale of customers choosing to conduct business based on

mobile banking is growing. In particular, the new crown epidemic's impact has made face-to-face business over the counter less convenient and secure. Mobile banking has seen healthy and rapid growth due to its greater convenience, as shown in the 2022 China Mobile Banking Comprehensive Operation Report jointly released by China Electronic Banking Network and ECOSYS: In the first quarter of 2022, Mobile banking transaction size was US\$2.18 trillion despite the overall decline, with 490 million monthly active users (Deloitte China Center for Financial Services, n.d.).

As an essential service of daily life, banking is undergoing unprecedented changes under the trend of the digital economy. With the increasing penetration of high-speed internet and electronic devices, digital banking has become increasingly pervasive. In addition to banking websites and mobile banking apps, electronic payment services recently emerged as alternative digital banking platforms. Moreover, this trend has been accelerated by the COVID-19 pandemic. Many banks have shut down their physical branches and replaced them with more digital banking platforms (Jin & Fan, 2022).

As face-to-face interactions in physical banks have been gradually replaced by digital user interfaces on websites and mobile apps, researchers have investigated people's experiences and attitudes toward online and mobile banking (Hua, 2008) and digital payment. However, such studies primarily focused on young adults. Compared to young adults, older adults tend to use technologies to a lesser extent and feel more reluctant to adopt new technologies (Olson et al., 2011). They also tend to encounter more difficulties when using new technologies due to age-related declines and fewer educational opportunities to keep up with the technology. Consequently, older adults might face more challenges when adopting digital banking.

On the other hand, compared to young adults, older adults have accumulated more experiences with various technologies over decades and may have different criteria for good technology. As a result, understanding what older adults say about technology would be beneficial for designing more inclusive technology, not just for themselves but for everyone. After all, aging is a process that everyone is experiencing. Thus, it is critical to understand older adults' banking experiences to improve the accessibility of emerging digital banking platforms (Jin & Fan, 2022).

### **Mobile Banking App and Retired Chinese**

With the development of information and communication technology (ICT), banking services are becoming increasingly digital. While digital banking can be convenient for digitally adept people, such a rapid technological shift may pose challenges for those accustomed to traditional brick-and-mortar banking, such as the elderly. According to the data of the seventh census in China (National Bureau of Statistics, n.d.), the proportion of the population aged 60 and above reached 18.70%, among which the proportion of the population aged 65 and above reached 13.50%. The main characteristics of the aging population are as follows:

First, the size of the elderly population is huge. There are 260 million people aged 60 and above in China, among which 190 million are aged 65 and above. Among the 31 provinces in China, 16 provinces have more than 5 million people aged 65 and above, among which 6 provinces have more than 10 million elderly population. Second, the aging process

has accelerated significantly. From 2010 to 2020, the proportion of the population aged 60 and above rose by 5.44 percentage points, and the population aged 65 and above rose by 4.63 percentage points. Compared with the previous decade, the rise has increased by 2.51 and 2.72 percentage points, respectively. Thirdly, the difference between urban and rural areas in the level of aging is obvious. Nationally, the proportion of people aged 60 and 65 and above in rural areas is 23.81% and 17.72%, respectively, 7.99 and 6.61 percentage points higher than that in urban areas. The urban-rural differences in the level of aging are closely related to population mobility and economic and social reasons. Fourth, the quality of the elderly population has been improving. 36.69 million people aged 60 and above have a high school education or above, 20.85 million more than in 2010; the proportion of people with a high school education or above is 13.90%, 4.98 percentage points higher than 10 years ago. 10 years, China's population life expectancy has also continued to improve. In 2020, a population projection for the year 2020, indicating that there will be an estimated 35.8 million individuals who are aged 80 years or older in that specific year, accounting for 2.54% of the total population, an increase of 14.85 million people and 0.98 percentage points compared with 2010 (World Health Organization, n.d.).

Population aging is an important trend of social development and the basic national condition of China for a longer period in the future, which is both a challenge and an opportunity. For example, the aging population will reduce the labor force supply, increase the burden of family retirement, and the pressure of basic public service supply from the perspective of challenges. At the same time, we should also see that population aging promotes the development of the “silver hair economy,” expanding the consumption of elderly products and services and helping promote technological progress. This all brings some new opportunities. Moreover, within China's population aged 60 and above, 55.83% of individuals in the 60-69 age group fall into the younger segment of that range. Most of these lower-age older adults have the advantages of knowledge, experience, and skills, and their physical condition is still OK, so they have a greater potential to play their roles. Moreover, this part of the population holds more wealth in this society, and even most children have been received by their parents (Jin & Fan, 2022).

As of December 2020, the active mobile banking users of commercial banks in China have exceeded 420 million, an increase of 6.3% compared with 2019. Regarding the scale of domestic commercial banks' mobile banking users, ICBC, Construction Bank, and Agricultural Bank rank among the top three commercial banks in China regarding mobile banking customers, with their scale exceeding 80 million households. Commercial banks are rapidly developing their retail banking strategies through mobile banking, expanding the scale of customers, and enhancing the stickiness of customers with the banks. The research problem is that limited research has addresses the retired consumer's behavior to use mobile banking in China. The research question is how the retired Chinese tend to adopt the mobile banking and what factor that could influence the use behavior. The objective of this paper is to investigate the main factors influencing the use of mobile banking by retired users of these three mobile banks, hoping that it will benefit the digital usage of the elderly.

## Literature Review

### Perceived Usefulness

Perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). Davis et al. (1989) also previously identified usefulness as the most powerful predictive variable in information technology usage. In their eyes, PU is defined as the belief interpreted by the usability level of mobile banking services. Attitude is the degree of a positive or negative assessment of users using mobile banking services. Since then, various studies focused on the technology acceptance model (TAM) have demonstrated that perceived usefulness is the key determinant factor in cases in which users intend to use a new IS or Internet technology. PU measures the individual's subjective assessment of the utility of new information technology products (Ashsifa, 2020).

Perceived usefulness has been applied to several types of information technology to measure innovation performance. The mobile banking application is one of digital banking's information technology developments, and its use is closely linked to the benefits it provides. The usefulness of the mobile banking application to clients will be closely related to its application, which will impact user satisfaction. When a mobile banking application has several benefits and offers a relative advantage, it can enhance user satisfaction. This statement is supported by Ashsifa (2020) research, which found that perceived usefulness positively impacts customer satisfaction.

With regards to m-banking, perceived usefulness signifies that a bank client recognizes the service as improving their performance and increasing their productivity and effectiveness. Existing studies by Perdigoto and Picoto (2012) have found that perceived usefulness is a vital factor in determining the usage of m-banking by consumers. As it stands, the reason why people use mobile banking systems is because they think that they are useful. At the same time, as perceived usefulness remains important in the long term (Venkatesh & Morris, 2000), we can infer that the user that is individually perceived through using m-banking applications will have, after that, an influence on actual usage. Therefore, the researcher hypothesizes that:

Hypothesis 1: Perceived usefulness has a significant impact on user satisfaction.

Hypothesis 2: Perceived usefulness has a significant impact on Behavioral Intention.

### User Satisfaction

User satisfaction has proven useful in evaluating the effects of IS and Internet/Web systems and has also been identified as the principal factor in the intention to use new technology (Negash et al., 2003). DeLone and McLean (2003) asserted that user satisfaction with the system influences intention to use, which becomes substantially stronger if the person, group, or organizational performance is improved after the system is used. In addition, they selected user satisfaction as the attitude variable and revealed that user satisfaction is related to both intentions to use and usage (Cenfetelli et al., 2005; Konradta et al., 2006). Kotler and Keller (2016) define satisfaction as pleasure or discontent by contrasting their expectations with the product's performance. Satisfaction is a function of a product or service's perception, and it can be defined as an assessment of a product or service's actual performance (Toor et al., 2016).

According to Konradta et al. (2006), user satisfaction is “the affective attitude towards a specific computer application of someone who interacts with the application directly.” Additionally, Kotler and Keller (2016) defined user satisfaction as “the net feeling of pleasure or displeasure that results from aggregating all the benefits that a person hopes to receive from interaction with the information systems.” Perdigoto and Picoto (2012) defines user satisfaction as “a subjective evaluation of the various consequences (individual, organizational, social consequences of IS use) evaluated on a pleasant-unpleasant continuum.” Hence, a hypothesis is set:

Hypothesis 3: User satisfaction has a significant impact on behavioral intention.

### **Trust**

With regards to m-banking, perceived usefulness signifies that a bank client recognizes the service as improving their performance and increasing their productivity and effectiveness. Existing studies (Luarn & Lin, 2005) have found that perceived usefulness is a vital factor in determining the usage of m-banking by consumers.

As it stands, the reason why people use mobile banking systems is because they think that they are useful. At the same time, as perceived usefulness remains important in the long term (Venkatesh & Morris, 2000), we can infer that the user that is individually perceived through using m-banking applications will have, after that, an influence on actual usage.

Trust is important in providing satisfaction and expected outcomes for m-commerce users (Li & Yeh, 2010). User trust and privacy, including security, are required to ensure users' confidence in m-banking services (Gu et al., 2009; Li & Yeh, 2010). There is a significant relationship between trust and privacy and the adoption of mobile commerce applications. Where there is a lack of trust in technology, it will not be adopted and defined as a role model leader who engages followers. Accordingly, a hypothesis is developed:

Hypothesis 4: Trust has a significant impact on behavioral intention.

### **Price Value**

Price value corresponds to the user-perceived benefit of a technology compared to the cost associated with its use (Brown & Venkatesh, 2005). Thus, the cost-benefit ratio emerges as a critical concern for users (Venkatesh et al., 2012). Thus, research suggests that users are more likely to use a technology from which they can benefit enough to offset required monetary expenses (Oliveira et al., 2014). Moreover, the perception of price value was suggested to differ concomitantly with social roles (which vary according to gender and age). The moderating role of age and gender has been demonstrated when examining the relationship between price value and behavioral intention (Merhi et al., 2020). The research of Kwateng et al. (2018) also claims that positive price value leads to behavioral intention; assessment of a product or technology is closely related to their intention to use the technology.

The importance of perceived value has been considered in various studies during recent years, and many definitions have been provided for its conception, such as consumer utility, related perceived advantages to the lost advantages, mental value, quality, and price, perceived value to the level of product quality, and paid the price. On the other hand, customer satisfaction is an emotional reaction or a cognitive and reciprocal perception status. Perceived

value has a positive effect on customer satisfaction. The perceived value is defined as the “quality a person redevises for the paid the price,” and if a consumer looks at the price of the lost money, he/she will become more sensitive about it. The perceived value is the first effective factor in buying intention. The importance of the product’s perceived value focuses on the reality that it determines the intensity of a consumer's strengths and weaknesses. For example, more perceived value leads to more buying intention. Their research found that consumers with more awareness about value have better attitudes about grey market goods than consumers with less awareness about value. Jin and Fan (2022) showed evidence that value awareness has a positive relationship with attitude. Consequently, a hypothesis is suggested:

Hypothesis 5: Price value has a significant impact on behavioral intention.

### **Behavioral Intention**

Behavioral intention to use can be interpreted as a response or reaction of someone wanting to use technology. Someone will be satisfied using technology if they believe it is easy to use and will improve their performance (Sahilatua & Naniek, 2013; Try et al., 2022).

Therefore, spiritual motivation can also be used to explain bank customers' behavior in using mobile banking. This is based on the economic behavior of a person who aims to fulfill all his needs in achieving prosperity or benefit (Rahmawaty, 2012). Thus, spiritual motivation is regarded as a variable that can affect the behavior of bank customers in using mobile banking.

Behavior results from the teaching and learning process that occurs due to his interaction with the surrounding environment caused by personal experiences. So, both internal and environmental factors influence behavior. Behavior is all human activities that outsiders can directly observe (Inayah et al., 2018; Suharyat, 2009). Furthermore, behavior is a function of individual characteristics (motives, values, personality traits, etc.). Hence, the following hypothesis is derived:

Hypothesis 6: Behavioral intention has a significant impact on use behavior.

### **Use Behavior**

Use behavior can be interpreted as a response or reaction of someone who desires to use technology. Someone will be satisfied using technology if they believe it is easy to use and will improve their performance (Sahilatua & Naniek, 2013). The actual system use is conceptualized by measuring the frequency and duration of the use of technology (Ratnaningrum, 2013).

Spiritual needs are the needs for fulfillment that depends on the perfection of individual growth and maturity, so the fulfillment of spiritual needs is very influential in forming a self-concept that will manifest in one’s behavior (Yasa, 2013).

As per Inayah et al. (2018), the attitude toward a behavior can be defined as the emotional disposition characterized by either support and favorability or lack of support and unfavorableness towards the object under consideration. This emotional disposition emerges when an individual assesses their belief in the outcomes associated with specific behaviors. Furthermore, attitude is evaluating the consequences of carrying out certain behaviors (Ratnaningrum, 2013).

Moreover, they also agree that behavior results from the teaching and learning process that occurs due to his interaction with the surrounding environment caused by personal experiences. So, both internal and environmental factors influence behavior.

### Research Methodology

#### Conceptual Framework

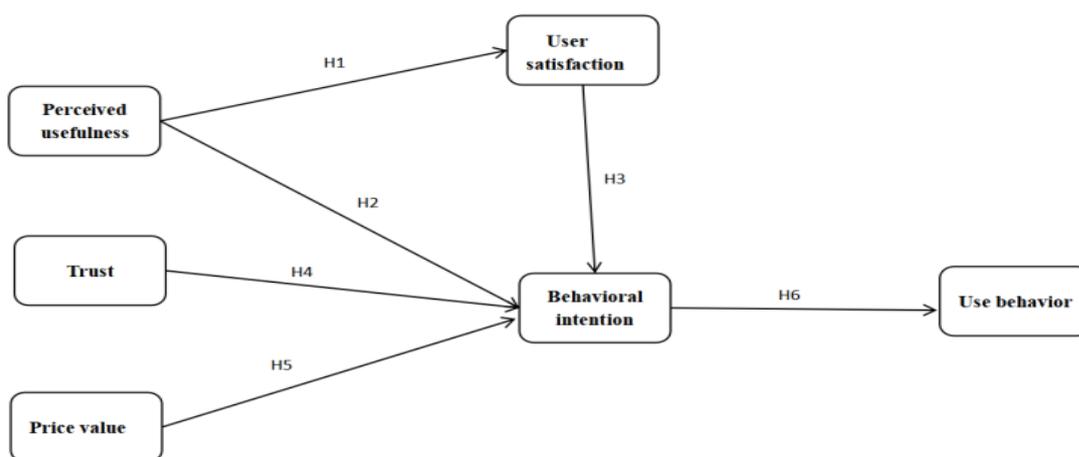
Conceptual framework demonstrates the factors that affect how retired Chinese customers use mobile banking. Conceptually, the framework seems relevant and comprehensive in understanding the behaviors of retired Chinese individuals in using mobile banking applications. However, it is essential to recognize that behavior is influenced by various cultural, societal, and individual factors. It is also crucial to account for potential generational differences within the retired population, as older adults might have varying levels of familiarity and comfort with technology.

The conceptual framework is developed from studying previous research frameworks. It is adapted from three theoretical models. Firstly, Bankole et al. (2011) studied the effect of trust (TRU) on behavioral intention (BI) and the effect of behavioral intention (BI) on user behavior (UB). Secondly, the study of Goularte and Zilber (2018) verified that price value has an impact on behavioral intention.

(PV) has a positive impact on behavioral intention (BI). The third research was explored by Priya (2017), who conducted that perceived usefulness (PU) has a positive impact on user satisfaction (UB). The findings of the study suggest that perceived usefulness (PU) is a strong determinant of user satisfaction (US) and behavioral intention (BI) to use the mobile banking service. The conceptual framework of this study is proposed in Figure 1.

Figure 1

Conceptual Framework



Note: Constructed by author

## Research Design

The researcher applied nonprobability sampling for quantitative approach with a questionnaire that was distributed 400 online and 100 paper-based to the target group of Chinese people who have been using in the top three mobile banking apps. The survey has three parts. First, the screening questions are used to identify the characteristics of respondents. Secondly, to analyze all four hypotheses, a 5-point Likert scale was used to measure five proposed variables, ranging from strong disagreement (1) to strong agreement (5). Lastly, demographic questions are gender, retired or not. For pilot testing, the expert rating of the item's index-objective congruence (IOC) and pilot test for 50 respondents have been tested. IOC's results were approved by three experts rating at a score higher than 0.6. A pilot test was conducted with Cronbach's alpha coefficient values exceeding the acceptable value of 0.7 (Nunnally, 1978).

Cronbach's Alpha approach was tested for validity and reliability. After the reliability test, the questionnaire was distributed to target respondents, which resulted in 450 accepted responses. The researcher analyzed the collected data through SPSS AMOS 26.0. Then, Confirmatory Factor Analysis (CFA) was used to test the convergence accuracy and validation. The model fit measurement was calculated with the comprehensive test with given data to ensure the validity and reliability of the model. Lastly, the researcher applied the Structural Equation Model (SEM) to examine the effect of variables.

## Research Population and Sample

The target population in this paper is Chinese people living in Shaoxing, China, who have utilized ICBC M-banking App, CCB M-banking App, and ABC M-banking App (Zou, 2021). The sample size for Structural Equation Models suggested that at least 200 respondents (Kline, 2011) should participate in the study. The survey was given to 500 respondents. After the data screening process, 450 responses were used in this study.

## Data Analysis

The researcher used nonprobability sampling, using judgmental sampling to select retired Chinese, living in Shaoxing, China, who have been using Agricultural Bank of China (ABC), China Construction Bank (CCB), and Industrial and Commercial Bank of China (ICBC)'s mobile banking applications. Then, the quota sampling was applied. The researcher employed convenience sampling to distribute the questionnaire online and offline. The data was collected for approximately nine months, from February to October 2022. The screening data process has been conducted to ensure the target group uses the three mobile banking apps. The online version was circulated via social networks, including Wenjuanxing, WeChat, and QQ. The respondents were encouraged to share the survey link with their coworkers. Structural Equation Modelling (SEM) and Confirmatory Factor Analysis (CFA) were used for data analysis, including model fit analysis, reliability, and construct validity.

## Demographics of Participants

The profile of the demographic targets 450 participants and is concluded in Table 1. Male respondents represent 55.3%, and female respondents account for 44.7%. For the use of which M-banking app, the biggest segment in this research was the use of ICBC M-banking

app, representing 35.1% of respondents, followed by 34.4% of use CCB M-banking app, 30.5% of use ABC M-banking app.

**Table 1**

*The demographic data*

Demographic and General Data (n=450)	Category	Frequency	Percentage
Gender	Male	249	55.3%
	Female	201	44.7%
M-banking App's Users	ICBC M-banking app	158	35.1%
	CCB M-banking app	155	34.4%
	ABC M-banking app	137	30.5%

## Results and Discussion

Confirmatory Factor Analysis (CFA) was conducted in this study. All items in each variable are significant and represent factor loading to test discriminant validity. The significance of factor loading of each item and acceptable values indicate the goodness of fit (Hair et al., 2006). Factor loadings show a greater value than 0.30 and a p-value lower than 0.05. Cronbach's alpha coefficient values exceed the acceptable value of 0.7 (Nunnally, 1978). The composite reliability is greater than the cut-off points of 0.7, and the average variance extracted was greater than the cut-off point of 0.5 (Fornell & Larcker, 1981). All estimates are significant as demonstrated in Table 2.

**Table 2**

*Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)*

Variables	Source of Questionnaire	No. of Item	CA	Factors Loading	CR	AVE
Perceived usefulness (PU)	Priya (2017)	4	0.832	0.696-0.779	0.834	0.558
Trust (TRU)	Chaouali and El Hedhli (2019)	3	0.827	0.719-0.849	0.862	0.641
Price value (PV)	Baptista and Oliveira (2015)	4	0.930	0.863-0.893	0.930	0.769
User satisfaction (US)	Priya (2017)	3	0.808	0.636-0.866	0.827	0.691
Behavioral intention (BI)	Baptista and Oliveira (2015)	3	0.858	0.753-0.911	0.873	0.698
Use behaviour (UB)	Çera et al. (2020)	4	0.855	0.581-0.789	0.819	0.534

Verified as the value of this study shown in Table 5 are greater than acceptable values. Therefore, convergent validity and discriminant validity are ensured. Moreover, these model measurement results consoled discriminant validity and validation to measure the validity of subsequent structural model estimation.

**Table 3**

*Square roots of AVEs and correlation matrix*

	<b>PU</b>	<b>TRU</b>	<b>PV</b>	<b>US</b>	<b>BI</b>	<b>UB</b>
<b>PU</b>	<b>0.747</b>					
<b>TRU</b>	-0.052	<b>0.801</b>				
<b>PV</b>	-0.083	0.790	<b>0.877</b>			
<b>US</b>	0.578	-0.077	-0.085	<b>0.787</b>		
<b>BI</b>	0.701	-0.077	-0.119	0.701	<b>0.835</b>	
<b>UB</b>	0.548	-0.075	-0.120	0.741	0.772	<b>0.731</b>

Note: The diagonally listed value is the AVE square roots of the variable

The square root of the average variance extracted is determined that all the correlations are greater than the corresponding correlation values for that variable as of Table 4. In addition, GFI, AGFI, NFI, CFI, TLI, and RMSEA are used as indicators for model fit in CFA testing.

**Table 4**

*Goodness of Fit for Measurement Model*

<b>Fit Index</b>	<b>Acceptable Criteria</b>	<b>Statistical Values Before Adjustment</b>	<b>Statistical Values After Adjustment</b>
<b>CMIN/DF</b>	< 5.00 (Bentler & Bonett, 1980)	4.845	3.779
<b>GFI</b>	≥ 0.80 (Greenspoon & Saklofske, 1998)	0.894	0.882
<b>AGFI</b>	≥ 0.80 (Filippini et al., 1998)	0.800	0.841
<b>NFI</b>	≥ 0.90 (Arbuckle, 1995)	0.881	0.909
<b>CFI</b>	≥ 0.90 (Hair et al., 2006)	0.903	0.931
<b>TLI</b>	≥ 0.90 (Hair et al., 2006)	0.882	0.915
<b>RMSEA</b>	< 0.08 (Hu & Bentler, 1999)	0.093	0.070
<b>Model Summary</b>		<b>Not in harmony with empirical data</b>	<b>In harmony with empirical data</b>

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker–Lewis index and RMSEA = Root mean square error of approximation.

**Structural Equation Modeling (SEM)**

Hair et al. (2010) state that Structural Equation Modeling (SEM) validates the causal relationship among variables in a proposed model and encompasses measurement inaccuracy in the structure coefficient. The goodness of fit indices for the Structural Equation Model (SEM) is measured as demonstrated in Table 5. The model fit measurement should not be over 3 for the Chi-square/degrees-of-freedom (CMIN/DF) ratio, and GFI and CFI should be higher than 0.8, as Greenspoon and Saklofske (1998) recommended. The calculation in SEMs and adjusting the model by using SPSS AMOS version 26, the results of fit the index presented good fit, which are CMIN/DF = 3.808, GFI = 0.912, AGFI = 0.869, NFI = 0.917, CFI = 0.937, TLI = 0.914 and RMSEA = 0.079, according to the acceptable values are mentioned in Table 5.

**Table 5**

*Goodness of Fit for Structural Model*

Fit Index	Acceptable Criteria	Statistical Values Before Adjustment	Statistical Values After Adjustment
<b>CMIN/DF</b>	< 5.00 (Bentler & Bonett, 1980)	7.170	3.808
<b>GFI</b>	≥ 0.80 (Greenspoon & Saklofske, 1998)	0.804	0.912
<b>AGFI</b>	≥ 0.80 (Filippini et al., 1998)	0.753	0.869
<b>NFI</b>	≥ 0.90 (Arbuckle, 1995)	0.815	0.917
<b>CFI</b>	≥ 0.90 (Hair et al., 2006)	0.836	0.937
<b>TLI</b>	≥ 0.90 (Hair et al., 2006)	0.811	0.914
<b>RMSEA</b>	< 0.08 (Hu & Bentler, 1999)	0.117	0.079
<b>Model Summary</b>		<b>Not in harmony with empirical data</b>	<b>In harmony with empirical data</b>

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker–Lewis index and RMSEA = Root mean square error of approximation.

**Hypothesis Outcomes**

The research model is calculated as the significance of each variable from its regression weights and R2 variances. The result from Table 6 postulated that all hypotheses were supported with a significance at p = 0.05.

**Table 6**

*Summary of hypothesis tests*

Hypothesis	Standardized path coefficient (β)	t-value	Testing result
H1: Perceived usefulness has a significant impact on user satisfaction.	0.581	10.148*	Supported
H2: Perceived usefulness has a significant impact on behavioral intention.	0.366	7.894*	Supported
H3: User satisfaction has a significant impact on behavioral intention.	0.549	9.089*	Supported
H4: Trust has a significant impact on behavioral intention.	0.052	2.145*	Supported
H5: Price value has a significant impact on behavioral intention.	-0.104	-2.987*	Supported
H6: Behavioral intention. has a significant impact on use behavior.	1.235	16.707*	Supported

Note: \* p<0.05

## Discussion

The study findings support H1, revealing that perceived usefulness plays a crucial role as a key driver of user satisfaction with a common coefficient value of 0.581 in the structural pathway. These results align with Ashsifa's research in 2020, which also indicates that perceived usefulness positively impacts customer satisfaction and encourages continuous use. Inayah et al. (2018) similarly found that perceived usefulness has a positive effect on attitudes toward using m-banking.

Regarding H2, the study confirms the significant influence of perceived usefulness on behavioral intention, with a common coefficient value of 0.366. H3 also supports the link between user satisfaction and behavioral intention, with a common coefficient value of 0.549. H4 provides evidence that trust significantly affects consumers' behavioral intention to use mobile banking, with a common coefficient value of 0.052. These findings are consistent with the TAM model-based study conducted by Jin and Fan in 2022, which also highlights trust's significant effect on consumer behavioral intention.

Additionally, H5 establishes that price value has a significant impact on consumers' behavioral intention to use mobile banking, with a common coefficient value of -0.104 in the structural path. Finally, the strong impact of H6 is reinforced by the value of 1.235 in Behavioral Intentions' support on Use Behavior, making it the most influential factor in this study. Alalwan et al. (2017) have also demonstrated that behavioral intention is significantly and positively influenced by performance expectancy, effort expectancy, hedonic motivation, price value, and trust.

## Conclusion and Recommendations

### Conclusion

This research paper focuses on the examination of the factors impacting consumer behavioral intention and use behavior of mobile banking in Shaoxing China for the retired people. The research described the findings as follows. First perceived usefulness significantly influences both user satisfaction and behavioral intention. The previous literature of Priya (2018) suggests that perceived usefulness (PU), perceived ease of use (PEU), perceived credibility (PC), and structural assurance (SA) are strong determinants of user satisfaction (US) and behavioral intention (BI) to use the mobile banking service. Second, user satisfaction has a significant impact on behavioral intention. Perceived usefulness and perceived ease of use will lead to higher behavioral intention to use m-banking. Third, trust has a significant impact on behavioral intention. Trust in mobile services refers to the system's and service providers' perceived reliability. Issues of risk and privacy affect the construct of trust in the system. Furthermore, the user's confidence in his/her ability to use the service also influences their trust in the service (Kaasinen, 2005). The fourth, price value, has a significant impact on behavioral intention.

Moreover, the perception of price value was suggested to differ concomitantly with social roles (which vary according to gender and age). Last, behavioral intention has a significant impact on user behavior. Behavioral intention strongly influences technology use (Venkatesh et al., 2003); it is predictable and influenced by individual intention (Yu, 2012). It can be concluded that behavioral intention will positively affect user behavior. The study aims

to show that perceived usefulness, trust, price value, and user satisfaction significantly affect retirees' use of mobile banking apps in Shaoxing.

Financial transactions among older populations can indeed differ from those of younger age groups due to various factors associated with daily living and lifestyle. Older individuals, especially those who have grown up in an era with limited electronic payment options, may still prefer cash transactions. Older populations often prefer conducting financial transactions in person at bank branches. They may value face-to-face interactions and feel more secure when dealing with bank personnel directly. This preference may arise from a sense of trust and familiarity with traditional banking methods rather than relying on online or mobile banking platforms.

Understanding the unique financial transaction patterns and preferences of older populations can help financial institutions, policymakers, and service providers develop tailored solutions that meet their specific needs. This could include offering alternative methods of in-person banking, improving digital literacy among older individuals, enhancing security measures for online transactions, and providing accessible financial advisory services.

Older adults may differ from younger age groups in their financial transactions due to factors like familiarity with traditional methods, preference for in-person banking, use of paper records, hesitancy towards digital banking, seeking assistance from family, and favoring simplicity and clarity in financial products. Understanding their behaviors is essential to tailor financial services to meet their specific needs.

## **Recommendations**

The researcher discovered key influencers of what aspects impact retired Chinese consumers' mobile banking behavior and use: perceived usefulness, trust, price value, and user satisfaction. Therefore, there is a need to increase the publicity for the retired group, and it is suggested that the designers of mobile banking apps can design more operation interfaces adapted to this age group's needs, such as easier font size modules. Zhang (2016) proposed that commercial banks can design special marketing strategies, including branding, channels, and services to fit the characteristics of the financial service needs of the elderly. It is proposed to focus on the construction of the bank's own culture to enhance brand awareness and to tailor the design of products, services, and the way and channels provided to the characteristics of the elderly. Lee et al. (2009) found that multimodal feedback with auditory signals would benefit older adults in completing mobile phone tasks. Shen (2017) analyzes the root cause of this problem in commercial banks from the problem of the insufficient launch of aging financial services products due to the lack of customer value as a service concept; he believes that in the future development of commercial banks should not only focus on the growth of performance but also strengthen the cultivation of cultural values for banks, and suggests that the marketing strategy of aging financial services of commercial banks can be carried out in three directions: convenience, support, and key services. It should also increase the security of use according to the characteristics of the elderly in order to improve their trust in the mobile banking app. At the same time, it can introduce various preferential measures to reduce transfer fees, increase the interest rate of financial products, exchange more suitable gifts, and take-home delivery to make the mobile banking service more convenient and humane. In addition, other methods can

be used to increase user satisfaction, such as organizing offline activities so that retired users can have a way to participate in them.

### Limitations and Further Study

Our study provides a comprehensive understanding of the factors influencing the use of mobile banking procedures among retirees in Shaoxing, China. Our study is limited to Shaoxing, a third-tier coastal city with a more developed digital economy and a richer financial sector. However, due to the limitations of the survey population and the differences in the subordinate districts and counties, the literacy level and education level of the population, etc., our findings may not reflect the influencing factors of mobile banking use among retired seniors living in areas with different levels of economic development.

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