

**CONSUMERS' CONSUMPTION VALUES,
SATISFACTION AND LOYALTY TOWARD
MOBILE PAYMENT SERVICE PROVIDERS
IN CHINA: ALTERNATIVE ATTRACTIVENESS
AS MODERATOR**

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UNIVERSITI SAINS MALAYSIA

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MOBILE PAYMENT SERVICE PROVIDERS
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by

ZHANG QI

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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CAB	Cognitive-Affective-Behavior
CB-SEM	Co-variance Structural Equation Modelling
CSR	Corporate Social Responsibility
DCEP	Digital Currency Electronic Payment
DV	Dependent Variable
GSB	Graduate School of Business
HTMT	Heterotrait-Monotrait
IS	Information System
IT	Internet Technology
IV	Independent Variable
NFC	Near Field Communication
PLS	Partial Least Square
QR Code	Quick Response Code
SEM	Structural Equation Modelling
SNS	Social Network Service
SOR	Stimulus-Organism-Response
SPSS	Statistical Package for the Social Science
TCV	Theory of Consumption Values
USM	Universiti Sains Malaysia
VB-SEM	Variance-Based Structural Equation Modelling

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**NILAI PENGGUNAAN, KEPUASAN DAN KESETIAAN PENGGUNA
TERHADAP PENYEDIA PERKHIDMATAN BAYARAN MUDAH ALIH DI
CHINA: TARIKAN ALTERNATIF SEBAGAI PENGANTARA**

ABSTRAK

Dalam tahun-tahun kebelakangan ini, perkembangan pesat industri pembayaran mudah alih telah menjadikan pengekalan pelanggan sebagai isu penting bagi penyedia perkhidmatan pembayaran mudah alih. Kajian ini cuba mengkaji hubungan antara nilai pengguna, kepuasan dan kesetiaan dengan membangunkan rangka kerja berdasarkan model Cognitive-Affective-Behaviour (C-A-B) dan Teori Nilai Penggunaan (TCV). Kajian ini mengumpul 427 soal selidik dari tiga kawasan di China. Keputusan menunjukkan bahawa kesetiaan ditentukan secara langsung oleh kepuasan, dan kepuasan dipengaruhi oleh nilai fungsi, emosi, epistemik, bersyarat dan kewangan. Kajian ini juga menunjukkan bahawa kepuasan telah menjadi pengantara hubungan antara nilai penggunaan dan kesetiaan, dan daya tarikan alternatif telah melemahkan pengaruh kepuasan terhadap kesetiaan. Penyelidikan ini mengalihkan tumpuan dalam penyelidikan pembayaran mudah alih semasa daripada peringkat penerimaan kepada peringkat pasca pakai. Tambahan pula, kajian ini meluaskan dan mengukuhkan teori tersebut dengan memperkenalkan dan mengesahkan secara empirikal nilai kewangan pembolehubah bebas tambahan, kepuasan pembolehubah pengantara dan daya tarikan alternatif pembolehubah yang menyederhana. Secara praktikal, kajian ini membantu penyedia perkhidmatan pembayaran mudah alih untuk menentukan nilai yang boleh diletakkan dalam strategi pemasaran mereka untuk memupuk kepuasan dan kesetiaan pelanggan, juga membantu mereka menyedari dan meneutralkan kesan kelemahan daya tarikan pesaing.

**CONSUMERS' CONSUMPTION VALUES, SATISFACTION
AND LOYALTY TOWARD MOBILE PAYMENT SERVICE PROVIDERS IN
CHINA: ALTERNATIVE ATTRACTIVENESS AS MODERATOR**

ABSTRACT

In recent years, the tremendous development of mobile payment industry has made customer retention a crucial issue for mobile payment service providers. This study attempts to examine the relationship between consumers' consumption values, satisfaction and loyalty by developing a framework based on the Cognitive-Affective-Behaviour (C-A-B) model and the Theory of Consumption Values (TCV). This study collected 427 questionnaires from three areas (municipalities or provincial capitals, prefecture-level cities and counties, towns or villages) in China. The results show that customers' loyalty is determined by satisfaction, and satisfaction is influenced by functional, emotional, epistemic, conditional and monetary value. This study also demonstrated that satisfaction has mediated the consumption values and loyalty relationship, and alternative attractiveness has weakened the influence of satisfaction on loyalty. This research shifts the focus in mobile payment research from adoption to the post-adoption stage, also establishes a solid model by integrating two fundamental theories. Furthermore, this study strengthens the C-A-B and TCV by introducing and empirically verifying an additional independent variable monetary value, a mediating variable satisfaction and a moderating variable alternative attractiveness. Practically, this study helps mobile payment providers determine which values could be positioned in their marketing strategies to cultivate customer satisfaction and loyalty, also helps them notice and neutralise the weakening effect of competitor's attractiveness.

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter starts with a general introduction of the research title, then provides a background review to explain the motivation and necessity of this research. Followed by the problem statement, research questions and objectives, significance and scope of the study. This chapter ended with a summary and overall research organisation.

1.2 Research Background

In recent years, the rapid development of mobile internet technology has disruptively changed our living styles and behaviours (Fu et al., 2022; Yuan et al., 2020; Zhu, 2022). Mobile related products and services such as banking, commerce, payment, social media and games continue to prevail and gain more and more attention. According to the Mobility Report published by Ericsson (2020), at the end of June 2020, there were 7,920 million mobile subscriptions worldwide, of which 5,530 million were smartphone subscriptions. This number is almost equivalent to the world's total population. As for China, based on the annual report released by the Ministry of Industry and Information Technology (MIIT) in 2020, the number of mobile phone subscriptions reached 1,594 million, even more than the country's population (MIIT, 2020). The rapid development of the mobile industry has significantly stimulated the dramatic growth of e-commerce in recent years, and in particular, mobile payment has enjoyed an increasing popularity and becoming one of the most vital components in the current business world (Yan et al., 2021).

Mobile payment is a hybrid of mobile technology and payment solution that used to facilitates payment for goods or services by mobile devices (Migliore et al., 2022). It has witnessed a significant development in recent years as an emerging new payment option (de Luna et al., 2019; Mukhopadhyay & Upadhyay, 2022). Compared with traditional offline payment, mobile payment could enable customers to conduct various types of transactions by mobile devices anywhere and anytime (Qasim & Abu-Shanab, 2016). Based on different scenarios, mobile payment can be classified into online or offline payment. Online mobile payment mainly includes online payment account login, associate account login or virtual quick response (QR) code scan, by which users can directly use payment platforms and login their account to pay the online bills. In addition, users can also use online mobile payment apps to pay their house's electricity, water and other utility bills (Wu et al., 2020). Whereas offline mobile payment mainly refers to payment scenarios that occur in daily life, such as near field communication (NFC), QR codes or facial recognition payment. According to the mobile payment user survey report published by the Payment and Clearing Association of China (PCAC, 2021), offline mobile payments are mainly carried out by small or high-frequency purchasing. This kind of payment is widely adopted in roadside stalls, public transportations or parking lots, it is usually conducted through special equipment such as code readers, point of sales (POS) terminal machines, tablets or smartphones.

The global mobile payment market is growing bigger and bigger. According to the Allied Market Research's report released in 2020, the global mobile payment market size was 1.48 trillion us dollars in 2020, and it is expected to reach 12.06 trillion us dollars by the year 2027, with a compound annual growth rate at 30.1% from the year 2020 to 2027 (Allied Market Research, 2020). Figure 1.1 illustrates the increasing

trend of estimated global mobile payment size from 2014 to 2027. The total global mobile payment market size is expected to grow from 34.9 billion USD in 2014 to 12,060 billion USD in 2027 (Allied Market Research, 2020).

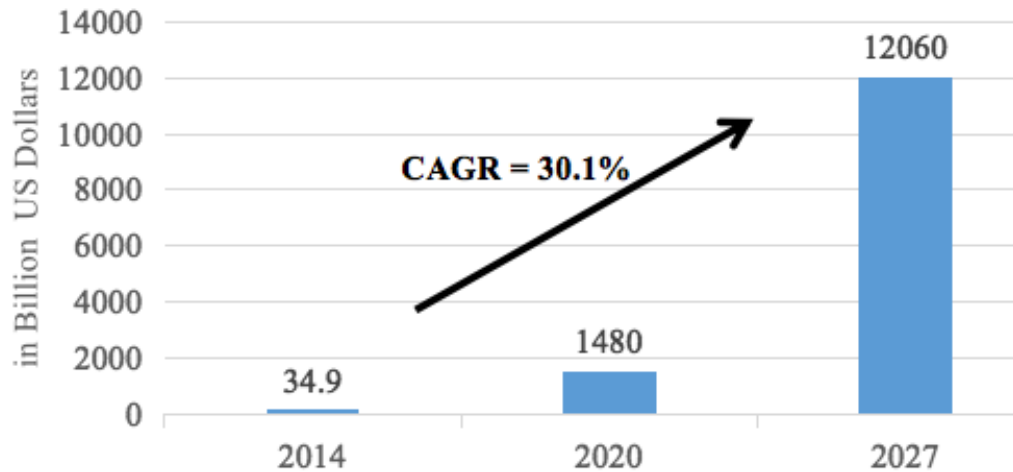


Figure 1.1 Global Mobile Payment Market Size (Allied Market Research, 2020)

Attracted by this large market and its great potential, many companies have developed and launched their mobile payment service to enter the market and gain prominent profits (Markovich et al., 2016). Besides the existing players such as Apple's Apply Pay, Samsung's Samsung pay and eBay's PayPal, some latecomers companies also noticed the opportunities in mobile payment (Dwyer, 2019). For example, Nokia invested 70 million USD in OboPay to enter the market, and Google spent more than 100 million USD to develop its own mobile payment software (Markovich et al., 2016).

In China, the rapid development of mobile payment has also led to the unprecedented fierce competition among mobile payment service providers (Allam, 2020). The central bank of China started to issue mobile payment licenses from the year 2010. Compared with only 101 companies authorized to provide mobile payment service in 2011, the accumulated licenses issued reached 272 as of 2019 (iiMedia, 2020). As a result, customers provided with various choices are becoming more and

more critical and easily swayed when choosing between these providers. This growing competition has led to a decrease in the number of loyal customers and subsequently harmed company profitability (Almohaimmeed, 2019; Yuan et al., 2020). Therefore, maintaining existing customers and urging mobile payment service providers to develop strategies to retain customer and improve their loyalty to achieve profitability and sustainability has become the most crucial target of mobile payment providers (Chiu & Huang, 2015). Building customer loyalty has gradually become equally or even more important than gaining new customers for mobile payment service providers (Wang et al., 2019).

The concept of customer loyalty always occupies a central place in marketing practice and remains a primary research interest in the academic community (Pekovic & Rolland, 2020). Both marketing scholars and practitioners recognize the importance of customer loyalty as a strategic objective in all industries (Tahir et al., 2021; Omar et al., 2021; Zephaniah et al., 2020). Compared with regular and un-loyal customers, loyal customers are much less likely to be influenced by negative reviews/reports or attracted by campaigns from competitors (Srivastava & Rai, 2018). The competence to retain old customers and cultivate loyalty is one of the most efficient ways to acquire competitive advantage (López-Miguens & Vázquez, 2017). Therefore, it is crucial and imperative to identify the drivers of customer loyalty and make efforts to cultivate them.

1.3 Overview of Mobile Payments Market in China

Over the past few years, China has become the world's largest mobile payment market (Huang et al., 2020). According to the latest overall payment system operating status report published by the Central Bank of China, the total mobile payment amount

reached 432 trillion Chinese Yuan in the year 2020, compared with 347 trillion in the year 2019, a yearly increase of 36.69 (People’s Bank of China, 2020). Figure 1.2 illustrates the increasing trend of Chinese mobile payment market size, which can be seen that the total size was only 22.6 trillion CNY in the year 2014, compared with 432.2 trillion in the year 2020, indicates that the total market size has been increased by over 20 times from 2014 to 2020 (People’s Bank of China, 2021).

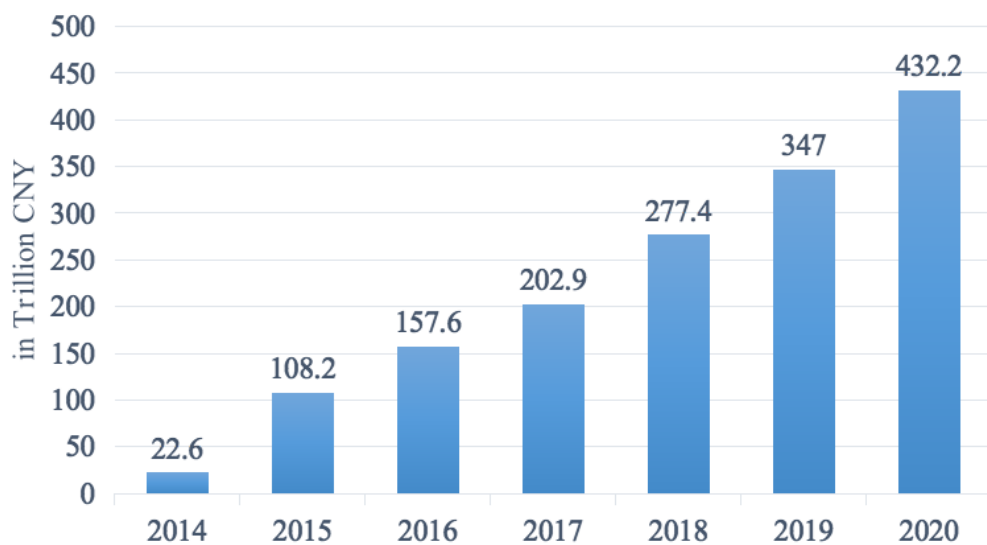


Figure 1.2 Mobile Payment Market Size in China (People’s Bank of China, 2021)

The total number of mobile payment users in China has also increased by an average annual rate of 20% from the year 2013 to 2020 (Statista, 2021). This growth rate has slow down in the last two years due to the high market saturation. Nevertheless, in 2021, Chinese mobile payment users have reached 900 million, with a growth rate of 7% compared with 7.7% in 2020 (PCAC, 2021a). As the most populous country in the world, China remains the largest and fast-growing market for mobile payment users (Schirmer, 2022). Figure 1.3 illustrates the increasing trend of mobile payment users in China from 2013 to 2021. The total number of mobile payment users grew from 125.48 million in 2013 to 915.52 million in 2021 (Statista, 2021).

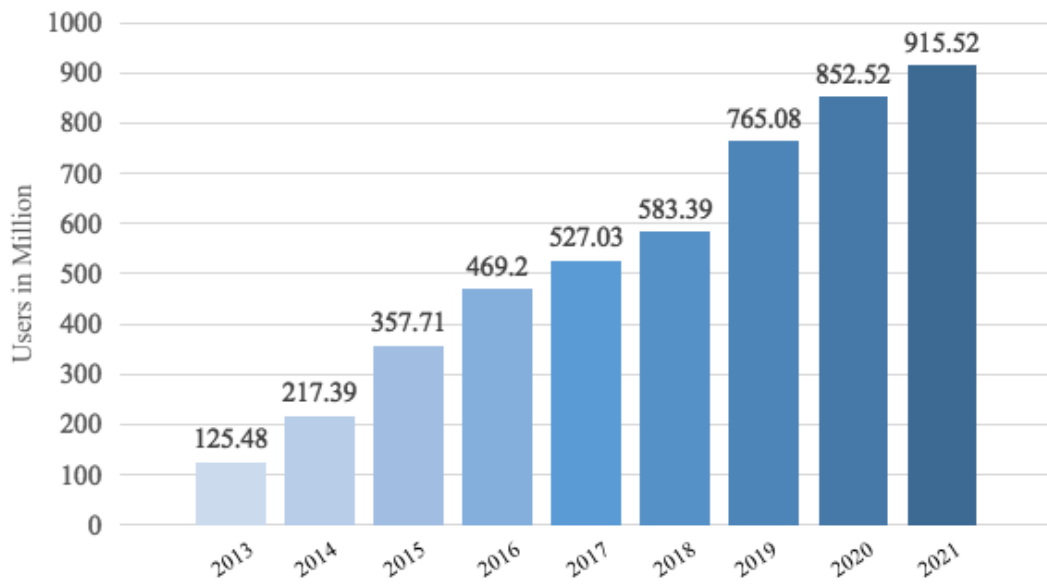


Figure 1.3 Number of Mobile Payment Users in China (Statista, 2021)

After the outbreak of the COVID-19 epidemic in December 2019, the authority of the China Payment and Clearing Association started a series of market campaigns to encourage citizens to adopt contactless mobile payment to reduce the risk of contact infection (PCAC, 2021a). These official initiatives had significantly stimulated the use of mobile payment transactions, resulting in the total value of mobile payments reaching RMB700 trillion in 2020, surging by 100% in one year (Research and Markets, 2020).

China is now leading the world with 47% of mobile and digital payment users compared to all mobile users, while the second rank on this list is Norway with a utilisation rate of 42%, which is still much higher than the average rate of Europe at 20% (Research and Markets, 2020). Among the world's largest mobile payment providers such as Apple Pay, Google Pay, Alipay, WeChat Pay. Alipay ranked first in terms of total number of users and total amount of transactions, it recorded an incredible 1.2 billion worldwide users in June 2019 (Daxue, 2021).

Figure 1.4 further illustrates the frequency of Chinese consumers using mobile payment services. It can be seen that 74 percent of users use mobile payment on a daily

basis, whereas 17 percent of users stated they use mobile payment at least three times per week (PCAC, 2021b). Therefore, it can be concluded that mobile payment has now become a daily necessity and cannot be separated from people's life in China (Schirmer, 2022).

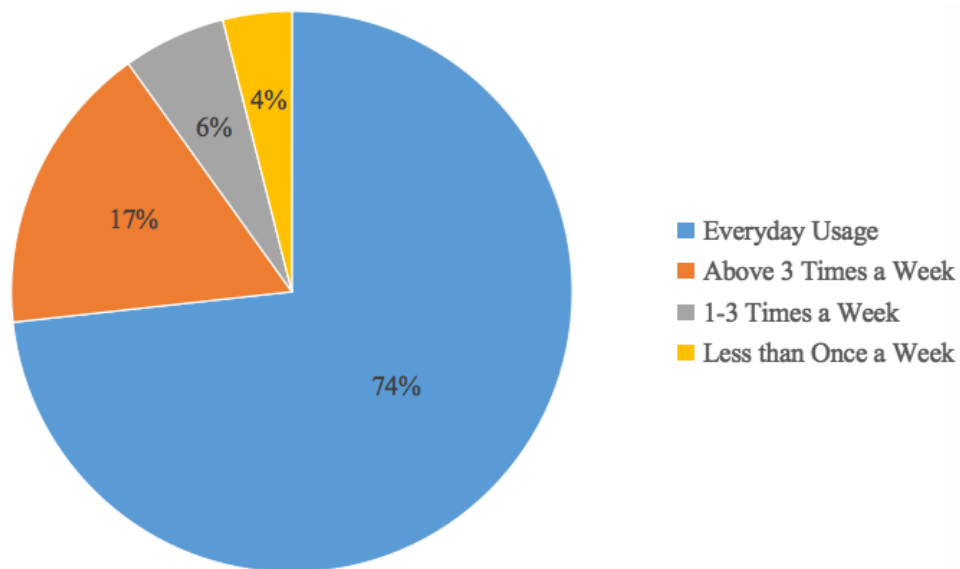


Figure 1.4 Frequency of Chinese Consumers Using Mobile Payment Service (PCAC, 2021b)

The rapid development of mobile payment in China is mainly attributed to the abundant mobile payment scenarios provided by the whole industrial ecology (Schirmer, 2022). Mobile payment could be used in every aspect of daily life, from online shopping to offline retailing, from convenience stores to large shopping malls, from purchasing subway tickets to booking flight tickets (Daxue, 2021). Figure 1.5 illustrates the scenarios mostly dependent on mobile payment services. Among these activities, restaurants and small/convenience stores are the highest usage scenarios, while parking fee is listed as the least usage activity (Daxue, 2021).

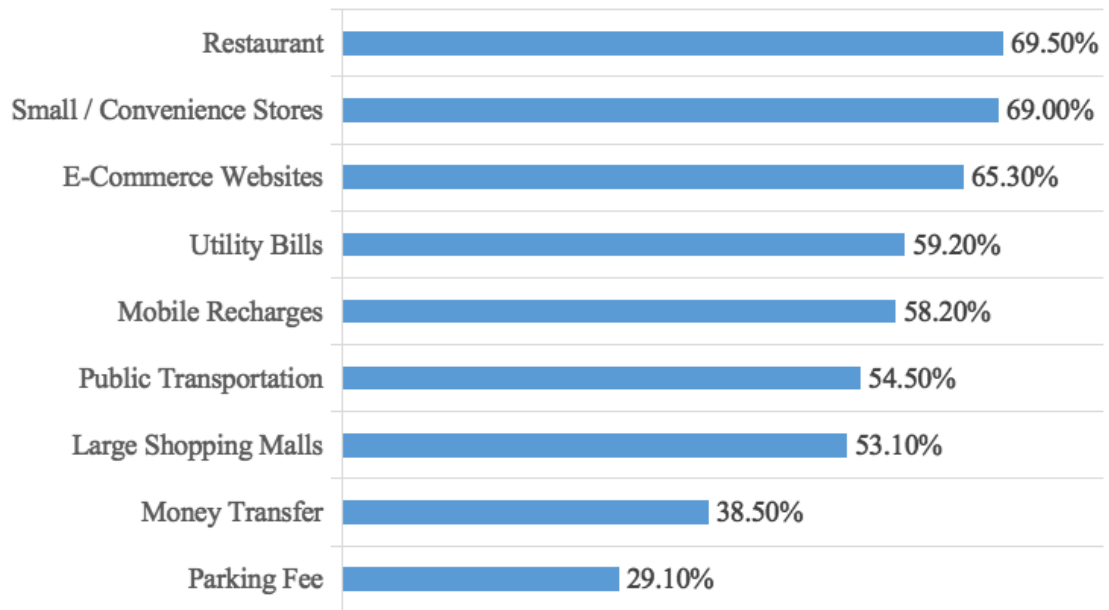


Figure 1.5 Mobile Payment Scenarios in China (Daxue, 2021)

These diversified mobile payment scenarios are provided by almost 300 mobile payment service providers in China. Based on the report of iiMedia (2020), as the governing authority in mobile payment, the Central Bank of China has totally issued 272 licenses by the end of 2019, compared with only 101 licenses approved in the year 2011, as illustrated in Figure 1.6. This means Chinese mobile payment users will be provided with 272 choices when choosing between mobile payment providers, and this number is continuously increasing.

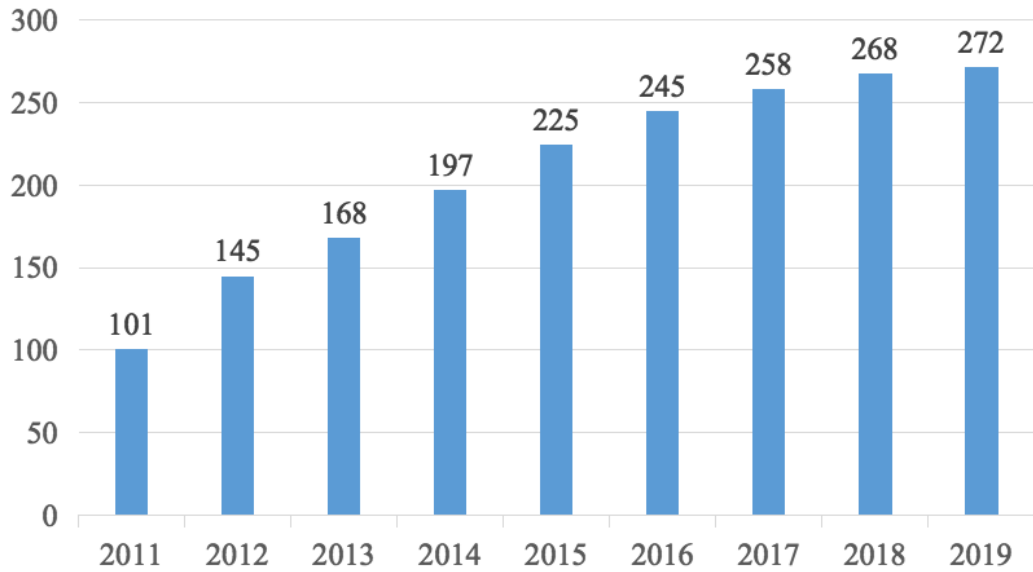


Figure 1.6 Mobile Payment Licenses Issued in China (iiMedia, 2020)

Within this mobile payment industry with cutting-throat competition, the key participants are third-party payment companies, China UnionPay, banks or other financial institutions, mobile network operators, and terminal mobile phone vendors (PCAC, 2021a). Figure 1.9 illustrates several key participants' popularity in China's mobile payment industry, including WeChat Pay, Alipay, UnionPay, Bank Apps, Credit Cards and other platforms. It can be seen that WeChat Pay and Alipay enjoyed the greatest customer popularity in 2020, respectively standing for 92.7% and 91% of customers' choice, followed by UnionPay (74.9%) and Banks Apps (23.3) in 2021 (Daxue, 2021).

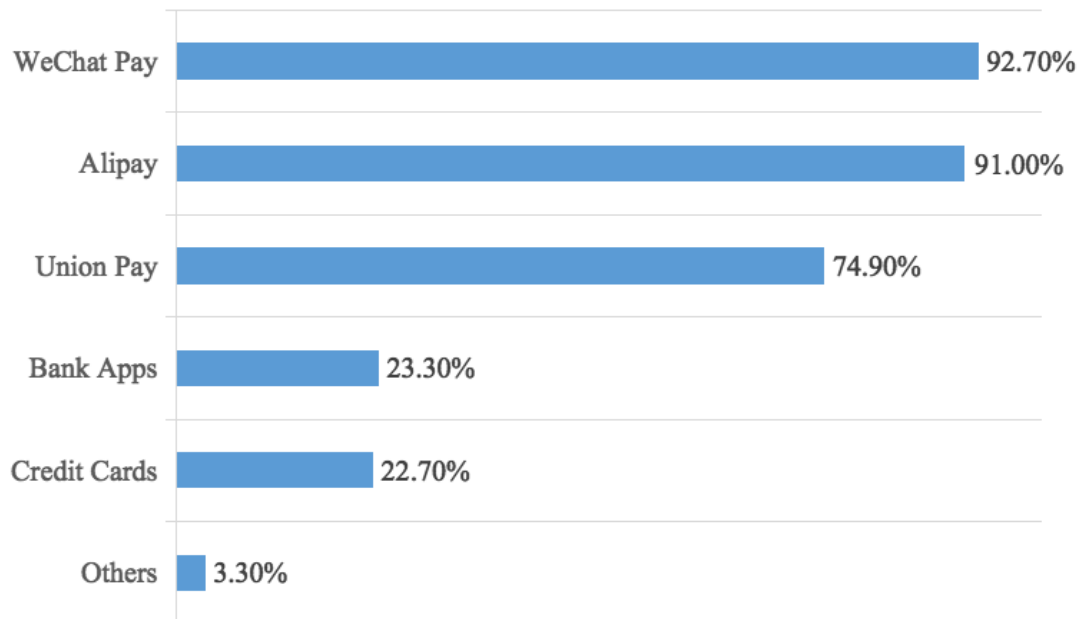


Figure 1.7 Popular Mobile Payment Platforms in China (Daxue, 2021)

The market share of each mobile payment platform is almost identical to mobile payment platforms' popularity (Tenba, 2019). Based on the latest report released by PCAC (2021), Alipay and WeChat Pay are two leading mobile payment service providers, aggregately occupying more than 93 percent market share. The rest of less than 7 percent market is divided by other providers of Pingan Pay, UnionPay and other providers (PCAC, 2021a), as illustrated in Figure 1.10. However, due to the huge number of total users, these platforms are still very commonly used in China.

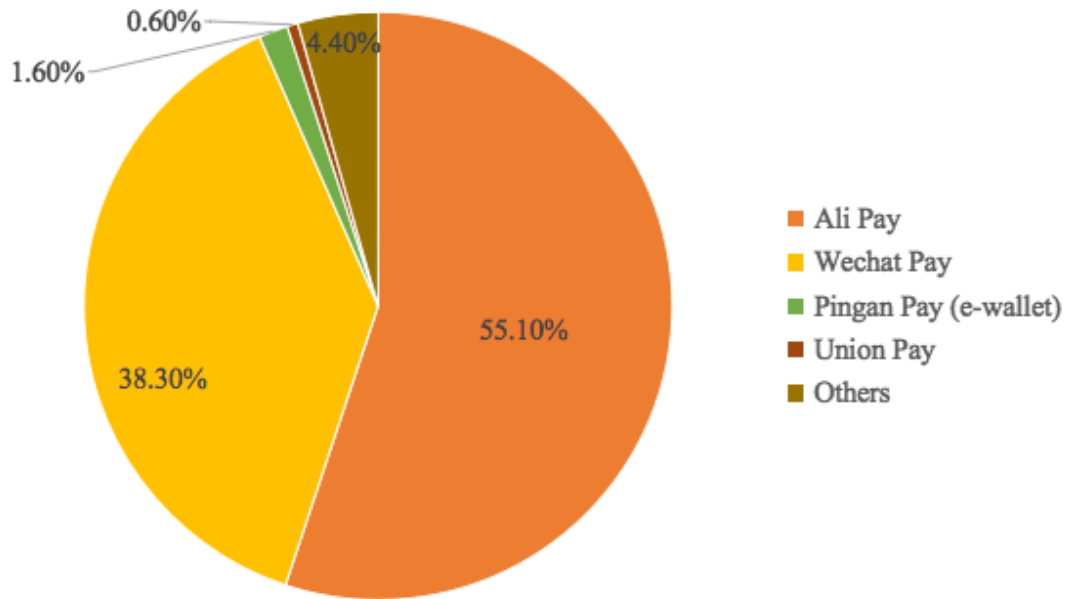


Figure 1.8 Market Share of Mobile Payment Service Providers in China (PCAC, 2021a)

Among all the mobile payment service providers, Alipay was established and introduced to the market by China's largest e-commerce network owner Alibaba Group in 2004 (Zhu et al., 2017). Alipay was the first mobile payment platform in China and its establishment has revolutionized the payment landscape in the whole country even worldwide (Research and Analysis, 2019). It was initially designed as a security tool to facilitate purchasing process between online buyers and sellers in Alibaba's C2C e-commerce platform Taobao. Nowadays, Alipay has developed into a hybrid mobile payment platform that provides over 100 different services to 1200 million users worldwide (Tenba, 2019).

WeChat Pay belongs to Tencent, which entered the mobile payment market almost ten years later than Alipay. In 2013, it was officially introduced to Chinese consumers as an extended function in its widely-used social media app WeChat (Bingchun, 2019). WeChat is China's most popular social media platform, with incredibly more than 1.1 billion monthly active users. Relying on the great influence of WeChat, WeChat Pay has undoubtedly become one of the most commonly used

mobile payment platforms (Tenba, 2019). Currently, WeChat Pay is extending its service category to incorporating diversified financial products, such as investment funds and insurance. Users could get access and pay for these products at a lower price within WeChat Pay (Daxue, 2021).

Union Pay is the world's largest payment card issuer. There were already eight billion bank cards issued by Union Pay by the year 2019, accounting for almost 30% of cards worldwide (Daxue, 2021). As the only domestic bank card organisation in China, Union Pay links the networks and branches of 14 major banks and many smaller banks in mainland China (APFC, 2020). Huawei Wallet is another emerging player in the mobile payment field. With its core advantage in technological innovation and terminal products, Huawei is now aiming to develop a full ecological circle of all smart scenarios which also gains more and more customers preference (iiMedia, 2020).

In addition to the above veteran players, Meituan Pay is an emerging mobile payment vendor growing fast in recent years. Meituan Pay is the affiliated product of Meituan-Dianping, the most widely used online food delivery application in local life and service area. Relying on Meituan-Dianping's substantive consumer foundation in off-line services, Meituan Pay can empower its merchant partners by sharing its transaction database (iiMedia, 2020). Although Meituan allows its users using different payment options when they pay for online orders, it only offers competitive discounts to users who choose Meituan Pay in the checkout process, which easily makes users choose Meituan Pay rather than alternative third-payment such as Alipay and WeChat Pay (Daxue, 2021). In October 2020, Meituan suspended Alipay as a payment option for its users on the Meituan app, but shortly under the pressure from Alipay users, Meituan resumed Alipay services but only showed in the folded option

at the bottom of the list. This incident indicates the competition between major payment service providers is turning white-hot.

PayPal is the first western payment company that enter the Chinese mobile payment market by acquiring the controlling shares of a local company Guofubao (Financial Times, 2020). Guofubao is a relatively small tech company that already gets the licenses for conducting online, cross-border and mobile payment services (Guofubao, 2019). The governing authority People's Bank of China, has already permitted PayPal's application to purchase 70% stakes of Guofubao in 2019, which means another powerful and experienced player has joined the competition in this already highly competitive market.

Besides all the above-mentioned mobile payment service providers, a new type of mobile payment option, DCEP (digital currency electronic payment), is also trying to penetrate the market by digitalising the cash in the circulation process. DCEP is an ambitious project launched by the Chinese government in August 2020, which will become a new mobile payment option other than those traditional technological giants listed above (Louie & Wang, 2021). Although the competitiveness and influence of DCEP in the mobile payment industry are not clear, it is still deemed a very competitive player since unlike Alipay or other providers, DCEP is a government endorsed product thus makes it can never be rejected by any merchants (Qing, 2020).

1.4 Customer Loyalty with Mobile Payment Service Providers

Provided with so many different mobile payment service providers and each with their unique value proposition, Chinese mobile payment users are likely to sway between them (Yuan et al., 2020). As the two largest giants leading this market, Alipay and WeChat Pay are typical examples of using different values to attract and retain

their customers. Functional value offered by Alipay in professional financial area and the social value offered by WeChat Pay in social communication area are the keys to their marketing strategy and customer loyalty management program (Bingchun, 2019). Alipay won and secured its leading position in market share with its dominance in large-amount transactions. However, when we consider the level of coverage and popularity among users, WeChat Pay exceeded Alipay with an aggregated users' coverage rate of 89.2%, compared with Alipay's 69.5% (PCAC, 2021a). The difference in popularity could be explained by the WeChat app's ubiquitous usage as social media and generating over one billion monthly active users (Cao et al., 2020). WeChat's dominant social interactive background makes users prefer to use the same app to conduct payments as they also use these apps to carry out their daily activities such as chatting or entertaining (Mu & Lee, 2017). Also, under offline mobile payment scenarios such as roadside stalls, WeChat Pay could trigger a strong peer influence on merchants and customers when they see others using it. Users who installed the WeChat app can easily and promptly make payments or complete transactions with each other. This influence could be seen in a survey conducted by Ipsos (2018), which showed that WeChat Pay occupied a leading position in peer-to-peer and micro offline payment scenarios (Ipsos, 2018). All these relative advantages WeChat Pay gets are because they provide functional and social value to their customer.

Compared with WeChat Pay, Alipay also possesses distinctive strengths to ensure its success in different mobile payment market segments. Relying on Alipay's parental company Alibaba's dominance in e-commerce, Alipay is listed as the only or preferred payment option in many online scenarios (Allied Market Research, 2020). Alibaba's e-commerce platform Taobao has a market share of 58% at the end of the year 2020 (eMarketer, 2020). This number is twice larger than all its rivals in the

Chinese online e-commerce market (China Internet Watch, 2020). Another relative advantage of Alipay is that it has been initially recognised as a reliable and trustworthy brand that able to provides a wide range of professional financial functions for both merchants and customers (APFC, 2020). Therefore, it is reasonable to assume that functional value is the foundation of Alipay's success. Within the highly competitive Chinese mobile payment market, not only WeChat Pay and Alipay have their unique value proposition to satisfying their customer's needs, other participants in this market are also trying to press respective advantages in their value propositions to gain customer satisfaction and increase their market share (Tenba, 2019).

Attracted by such diversified value propositions in the market, also considering the essential function of various mobile payment services are almost same, which is to facilitate transactions (Peng et al., 2013; Yuan et al., 2020). Customers are naturally becoming more and more critical in choosing between providers and thus make customer loyalty a pressing issue. Customers choose different mobile payment platforms due to different reasons. Based on the research conducted by iiMedia (2020) on mobile payment users' behaviour, the three most important factors that would influence users' choice in mobile payment platforms are: if the platform has a convenient payment function; if the platform can secure privacy; and if the platform can provide enough discount or cashback. Figure 1.7 illustrates the factors influencing consumers' choice in different platforms. On the top of the list, 62.4 percent of users choose the payment platform based on if the platform has a convenient payment function. In contrast, the user interface is the least considered factor that only standing for 3.3 percent consumers.

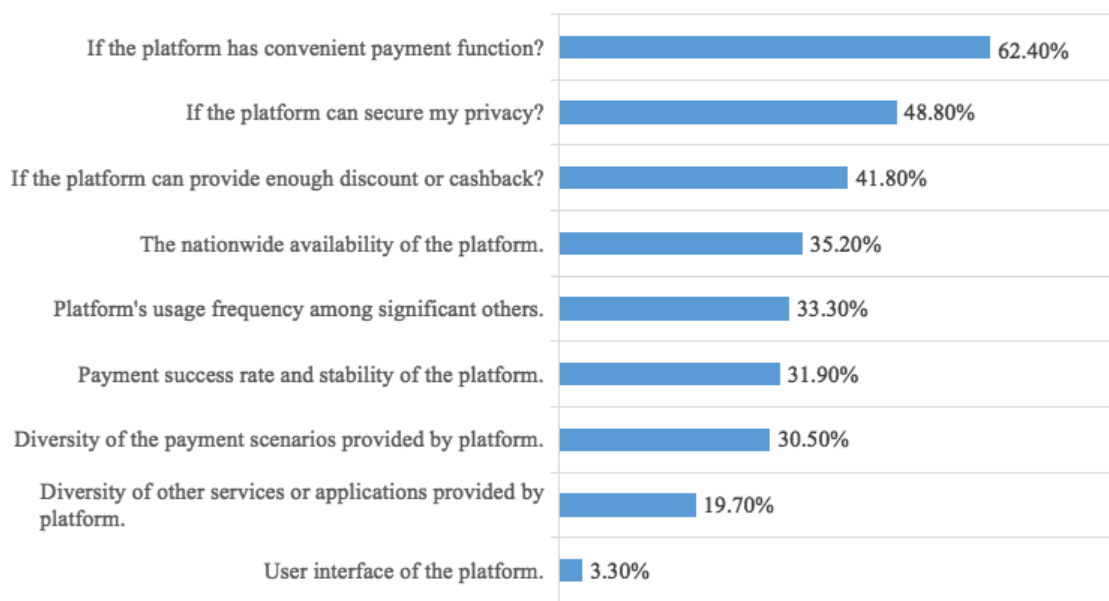


Figure 1.9 Main factors influencing Users choosing payment platform (iiMedia, 2020)

Due to the availability of numerous mobile payment providers in the market, also given that the basic function provided by different providers are almost identical (Yuan et al., 2020), mobile payment users in China are easily switching from one provider to another (Wang et al., 2019). This widely existed customers' switching behaviour is well reflected in the low exclusive user rate of WeChat Pay and Alipay. Exclusive user is a concept used to describe users that prefer to use the service from a particular provider above all the others (Ipsos, 2020), it could be deemed as a similar concept to loyal customer. By the end of the year 2019, WeChat Pay and Alipay users had reached 1 and 0.78 billion respectively, these two companies aggregately penetrated 93.8 percent of all the Chinese mobile payment users. However, the exclusive user is quite low. Figure 1.8 illustrates the users' constituent of WeChat Pay and Alipay. Compared with their shared users' percentage of 70.6, the exclusive user rate is only 21.7 percent for WeChat Pay and 1.4 percent for Alipay (Ipsos, 2020). This means 70.6 percent of mobile payment users in China have both Alipay and WeChat Pay installed on their cell phones, users could easily change mobile payment platforms

to complete payments due to a variety of reasons such as discounted price, merchant's preference or simply users' mood.

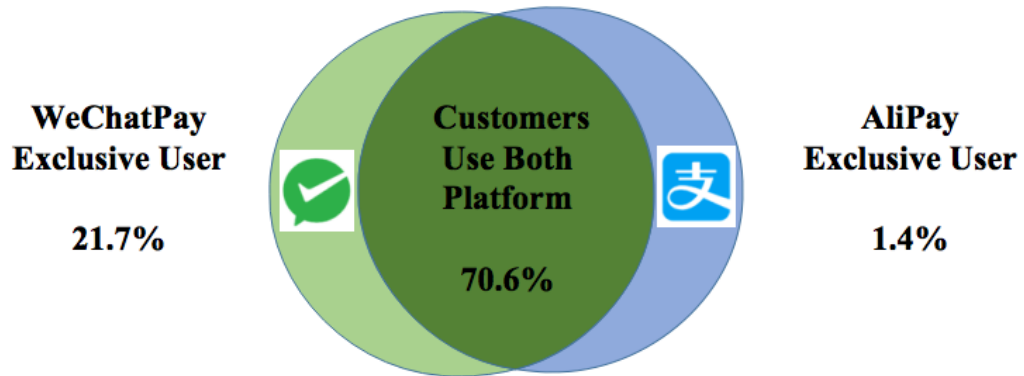


Figure 1.10 Low Exclusive User Rate in WeChat Pay and Alipay (Ipsos, 2020)

It is thus could be seen that the slowing-down increase of the new customer and the growing number of participants has led to fierce competition within this market. This competition is further deteriorating due to customer switching caused by the similarity of services offered by each mobile payment service provider (Yuan et al., 2020), all of which has leads to stagnant and down-trend in the number of loyal customers. According to the report published by Ipsos (2020), the exclusive users for the three leading mobile payment service providers have decreased consecutively in the last three years. Figure 1.11 illustrates the change in the proportion of exclusive users in three leading mobile payment service providers. The rate of exclusive users in the three largest providers WeChat Pay, Alipay and UnionPay, has dropped consecutively in the last three years. This decreasing trend is especially acute in UnionPay's case, due to the rapid rising of WeChat Pay and Alipay, the exclusive user rate of UnionPay has been enormously dropped from 38.4% in 2018 to 7.5% in 2020.

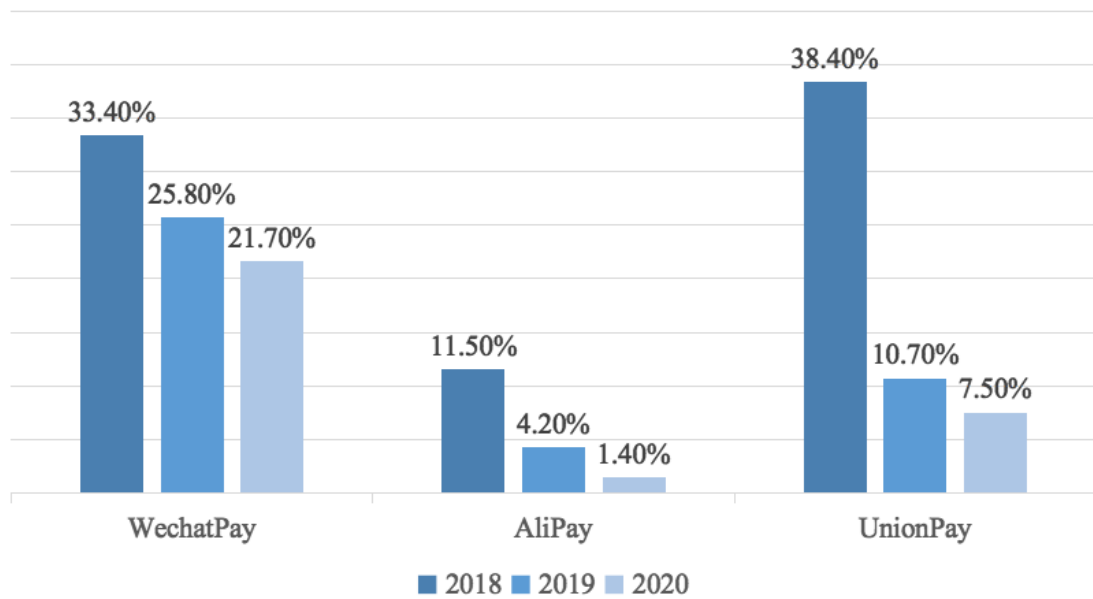


Figure 1.11 Decrease in Exclusive Users of Three Leading Providers (Ipsos, 2020)

To sum up, in this already highly competitive Chinese mobile market, not only existing service providers are strenuously developing their relative competitive advantages, emerging players are also trying their best to cut a slice of the cake. The evidence of this growing white-hot competition could be seen in the recent eye-attracting monopoly case, which Alibaba Group is legally charged for monopoly related to the fact that the only payment method available on Taobao is Alipay (Wang, 2021). Meanwhile, at another market end, the competition between these mobile payment service providers is quite welcomed among mobile payment users. Customers are provided with abundant options when they choose between different providers, thus they can easily switch among these providers based on their preference or to fulfil a specific purpose, which results in a decrease in customer loyalty (ReportLinker, 2021).

1.5 Problem Statement

It is reasonable to state that the slowing-down increase of the new customer and a growing number of competitors has led to fierce competition within the Chinese

mobile payment market. This competition further deteriorates due to customer switching behaviour caused by similarity of services offered by each mobile payment service provider (Yuan et al., 2020), all of which eventually leads to a down-trend in the number of loyal customers. Decreasing customer loyalty may lead to many negative influences on the organization such as decreased market share and profitability (Tahir et al., 2021). This kind of influence could already be seen in Chinese mobile payment market, that just within 2020, there were over ten acquisitions occurred between different mobile payment service providers, such as QianDai Wallet acquired by Meituan Pay, OneNine Pay acquired by WeChat's parent company Tencent. Therefore, identifying the drivers of customer loyalty in this context is with great practical significance and necessity (Yuan et al., 2020).

Although previous research have gradually shifted customer loyalty to a vital position due to the intense nature of competitive rivalry (Shahzad et al., 2021), also recognize the importance of identifying and understanding the factors that drive customer loyalty (Nyadzayo & Khajehzadeh, 2016), it still remains one of the most challenging issues confronted with the companies in this modernized competitive business world, extant literature is not yet provide a consistent conclusion regarding the antecedents of customer loyalty (Kumar et al., 2013; Shahzad et al., 2021), and specific research regarding customer loyalty in mobile payment context is very limited and scarce (Yuan et al., 2020).

At the same time, although increasing studies regarding mobile payment have been carried out in the area of consumer behaviour and information technology in recent years (Cao et al., 2018), most of these studies were only focused on the initial adoption stage. Several adoption factors have been identified such as perceived ease of use, perceived usefulness, usability or trust (Dahlberg et al., 2015b; Liu et al., 2011;

Verkijika, 2020), limited researches have focused on the influence of consumption values on consumer behaviour. Meanwhile, research on mobile payment users' post-adoption usage is scarce (Alhassan et al., 2020; Qasim & Abu-Shanab, 2016). While in China, there are over 900 million regular mobile payment users (PCAC, 2021a), initial adoption is no longer the main issue. Thus, the first gap this research intends to fill is to lift the concentration from pre-adoption consumer behaviour to post-adoption stage. Moreover, among the limited literature addressing the post-adoption stage of mobile payment, most of them are concentrating on users' continuance intention (McLean et al., 2020), which is a concept describes the users' intention to continue using mobile payment compared with other payment methods (Alhassan et al., 2020; Pal et al., 2021). For example, Shao et al. (2019) examined the influence of relative advantage, security, reputation and trust on continuance intention in using mobile payment platform; Alhassan et al. (2020) examined the driving effect of gratification on the attitude and continuance use of mobile payment service in developing country context. However in this study, based on the fact that over 75% of Chinese mobile payment consumers use mobile to complete payments at least three times a week (PCAC, 2021b), we can affirm that continuing usage in China is already realized (Liu et al., 2021). Thus this research intends to shift the focus from continuance usage in previous literature to customer loyalty, which is a type of consumer behaviour in the post-adoption stage that is not adequately addressed in prior research and requires more attention in this particular market (Yuan et al., 2020)

As the basis of this research, the Cognitive-Affective-Behavioural (C-A-B) model provided a useful tool in understanding consumers' behaviour (Havlena & Holbrook, 1986), the positive relationship among customer cognitive, affective and behavioural elements has been extensively affirmed in different context settings, such

as Mobile Commerce (Omar et al., 2021), Mobile Application (Kim et al., 2021), Telecommunication Industry (Belwal & Amireh, 2018) or social network service (SNS) (Tran & Strutton, 2020). Customer loyalty is well explained by these studies that it is formulated through a stair-up process starts from cognitive components such as beliefs, thoughts or perceptions, to the affective phase such as feelings or attitude, and finally leads to the behavioural stage of consumers' actual behaviour.

However, most previous research prefers to use quality-based cognitive constructs to predict loyalty. Such as Yuan et al. (2020) adopted information quality, system quality and service quality in their research of mobile payment loyalty, Kim et al. (2021) used information quality and service quality in their research of mobile shopping application loyalty. Such slant in quality-based factors might leads to the negligence in the consumer-based factors that would influence customer satisfaction and loyalty, also contradicting with the actual situation in the Chinese mobile payment market. Due to the standard principle function provided by mobile payment service providers are basically same (Yuan et al., 2020), users are satisfied and loyal to different service providers not only because the quality-related attributes they provide. Chinese mobile payment consumers' affective attitude and behaviour also arise from other possible reasons such as social needs satisfied by WeChat Pay (Zhang et al., 2017), or professional financial functional provided by Alipay (Khayer & Bao, 2019).

Mobile payment service is commonly recognized as a high-involvement service due to its relevance to several factors such as technical features, potential risks and different values provided (Calvo-Porrall & Nieto-Mengotti, 2019; Kim et al., 2022). Therefore, it is reasonable to presume that mobile payment consumers' decision-making process is not only affected by external stimulus of mobile payment service, it also potentially affected by users' internal characteristics such as

personality, social status or lifestyle. Such as Liu et al. (2021) suggested that with mobile payment as a new payment method, customers could derive much more emotional pleasure from the payment process compared with traditional payment, thus helping improve customer satisfaction; Kaur et al. (2020) proposed that consumers' intention to use mobile payment could be affected by users' compatibility with their lifestyle, or observability of seeing others use mobile payment; similarly, Flavian et al. (2020) introduced another concept mindfulness to understand mobile payment user behaviour better, technological novelty seeking is another construct in this study and also proved to have a great influence on mobile payment users' behaviour. All of these updated researches suggested that when examining mobile payment users' behaviour, a more inclusive and subjective concept should be considered other than overly addressed adoption factors quality. Related studies have suggested that compared with other factors, customer perceived value is a higher level construct with a more inclusive and comprehensive essence (Sánchez-Fernández & Iniesta-Bonillo, 2007; Zauner et al., 2015).

Based on all these considerations, this study aims to examine mobile payment customer behaviour from a value perspective. More specifically, a multi-dimensional value approach of the Theory of Consumption Values (TCV), is adopted to better understand mobile payment consumers' choice behaviour in this specific market context. Among limited studies applying TCV in previous mobile payment literature, most of them are only focusing on pre-adoption intentions (Kushwah, Dhir, & Sagar, 2019; Ray et al., 2021); or only look at the original consumption value variables without considering the significant role of monetary value in this specific mobile payment context (Goh et al., 2014). Based on the users' report published by PCAC (PCAC, 2021b), the option of "whether customers could get certain discounts when

they are using mobile payment service” ranked second in the list of reasons that affect users’ choice, as such, monetary value and its potential impact in consumer behaviour need to be particularly considered in this specific context. Therefore, this research intends to fill these gaps by applying the Theory of Consumption Values in the mobile payment context to investigate mobile payment users’ post-adoption behaviour loyalty. Moreover, this study extends this theory by adding a new independent variable monetary value, to strengthen the explaining power of TCV in mobile payment context.

In the Chinese mobile payment market, there are 272 companies authorised with the license to offer mobile payment services (iiMedia, 2020). These providers include third-party payment companies, banks, telecommunication operators, and smartphone vendors, each of them is making strenuous efforts to attract customers and thus creating an unprecedented level of competition in this market (Wang et al., 2019). Mobile payment users are constantly exposed to ubiquitous market campaigns and aggressive advertising from other providers to highlight the advantage of their services. Therefore, alternative attractiveness is considered a highly relevant factor in the Chinese mobile context, and it is also frequently cited as an influential construct in previous mobile-related literatures (Chuah et al., 2018; Kuo, 2020).

Alternative attractiveness could significantly influence consumers’ decision-making process on whether to stay loyal (Mannan et al., 2017). A higher perception of alternative attractiveness could reduce consumers’ price tolerance, satisfaction, service quality perception and loyalty toward their current service provider (Ghazali et al., 2016; Kim et al., 2016; Temerak, 2016). Customers’ loyalty derived from satisfaction in the current provider could be diluted when they become aware that a more satisfying service could be provided by substituting providers. El-Manstrly (2016) argued that

satisfaction is a necessary but insufficient condition in cultivating customer loyalty. The linkage between satisfaction and loyalty is subject to possible intervention of alternative attractiveness. Nagengast et al. (2014) also stated that alternative attractiveness is considered a construct with a strong moderating nature and is particularly influential in the relationship between repurchase intention and its direct antecedents. Therefore, this study adopts alternative attractiveness as a moderator to examine how it moderates the influence of users' satisfaction on loyalty.

Meanwhile, many customer loyalty research have tested the influence of alternative attractiveness but the findings are not always consistent. For example, Wu (2011) identified that alternative attractiveness strengthens the influence of customer satisfaction on loyalty; in a similar mobile technology context, Chuah et al. (2017) also found that alternative attractiveness would strengthen the satisfaction and loyalty relationship. On the contrary, Mannan et al. (2017) found that alternative attractiveness would weaken the influence of customer satisfaction on switching intentions in telecommunication context. These inconsistent findings have motivated this study to adopt alternative attractiveness as the moderator and examine its influence on the relationship between satisfaction and loyalty in the specific mobile payment context (Kim et al., 2018; Lee et al., 2021). Meanwhile, people are more willing to switch to other mobile payment service providers because their judgement of the current service provider has been influenced by the attractiveness perceived from alternative companies (Kim et al., 2018). Therefore, to have a more comprehensive understanding in customer loyalty, it is considered necessary to incorporate the concept of alternative attractiveness into the research and investigate how alternative attractiveness may affect customers' loyalty, specifically, how alternative attractiveness would moderate the relationship between satisfaction and loyalty.