

pISSN: 1906 - 6406 The Scholar: Human Sciences
eISSN: 2586 - 9388 The Scholar: Human Sciences
<http://www.assumptionjournal.au.edu/index.php/Scholar>

Affecting Factors of Gen X's Behavioral Intention and Use Behavior of Mobile Payment in China

Junke Huang*

Received: July 2, 2023. Revised: October 9, 2023. Accepted: October 12, 2023.

Abstract

Purpose: China's mobile payments are changing the financial landscape and social impact and attracting international attention. This paper aims to investigate the factors influencing the behavioral intention and use behavior of Generation X consumers in China toward mobile payments. The framework contains social influence, perceived value, perceived usefulness, perceived ease of use, perceived risk, behavior intention, and user behavior. **Research design, data, and methodology:** A quantitative research method was used to survey 500 Generation X consumers in China. Purposive, quota, and convenience sampling were employed to collect data. Structural equation modeling (SEM) and confirmatory factor analysis (CFA) were used to analyze the data for model fit, reliability, and construct validity. **Results:** The results reveal that behavioral intention significantly impacts use behavior among Chinese Generation X consumers. Social influence, perceived value, perceived ease of use, perceived usefulness, and perceived risk have significant effect on behavioral intention, with perceived ease of use also having a significant effect on behavioral intention through perceived usefulness. **Conclusions:** The study confirmed seven hypotheses and recommended that mobile payment platforms adopt the proposed framework to measure and improve mobile payment behavioral intention and use behavior among Chinese Generation X consumers.

Keywords: Generation X, Mobile Payment, Behavioral Intention, Use Behavior, China

JEL Classification Code: E44, F31, F37, G15

1. Introduction

With the changing times and the rapid development of information technology, the functions and convenience of mobile terminal devices have been greatly improved, and people widely use various mobile terminal devices. Because of the popularity of mobile terminal devices, mobile payment is also becoming more and more widespread. Mobile payment methods are faster, easier to operate, more efficient, and safer (Chen & Tang, 2006). In a situation where the rampant spread of viruses has caused social and financial crises, there is a very tacit agreement to move communication, education, and payment online to ensure a safe distance between people. Mobile payments are widely

used in various fields in many countries worldwide. China's mobile payment usage is extremely high and at the forefront of the world regarding technology (Shi, 2007).

China's mobile payments are changing the financial landscape and social impact and attracting international attention (Frost et al., 2019). Through the study, Wu and Wang (2005) found that perceived risk and value significantly impact people's willingness to use mobile commerce.

Chu et al. (2021) argues that in the consumption domain, individuals receive the perceived stimulus of a new product. Various external factors influence individuals' perceived usefulness and perceived ease of use of the product, both of which affect individuals' consumption intention and

*Junke Huang, Sichuan College of Architectural Technology, Chengdu, China. Email: 841064883@qq.com

© Copyright: The Author(s)
This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

consumption behavior. Qi (2016) believes a clear link exists between behavioral intention and use behavior. Fishbein et al. (2001) Believe behavioral intentions are the best predictor of behavior. In past studies, safety and risk have influenced intention to use and use behavior (Tan & Teo, 2000).

Generation X (typically born between the early 1960s and early 1980s) represents a significant portion of the population in many countries, including China. They are a sizable consumer segment with unique characteristics and preferences. Understanding their behavior regarding mobile payments can provide valuable insights into a substantial market segment. Generation X consumers have experienced significant technological advancements in their lifetimes, transitioning from analog to digital technologies. As a result, they are relatively tech-savvy and adaptable to digital solutions like mobile payments. Investigating their attitudes and behaviors can shed light on how a generation that has witnessed rapid technological changes perceives and adopts mobile payment technologies.

This paper constructs a research framework based on the TPB model, which suggests that social influence, perceived value, perceived usefulness, perceived ease of use, and perceived risk are important factors influencing Generation X mobile payment consumers' behavioral intention and use behavior. Among them, the perceived ease of use of consumers who use mobile payment has an impact on perceived usefulness and continues to have a positive impact on their intention to use (Mo & Luo, 2019). It has also been shown that the behavioral intention of mobile payments positively impacts user behavior (Cao & Li, 2009).

Therefore, the framework of this study includes seven variables: social influence, perceived value, perceived usefulness, perceived ease of use, perceived risk, behavioral intention, and user behavior to explore further the factors that influence mobile payments among Generation X consumers in China.

2. Literature Review

2.1 Social Influence

Social influence is the effect on the attitude or behavior of others (Jing, 2001). Social influence is the influence that one party intentionally or unintentionally has on the other party's behavior because of a certain relationship between the two parties (Asch, 1951). Venkatesh et al. (2003) sees social influence as the extent to which people believe those, they care about will approve of or support their behavior.

Social influence refers to changes in attitudes and behaviors that affect others and can come from a wide range of individual or group sources (Myers & Twenge, 2012). Mehl and Pennebaker (2003) found through experimental

studies that humans, as social animals, respond to their surroundings and that a particular social situation can prompt a behavior change. Social influences include subjective norms, voluntariness, and other influencing factors, among which experience and voluntariness impact behavioral intentions (Jing et al., 2021). Therefore, a hypothesis is proposed:

H1: Social influence has a significant impact on behavioral intention.

2.2 Perceived Value

From the customer's point of view, customer value refers more to the customer's perceived value (Zeithaml, 1988). Zeithaml first proposed the customer perceived value theory from the customer's point of view in 1988, and she suggested two important factors in studying customer value: first, the customer's perception of the value obtained, and second, the customer's perception of the cost paid (Su, 2016). Consumers' perceived value concerns the desire to make rational shopping choices (Chang & Dibb, 2012).

The values of personal belief and action systems help people understand the meaning of motivation and behavior (Bengtson & Lovejoy, 1973). Moreover, researchers or business practitioners from different disciplines are increasingly interested in customer-perceived value (Jong et al., 2005). Customer perceived value is closely related to price, quality, cost payment, behavioral intention, and satisfaction (Holbrook, 1999). Thus, this study hypothesizes that:

H2: Perceived value has a significant effect on behavioral intention.

2.3 Perceived Usefulness

Perceived usefulness refers to the extent to which people believe that the application of a system can improve their work efficiency and the perceived usefulness of such an application system (Feng et al., 2022). Perceived usefulness is the degree to which users subjectively perceive an improvement in their work performance when using a particular system (Zhu et al., 2021). In the real world of mobile payments, perceived usefulness leads consumers to believe that it will improve their level of productivity (Chen & Adams, 2005).

Bhattacharjee (2001) found through his study that perceived usefulness is a key motivating factor for user satisfaction and continued use of information systems. Through the study, Li et al. (2013) found that perceived usefulness is closely related to users' behavioral intention in a positive relationship in mobile payment. In mobile payment, perceived usefulness will impact the user's behavioral intention (Dewan & Chen, 2005). Accordingly, an assumption is presented:

H3: Perceived usefulness has a significant effect on behavioral intention.

2.4 Perceived Ease of Use

Perceived ease of use refers to people's perception of the ease of use of a technology system when they use it specifically (Davis, 1989). Perceived ease of use is the user's perceived level of convenience in moving needs and the state of time, physical effort, and other cost savings (Mao, 2022). In mobile payment technology, perceived ease of use refers to the attitude of the individual in using the technology in the process of accomplishing the desired goal (Lu et al., 2018).

Perceived usefulness and perceived ease of use are the main factors that influence technology use intention and use behavior (Wang, 2007). Factors such as ease of use and usefulness are often mentioned in the acceptance and adoption of mobile payment technologies (Dewan & Chen, 2005). Through their study, Li et al. (2013) found that perceived ease of use affects perceived usefulness and is one of the main factors in users' acceptance and adoption of mobile payment services (Li et al., 2013).

The Technology Acceptance Model is a new model proposed by Davis (1989) by modifying the Theory of Rational Behavior. There are two structures in the technology acceptance model, perceived usefulness, and perceived ease of use. The more positive the user's attitude toward technology use, the stronger the willingness to use the technology behavior, and the higher the technology acceptance will be (Adams et al., 1992). Perceived Ease of Use When technology is easier to use, users do not need to spend extra time and effort to learn it. They are more confident in their self-efficacy and have a more positive attitude, which directly impacts behavioral intentions (Zhu, 2012). Consequently, two hypotheses can be indicated:

H4: Perceived ease of use has a significant effect on perceived usefulness.

H5: Perceived ease of use has a significant effect on behavioral intention.

2.5 Perceived Risk

The concept of risk became quite popular in economics in the 1920s (Knight, 2013). Since then, it has been successfully applied to economics, finance, and other decision-making disciplines (Dowling & Staelin, 1994). In 1960, Bauer of Harvard University first introduced the concept of risk into marketing. The theory of perceived risk is used to explain consumer buying behavior, mainly as a risk-taking behavior, because consumers are not sure of the outcome of the use of the product when considering a purchase, so in fact, consumers assume some risk, which is the original meaning of perceived risk (Ross, 1975).

Featherman and Pavlou (2003) found that a direct association between perceived risk on behavioral intention was confirmed in the e-service acceptance level. Mitchell argues that consumers tend to reduce their perceived risk rather than maximize their perceived value when making purchase decisions and that perceived risk is a stronger and more powerful explanation for consumer behavior (Mitchell, 1999). The famous marketing expert Kotler has also pointed out that consumers change, postpone, or cancel their purchase decisions largely due to the influence of perceived risk (Kotler & Armstrong, 1994). Subsequently, a hypothesis is suggested:

H6: Perceived risk has a significant effect on behavioral intention.

2.6 Behavioral Intention

Behavioral Intention refers to a person's subjective judgment of his or her tendency to act in the future (Folkes, 1988). Behavior Intention is a subjective determination of an individual's willingness to adopt a particular behavior (Upmeyer, 2012). Fishbein and Ajzen (1975) proposed the theory of rational behavior, in which attitudes toward a particular behavior and subjective benchmarks combine to determine behavioral intentions, and behavioral intentions lead to volitional behavior (Elliott et al., 2005).

Ajzen believes that the actor does not always analyze rationally and thus forms the behavioral intention before deciding on the best behavior to use (Peach et al., 2005). With advances in technology and communication, behavioral intent has been repeatedly shown to be an influential factor in use behavior (Cao & Li, 2009). Consumers' consumption activities are based on self-needed choices, and finding the main reasons for consumer acceptance and action is a key challenge for the researchers involved (Schaefer, 2013). Based on the above discussions, this study put forward a hypothesis:

H7: Behavioral intention has a significant effect on use behavior.

2.7 Use behavior

Behavior is the activity of an organism under the influence of various internal and external stimuli. Different subdisciplines of psychology study different perspectives (Jing, 2001). Use behavior includes the holder's use behavior and the licensee's use behavior (Chih-Chien et al., 2005). Moreover, user behavior refers to the acquisition and use of goods or services taken by the action; users of the product first have a cognitive, familiar with the process, use, and finally decide whether to continue to consume the use and finally become a loyal user (Wang et al., 2023).

Limayem et al. (2007) argue that the relationship between intention and behavior plays a moderating role. Wu and Fan (2010) found that many factors influence consumers' behavioral intention and use of mobile payment. Sheng (2009) found through his research that the use of mobile payment behavior is influenced by various aspects, one of which is the behavior of one of the main influences.

3. Research Methods and Materials

3.1 Research Framework

This conceptual framework was developed based on five theoretical models from previous research frameworks. Social influence, behavioral intention, and use behavior were derived from Gupta and Arora (2020) model. The perceived value variable, on the other hand, was derived from Lin et al. (2020) model. The variables of perceived usefulness, perceived ease of use, perceived risk, and behavioral intention were derived from Phonthanukitithaworn et al. (2016) model. The variables for perceived value and behavioral intention were then taken from Zhang et al. (2019) model. Finally, the variables for perceived usefulness and ease of use are from Leong et al. (2021)s' model (see Figure 1).

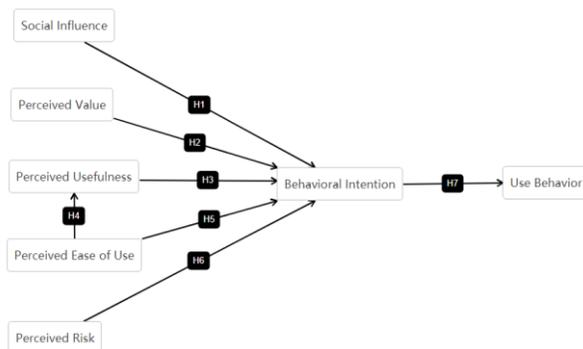


Figure 1: Conceptual Framework

H1: Social influence has a significant effect on behavioral intention.

H2: Perceived value has a significant effect on behavioral intention.

H3: Perceived usefulness has a significant effect on behavioral intention.

H4: Perceived ease of use has a significant effect on perceived usefulness.

H5: Perceived ease of use has a significant effect on behavioral intention.

H6: Perceived risk has a significant effect on behavioral intention.

H7: Behavioral intention has a significant effect on use behavior.

3.2 Research Methodology

The researchers used a quantitative non-probability sampling method to send a questionnaire to Generation Y mobile payment consumers living in the degree via the Internet. Key factors that have a significant impact on Generation X mobile payment consumers were collected and analyzed. The survey was divided into three parts. The first part identifies the characteristics of the respondents through screening questions. The second part used a Likert scale to test seven suggested variables ranging from strongly disagree to agree strongly. Finally, demographic questions about Generation X, residential, and mobile payment use were asked.

A pilot test was also conducted in which 50 respondents were scored by experts on their agreement with the program's objectives (IOC), and a pilot test was administered. The validity and reliability of Cronbach's Alpha method were tested. The results of the expert ratings indicated an IOC score higher than 0.6, as approved by three experts. Additionally, the pilot test yielded Cronbach's alpha coefficient values exceeding the acceptable threshold of 0.7, as defined by Nunnally and Bernstein (1994).

After the confidence test, a questionnaire was distributed to the target respondents, and 500 responses were received. The researchers analyzed the collected data using statistical software. Then, they used confirmatory factor analysis (CFA) to test its convergence and validity. The fitted measures of the model were calculated by combining the tests on the given data to ensure the validity and reliability of the model. Finally, the researchers used structural equation modeling (SEM) to examine the effects of the variables.

3.3 Population and Sample Size

The research population of this paper is Generation X mobile payment consumers in Chengdu. The structural equation model suggests a sample size of at least 425 people (Kline, 2015). Five hundred respondents were used in this study.

3.4 Sampling Technique

The researcher used purposive sampling to select Generation X consumers using Alipay, WeChat, and UnionPay mobile payment applications in Chengdu, Sichuan, China. Quota sampling was applied to calculate sample size for each group per shown in Table 1. Afterward, the

researchers used a convenience sampling tool, Question Star, to distribute an online questionnaire.

Table 1: Sample Units and Sample Size

Mobile Payment Application Platform	Total Generation X consumers	Proportional Sample Size Total
WeChat	345000000	236
Alipay	310000000	213
UnionPay	74400000	51
Total	729400000	500

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The demographic target of this study was information from 500 participants. All respondents experienced mobile payments on three mobile payment application platforms: WeChat, Alipay, and UnionPay. Among respondents, male is 47.6%, and female is 52.4%. The number of people on each platform was 236, 213, and 51, representing 47.2%, 42.6%, and 10.20% of the total sample, respectively (see Table 2).

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	238	47.6%
	Female	262	52.4%
Mobile Payment Application Platform	WeChat	236	47.2%
	Alipay	213	42.6%
	UnionPay	51	10.20%
Total		500	100%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was used in this study. Cronbach's alpha coefficient values exceed the acceptable threshold of 0.7 (Nunnally & Bernstein, 1994). All items in each variable were significant and represented the factor loadings for testing convergent validity. Hair et al. (2007) emphasized the importance of the factor loadings for each item. The factor loading requirement was set at 0.5 with a p-value coefficient less than 0.05. In addition, according to Fornell and Larcker (1981), the critical point was set as CR greater than 0.7 and AVE greater than 0.5. As shown in Table 3, the factor loading values were above 0.5, CR greater than 0.7, and AVE greater (see Table 3).

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Social Influence (SI)	Sobti (2019)	4	0.871	0.777-0.828	0.873	0.633
Perceived Value (PV)	Shah et al. (2020)	4	0.867	0.774-0.813	0.868	0.622
Perceived Usefulness (PU)	Phonthanukitithaworn et al. (2016)	3	0.832	0.764-0.836	0.836	0.629
Perceived Ease of Use (PEOU)	Phonthanukitithaworn et al. (2016)	3	0.853	0.795-0.844	0.853	0.659
Perceived Risk (PR)	Phonthanukitithaworn et al. (2016)	4	0.854	0.755-0.81	0.855	0.595
Behavioral Intention (BI)	Sobti (2019)	4	0.838	0.726-0.774	0.839	0.566
Use Behavior (UB)	Alam et al. (2020)	3	0.835	0.761-0.823	0.836	0.629

In addition, we used CMIN/DF, GFI, AGFI, NFI, CFI, TLI, and RMSEA as model fit indices in the CFA test. As shown in Table 4, the values obtained in this study are above acceptable, verifying that the models fit well. These model measurements strengthen their discriminant validity and validate the validity of the subsequent structural model estimates (see Table 4).

Table 4: Goodness of Fit for Measurement Model

Index	Acceptable Criteria	Statistical Values
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	1.716
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.937
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.919
NFI	≥ 0.80 (Wu & Wang, 2006)	0.935
CFI	≥ 0.80 (Bentler, 1990)	0.972
TLI	≥ 0.80 (Sharma et al., 2005)	0.966
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.038

Index	Acceptable Criteria	Statistical Values
Model Summary		In harmony with empirical data

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 = normalized fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, IFI = Incremental Fit Index, and RMSEA = root mean square error of approximation

As shown in Table 5, the square root of AVE for each variable is greater than its correlation with other variables, indicating that the model has good discriminant validity.

Table 5: Discriminant Validity

	SI	PV	PU	PEOU	PR	BI	UB
SI	0.796						
PV	0.292	0.789					
PU	0.274	0.349	0.793				
PEOU	0.220	0.369	0.430	0.812			
PR	-0.270	-0.408	-0.248	-0.327	0.771		
BI	0.299	0.419	0.478	0.557	-0.386	0.752	
UB	0.269	0.350	0.470	0.474	-0.309	0.552	0.793

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

Source: Created by the author.

4.3 Structural Equation Model (SEM)

The structural equation model (SEM) is a generalization of the regression model and has many advantages that the regression model does not have: It can deal with multiple independent and dependent variables at the same time to meet the needs of increasingly complex theoretical models in social science research; it can analyze explicit and latent variables at the same time to meet the general implicit characteristics of variables in social science research; it allows measurement errors of independent variables and higher accuracy of parameter estimation; it has great fit evaluation indicators to evaluate the model, etc. These advantages make SEM an important statistical method in social science research (Wang et al., 2022).

The fit indices of the structural equation model (SEM) are shown in Table 6. By using statistical software for SEM calculation and model adjustment, the results of the fit indices present a good fit, i.e., CMIN/DF=2.795, GFI=0.883, AGFI=0.858, NFI=0.888, CFI=0.925, TLI=0.916, and RMSEA=0.060, according to the acceptable values mentioned (see Table 6).

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	≤ 5.0 (Wheaton et al., 1977)	2.795
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.883
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.858
NFI	≥ 0.80 (Wu & Wang, 2006)	0.888
CFI	≥ 0.80 (Bentler, 1990)	0.925
TLI	≥ 0.80 (Sharma et al., 2005)	0.916
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.060
Model Summary		In harmony with empirical data

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 = normalized fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, IFI = Incremental Fit Index, and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

The research model judges the significance of the regression path coefficients based on their t-values and calculates the explanatory power of the independent variables on the dependent variable based on R2. Table 7 shows that at the significance level, *P < 0.05, **P < 0.01, ***P < 0.001. all hypotheses were supported. The coefficient of influence of social influence on behavioral intention was 0.116, the coefficient of influence of perceived value on behavioral intention was 0.169, the coefficient of influence of perceived usefulness on behavioral intention was 0.291, the coefficient of influence of perceived ease of use on perceived usefulness was 0.5, the coefficient of influence of perceived ease of use on behavioral intention was 0.465, and the coefficient of influence of perceived risk on behavioral intention was -0.181. Finally, the coefficient of influence of behavioral intention on use behavior was 0.664. the behavioral intention had the greatest influence on user behavior (see Table 7).

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: SI→BI	0.116	2.752**	Supported
H2: PV→BI	0.169	3.927***	Supported
H3: PU→BI	0.291	5.332***	Supported
H4: PEOU→PU	0.5	9.176***	Supported
H5: PEOU→BI	0.465	8.098***	Supported
H6: PR→BI	-0.181	-4.174***	Supported
H7: BI→UB	0.664	11.251***	Supported

Note: *** p<0.001, ** p<0.01, * p<0.05

Source: Created by the author

H1 has confirmed that social influence influences behavioral intention with a result of 0.116. Among the many factors influencing behavioral intention, social influence is an important factor influencing the mobile payment behavioral intention of Generation X consumers. In the mobile payment environment, social influence significantly impacts users' intention to use and their behavior (Zhang & Yuan, 2019). The result of **H2** is 0.169, indicating that perceived value has an impact on behavioral intention. Parasuraman and Grewal (2000) studied perceived value from the perspective of cost and benefit, input and generation, etc. perceived value impacts all stages of consumer behavior. The result of **H3** is 0.291, which indicates that perceived usefulness impacts behavioral intention. Perceived usefulness evaluates things in the user's perception process,

is the main content, and ultimately influences the user's attitude and behavior (Davis, 1989). The result of **H4** is 0.5, indicating that perceived ease of use affects perceived usefulness. Feng (2022) experimentally demonstrated the significant positive effect of perceived ease of use on perceived usefulness. The result for **H5** is 0.465, indicating that perceived ease of use impacts behavioral intention. From the perspective of mobile payment users, perceived ease of use affects users' behavioral intention (Chiu et al., 2009). The result for **H6** is -0.181, indicating that perceived risk affects behavioral intention. Perceived risk is reduced to a level acceptable to consumers or disappears completely, and consumers can generate selling intentions and purchase behavior (Mitchell et al., 1997). Finally, the result for **H7** is 0.664, indicating that behavioral intention impacts user behavior. In a study of consumer purchase behavior, Xing (2011) found that behavioral intention is an important determinant of the occurrence of behavior.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This study aims to examine the factors that influence the behavioral intention and use behavior of Chinese Generation X consumers in mobile payment. The model consists of seven variables and seven hypotheses. The hypotheses are the effect of social influence on behavioral intention, the effect of perceived value on behavioral intention, the effect of perceived usefulness on behavioral intention, the effect of perceived ease of use on perceived usefulness, the effect of perceived ease of use on behavioral intention, the effect of perceived risk on behavioral intention, and the effect of behavioral intention on user behavior. A questionnaire survey was conducted among Generation X consumers using Alipay, WeChat, and UnionPay mobile payment applications in Chengdu, Sichuan, China. The data analysis aimed to explore the factors that influence the behavioral intention and use behavior of Generation X consumers in mobile payment. Confirmatory factor analysis (CFA) was used to measure the validity and reliability of the conceptual model. Structural equation modeling (SEM) was used to analyze the proposed relationships between the hypotheses.

The results of the study are as follows. First, behavioral intention has the greatest impact on user behavior, which means that mobile payment behavioral intention largely determines the mobile payment use behavior of Chinese Generation X consumers. Perceived ease of use has a significant effect on perceived usefulness and behavioral intention. In contrast, perceived usefulness significantly

affects behavioral intention, which indicates that perceived ease of use can indirectly influence behavioral intention through perceived usefulness. Second, social influence significantly affects behavioral intention, indicating that social influence is the basis of behavioral intention. Perceived value and perceived risk have a significant effect on behavioral intention. This implies that Chinese Generation X consumers' behavioral intention of mobile payment is influenced by social influence, perceived value, perceived risk, perceived usefulness, and perceived ease of use.

In summary, this study concludes that social influence, perceived value, perceived ease of use, and perceived usefulness significantly impact behavioral intention. Perceived risk has a negative impact on behavioral intention. In contrast, the behavioral intention has the greatest impact on user behavior, indirectly proving that social influence, perceived value, perceived risk, perceived ease of use, and perceived usefulness significantly impact the mobile payment use behavior of Chinese Generation X consumers.

5.2 Recommendation

The researchers found that by investigating the behavioral intention and use behavior of Chinese Generation X consumers, they can conclude that the key factors influencing the behavioral intention of Chinese Generation X consumers in mobile payment are social influence, perceived value, perceived risk, perceived ease of use, and perceived usefulness. Behavioral intention is the main factor influencing Chinese Generation X consumers' mobile payment use behavior. Therefore, in the mobile payment context, improving social influence, perceived value, perceived ease of use, and perceived usefulness can enhance Chinese Generation X consumers' behavioral intention to use mobile payment. Laroche et al. (2001) found that a user's behavioral intention influences use behavior by studying a customer's perceived transaction value, and user behavior has a positive relationship.

Second, the behavioral intention of Chinese Generation X consumers significantly impacts use behavior in the mobile payment context. Behavioral intention and use behavior are a unified whole, where behavioral intention is the basis of user behavior, and user behavior is the application and development of behavioral intention. The understanding of consumers' behavioral intention varies among researchers, with some researchers arguing that behavioral intention and use behavior are driven by social influence, perceived value, and perceived risk (Lai, 1995).

Third, it is suggested that the perceived usefulness of mobile payments in the mobile payment context is enhanced

by increasing the perceived ease of use among Chinese Generation X consumers because perceived ease of use positively affects perceived usefulness. Perceived usefulness positively affects Chinese Generation X consumers' behavioral intention to make mobile payments. Thus, perceived ease of use improves the perceived usefulness of mobile payments for Chinese Generation X consumers and effectively induces mobile payment behavioral intentions of Chinese Generation X consumers. They are adding to the literature. Finally, Chinese Generation X consumers' perceived risk of mobile payment can significantly negatively impact their behavioral intention of mobile payment, making Chinese Generation X consumers' behavioral intention of mobile payment lower and indirectly affecting Chinese Generation X consumers' mobile payment behavior. Yang et al. (2012) argued that social influence, perceived value, cost, perceived usefulness, perceived ease of use, perceived risk, and various other factors influence the behavioral intention of user behavior, further determining the actual adoption of that mobile payment.

In summary, the results of this study will help Chinese mobile payment platforms to gain reference information and inspiration on the practices of Chinese Generation X consumers, improve the behavioral intention and use behavior of Chinese Generation X consumers, and promote more possibilities for Chinese Generation X consumers to use mobile payment in the mobile payment context.

5.3 Limitation and Further Study

The basic purpose of this study is to evaluate the usability of the proposed combination model in a developing country context. As payment methods continue to evolve and be used in society, the results of this study will help provide insight into the behavioral intentions and use behavior of mobile payment methods.

However, this study still has obvious limitations, such as the single sample country context and the fact that only three sampling methods were considered to collect data. In addition, it is important to note that the influencing factors may have yet to be considered comprehensively, so more studies and more concise models are needed in the future to determine the experimental results.

In conclusion, more and more people are using mobile payment applications, and this payment behavior will have a very significant impact on the Chinese economy. We encourage other scholars to discover future lines of research across different cultures that will enhance the use of mobile payment methods and ensure the continued growth of the Chinese economy.

References

- Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: A replication. *MIS quarterly*, 16, 227-247.
- Alam, M. Z., Hu, W., Hoque, M. R., & Kaium, M. A. (2020). Adoption intention and usage behavior of mHealth services in Bangladesh and China: A cross-country analysis. *International Journal of Pharmaceutical and Healthcare Marketing*, 14(1), 37-60. <https://doi.org/10.1108/ijphm-03-2019-0023>
- Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), *Groups, leadership and men; research in human relations* (pp. 177-190). Carnegie Press.
- Bengtson, V. L., & Lovejoy, M. C. (1973). Values, personality, and social structure: An intergenerational analysis. *American Behavioral Scientist*, 16(6), 880-912.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238. <https://doi.org/10.1037/0033-2909.107.2.238>
- Bhattacharjee, A. (2001). An empirical analysis of the antecedents of electronic commerce service continuance. *Decision support systems*, 32(2), 201-214.
- Cao, Y., & Li, Q. (2009). A model and empirical study of mobile payment users' intention and usage behavior. *Statistics and Information Forum*, 24(2), 72-77.
- Chang, C., & Dibb, S. (2012). Reviewing and conceptualizing customer-perceived value. *The marketing review*, 12(3), 253-274.
- Chen, H., & Tang, J. (2006). A study of the users and usage behaviour of mobile payments. *Management science*, 19(6), 48-55.
- Chen, J. J., & Adams, C. (2005). User acceptance of mobile payments: A theoretical model for mobile payments. *ICEB 2005 Proceedings*, 95, 1-10.
- Chih-Chien, W., Hsu, Y., & Fang, W. (2005). Acceptance of technology with network externalities: an empirical study of internet instant messaging services. *JITTA: Journal of Information Technology Theory and Application*, 6(4), 15.
- Chiu, C.-M., Lin, H.-Y., Sun, S.-Y., & Hsu, M.-H. (2009). Understanding customers' loyalty intentions towards online shopping: an integration of technology acceptance model and fairness theory. *Behavior & Information Technology*, 28(4), 347-360.
- Chu, X., Liu, K., Li, Y., & Lei, P. (2021). Does perceived ease of use affect willingness to use virtual goods in online games? The role of perceived usefulness and player neuroticism. *Psychological Science*, 2(1), 134.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 13(3), 319-340.
- Dewan, S. G., & Chen, L.-d. (2005). Mobile payment adoption in the US: A cross-industry, Cross platform solution. *Journal of Information Privacy and Security*, 1(2), 4-28.
- Dowling, G. R., & Staelin, R. (1994). A model of perceived risk and intended risk-handling activity. *Journal of consumer research*, 21(1), 119-134.

- Elliott, M. A., Armitage, C. J., & Baughan, C. J. (2005). Exploring the beliefs underpinning drivers' intentions to comply with speed limits. *Transportation Research Part F: Traffic Psychology and Behavior*, 8(6), 459-479.
- Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: a perceived risk facets perspective. *International journal of human-computer studies*, 59(4), 451-474.
- Feng, D., Xiang, C., Vongurai, R., & Pibulcharoensit, S. (2022). Investigation on Satisfaction and Performance of Online Education Among Fine Arts Major Undergraduates in Chengdu Public Universities. *AU-GSB E-JOURNAL*, 15(2), 169-177. <https://doi.org/10.14456/augsbejr.2022.82>
- Feng, J. (2022). A study of the factors influencing the behavioural intention to continue learning in a virtual experimental environment Nanjing University of Posts and Telecommunications. *Procedia - Social and Behavioral Sciences*, 59, 180-187.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. (1st ed.). MA: Addison-Wesley.
- Fishbein, M., Hennessy, M., Kamb, M., Bolan, G. A., Hoxworth, T., Iatesta, M., Rhodes, F., Zenilman, J. M., & Group, P. R. S. (2001). Using intervention theory to model factors influencing behavior change: Project RESPECT. *Evaluation & the health professions*, 24(4), 363-384.
- Folkes, V. S. (1988). Recent attribution research in consumer behavior: A review and new directions. *Journal of consumer research*, 14(4), 548-565.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388. <https://doi.org/10.1177/002224378101800313>
- Frost, J., Gambacorta, L., Huang, Y., Shin, H. S., & Zbinden, P. (2019). BigTech and the changing structure of financial intermediation. *Economic Policy*, 34(100), 761-799.
- Gupta, K., & Arora, N. (2020). Investigating consumer intention to accept mobile payment systems through unified theory of acceptance model: An Indian perspective. *South Asian South Asian Journal of Business Studies*, 9(1), 88-114. <https://doi.org/10.1108/sajbs-03-2019-0037>
- Hair, J. F., Money, A. H., Samouel, P., & Page, M. (2007). Research methods for business. *Education+ Training*, 49(4), 336-337. <https://doi.org/10.1108/et.2007.49.4.336.2>
- Holbrook, M. B. (1999). *Consumer value. A framework for analysis and research* (1st ed.). Routledge.
- Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? *Personality and social psychology review*, 14(3), 332-346. <https://doi.org/10.1177/1088868310361240>
- Jing, B. (2001). Dictionary of Philosophy. In: Shanghai Dictionary Press. *Shanghai Lexicographical Publishing*, 2(1), 1-10.
- Jing, Y., Li, X., & Jiang, X. (2021). Analysis of factors influencing online learning behavioural intentions and educational insights in the post-epidemic era. *E-learning in China*, 418(6), 31.
- Jong, A. d., Ruyter, K. d., & Lemmink, J. (2005). Service climate in self-managing teams: Mapping the linkage of team member perceptions and service performance outcomes in a business-to-business setting. *Journal of Management Studies*, 42(8), 1593-1620.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling* (5th ed.). Guilford publications.
- Knight, F. (2013). *Risk, uncertainty, and profit*. Vernon Press Titles in Economics (1st ed.). Vernon Press.
- Kotler, P., & Armstrong, G. (1994). *Marketing management, analysis, planning, implementation, and control* (1st ed.). Prentice-Hall International.
- Lai, A. W. (1995). Consumer values, product benefits and customer value: a consumption behavior approach. *ACR North American Advances. Association for Consumer Research*, 22, 381-388.
- Laroche, M., Pons, F., Zgolli, N., & Kim, C. (2001). Consumers use of price promotions: a model and its potential moderators. *Journal of Retailing and Consumer Services*, 8(5), 251-260.
- Leong, C.-M., Tan, K.-L., Pua, C.-H., & Chong, S.-M. (2021). Predicting mobile network operator's users m-payment intention. *European business review*, 33(1), 1-10. <https://doi.org/10.1108/eb-10-2019-0263>
- Li, K., Sun, X., & Yan, J. (2013). Analysis of factors influencing the willingness to use mobile payment systems: An empirical study based on exchange theory. *Management commentary*, 1(3), 91-100.
- Limayem, M., Hirt, S. G., & Cheung, C. M. (2007). How habit limits the predictive power of intention: The case of information systems continuance. *MIS quarterly*, 31(4), 705-737. <https://doi.org/10.2307/25148817>
- Lin, K.-Y., Wang, Y.-T., & Huang, T. K. (2020). Exploring the antecedents of mobile payment service usage: Perspectives based on cost-benefit theory, perceived value, and social influences. *Online Information Review*, 44(1), 299-318. <https://doi.org/10.1108/oir-05-2018-0175>
- Lu, H., Liang, A., & Li, Z. (2018). The impact of socialisation of online learning platforms on university students' intention to continue using them. *Research in Higher Financial Education*, 21(2), 19-27.
- Mao, X. (2022). A study of the perceived usability of campus travel apps: the example of "Hello Travel". *Beauty and the Times: Creativity*, 2(6), 61-64.
- Mehl, M. R., & Pennebaker, J. W. (2003). The sounds of social life: a psychometric analysis of students' daily social environments and natural conversations. *Journal of Personality and Social Psychology*, 84(4), 857.
- Mitchell, V. W. (1999). Consumer perceived risk: conceptualisations and models. *European Journal of marketing*, 33(1/2), 163-195. <https://doi.org/10.1108/03090569910249229>
- Mitchell, V. W., Yamin, M., & Pichene, B. (1997). A cross-cultural analysis of perceived risk in British and French CD purchasing. *Journal of Euro marketing*, 6(1), 5-24.
- Mo, Z., & Luo, M. (2019). A study of the influence of online reviews on consumer purchase decisions: mediating moderating effects based on review credibility and trust propensity. *Journal of Guangdong University of Technology*, 36(2), 54-61.

- Myers, D. G., & Twenge, J. M. (2012). *Exploring social psychology* (8th ed.). McGraw-Hill New York.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Parasuraman, A., & Grewal, D. (2000). The impact of technology on the quality-value-loyalty chain: a research agenda. *Journal of the academy of marketing science*, 28(1), 168-174.
- Peach, M., Jimmieson, N., & White, K. (2005). Beliefs underlying employee readiness to support a building relocation: A theory of planned behavior perspective. *Organization Development Journal*, 23(3), 9-22.
- Phonthanukitithaworn, C., Sellitto, C., & Fong, M. W. (2016). An investigation of mobile payment (m-payment) services in Thailand. *Asia-Pacific Journal of Business Administration*, 8(1), 37-54.
- Qi, X. (2016). A Study on the Motivation and Usage Behaviour of UGC Mode Mobile Short Video Social Platform Jinan University. *International Journal of Advertising*, 40(2), 1-27.
- Ross, I. (1975). Perceived risk and consumer behavior: a critical review. *ACR North American Advances*, 2, 1-20.
- Schaefers, T. (2013). Exploring carsharing usage motives: A hierarchical means-end chain analysis. *Transportation Research Part A: Policy and Practice*, 47, 69-77.
- Shah, A. M., Yan, X., Shah, S. A. A., & Ali, M. (2020). Customers' perceived value and dining choice through mobile apps in Indonesia. *Asia Pacific Journal of Marketing and Logistics*, 33(1), 1-28. <https://doi.org/10.1108/APJML-03-2019-0167>
- Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research*, 58(7), 935-943. <https://doi.org/10.1016/j.jbusres.2003.10.007>
- Sheng, Y. (2009). Mobile phone usage behavior and the factors that influence it Zhejiang University. *Computers in Human Behavior*, 29(4), 1763-1770
- Shi, H. (2007). A study on the factors influencing consumers' willingness to use mobile payment services Hangzhou: Zhejiang University. *Advances in Computer Science and Engineering*, 7(6), 575-580.
- Sica, C., & Ghisi, M. (2007). The Italian versions of the Beck Anxiety Inventory and the Beck Depression Inventory-II: Psychometric properties and discriminant power. In M. A. Lange (Ed.), *Leading-edge psychological tests and testing research* (pp. 27-50). Nova Science Publishers.
- Sobti, N. (2019). Impact of demonetization on diffusion of mobile payment service in India: Antecedents of behavioral intention and adoption using extended UTAUT model. *Journal of Advances in Management Research*, 16(4), 472-497. <https://doi.org/10.1108/jamr-09-2018-0086>
- Su, C. (2016). *Customer Relationship Management* (1st ed.). Higher Education Press.
- Tan, M., & Teo, T. S. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for information Systems*, 1(1), 5. <https://doi.org/10.17705/1jais.00005>
- Upmeyer, A. (2012). *Attitudes and behavioral decisions* (1st ed.). Springer Science & Business Media.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 27(3), 425-478.
- Wang, W. (2007). Research on the adoption and use of information technology. *Research and Development Management*, 19(3), 48-55. <http://www.cqvip.com/qk/81062x/200703/24849557.html>
- Wang, X., Zhao, K., Liu, Y., & Luo, R. (2023). Analysis of the factors influencing the use of intelligent voice interaction users and their usage behavioral groupings. *F1000 Research*, 10, 496.
- Wang, Y., Wen, Z., Li, W., & Fang, J. (2022). Methodological research and model development on structural equation models in China's mainland from 2001 to 2020. *Advances in Psychological Science*, 30(8), 1715. <https://doi.org/10.3724/SP.J.1042.2022.01715>
- Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. F. (1977). Assessing reliability and stability in panel models. *Sociological methodology*, 8(1), 84-136. <https://doi.org/10.2307/270754>
- Wu, J.-H., & Wang, S.-C. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & management*, 42(5), 719-729. <https://doi.org/10.1016/j.im.2004.07.001>
- Wu, J.-H., & Wang, Y.-M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. *Information & management*, 43(6), 728-739. <https://doi.org/10.1016/j.im.2006.05.002>
- Wu, X., & Fan, J. (2010). An empirical study of mobile payment usage behaviour based on perceived risk. *Statistics and decision making*, 20, 145-148.
- Xing, Y. (2011). A study of the mechanisms underlying the role of attitudes in technology use behaviour Hangzhou. *Frontiers in Psychology*, 1(3), 1-10.
- Yang, S., Lu, Y., Gupta, S., Cao, Y., & Zhang, R. (2012). Mobile payment services adoption across time: An empirical study of the effects of behavioral beliefs, social influences, and personal traits. *Computers in human behavior*, 28(1), 129-142. <https://doi.org/10.1016/j.chb.2011.08.019>
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of marketing*, 52(3), 2-22.
- Zhang, J., & Yuan, Y. (2019). A study of college students' knowledge payment APP usage behavior and its mechanism: the example of fluent reading. *Sustainability*, 15(3), 2848.
- Zhang, K. Z., Gong, X., Chen, C., Zhao, S. J., & Lee, M. K. (2019). Spillover effects from web to mobile payment services: The role of relevant schema and schematic fit. *Internet research*, 29(6), 1213-1232.
- Zhu, D. (2012). A study of students' behavioural intention to use mobile libraries in higher education. *Knowledge of library information* 34(4), 75-80. <https://doi.org/10.13366/j.dik.2012.04.014>
- Zhu, W., Wang, L., Wang, Y., & Chen, M. (2021). A study on the impact of Internet Word of Mouth on female consumers' perceived usefulness and purchase intention. *The rule of law and the economy*, 1(1), 1-10.