Chinese Travellers' Adoption of Mobile Payment Applications of WeChat Pay

and Alipay in New Zealand Hotels

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# Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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# Acknowledgement

# Abstract

Mobile payment has become increasingly popular in various consumption situations from daily coffee orders to the farmer's market in recent years. As a result, mobile payment has accelerated the evolving of a cashless society in many countries. However, in tourism and hospitality research, the adoption of mobile payment in the hotel industry remains in its infancy.

New Zealand attracts over 1.2 million overseas visitors every year, yet the overseas traveller's hotel experience, and especially payment experiences, have rarely been studied. As China is New Zealand's second largest tourist sector, understanding Chinese travellers' payment preferences is of practical importance to hospitality and tourism practitioners in New Zealand. This study examined Chinese travellers' adoption intentions of mobile payment (WeChat Pay and Alipay) during their stay in New Zealand hotels based on the second unified theory of acceptance and use of technology (UTAUT2) model. In particular, this study extends the UTAUT2 model by incorporating social influence as a moderator.

Using an online questionnaire survey, data was collected from Chinese customers who had travelled to New Zealand ($N = 183$). The results reveal that habit, performance expectancy, and cost efficiency were important determinants of travellers' intention to use mobile payment in New Zealand hotels. Social influence appeared to be a significant moderator in the relationships of performance expectancy and cost efficiency with adoption intention. The findings of the study could contribute to the body of knowledge of mobile payment adoption in the hotel industry and provide for hotel managers and marketers with valuable insights into better understandings of the payment preferences of Chinese guests to gain competitive advantage.

# Chapter 1. Introduction

## 1.1   Background

Mobile commerce (m-commerce) has dramatically increased in recent years due to the

high popularity of smartphones amongst contemporary consumers and the marketing

effectiveness of smartphones in reaching out to broader customers (Hew, 2017). M-

commerce refers to all types of commercial transactions (monetary consumption or data

service) processed via communication networks on wireless devices such as mobile

phones and tablets (Chhonker, Verma, & Kar, 2017). M-commerce takes many forms

such as mobile shopping, mobile banking, and mobile payment (Alalwan, Dwivedi, &

Rana, 2017; Faulds, Mangold, Raju, & Valsalan, 2018; Li, Wang, Wangh, & Zhou,

2019). Amongst these forms, mobile payment has become one of the key driving forces

of m-commerce because of its feasibility and convenience (de Albuquerque, Diniz, &

Cernev, 2016). According to Worldpay's 2018 Global Payment Report, global use of

mobile payment is forecast to increase to 28% in 2022, surpassing the use of credit

cards and cash (Worldpay, 2018).

Mobile payment is defined as a payment method that enables consumers to settle

payments for goods, bills, and services through mobile devices (Dahlberg, Guo, &

Ondrus, 2015; Dennehy & Sammon, 2015). In the context of hotels, it is common to see

customers use mobile payment applications (e.g. Apple Pay, Samsung Pay, WeChat Pay,

and Alipay) instead of using cash or credit cards to settle both online (e.g., prepay

online bookings) and offline payments (e.g., check-outs).

Mobile payment has radically reshaped the ways consumers make purchases and the

ways merchants accept payments, and it has considerably benefitted both parties

(Taylor, 2016). From the merchant's perspective, mobile payment improves the

efficiency and performance of business operation as well as enhances customer relationship management as mobile systems enable an accessible channel for customer feedback (de Albuquerque et al., 2016). According to Taylor (2016), the efficiency of mobile payments would substantially help labour-intensive industries to save time and labour in relation to settling transactions for countries with high labour cost such as New Zealand and Australia. From the customer's perspective, the unique features of mobile payment advance the consumption experience. For instance, mobile payment provides hotel guests with access to immediate payment and an alternative to the point of sale (POS) terminal, enabling them to avoid queues during peak hours on the floor (Taylor, 2016). Moreover, mobile payment applications allow customers to review previous payments at different service counters, as a typical hotel experience usually involves a number of separate transactions such as room service, restaurant services, and recreation services (Morosan & DeFranco, 2016).

Amongst the various mobile payment platforms, WeChat Pay is currently the world's biggest with 900 million users, followed by Alipay with 870 million users (Worldpay, 2018). These two platforms are considered to be the most popular mobile payment applications for the Chinese consumer market. According to the IPSOS 2018 Q4 report, the volume of annual transactions via mobile payment in mainland China was 152.77 trillion Chinese yuan, and 54% of daily expenses were paid using mobile payment, 27% were paid using debit or credit card (Union Pay), and 19% were paid using cash (Chen, 2019). Mobile payment applications such as WeChat Pay and Alipay have become indispensable payment technologies for the daily lives of Chinese consumers. Hence, this study examines Chinese travellers' mobile payment adoption intentions in relation to WeChat Pay or Alipay when visiting overseas hotels.

## 1.2    Problem statement and objectives

In the year of 2018, there were 3.7 million visits from China, which created 10.6 billion New Zealand dollars of revenue to the country's tourism sector (New Zealand tourism forecasts 2018-2024, 2018). It is forecasted that China will become New Zealand's largest market within five years; hence, it is important for the hospitality and tourism providers in New Zealand to understand Chinese customers' consumption preferences, including payment preferences.

This study's purpose is to discover antecedents of Chinese travellers' adoption of mobile payment at service counters in New Zealand hotels. More specifically, despite the proliferation of WeChat Pay and Alipay in mainland China, research on Chinese consumers' use of these two popular mobile payment applications in consumption situations beyond China is limited (Feng, 2017). Given the increase of Chinese inbound tourists, understanding Chinese travellers' payment preferences has become important to service providers in travel destinations (e.g., the New Zealand hotel industry) so providers can improve the overall consumer experience and gain competitive advantages (Marinkovic & Kalinic, 2017).

The study applies the second version of the unified theory of acceptance and use of technology (UTAUT) model, or the UTAUT2 model, to examine Chinese travellers' adoption intentions of WeChat Pay and Alipay in New Zealand hotels. The UTAUT2 model developed by Venkatesh et al. (2012), is a useful framework for researching technology in the customer context. The UTAUT2 model differentiates from the original UTAUT model which focused more on technology adoption in work settings. The UTAUT2 model proposes seven independent factors that influence individuals' technology adoption, including performance expectancy, effort expectancy, social

influence, facilitating conditions, hedonic motivation, price value, and habit. This study modifies the UTAUT2 model by adding perceived security and cost efficiency, incorporating social influence as a moderator to better fit the current study's context and the nature of mobile payment technology.

The primary purpose of this study is to examine the factors that influence Chinese travellers' intentions to adopt WeChat Pay or Alipay in New Zealand hotels. Accordingly, this study has the following objectives:

1) To modify the UTAUT2 model to be compatible with the context of mobile payment adoption, for the purpose of investigating factors that influence Chinese travellers' intentions to use WeChat Pay and Alipay in New Zealand hotels

2) To test the moderating role of social influence on the relationships between the proposed antecedents and adoption intention based on the UTAUT2 model

## 1.3   Significance of the study

This study could contribute to the literature of mobile payment adoption in the hotel industry, and particularly to the research on Chinese travellers' adoption intentions regarding WeChat Pay and Alipay mobile payment technologies. The results of the research model testing could add empirical evidence to the validation of the UTAUT2 model and shed new light on technology adoption in terms of the moderating effects of social influence. The findings of this study can be practically useful in guiding hotel managers and decision-makers to cater for the growing numbers of Chinese tourists in New Zealand as well as in other Chinese tourism-leading countries.

## 1.4 Dissertation preview

This dissertation includes five chapters. This first chapter introduces the background, research questions, and objectives of the study.

The second chapter details the literature review on mobile technology and mobile payment adoption in hospitality and tourism. The chapter then delineates the theoretical framework of the UTAUT2 model and presents the developed hypotheses based on the modified UTAUT2 model.

The third chapter presents the methodology of this study, focusing on the research paradigm, research method, and data collection. The questionnaire survey is detailed in terms of the instrument design, measurement development, and sampling method. The last part briefly introduces the statistical methods applied for data analysis.

The fourth chapter presents the results of the study, including the demographics and behavioural characteristics of respondents, the reliability and validity of study constructs, and the results of hypothesis testing.

The fifth chapter summarises the main findings drawn from the study results. The academic and practical implications are presented, followed by limitations and possible directions for future research and conclusion.

# Chapter 2. Literature Review

This chapter reviews previous research relevant to mobile payment and delineates important theoretical frameworks underpinning technology adoption. The first section generally reviews mobile technology, particularly the mobile payment uses in the hospitality and tourism environment, and previous studies relevant to WeChat Pay and Alipay applications are also reviewed. The second section critically examines the UTAUT model to better understand the theoretical foundation of technology adoption. The third section presents an integrated model, which incorporates cost efficiency and perceived security into the UTAUT2 model. Furthermore, social influence is introduced not only as the independent variable but also as a moderator in this study. Hypotheses derived from the integrated model are proposed at the end.

## 2.1  Mobile payment

### 2.1.1  Mobile technology use in hospitality and tourism

Mobile technology has been tightly bound with not only our daily lives but also our travels in many different patterns, including the use of technologies such as smartphones, tablets, and mobile applications (Wang, Xiang, & Fesenmaier, 2016). In the field of hospitality and tourism, relevant mobile information services such as mobile applications, global positioning systems (GPS) and mobile payment have dramatically innovated customer behaviours and business operations (Law, Chan, & Wang, 2018).

The studies on mobile technology in hospitality and tourism have long focused on exploring the contribution of mobile technologies from the perspectives of two different groups: suppliers and consumers (Law et al., 2018). From the suppliers' perspective, most previous studies focus on investigating the influences of mobile technology on business functions such as strategic development, human resource management,

performance management, marketing, and distribution (Boys, DuBreuil White, & Groover, 2017; Meehan, Lunney, Curran, & McCaughey, 2016; Qin, Tang, Jang, & Lehto, 2017). In addition, evaluation and improvement of mobile technologies as well as influential factors on successful mobile adoption have been widely discussed (Law et al., 2018; Lin, 2017; Murphy, Chen, & Cossutta, 2016).

From the customers' perspective, there are four categories that are reviewed quite often. The first category investigates customers' motivators to use mobile technologies for travel purposes (Aluri, 2017; Park & Huang, 2017; Sarmah, Kamboj, & Rahman, 2017). The second category discusses how mobile technologies influence consumers in their planning, experience, and sharing of travel (Dickinson et al., 2017; Zhang, Abound Omran, & Cobanoglu, 2017). The third category focuses on exploring perceptions towards using mobile technologies (DeFranco & Morosan, 2017; Erawan, 2016). The fourth category explores customers' usage and preference of mobile technologies for travel (Dickinson, Hibbert, & Filimonau, 2016; Murphy et al., 2016). However, given the increasing popularity and penetration of mobile payment in consumers' daily lives, research on consumers' adoption of mobile payment in the hospitality and tourism context is shockingly less discussed when compared to the marketing and information technology literature.

### 2.1.2 Mobile payment in hospitality and tourism

Mobile payment has dramatically changed the human lifestyle, with daily e-commerce being rapidly adopted by stores and service organisations in global business. According to the Intelligent Mobile Payment Solution Market 2019 report, the compound annual growth rate (CAGR) of mobile payment transactions is forecasted to be 26.93% from

2019 to 2024. The mobile payments solution market was valued at USD 921.68 billion in 2019 and was forecasted to reach USD 3695.46 million in 2024 (William, 2019).

Mobile payment has been defined by previous studies with many different interpretations. De Bel and Gâza (2011) stated that mobile payment is the payment method which involves using a mobile phone device to engage in consumption of goods or services. Contini, Crowe, Merritt, Oliver, and Mott (2011) describe mobile payment as enabling a mobile phone as a payment method other than cheque, cash, or credit card to access online banking and settle payments in retail systems. More recently, mobile payment has been further defined as mobile devices utilising wireless and other communications to settle payments which are enabled by technologies such as near-field communication (NFC), quick response (QR) codes, or short message service (SMS) (Dahlberg et al., 2015; Dennehy & Sammon, 2015). Previous studies on mobile payment in the hospitality and tourism literature have predominantly focused on the NFC types of mobile payment, such as Apple Pay, Samsung Pay, and Android Pay (e.g., Esfahani & Bulent Ozturk, 2019; Morosan & DeFranco, 2016; Ozturk, Bilgihan, Salehi-Esfahani, & Hua, 2017), whilst the most widely accepted types of QR code-based mobile payment for Chinese consumers, such as WeChat pay and Alipay, have not yet been fully examined (Li et al., 2019).

### 2.1.3    WeChat Pay and Alipay

According to a recent report from the Economist, China has occupied over half of the global mobile payment market and has led three quarters of global online transaction (Lu, 2018). The Chinese population, especially with its young urban dwellers, is now able to pay for daily life consumption using only mobile devices (Chong, 2019). Due to this shift, Chinese businesses are experiencing significant innovations in payment

processing, moving from cash and credit cards to a cashless society (Korella & Li, 2018).

WeChat Pay and Alipay, the two most popular and leading payment platforms in China, are similar to the PayPal platform, which offers many useful functions and is commonly used in Western countries (Feng, 2017). WeChat Pay and Alipay users can link their credit or debit cards and transfer money from their Chinese bank accounts onto these two platforms. Through scanning QR codes with their smartphones, customers can purchase goods or services not only at online websites and applications, but also at participating merchants and vending machines (DeLuna, 2018). With more than one billion daily active users, WeChat Pay is currently the world's biggest payment platform (Feng, 2017).

Despite the widespread consumer adoption of these platforms, few studies have investigated WeChat Pay and Alipay in hospitality research, especially in the hotel sector. There are two explanations for this research gap. First, WeChat Pay and Alipay are new applications, having become popular only in recent years, as Alipay was launched in 2003 and WeChat Pay launched in 2011 (DeLuna, 2018). Second, WeChat Pay and Alipay are pervasive in China; hence, most of the research articles published are in Chinese. These two elements may have limited any research interest on WeChat Pay and Alipay regarding mobile payment research aspects. The voids in the literature help strengthen the significance of the current study filling the gap in terms of adoption of WeChat Pay and Alipay in the overseas context.

WeChat Pay and Alipay have further extended their overseas markets by offering their payment methods in many other countries, yet their overseas adoption has been under-researched. According to the report from Nielsen (NLSN, 2019), New Zealand was one

of the top 10 most popular countries for Chinese tourists using mobile payments in 2019. Therefore, an increasing number of New Zealand merchants are wanting to cater for Chinese customers by providing their preferred payment methods. Alipay was first launched at Auckland Airport's International terminal in late 2016 (Thompson, 2016). Then in 2018, the Sky City Entertainment Group introduced WeChat Pay and Alipay to target Chinese customers (Sky city Entertainment Group, 2018). More recently, the QR codes of WeChat Pay and Alipay have appeared in many Chinese retail shops, souvenir stores, restaurants and cafes in Auckland. Although there has been an increasing popularity for the adoption of WeChat Pay and Alipay amongst New Zealand merchants, the payment preferences of Chinese travellers when it comes to hotels currently remains unknown. This study, therefore, is carried out in New Zealand and targets Chinese travellers who choose to stay in New Zealand hotels with the aim of investigating their intention to use WeChat or Alipay to settle their payments at service counters.

## 2.2   Theoretical foundations

According to Law et al. (2018), the most cited theories in mobile technologies research in the hospitality and tourism context are the technology acceptance model (TAM) and the unified theory of acceptance and use of technology (UTAUT) model. The TAM was first proposed by Davis (1989). From a user's perspective, perceived usefulness and perceived ease of use have been found as two main factors that determine the attitude to accepting new technology (Davis, 1989). This model has been widely modified by various researchers (Venkatesh & Bala, 2008; Venkatesh & Davis, 1996, 2000; Venkatesh, Morris, Davis, & Davis, 2003; Venkatesh et al., 2012). However, the TAM does not  comprehensively consider consumers' technology adoption under specific influences within non-working environments (Dahlberg et al., 2015).

Venkatesh et al. (2003) established the UTAUT model based on previous important technology acceptance models to examine organisations' and employees' intentions to accept technology. The UTAUT model theorised four main constructs that determine people's intention to use new technology: performance expectancy, effort expectancy, social influence, and facilitating conditions. In addition, four moderation factors including gender, age, experience, and voluntariness of use, were proposed (Venkatesh et al., 2003). The UTAUT model has been investigated and tested by the vast number of studies related to technology adoption (Cimperman, Brenčič, & Trkman, 2016; Magsamen-Conrad, Upadhyaya, Joa, & Dowd, 2015; Zhou, Lu, & Wang, 2010).

Whilst the UTAUT2 model further modified the UTAUT model to fit in with a customer context and introduced three additional constructs, namely hedonic motivation, price value, and habit (see Figure 1) (Venkatesh et al., 2012), the moderation construct of voluntariness of use from the UTAUT was omitted due to the UTAUT2 being contextualised within the consumer setting instead of within a work setting (Khan, Hameed, & Khan, 2017). The consumer context, as noted in the UTAUT2 model, fits well with this study's context wherein Chinese travellers' intentions to use mobile payment technology (i.e., WeChat Pay or Alipay) are being investigated. Therefore, the UTAUT2 model is relatively more compatible with this study's context and the nature of the technology in the current research than other technology adoption models.
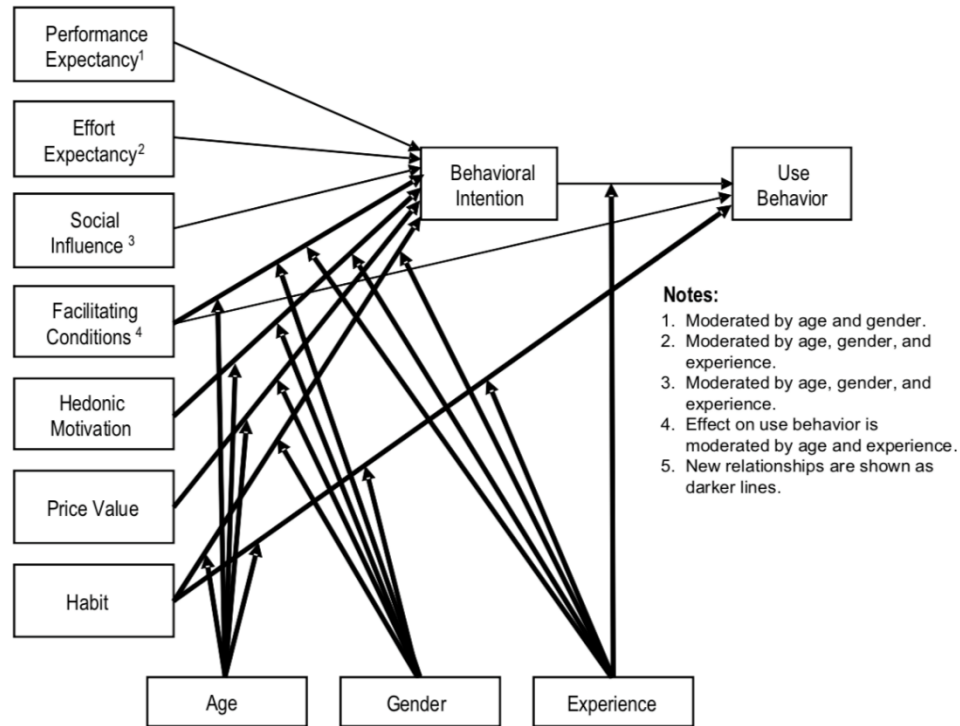
**Figure 1. UTAUT2 model (Venkatesh et al., 2013)**

## 2.3 Hypotheses development

The UTAUT2 model proposes seven factors that determine individuals' technology

adoption intention (Venkatesh et al., 2013). This study further classified the seven

factors into three groups, namely, technology feature-based factors, environmental

factors, and individual-related factors, based on the relevance to the three key players in

technology adoption (i.e., user, social referents, and technology) which was

conceptualised by Lorenz and Buhtz (2017). Oliveira, Thomas, Baptista, and Campos

(2016) also identified three areas that influence customers' mobile payment adoption

intentions. The first area is technology specific characteristics, which involves specific

factors related to technology such as performance expectancy and perceived security.

The second area is environmental factors, which is mainly focused on social network

influence on adoption attention and compatibility. The third area is customer specific

characteristics, which refers to mobile payment users' innovativeness characteristics.

The proposed categorisation of mobile payment adoption factors in this study is similar to the categorisation of Olivera et al. (2016) yet is uniquely different in the subordinate factors. The following sections discuss the specific constructs under each category.

### 2.3.1 Technology feature-based factors

The determinant factors for technology adoption intention which are directly related to the functionality of the technology are termed technology feature-based factors. These consist of performance expectancy and effort expectancy in the UTAUT2 model.

**Performance expectancy** can be defined as the degree to which an individual's use of technology will assist them to improve job performance, and it is a concept which originated from perceived usefulness of the TAM (Davis, 1989; Venkatesh et al., 2003). Performance expectancy is the most significant and strongest predictor of customers' intentions to adopt new technology (Khan et al., 2017; Morosan & DeFranco, 2016; Venkatesh et al., 2012). In the hotel context, the performance of mobile payment applications could offer customers more efficiency, with a faster and more accurate transaction experience, and it can improve the overall consumption experience (Morosan & DeFranco, 2016). Therefore, with regard to using WeChat Pay or Alipay in assisting efficient hotel payments in overseas hotels, it is proposed that if Chinese travellers' performance expectancy is higher, then they are more likely to adopt mobile payment.

**Effort expectancy** refers to individuals' perceived level of ease to use certain technologies (Venkatesh et al., 2012). Effort expectancy positively contributes to customers' intentions to use technology (e.g. Teo, Tan, Ooi, & Lin, 2015, Khalilzadeh, Ozturk, & Bilgihan, 2017); however, depending on the nature of the specific technology and depending on various research contexts, the influence of effort expectancy could be

largely reduced or could become insignificant (e.g. Morosan & DeFranco, 2016, Oliveira et al., 2016). The specific technologies for the present study, Alipay and WeChat Pay, are mobile application-based technologies which require little cognitive effort from users to learn and use the technology, so effort expectancy would become a less significant factor in adoption intention. Furthermore, the current study emphasises a unique technology adoption situation of overseas travelling occasions, where it is noticeable that most target consumers (i.e., Chinese travellers) have already used the technology in their day-to-day lives. Thus, whether they would use the same technology in a different environment, such as overseas travels, is the question posed. Based on the abovementioned reasoning, effort expectancy is omitted from the present research model, whilst performance expectancy is included and expected to be relevant. Accordingly, the following hypothesis was formulated.

**H1**: Performance expectancy (PE) positively affects Chinese guests' intentions to use (INT) WeChat Pay or Alipay in New Zealand hotels.

### 2.3.2 Environmental factors

Environmental factors, such as social influence and facilitating conditions, can be defined as external factors which, in comparison to technology feature-based factors, are independent of technology or users and promote individuals' adoption intention (Oliveira et al., 2016).

**Social influence** is the extent to which consumers perceive that their family and friends and other social referents are important influences on their perceptions of whether they should use certain technologies (Venkatesh et al., 2003). The extant studies suggest that social influence has significant direct and indirect impact on customers' adoption of and intention to recommend mobile payment (Feng, 2017). For example, Koenig-Lewis,

Marquet, Palmer, and Zhao (2015) demonstrated that customers' friends' opinions and experiences significantly influence their intention to use mobile payment. Moreover, mobile technology has been widely accepted by Generation X (born between 1979 and 1982) and Generation Y (born in the mid-80s or later), generations that are greatly influenced by social media platforms such as Facebook, Twitter, YouTube, and Instagram (Kuss et al., 2018). Social media has been shown to significantly impact travellers' three travel planning process stages: pre-trip, during-trip, and post-trip (tom Dieck, Jung, Kim, & Moon, 2017).This study takes into consideration the social media influence on Chinese travellers' intentions to use mobile payment during different stages of their overseas travel. This study proposes that social influence derived from both travellers' family and friends and information from hotel-related social media sites could drive Chinese travellers to use mobile payment in New Zealand hotels. This leads to the following hypothesis:

**H2**: Social influence (SI) positively affects Chinese guests' intentions to use WeChat Pay or Alipay in New Zealand hotels.

**Facilitating conditions** was initially defined as the degree of organisational support in terms of infrastructure that can help with the use of a technology in work settings (Venkatesh et al., 2003).Whilst in commercial settings, facilitating conditions is perceived as consumers' perception of the resources provided by the service supplier that facilitate the completion of tasks through using certain technologies (Morosan & DeFranco, 2016). For example, accessible WIFI service and QR code display are necessary conditions for WeChat Pay or Alipay. However, it is worth clarifying that facilitating conditions includes more than hardware and infrastructure support from commercial establishments; it also includes intangible resources such as information and knowledge (Morosan & DeFranco, 2016; Venkatesh et al., 2003; Venkatesh et al.,

2012). For instance, hotels may inform overseas travellers about the availability of WeChat Pay and Alipay at their service counters prior to their booking. Also, employee assistance for consumers using the technology, including language and technical support, can be regarded as another facilitating condition. Previous studies have evidenced that facilitating conditions significantly influence intention to adopt payment technology in hospitality sector businesses such as restaurants and hotels (Esfahani & Bulent Ozturk, 2019; Morosan & DeFranco, 2016; Rita, Oliveira, Estorninho, & Moro, 2018). Therefore, the following hypothesis is formed:

**H3**: Facilitating conditions (FC) positively affect Chinese guests' intentions to use (INT) WeChat Pay or Alipay in New Zealand hotels.

### 2.3.3 Individual-related factors

Individual-related factor refers to individual differences in perceptions, perceived values, beliefs in relations to technology adoption. For example, personal innovativeness and hedonic motivations to use technology vary from person to person. In the modified UTAUT2 model, hedonic motivation, cost efficiency, and perceived security can be categorised as individual-related factors.

**Cost efficiency** was inspired by the price value construct from the UTAUT2 model. Price value is described as a cognitive relationship between consumers' perceived benefits of using certain technologies and the monetary cost of using the technology (Venkatesh et al., 2012). In the context of this study, the transaction cost (e.g., currency exchange rate and surcharge) of using mobile payment was explored instead of the cost of using mobile payments themselves as this study was based on Chinese customers' overseas travel environment.

In addition, WeChat Pay and Alipay offers users cross-border payment when consumers are travelling overseas. Cross-border payment refers to transactions that involve individuals, companies, banks, or settlement institutions which operate in at least two different countries, hence use different currencies (Giuffrida, Mangiaracina, Perego, & Tumino, 2017). The daily cross-border transaction amount of WeChat Pay and Alipay is between 500 to 600 million Chinese yuan. WeChat Pay and Alipay have covered 54 countries and regions to allow Chinese travellers to settle payments in Chinese currency with real-time exchange rates. Previous studies have suggested that exchange rates have significant influence on international travellers' demand for hotel accommodation (Aalen, Iversen, & Jakobsen, 2019). Considering that WeChat Pay and Alipay have applied real-time exchange rates, this may allow Chinese travellers to perceive use of WeChat Pay or Alipay as good value for money when they are travelling overseas.

With a 2% surcharge for all credit card transactions in New Zealand hotels (Rosenburg, 2020), a number of international travellers prefer to settle payments by cash to avoid the surcharge fees. This could also encourage Chinese travellers to settle payments using WeChat Pay or Alipay in New Zealand hotels. Thus, the following hypothesis was developed:

**H4**: Cost efficiency (CE) positively affects Chinese guests' intentions to use (INT) WeChat Pay or Alipay in New Zealand hotels.

**Perceived security** is defined as individuals' perception of the level of security and risk-free status in using a technology to complete tasks (Shin, 2010), whilst the perceived security of mobile payment technology often refers specifically to the security in making transactions (Vatanasombut, Igbaria, Stylianou, & Rodgers, 2008). As mobile payment technology is directly related to monetary transactions, personal information,

and bank details, the level of payment technology security significantly impacts mobile payment technology adoption intention (Kim, Tao, Shin, & Kim, 2010). Perceived security is categorised as an individual-related factor instead of a technology feature-based factor in this study because perceived security reflects individuals' subjective perception in using mobile payment technologies rather than the objective technical criteria of the payment method (Morosan, 2014). This study proposes that the more consumers believe using WeChat Pay or Alipay is secure, the more likely they are to use them. Thus, the following hypothesis was developed:

**H5**: Perceived security (PS) positively affects Chinese guests' intentions to use (INT) WeChat Pay or Alipay in New Zealand hotels.

**Habit** has been described in the conceptualisation of the UTAUT2 model as a prior behaviour that customers automatically repeat in terms of using certain technologies (Venkatesh et al., 2012). In previous technology studies, habit and experience were two related constructs affecting behavioural intentions (Kim, Malhotra, & Narasimhan, 2005; Venkatesh et al., 2003). However, habit and experience differ in two main ways. First, experience plays a necessary role, rather than a sufficient role, in forming a habit. Second, according to the different extent of interacting with certain technologies, experience can lead to different levels of habit (Venkatesh et al., 2012).

In the mobile payment context, habit has been found to have a direct influence on customers' intentions to adopt behaviour (Morosan & DeFranco, 2016). According to a mobile payment usage survey that was conducted in China by IPSOS, a global market research and consulting company, in 2017 over 55% of Chinese consumers paid for their consumption by mobile phone, whilst 25% paid by credit card, and only 21% paid by cash (IPSOS, 2017). Given the ever-increasing transaction volume and frequency,

use of mobile payment has become a habit for Chinese consumers in their day-to-day lives (Korella & Li, 2018). To contextualise to the current study, Chinese travellers who are more familiar with using WeChat Pay or Alipay as their primary payment method would have greater intentions to use these platforms during overseas travels than those who are less familiar with using them. Thus, this study hypothesises the following:

**H6**: Habit (HAB) positively affects Chinese guests' intentions to use (INT) WeChat Pay or Alipay in New Zealand hotels.

### 2.3.4    Moderating role of social influence

Previous research has widely acknowledged that social influence significantly impacts on human behaviour in general and on human behaviour in technology adoption (Asch & Guetzkow, 1951; Triandis, 1979). Social influence has originally been identified as a phenomenon where an individual or a group may change another individual's thoughts or behaviours through certain interactions (French, Raven, & Cartwright, 1959; Kelman, 1958). Social influence has been conceptualised differently in other disciplines as subjective norm, group norm, social identity, and so forth. In previous major technology adoption models, social influence as a predictor significantly influenced people's intentions to adopt new technology (Ajzen, 1991; Venkatesh & Davis, 2000; Venkatesh et al., 2003). However, social influence as a moderator for technology adoption has not been well researched, especially in the mobile payment context.

Lorenz and Buhtz (2017) conceptualised a three-dimensional model stating the reciprocal interactions between users, social referents, and technologies in technology adoption research. Their model implies the interplay between different social referents (e.g., family, friends, and social media), users' perceptions of a certain technology and the overall acceptance level of that technology in the broader society. This study thus

proposes that social influence could interact with both technology feature-based factors and individual-related factors) on customers' intentions to use mobile payment.

From a national culture perspective, China is a collectivist country where people's behaviour is oriented towards groups (Earley, 1989). For example, a study by Ikram, Zahid, Safeer (2017) found that for people living in a collectivist culture such as Pakistan, group orientations and societal pressures acted as moderators influencing the adoption of online services. Therefore, this study hypothesises that social influence plays a moderator role to test Chinese travellers' intentions to use mobile payment in overseas environments.

WeChat Pay and Alipay are complex platforms which combine online social networks with payment functions (Zeng & Seock, 2019). For example, WeChat as an online social network can be considered as Facebook, Twitter, Instagram, WhatsApp, and Skype rolled into one, where WeChat Pay is the part of the platform that includes payment capability. WeChat and Alipay applications offer their users numerous functions such as instant messaging, food ordering, hotel booking, event booking, and doctor appointment booking, all of which are activities deeply ingrained in the daily lives of Chinese citizens (Lien, Cao, & Zhou, 2017). In a study based on word-of-mouth theory, Zeng and Seock (2019) pointed out that Chinese customers are more likely to consider the opinions posted by friends, family, and key opinion leaders on social media platforms than they are to consider official news sources and advertising. This evidence indicates that Chinese traveller's intentions to use WeChat Pay or Alipay in New Zealand hotels could be moderated by posts made by their friends, family, and key opinion leaders on WeChat and Alipay platforms. In other words, if friends or family post and mention hotel offers using WeChat Pay, WeChat's "moment" feature, or

Alipay, this may increase Chinese travellers' intentions to use WeChat Pay and Alipay in hotels.

Consequently, relevant to the mobile payment context, social influence is expected to play a moderator role in influencing Chinese travellers' intentions to use WeChat Pay and Alipay. Therefore, it is posited that social influence (SI) as a moderator positively impacts the relationships between the five independent variables (PE, FC, PS, CE, HAB) and Chinese travellers' intentions to use mobile payment (INT) as hypothesised below:

> **H7:** SI moderates the relationship between PE and INT, where customers with high SI have stronger intention to use WeChat and Alipay than those with low SI.

> **H8:** SI moderates the relationship between FC and INT, where customers with high SI have stronger intention to use WeChat and Alipay than those with low SI.

> **H9:** SI moderates the relationship between PS and INT, where customers with high SI have stronger intention to use WeChat and Alipay than those with low SI.

> **H10:** SI moderates the relationship between CE and INT, where customers with high SI have stronger intention to use WeChat and Alipay than those with low SI.

> **H11**: SI moderates the relationship between HAB and INT, where customers with high SI have stronger intention to use WeChat and Alipay, than those with low SI.

### 2.3.5 Proposed research model

As Figure 2 (below) shows, the proposed research model summarises the hypothesised relationships between constructs. Performance expectancy (technology feature-based

factors), social influence and facilitating conditions (environmental factors), and cost efficiency, perceived security, and habit (individual-related factors) have positive relationships with the intention to use (H1, H2, H3, H4, H5, H6). Moreover, social influence is also considered as a moderator which moderates the relationship between performance expectancy and intention to use (H7), facilitating conditions and intention to use (H8), perceived security and intention to use (H9), cost efficiency and intention to use (H10), as well as habit and intention to use (H11). Customers with high social influence will have stronger intention to use certain technologies than those with low social influence.
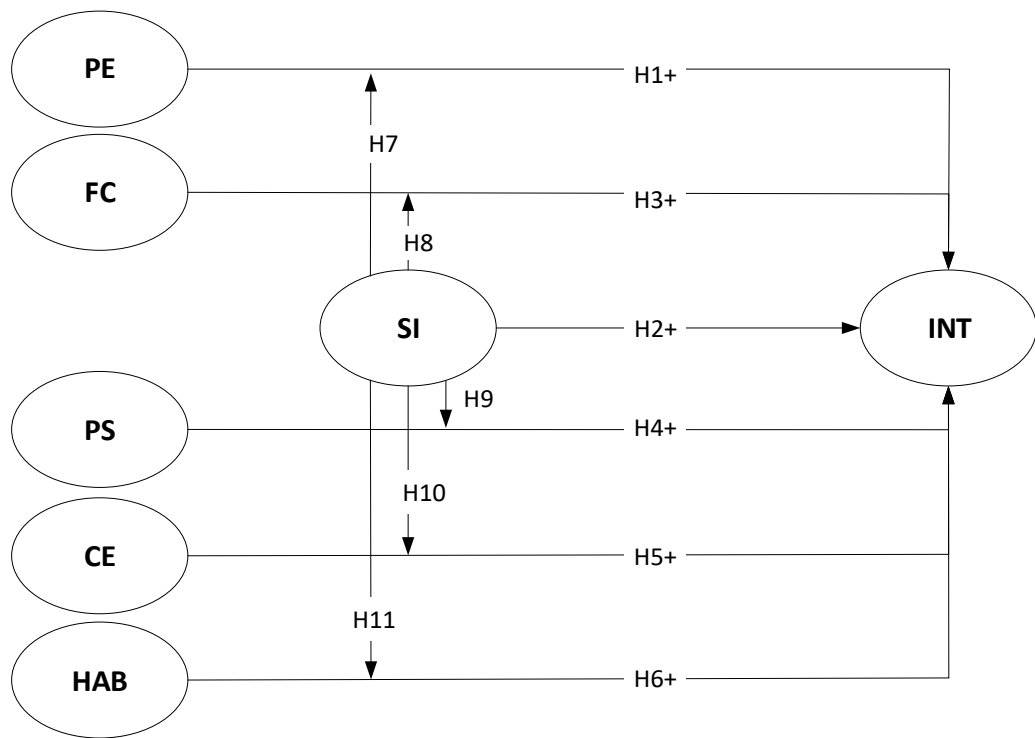


**Figure 2. Conceptual model and hypotheses**

Note: PE = Performance expectancy; SI=Social influence; FC = Facilitating influence; PS = Perceived Security; CE = Cost efficiency; HAB = Habit; INT = Intention to use

# Chapter 3. Methodology

This chapter addresses the methodology adopted in this study. Instrument design, measurements for variables, and data collection methods are explained in the first part. Following this is a brief introduction to the statistical methods applied in data analysis.

## 3.1   Research methodology

To test the existing UTAUT2 model in the context of this study, a deductive approach was adopted as the main theoretical perspective (Gray, 2013). The following section presents the main philosophical assumptions of the study including epistemology, paradigm, and method.

Epistemology is the study of the nature of knowledge and consists of three categories: objectivism, constructivism, and subjectivism (Crotty, 1998). This study adopted objectivist epistemology, which posits researchers find out the truth of the underlying topic without involving their own feelings and values (Gray, 2013). In terms of research paradigm, positivist researchers postulate that reality exists independently of the human consciousness and can be investigated directly through rigorous empirical inquiry (Gray, 2013). This study holds that the pattern of Chinese tourists' behavioural intentions regarding payment method can be learned through empirical examination, and the researcher could maintain an objective view in interpreting the learned facts.

To address the research questions, this study deployed the survey research methodology utilising the questionnaire method. Survey questionnaires are a widely applied methodology for collecting data from a target population in social science research (de Sena Abrahão, Moriguchi, & Andrade, 2016; Morosan & DeFranco, 2016). Surveys allow the researcher to evaluate Chinese tourists' mobile payment adoption intention

through a set of questions that elicit their values, personal traits, payment behavioural preferences, attitudes, and intentions (Litjens et al., 2017). More specifically, an online questionnaire survey was undertaken to achieve the research objectives and purpose of this study. The next section elaborates in detail the instrument design, study measurements, and data collection method. It also provides a brief introduction to main data analysis techniques.

## 3.2  Instrument development

The online questionnaire, as the main research instrument, was applied in this study to collect primary data from the Chinese population. There were three parts in the questionnaire: research model testing, respondents' payment behavioural characteristics, and respondents' demographic profiles (see Appendix A). In this study, online questionnaires were designed in Chinese and English, resulting in two versions, as most WeChat Pay or Alipay users are Chinese and use English as their second language. The Chinese version assisted participants to finish the questionnaire more easily (See Appendix B). To achieve equivalence between the English and Chinese versions, this study was based on the Brislin model for instrument translation, as previous research suggests that the Brislin translate model is a well-known method for cross-cultural research (Lee, Li, Arai, & Puntillo, 2009). An experienced bilingual (English and Chinese) researcher checked the content of both versions.

Prior to the first section of the survey, two screening questions were prefaced to help eliminate respondents who were younger than 18 years old, as well as those without experience with the use of WeChat Pay or Alipay. An anchoring scenario was given to the participants before the main questions: "Imagine that you are staying in a hotel when you are travelling in New Zealand. Now you are settling a payment at one of the

service counters. There are multiple payment channels including credit card, cash, and mobile payment." The questionnaire was slightly modified for the participants who were travelling in New Zealand by removing the above scenario (see section 3.4 for more detail). In the research model testing section, all the questions were designed based on the research model. The respondents' behavioural characteristic section collected general information from participants about mobile payment behaviour when travelling overseas, including overseas payment experiences with WeChat Pay or Alipay, favourite payment methods, and whether payment amounts and service encounters influenced the use of WeChat Pay or Alipay to settle payments at overseas hotels. In addition, three demographic questions were designed to collect data on respondents' age, gender, and education level, as these three factors may have confounding influence on Chinese guests' intentions to use WeChat Pay and Alipay when they are staying in overseas hotels.

## 3.3  Measures

There were 24 questions in the section of the questionnaire which set out to test the research model. These were measured by a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Measurements for the research model constructs were adopted based on a rigorous review of the literature on mobile payment adoption. The four items measuring performance expectancy were adopted from the TAM (Davis, 1989). The scales for social influence (four items), facilitating condition (three items), and habit (three items) were adopted from the influential work of the UTAUT2 model (Venkatesh et al., 2012). Cost efficiency was added based on its extensive use in previous studies and the payment characteristics of New Zealand hotels, and the three items measuring cost

efficiency were adopted and modified from Greenleaf, Johnson, Morwitz, and Shalev (2016). The perceived security scale consisted of three items, two of which were modifications from Vatanasombut et al. (2008), and one of which was adopted from Morosan and DeFranco (2016). Measurement of the dependent variable, intention to use (4 items), was adopted from Davis (1989); Venkatesh et al. (2012). Table 1 below lists the items of measurement applied to operationalise each construct.

**Table 1. Construct measurements**

| Construct | Reference |
|---|---|
| Performance expectancy - PE<br>  1.  Using WeChat Pay or Alipay would increase the efficiency of my hotel consumption experience (e.g., faster transaction)<br>  2.  Using WeChat Pay or Alipay would allow me to have a better view of my purchasing history in hotels<br>  3.  Using WeChat Pay or Alipay would reduce my need to carry cash or credit cards when staying in hotels<br>  4.  Overall, I believe that WeChat Pay or Alipay is useful when I am staying in hotels | Venkatesh et al. (2012) |
| Social influence - SI<br>  1.  Family members influence my intention to use WeChat Pay or Alipay in hotels<br>  2.  My peers or friends influence my intention to use WeChat Pay or Alipay in hotels<br>  3.  Other travellers influence my intention to use WeChat Pay or Alipay in hotels<br>  4.  People on social media influence my intention to use WeChat Pay or Alipay in hotels | Venkatesh et al. (2012) |
| Facilitating condition - FC<br>  1.  I have the resources necessary to use WeChat Pay or Alipay<br>  2.  I have the knowledge necessary to use WeChat Pay or Alipay<br>  3.  I can get help from others when I have difficulties using WeChat Pay or Alipay in hotels | Venkatesh et al. (2012) |
| Perceived security - PS<br>  1.  I feel secure providing personal information when using WeChat Pay or Alipay in hotels<br>  2.  I am not worried that information I provide when using WeChat Pay or Alipay could be used by other people<br>  3.  Overall, I feel that WeChat Pay or Alipay transmits sensitive information safely | Venkatesh et al. (2012) |
| Cost efficiency - CE<br>  1.  Given that in most cases there is a 2% surcharge on credit card transactions in hotels, I prefer to use WeChat or Alipay to settle my bill<br>  2.  I feel that the currency exchange rates are generally better in WeChat Pay or Alipay than with credit cards or cash<br>  3.  Overall, I think using WeChat Pay or Alipay to pay in hotels is good value for money | Greenleaf et al. (2016) |
| Habit - HAB<br>  1.  Using WeChat Pay or Alipay has become quite natural to me<br>  2.  When making general payments, WeChat Pay or Alipay is my first choice<br>  3.  Overall, using WeChat Pay or Alipay has become a habit for me | Venkatesh et al. (2012) |
| Intention to use - INT<br>  1.  I intend to use WeChat Pay or Alipay in New Zealand hotels in the future<br>  2.  I will always try to use WeChat Pay or Alipay when I am staying in New Zealand hotels<br>  3.  I will recommend others to use WeChat Pay or Alipay in hotels if they are travelling in New Zealand<br>  4.  WeChat Pay and Alipay are two of my preferred technologies for payment when I am staying in New Zealand hotels | Davis (1989); Venkatesh et al. (2012) |

## 3.4 Data collection

Before data collection, a rigorous pilot test was hosted by the researcher in the School of Hospitality and Tourism at Auckland University of Technology (AUT). The pilot test involved 20 respondents who were fluent in both English and Chinese and had experience with using WeChat Pay or Alipay. The purpose of the pilot test was not only to verify the survey questions, but also to confirm the Chinese version accurately expressed the meaning of the English version. Some modifications were made to the questionnaire based on the feedback from the pilot test. For example, the questionnaire item "*People who are important / influential to me influence my intention to use WeChat Pay or Alipay in hotels*" was changed to read "*Family members / my peers and friends influence my intention to use WeChat Pay or Alipay in hotels*" due to confusion in defining who are important or influential people and a lack of connection to the travel context.

Before the online survey was distributed, ethics approval for the research was sought and granted by Auckland University of Technology Ethics Committee (AUTEC) on 6th September, 2019 with reference number: 19/320.

There was no direct contact between the primary researcher and potential participants. The primary researcher respected the values, practices and beliefs of the cultural and social groups of the participants to encourage reliable and trustworthy participation. The questionnaire was designed with no intention to deliberately deceive or harm any participant. The questionnaire did not collect any identifiable personal information in order to ensure participant privacy and to avoid any coercion. Participants were assured of the confidentiality of the research and informed of their right to withdraw the questionnaire during the survey.

Data was collected mainly in mainland China and the three bigger tourism cities in New Zealand: Auckland, Wellington, and Queenstown. The duration of data collection was approximately one month, from September to October 2019. Random sampling strategy was employed, in which both an online panel and New Zealand hotels were selected for data collection. Szolnoki and Hoffmann (2013) pointed out that random sampling could efficiently represent the target population as the entire target population has an equal chance of being selected.

In mainland China, the survey participants were recruited through the *SO JUMP* platform (also known as Wen Juan Xing), which is China's leading professional survey website. *SO JUMP* has 2.6 million registered members from 34 provinces and cities in China, with a record of more than 2,000 studies that have received satisfactory data through *SO JUMP* (Zheng & Zheng, 2014). The study sample was randomly selected through registered members of *SO JUMP* in the whole mainland China. Prior to the online data collection, it was confirmed with *SO JUMP* that only Chinese participants who had overseas travel experience would be recruited. *SO JUMP* distributed the questionnaire which also contained the participant information sheet in Chinese (Appendix D), to the sample population through an online Qualtrics survey link via email or mainstream social apps in China (e.g., WeChat app, QQ app). The information sheet provided an introduction and purpose of the research, expected time to complete the questionnaire, ethical principle details, and contact details of researchers in case of any need for further inquiry. Data was collected until an adequate sample size was reached for appropriate analysis.

Within New Zealand, one international hotel group and one local entertainment group were invited to participate in the data collection. The international hotel group has 32

hotels and resorts throughout New Zealand, ranging from budget business to luxury. In consideration of time and convenience, a total of five hotels (four belong to the international hotel group, and one belongs to the local entertainment group) located in Auckland, Wellington, and Queenstown were recruited for this study. The QR code of the questionnaire was printed onto A5 posters which were displayed in the hotel lobbies and restaurant reception areas. Hotel staff encouraged their Chinese guests to scan the QR code to participate in the survey along with the participants information sheet (Appendix C) and the questionnaire (Appendix A).

In total, 341 responses were collected from the online panel and participating hotels, from which 42 responses were excluded due to too many missing values. This left 299 usable responses (response rate 87.7%). Considering this study focused on the New Zealand region, participants who had never visited New Zealand were removed from the online panel. In the end, there were 183 responses retained for data analysis.

## 3.5  Data analysis

This study applied LISREL9.1 and Statistical Package for Social Science (SPSS) 2.0 to analyse the data. Gender was recorded as 0 = female and 1 = male, and the measurement scales were coded from 1 to 5. A frequency table was generated to represent respondents' demographic details and payment behavioural characteristics. Factor analysis, correlation, and confirmatory factor analysis (CFA) was used to test the reliability and validity of this study. To test the hypotheses, multiple regression analysis and hierarchical multiple regression was applied.

# Chapter 4. Results

This chapter presents the final results of data analysis with the aid of tables and figures. First, the respondents' profile is presented, detailing respondents' demographic details in terms of age, gender, and education. In addition, the respondents' payment behavioural characteristics, including WeChat Pay or Alipay payment experience, overseas payment preference, and payment amount are presented. This is followed by the factor analysis and correlations to present the reliability and validity of the study variables. The last section presents the final hypothesis test.

## 4.1   Respondents' profile

Table 2 shows the respondents' profile, including demographic data and behavioural characteristics. There were 183 participants in this survey. Over half of the respondents (56%) were female ($N = 103$), and 44% of respondents were male ($N = 80$). The average age was 34 years old, where the youngest respondent was at the age of 20 and the oldest respondent was at the age of 65. Age was non-normally distributed, with a skewness of 1.23 ($SE = 0.18$) and a kurtosis of 1.12 ($SE = 0.36$). The largest age group was 25 to 31 years, comprising approximately 36% of respondents ($N = 66$). This was followed by the 32 to 38 age group which comprised nearly 30% of respondents ($N = 55$). There were 29 respondents from the 18 to 24 age group (approximately 16%). In terms of education level, most, or 60%, of respondents had a bachelor's degree ($N = 110$), whilst 33% of respondents ($N = 60$) had a master's degree or higher education level. The remaining 7% of respondents had either completed nine years of compulsory education or completed high school.

In terms of respondents' behavioural characteristics, nearly 84% of respondents had used WeChat Pay or Alipay when they were travelling overseas. Only 16% of

respondents did not have overseas mobile payment experience using WeChat Pay or Alipay to settle their bills. With regard to the overseas hotel payment method preference, most chose mobile payment as their favourite payment method when settling bills in hotels ($N = 78$, 43%), whilst 39% of respondents ($N = 72$) preferred to use credit card. Only 18% of respondents ($N = 33$) chose local cash to settle their hotel bills. The survey revealed that 27% of respondents ($N = 49$) would prefer to use WeChat Pay or Alipay pay when the total amount spent in hotels is less than 10,000 RMB. If the total amount of the hotel bill is less than 1,000 RMB, 24% of respondents ($N = 44$) preferred to use mobile payment. If the hotel bill is less than 500 RMB or 5,000 RMB, some participants ($N = 37$, 20%) preferred to settle the payment through WeChat Pay or Alipay.

**Table 2. Respondents' profile**

|  | Frequency (N) | Percentage% |
|---|---|---|
| Gender (N = 183) | | |
|   Male | 80 | 43.7 |
|   Female | 103 | 56.3 |
| Age (N = 183) | | |
|   18-24 | 29 | 15.8 |
|   25-31 | 66 | 36.1 |
|   32-38 | 55 | 30.1 |
|   39-45 | 7 | 3.8 |
|   46-52 | 12 | 6.6 |
|   53-59 | 13 | 7.1 |
|   >= 60 | 1 | .5 |
| Education (N = 183) | | |
|   Nine years of compulsory education | 5 | 2.7 |
|   High School | 8 | 4.4 |
|   Undergraduate | 110 | 60.1 |
|   Postgraduate | 54 | 29.5 |
|   PhD | 6 | 3.3 |
| Overseas WeChat Pay/Alipay Payment Experience (N = 183) | | |
|   Yes | 154 | 84.2 |
|   No | 29 | 15.8 |
| Overseas Payment Preference (N = 183) | | |
|   Local cash | 33 | 18.0 |
|   Credit card | 72 | 39.3 |
|   Mobile payment | 78 | 42.6 |
| Payment Amount (N = 181, Missing = 2) | | |
|   Under 100 RMB | 14 | 7.7 |
|   Under 500 RMB | 37 | 20.4 |
|   Under 1000 RMB | 44 | 24.3 |
|   Under 5000 RMB | 37 | 20.4 |
|   Under 10000 RMB | 49 | 27.1 |

In terms of the types of hotel service counters at which respondents preferred to use

WeChat Pay or Alipay to settle their bills (N.B. respondents can choose multiple service

counters), as shown in Figure 3, reception desk was selected by 137 respondents

(74.9%). Other facility services, such as spa or concierge services, was selected 132

(72.1%) by respondents. Restaurant and souvenir store service counters was selected by

74 (40.4%) and 75 (41%) respondents, respectively.
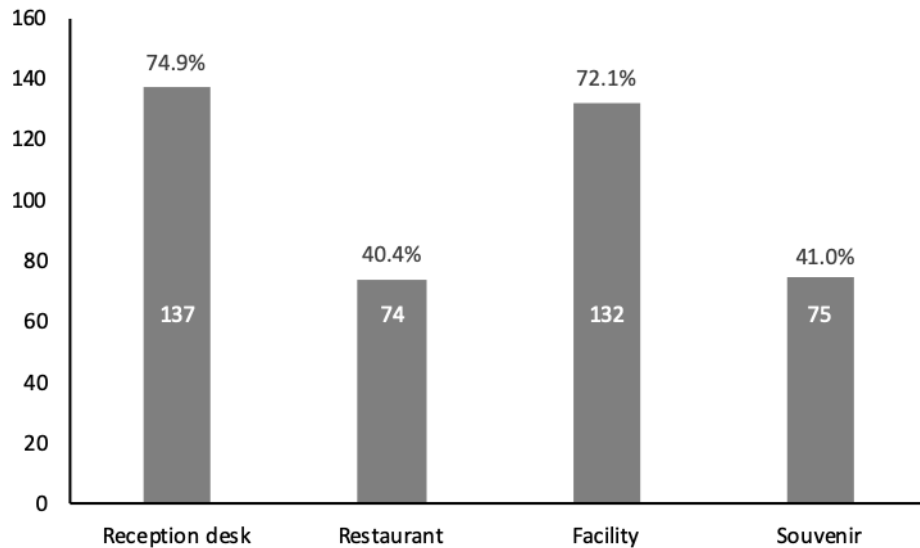


**Figure 3. Service counter preference for WeChat Pay/Ali Pay**

## 4.2 Factor analysis

The measurement model was assessed for reliability and validity of the constructs and

indicators. Reliability and validity indicate the consistency and accuracy of a measure,

and are widely used to evaluate the quality of research (Bacharach, 1989). This study

applied Cronbach's alpha to test reliability of constructs and used factor loading to test

reliability of indicators. CFA was used to measure the convergent and discriminant

validity of constructs.

**Table 3. Properties of the study constructs**

| Constructs and indicators | Item loading | t-value | Cronbach's α | AVE |
|---|---|---|---|---|
| Performance expectancy- PE | | | .898 | .741 |
| PE1 | 0.878 | | | |
| PE2 | 0.808 | 14.25 | | |
| PE3 | 0.845 | 15.49 | | |
| PE4 | 0.908 | 17.89 | | |
| Social influence - SI | | | .932 | .818 |
| SI1 | 0.810 | | | |
| SI2 | 0.911 | 15.49 | | |
| SI3 | 0.947 | 16.46 | | |
| SI4 | 0.944 | 16.38 | | |
| Facilitating condition - FC | | | .881 | .804 |
| FC1 | 0.961 | | | |
| FC2 | 0.888 | 21.48 | | |
| FC3 | 0.837 | 18.10 | | |
| Cost efficiency - CE | | | .875 | .764 |
| CE1 | 0.900 | | | |
| CE2 | 0.873 | 17.10 | | |
| CE3 | 0.849 | 16.16 | | |
| Habit - HAB | | | .908 | .855 |
| HAB1 | 0.922 | | | |
| HAB2 | 0.925 | 22.41 | | |
| HAB3 | 0.927 | 22.54 | | |
| Perceived security - PS | | | .871 | .771 |
| PS1 | 0.926 | | | |
| PS2 | 0.813 | 15.12 | | |
| PS3 | 0.892 | 18.13 | | |
| Intention to use - INT | | | .927 | .841 |
| INT1 | 0.917 | | | |
| INT2 | 0.927 | 22.26 | | |
| INT3 | 0.874 | 18.81 | | |
| INT4 | 0.949 | 24.06 | | |

Note. Fit indices: Chi-square (231) = 1338.542, $p$ = .000); Goodness of Fit Index (GFI) = .708; Adjusted Goodness of Fit Index (AGFI) = 0.621; Comparative Fit Index (CFI) = 0.961; Root Mean Square Residual (RMR) = .461;

The CFA of the measurement model yielded the following fit indices: $X^2$ = 1338.542, p < .05, comparative fit index (CFI) = 0.961, non-normed fit index (NNFI) = 0.953, standardised RMR = 0.0407, normed fit index (NFI) = 0.948, 1), and AVE > 0.5.

Though the chi-square statistic fell outside of the cut-off of $p$ > .05 due to its high

sensitivity to sample size (over 200), the rest of the fit indices still evidence an acceptable model fit (Hu & Bentler, 1999; Lance & Vandenberg, 2009; Schermelleh-Engel, Moosbrugger, & Müller, 2003).

According to Straub (1989), the constructs are reliable if Cronbach's alpha is above 0.7 in all cases. As shown in Table 3, all constructs had alpha values greater than 0.87 which indicates that all the constructs have composite reliability. Henseler, Ringle, and Sinkovics (2009) suggest that every indicator criterion should be greater than 0.70, and if the loading is less than 0.4, it should be eliminated. In this study, all indicator loadings were situated between 0.808 to 0.961, evidencing all the items as statistically significant. Overall, construct reliability and indicator reliability were both verified as good.

Campbell and Fiske (1959) propose that convergent and discriminant validity are two aspects to assess the construct validity of a test. To assess reliability, this study performed CFA to test the convergent and discriminant validity of all constructs. According to the criterion of Fornell and Larcker (1981) and Kline (2011), the convergent validity of the measurement model can be assessed by the average variance extracted (AVE). The latent variable explains more than half of the variance of its indicators based on an AVE value higher than 0.5. As shown in Table 3, all construct AVE values are higher than 0.7, meeting this criterion.

Discriminant validity of the construct can be tested by contrasting the square root of the AVE value of a construct with its corresponding inter-constructed correlations (Shankar & Datta, 2018). As shown in Table 4, all square roots of AVE values (i.e., all diagonal values) were greater than the corresponding inter-constructs correlations (off-diagonal values). As Fornell and Larcker (1981) indicated, the square root of AVE should be

greater than all correlations between each pair of constructs. In summary, it was concluded that the discriminant validity of the study constructs was verified satisfactorily.

## 4.3 Correlation between study variables

This study applied Pearson correlation coefficients to investigate relationships between the research variables. The variables explored included two demographic variables (gender and age), five independent variables (PE, FC, PS, CE, and HAB), one moderator variable (SI) and one dependent variable (INT). Gender was dummy-coded (female = 0, male = 1).

As shown in Table 4 (see below), all the independent variables are positively related to the dependent variable of intention to use. More specifically, habit shows the strongest correlation with intention to use ($r = .854$, $p < .01$), followed by cost efficiency ($r = .765$, $p < .01$), and facilitating conditions ($r = .704$, $p < .01$).

The demographic variable of age has significant correlation with performance expectancy ($r = .149$, $p < .01$), habit ($r = .170$, $p < .01$) and intention to use ($r = .209$, $p < .01$). However, gender is not correlated with any other variables, implying no significant difference between males and females in mobile payment overseas adoption intention related variables.

**Table 4. Pearson's correlations, means, and standard deviations**

|     | Mean | S.D. | GEN | AGE | PE | SI | FC | PS | CE | HAB | INT |
|-----|------|------|-----|-----|----|----|----|----|----|-----|-----|
| GEN | 0.56 | .497 | | | | | | | | | |
| AGE | 33.03 | 9.364 | .021 | | | | | | | | |
| PE | 4.41 | .928 | .041 | .149* | **.861** | | | | | | |
| SI | 3.33 | 1.344 | .024 | .060 | .425** | **.904** | | | | | |
| FC | 4.39 | .881 | .069 | .133 | .739** | .361** | **.897** | | | | |
| PS | 3.88 | 1.041 | -.040 | .050 | .504** | .339** | .566** | **.874** | | | |
| CE | 4.35 | .881 | .083 | .107 | .627** | .343** | .702** | .588** | **.925** | | |
| HAB | 4.40 | .897 | .023 | .170* | .609** | .316** | .732** | .609** | .764** | **.878** | |
| INT | 4.33 | .895 | .051 | .209** | .640** | .355** | .704** | .598** | .765** | .854** | **.917** |

Note: The square root of AVE appears on the diagonal in bold; significance at *$p<$ .05, **$p <$ .01 (2-tailed); $N$ = 183 (pair-wise); GEN = Gender; PE = Performance expectancy; SI=Social influence; FC = Facilitating influence; PS = Perceived Security; CE = Cost efficiency; HAB = Habit; INT = Intention to use

## 4.4 Hypotheses testing

Multiple regression analysis was applied to test the hypothesised causal relationships between the independent variables and dependent variable. Multiple regression is widely adopted for testing specific scientific hypotheses and relationships amongst quasi-experimental, experimental, and non-experimental data (Petrocelli, 2003). The R-squared values of intention to use indicated that the theoretical model has explained a total variance of 80.4% in guests' intention to use WeChat Pay and Alipay in NZ hotels.

Hierarchical multiple regression was used to assess the predictive power of the five independent variables (PE, FC, PS, CE, and HAB) on guests' intention to use WeChat Pay or Alipay in NZ hotels. Table 5 shows the results of the multiple regressions. Gender and age were entered at step one, explaining 4.6% of the variance in guests' intention to use WeChat Pay or Alipay in NZ hotels. With regard to the demographic variables (age and gender), only age, with beta value ($\beta$ =.208, $p <$ .01), was found to be

significantly related to Chinese guests' intention to use WeChat Pay or Alipay in NZ hotels.

After entry of the five independent variables at step two, the total variance explained by the model as a whole was 78.8%, $\Delta F (6, 171) = 99.845$, $p < .01$. The five independent variables explained an additional 74.2% of the variance in guests' intention to use WeChat Pay or Alipay in NZ hotels ($\Delta R^2 = .742$). Performance expectancy, cost efficiency, and habit all showed a statistically significant influence on intention to use, with habit showing the highest beta value ($\beta = .542$, $p < .01$), followed by cost efficiency ($\beta = .182$, $p < .01$) and performance expectancy ($\beta = .113$, $p < .01$).

To test the moderation effects of social influence on the independent variables, four interaction variables (i.e., SI x PE, SI x FC, SI x PS, SI x CE, SI x HAB) were created and entered at step three, explaining 80.4% of the variance in guests' intention to use WeChat Pay or Alipay in hotels with a value of $\Delta F (5,166) = 2.597$, $p < .01$. The final model indicates that social influence positively and significantly moderates the relationship between performance expectancy and intention to use ($\beta = .309$, $p < .01$). The relationship between cost efficiency and intention to use was negative moderated by social influence ($\beta = -.192$, $p < .01$).

**Table 5. Hierarchical multiple regression**

| | | INT | |
|---|---|---|---|
| **Step** | **1** | **2** | **3** |
| **Beta** | | | |
| GEN | .046 | .017 | .009 |
| AGE | .208** | .069† | .063† |
| PE | | .113* | .262** |
| SI | | .037 | .052 |
| FC | | .035 | .074 |
| PS | | .089† | .067 |
| CE | | .182** | .097 |
| HAB | | .542** | .488** |
| SI_X_PE | | | .309** |
| SI_X_FC | | | -.059 |
| SI_X_PS | | | .018 |
| SI_X_CE | | | -.192** |
| SI_X_HAB | | | -.054 |
| | | | |
| **R²** | .046 | .788 | .804 |
| **Δ R²** | | .742 | .015 |
| **Δ F** | | 99.845** | 2.597* |
| **df** | | 6, 171 | 5, 166 |

Note: $^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$, pairwise, $\Delta R^2$ = R-squared change, $\Delta F$ = $F$ change; PE = Performance expectancy; SI=Social influence; FC = Facilitating condition; PS = Perceived Security; CE = Cost efficiency; HAB = Habit; INT = Intention to use

# Chapter 5. Discussion and conclusions

This chapter presents the summary of key findings and then discusses the research and practical implications based on the findings. The limitations of the scope of the study and suggestions for future research are then given, followed by a conclusion.

## 5.1 Summary of key findings

This study examined the antecedents for Chinese travellers' intentions to use WeChat Pay and Alipay in hotels during their overseas travels based on a modified UTAUT2 model. The modified model has explained a total variance of 80.4% in the Chinese guests' intention to use, which contributes to validation of the UTAUT2 model in the context of consumer technology.

The results from multiple regression revealed that individual-related factors of habit ($\beta$ =.542, $p <$ .01) and cost efficiency (CE) ($\beta$ = .182, $p <$ .01), as well as the technology feature-based factor of performance expectancy (PE) ($\beta$ =.113, $p <$ .01) were significant predictors of the Chinese travellers' intention to use mobile payment applications whilst they were travelling in New Zealand. However, environmental factors of social influence and facilitating conditions, as well as individuals' perceived security appeared to be non-significant factors on intention to use (or adoption intention).

Habit was the strongest predictor in overseas adoption of mobile payment ($\beta$ =.542, $p <$ .01), which is contrary to Morosan and DeFranco's (2016) study, where they found habit had relatively less effects than performance expectancy and hedonic motivation on customers' intentions to use mobile payment in hotels in the U.S. The impact of habit may result from Chinese travellers' repetitive use of mobile payment in the context of their home environment, as China is quickly growing into a cashless society and mobile

payment has been widely accepted from merchants to customers (Law, Sun, Schuckert, & Buhalis, 2018). In the context of this study, Chinese travellers were existing or even frequent users of mobile payment methods before travelling to New Zealand, thus habit of using mobile payment was a significant influencer on intention to use this method when travelling overseas. The conflicting findings on the significance of habit from previous studies could be explained by different levels of acceptance and use frequency of the researched technologies in the consumer context. For example, a few studies relevant to mobile technology adoption did not include habit as a predictor because the technology has not been widespread amongst customers to form a habit of using (Oliveira et al., 2016).

Cost efficiency was the second strongest predictor for Chinese travellers' mobile payment adoption in New Zealand hotels ($\beta = .182$, $p < .01$), implying that customers' perceived cost efficiency of using WeChat pay and Alipay increase their intention to use. There are monetary benefits of using WeChat pay and Alipay during overseas travelling, for example, in most cases there is a 2% surcharge on credit card transactions in hotels in New Zealand. Studies suggested that tourists' perception of value for money significantly influenced their satisfaction with restaurant and hotel experiences (Kansal, Walia, & Goel, 2015; Nam & Lee, 2011). Travellers become more sensitive to cost efficiency in an overseas environment with extra charges like currency exchange rates and surcharges than when they are travelling domestically without the extra charges.

Using WeChat and Alipay overseas can benefit travellers in saving extra charges as well as time and cognitive effort in making payments (Ma et al., 2018). For instance, customers can save time in queuing for check-out and save cognitive efforts in communicating in different languages at the reception desk by using mobile payment.

As suggested in the technology adoption literature, cost can refer not only to cost in money which is captured by cost efficiency or price value (Oliveira et al., 2016), but also to cost in effort and time in terms of cognitive effort saving and time convenience (Byun & Byun, 2013; James, Pirim, Boswell, Reithel, & Barkhi, 2006).

Performance expectancy was a significant predictor of adoption intention ($ß = .113$, $p < .01$), but it was not as strong a predictor as habit and cost efficiency in predicting adoption intention. Many studies on mobile technology adoption found effort expectancy as the most salient amongst all predictors of adoption intention (Morosan & DeFranco, 2016; Oliveira et al., 2016), emphasising the role of system performance. This study, however, focused on examining technology adoption in overseas travelling. Chinese travellers' perception of the performance of mobile payment has been mitigated because they have already adopted mobile payment in their daily lives and become familiar with the functions of the technology. Therefore, performance expectancy of WeChat Pay and Alipay was no longer the most significant factor in adoption intention when Chinese customers are travelling overseas.

Perceived security was close to significant ($ß = .089$, $p < .10$), yet compared to previous studies it was less significant, which is possibly due to Chinese travellers' being more familiar with the payment methods in this study, and thus being less concerned about transaction and privacy security.

Social influence positively moderated the relationship between performance expectancy and intention to use ($ß = .309$, $p < .01$), meaning that social influence from others (e.g., family, peers, other travellers, and other social influencers) strengthened the effect of the performance of mobile payment on travellers' adoption intention. Chinese travellers are more willing to use WeChat Pay and Alipay to in hotels when they are motived by

other people, whilst social influence negatively moderated the relationship between cost efficiency and intention to use, meaning that social influence lessened the effect of perceived cost efficiency on using WeChat Pay or Alipay during overseas travels. Though overseas travellers are sensitive with surcharges and value for money, the influence from others largely mitigates their concerns for monetary benefits.

Age significantly influenced intention to use ($ß =.208$, $p < .01$), indicating that older travellers are more likely to use mobile payment. This result contrasts with the findings of previous studies that suggest mobile payment is most widely accepted by younger generations (Harris, Cox, Musgrove, & Ernstberger, 2016). One potential explanation for this contrasting finding is that older consumers are comfortable with using WeChat Pay or Alipay in China, and therefore feel more familiar and safer with using it overseas than using other payment methods such as credit cards. Another potential explanation for this study's finding may be that the sample was collected primarily from five-star hotels in New Zealand, so the guests who stayed in these hotels may be older consumers who have better financial resources than younger consumers.

## 5.2   Research implications

Being the first study to address Chinese travellers' intentions to use familiar mobile payment technologies (e.g., WeChat pay and Alipay) in overseas hotels, this study has several notable contributions that need to be highlighted.

First, this study addressed an important lacuna in the technology adoption research in terms of consumers' intention to re-adopt a familiar technology in a unique consumption environment, such as overseas travelling. It emphasises social influence as a significant moderator, moderating the effects of performance expectancy and cost efficiency on technology adoption in the context of new and unfamiliar consumption

environment. According to the UTAUT2 model on which this study was based, social influence is a significant predictor of customers' intention to adopt new technology (Venkatesh et al., 2012). Compare to previous studies where direct and indirect effects of social influence on behavioural intention have been extensively discussed (Feng, 2017; Koenig-Lewis et al., 2015), this study adopted a different perspective to explore social influence as a moderator in affecting the magnitude of technology featured-based factors (e.g., performance expectancy) and individual-related factors (e.g., cost efficiency) on adoption intention, and thereby extend the general UTAUT2 model.

Second, this study adds to the literature of technology adoption in overseas environments by providing understanding of a new contextual factor: cost efficiency in forming intentions. Cost efficiency, in this mobile payment study context, refers to the Chinese travellers' perception of whether a payment method is good value for money, in terms of saving currency exchange rates and credit card surcharges as well as saving cognitive effort and time. Thus, future research on payment technology adoption may be aware of the contextual influencers such as extra charges and differentiate between research contexts (e.g., inbound and outbound travel).

Third, this study examines a specific population and context: Chinese and their adoption of familiar mobile payment applications when staying in overseas hotels. As WeChat Pay and Alipay have expanded networks to the global market, it is strategically important for the local businesses, such as hotels and retail outlets, in destination countries to understand whether the vast population of Chinese mobile payment users will continue to use these payment methods in the overseas context. In academic research, many studies have explored the adoption of WeChat Pay and Alipay in mainland China; however, few have paid attention to their adoption in environments

outside of China. This study investigated whether the change of environment influenced Chinese consumers' intentions to use WeChat Pay and Alipay.

## 5.3   Practical implications

The findings of the study provide unique insights into the dynamics of Chinese travellers' intentions to use mobile payment in New Zealand hotels and practical implications for hotel marketers.

First, the profile of respondents offers insight into contemporary Chinese travellers' payment habits. The behavioural characteristics of respondents show that nearly 84% of the respondents had experience of using WeChat Pay and Alipay in overseas environments. This indicates that WeChat Pay and Alipay have been widely adopted outside of mainland China. In addition, 43% of respondents preferred to settle their hotel bills by mobile payment apps, and habit was shown to have the strongest influence on their future intentions to use mobile payments at hotel service counters. This reveals that using mobile payment is a habit for Chinese customers and that Chinese travellers prefer to use mobile payment even when travelling overseas. Therefore, it is key for the international hotel brands to have access to and accept mobile payment at their service counters to attract more Chinese travellers.

Second, in terms of the types of service counters at which travellers preferred to settle their bills by mobile payment applications, reception desks and facilities counters (e.g. hotel spas) were frequently chosen. This suggests that hotel managers should set up WeChat Pay and Alipay services not only at reception desks for check-in and check-out service, but also at service counters for other hotel facilities such as hotel spas, gyms, or concierge services.

Third, social influences through word of mouth were shown to significantly affect Chinese travellers' payments using WeChat pay and Alipay during overseas travels. This suggests that hotel marketers can promote mobile payment both online (e.g., hotel website, online travel agency websites, and social media sites) and offline (e.g., family, friends, peers, and other travellers) to reach out to more potential customers. As Chinese travellers have limited access to hotel information from overseas, official hotel websites and online travel agency websites such as *Booking.com* and *TripAdvisor.com* are effective channels for disseminating knowledge of hotels before travellers arrive. Hotel marketing managers can update available payment methods on these channels in a timely manner and promote the fact that the hotel can settle payments by multiple payment methods. As to increase word of mouth of family members, peers, friends, and other travellers, hotels could give incentives such as coffee vouchers for travellers who use WeChat Pay or Alipay and further discounts when they share their mobile payment experience on their social media accounts.

In addition, in the context of overseas adoption of WeChat Pay and Alipay, hotels also should give their employees proper trainings in how to take payments through WeChat Pay or Alipay in order to secure smooth operations and provide timely help.

## 5.4   Limitations and future research

The study has several limitations which provide impetus for further research on mobile payment adoption in the context of hospitality and tourism. The first limitation is related to the sample size. The study is based on 184 valid samples of Chinese travellers .Future study could consider a larger sample size and a population with diverse demographics to add to the validation of the model. The second limitation is that as the study has been contextualised in New Zealand hotels, so the generalisability of the results might be

limited to the New Zealand hotel industry. Therefore, future researchers may replicate the study to explore mobile payment adoption in different countries and cultural contexts to extend to various hospitality sectors such as restaurants, airlines, and retail outlets. The third limitation is that the study conducted a scenario-based survey where travellers' adoption intention rather than actual adoption was investigated. Thus, future studies may examine travellers' actual experience of mobile payment adoption during their travels.

## 5.5   Conclusion

Recognising the emerging trend of mobile payment in the hospitality and tourism industry, this study developed a comprehensive model that examined Chinese travellers' intention to use WeChat Pay and Alipay in hotels during overseas travelling. The study revisited the UTAUT2 model by incorporating an important contextual factor of cost efficiency and proposing the moderation role of social influence on the main dependent constructs to adoption intention. Consequently, the model is empirically validated by the total variance explained. The study broadens the existing mobile technology adoption literature by a systematic investigation of travellers' adoption of mobile payment in an overseas environment, especially in hotel service counters. As popular mobile payment technologies such as WeChat Pay and Alipay remain in an early stage of adoption in the global market, the findings of the present study provide valuable insights into this fascinating phenomenon for the international hotel brands.

# References

Aalen, P., Iversen, E. K., & Jakobsen, E. W. (2019). Exchange rate fluctuations and demand for hotel accommodation: panel data evidence from Norway. *Scandinavian Journal of Hospitality and Tourism, 19*(2), 210-225. https://doi.org/10.1080/15022250.2018.1482566

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes, 50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management, 37*, 99-110. https://doi.org/10.1016/j.ijinfomgt.2017.01.002

Aluri, A. (2017). Mobile augmented reality (MAR) game as a travel guide: Insights from Pokémon GO. *Journal of Hospitality and Tourism Technology, 8*(1), 55-72. https://doi.org/10.1108/JHTT-12-2016-0087

Asch, S. E., & Guetzkow, H. (1951). Effects of group pressure upon the modification and distortion of judgments. *Documents of gestalt psychology*, 222-236.

Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. *Academy of Management Review, 14*(4), 496-515. https://doi.org/10.5465/AMR.1989.4308374

Boys, K. A., DuBreuil White, K., & Groover, G. (2017). Fostering rural and agricultural tourism: exploring the potential of geocaching. *Journal of Sustainable Tourism, 25*(10), 1474-1493. https://doi.org/10.1080/09669582.2017.1291646

Byun, S., & Byun, S.-E. (2013). Exploring perceptions toward biometric technology in service encounters: a comparison of current users and potential adopters. *Behaviour & Information Technology, 32*(3), 217-230.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin, 56*(2), 81. https://doi.org/10.1037/h0046016

Chen, T. (2019). *The cross-border payment war of WeChat Pay and Alipay*. Retrieved Nov 13, 2019, from https://walkthechat.com/the-cross-border-payment-war-of-wechat-pay-and-alipay/

Chhonker, M. S., Verma, D., & Kar, A. K. (2017). Review of technology adoption frameworks in mobile commerce. *Procedia computer science, 122*, 888-895. https://doi.org/10.1016/j.procs.2017.11.451

Chong, G. P. L. (2019). Cashless China: Securitization of everyday life through Alipay's social credit system—Sesame Credit. *Chinese Journal of Communication*, 1-18. https://doi.org/10.1016/j.ijmedinf.2016.03.002

Cimperman, M., Brenčič, M. M., & Trkman, P. (2016). Analyzing older users' home telehealth services acceptance behavior—applying an Extended UTAUT model. *International journal of medical informatics, 90*, 22-31. https://doi.org/10.1016/j.ijmedinf.2016.03.002

Contini, D., Crowe, M., Merritt, C., Oliver, R., & Mott, S. (2011). Mobile payments in the United States: mapping out the road ahead. *Federal Reserve Bank of Atlanta and Federal Reserve Bank of Boston White Paper, March.*

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*: Sage.

Dahlberg, T., Guo, J., & Ondrus, J. (2015). A critical review of mobile payment research. *Electronic Commerce Research and Applications, 14*(5), 265-284. https://doi.org/10.1016/j.elerap.2015.07.006

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

de Albuquerque, J. P., Diniz, E. H., & Cernev, A. K. (2016). Mobile payments: A scoping study of the literature and issues for future research. *Information Development, 32*(3), 527-553. https://doi.org/10.1177/0266666914557338

De Bel, J., & Gâza, M. (2011). Mobile Payments 2012-My mobile, my wallet. *Google Scholar*.

de Sena Abrahão, R., Moriguchi, S. N., & Andrade, D. F. (2016). Intention of adoption of mobile payment: An analysis in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT). *RAI Revista de Administração e Inovação, 13*(3), 221-230. https://doi.org/10.1016/j.rai.2016.06.003

DeFranco, A., & Morosan, C. (2017). Coping with the risk of internet connectivity in hotels: Perspectives from American consumers traveling internationally. *Tourism management, 61*, 380-393. https://doi.org/10.1016/j.tourman.2017.02.022

DeLuna, J. (2018). What Do Alipay & WeChat Pay Mean for Corporate Payments? (Vol. 35, pp. 20-22): Northstar Travel Media LLC.

Dennehy, D., & Sammon, D. (2015). Trends in mobile payments research: A literature review. *Journal of Innovation Management, 3*(1), 49-61. https://doi.org/10.24840/2183-0606_003.001_0006

Dickinson, J. E., Filimonau, V., Hibbert, J. F., Cherrett, T., Davies, N., Norgate, S., . . . Winstanley, C. (2017). Tourism communities and social ties: The role of online and offline tourist social networks in building social capital and sustainable practice. *Journal of Sustainable Tourism, 25*(2), 163-180. https://doi.org/10.1080/09669582.2016.1182538

Dickinson, J. E., Hibbert, J. F., & Filimonau, V. (2016). Mobile technology and the tourist experience:(Dis) connection at the campsite. *Tourism management, 57*, 193-201. https://doi.org/10.1016/j.tourman.2016.06.005

Earley, P. C. (1989). Social loafing and collectivism: A comparison of the United States and the People's Republic of China. *Administrative science quarterly*, 565-581.

Erawan, T. (2016). Tourists' intention to give permission via mobile technology in Thailand. *Journal of Hospitality and Tourism Technology, 7*(4), 330-346. https://doi.org/10.1108/JHTT-11-2015-0044

Esfahani, S. S., & Bulent Ozturk, A. (2019). The influence of individual differences on NFC-based mobile payment adoption in restaurant industry. *Journal of Hospitality and Tourism Technology, 10*(2), 219-232. https://doi.org/10.1108/Jhtt-01-2018-0009

Faulds, D. J., Mangold, W. G., Raju, P., & Valsalan, S. (2018). The mobile shopping revolution: Redefining the consumer decision process. *Business Horizons, 61*(2), 323-338. https://doi.org/10.1016/j.bushor.2017.11.012

Feng, L. (2017). *Brand choice of Chinese consumers to adopt digital payment platform in Thailand focusing on Alipay, WeChat Pay, and Union Pay*. Bangkok University.

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics: SAGE Publications Sage CA: Los Angeles, CA.

French, J., Raven, B., & Cartwright, D. (1959). The bases of social power. *Classics of organization theory, 7*, 311-320.

Giuffrida, M., Mangiaracina, R., Perego, A., & Tumino, A. (2017). Cross-border B2C e-commerce to Greater China and the role of logistics: a literature review. *International Journal of Physical Distribution & Logistics Management, 47*(9), 772-795. https://doi.org/10.1108/Ijpdlm-08-2016-0241

Gray, D. E. (2013). *Doing research in the real world*: Sage.

Greenleaf, E. A., Johnson, E. J., Morwitz, V. G., & Shalev, E. (2016). The price does not include additional taxes, fees, and surcharges: A review of research on partitioned pricing. *Journal of Consumer Psychology, 26*(1), 105-124. https://doi.org/10.1016/j.jcps.2015.04.006

Harris, M., Cox, K. C., Musgrove, C. F., & Ernstberger, K. W. (2016). Consumer preferences for banking technologies by age groups. *International Journal of Bank Marketing, 34*(4), 587-602. https://doi.org/10.1108/Ijbm-04-2015-0056

Henseler, J., M.Ringle, C., & Sinkovics, R. R. (2009). *The use of partial least squares path modeling in international marketing.*: Emerald Group Publishing Limited. https://doi.org/10.1108/S1474-7979(2009)0000020014

Hew, J.-J. (2017). Hall of fame for mobile commerce and its applications: A bibliometric evaluation of a decade and a half (2000–2015). *Telematics and Informatics, 34*(1), 43-66. https://doi.org/10.1016/j.tele.2016.04.003

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

James, T., Pirim, T., Boswell, K., Reithel, B., & Barkhi, R. (2006). Determining the intention to use biometric devices: An application and extension of the technology acceptance model. *Journal of Organizational and End User Computing (JOEUC), 18*(3), 1-24. https://doi.org/10.4018/joeuc.2006070101

Kansal, P., Walia, S., & Goel, S. (2015). Factors affecting perception of value for money and customer satisfaction for foreign tourists in Goa. *International Journal of Hospitality and Tourism Systems, 8*(2). https://doi.org/10.21863/ijhts/2015.8.2.017

Kelman, H. C. (1958). Compliance, identification, and internalization three processes of attitude change. *Journal of conflict resolution, 2*(1), 51-60. https://doi.org/10.1177/002200275800200106

Khalilzadeh, J., Ozturk, A. B., & Bilgihan, A. (2017). Security-related factors in extended UTAUT model for NFC based mobile payment in the restaurant industry. *Computers in Human Behavior, 70*, 460-474. https://doi.org/10.1016/j.chb.2017.01.001

Khan, I. U., Hameed, Z., & Khan, S. U. (2017). Understanding online banking adoption in a developing country: UTAUT2 with cultural moderators. *Journal of Global Information Management (JGIM), 25*(1), 43-65. https://doi.org/10.4018/Jgim.2017010103

Kim, C., Tao, W., Shin, N., & Kim, K.-S. (2010). An empirical study of customers' perceptions of security and trust in e-payment systems. *Electronic Commerce Research and Applications, 9*(1), 84-95. https://doi.org/10.1016/j.elerap.2009.04.014

Kim, S. S., Malhotra, N. K., & Narasimhan, S. (2005). Research note—two competing perspectives on automatic use: A theoretical and empirical comparison. *Information systems research, 16*(4), 418-432. https://doi.org/10.1287/isre.1050.0070

Kline, R. B. (2011). Principles and practice of structural equation. *Modeling.(3nd.*

Koenig-Lewis, N., Marquet, M., Palmer, A., & Zhao, A. L. (2015). Enjoyment and social influence: Predicting mobile payment adoption. *The Service Industries Journal, 35*(10), 537-554. https://doi.org/10.1080/02642069.2015.1043278

Korella, J. L., & Li, W. (2018). Retail payment behaviour and the adoption of innovative payments: A comparative study in China and Germany. *Journal of Payments Strategy & Systems, 12*(3), 245-265.

Kuss, D. J., Kanjo, E., Crook-Rumsey, M., Kibowski, F., Wang, G. Y., & Sumich, A. (2018). Problematic mobile phone use and addiction across generations: The roles of psychopathological symptoms and smartphone use. *Journal of*

*technology in behavioral science, 3*(3), 141-149. https://doi.org/10.1007/s41347-017-0041-3

Lance, C. E., & Vandenberg, R. J. (2009). *Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational and social sciences*: Taylor & Francis.

Law, R., Chan, I. C. C., & Wang, L. (2018). A comprehensive review of mobile technology use in hospitality and tourism. *Journal of Hospitality Marketing and Management, 27*(6), 626-648. https://doi.org/10.1080/19368623.2018.1423251

Law, R., Sun, S., Schuckert, M., & Buhalis, D. (2018). An exploratory study of the dependence on mobile payment among chinese travelers. In *Information and Communication Technologies in Tourism 2018* (pp. 336-348): Springer.

Lee, C.-C., Li, D., Arai, S., & Puntillo, K. (2009). Ensuring cross-cultural equivalence in translation of research consents and cinical documents: A systematic process for translating English to Chinese. *Journal of Transcultural Nursing*(1), 77. https://doi.org/10.1177/1043659608325852

Li, J., Wang, J., Wangh, S., & Zhou, Y. (2019). Mobile payment with alipay: An application of extended technology acceptance model. *IEEE Access, 7*, 50380-50387. https://doi.org/10.1109/Access.2019.2902905

Lien, C.-H., Cao, Y., & Zhou, X. (2017). Service quality, satisfaction, stickiness, and usage intentions: An exploratory evaluation in the context of WeChat services. *Computers in Human Behavior, 68*, 403-410. https://doi.org/10.1016/j.chb.2016.11.061

Lin, S. W. (2017). Identifying the critical success factors and an optimal solution for mobile technology adoption in travel agencies. *International Journal of Tourism Research, 19*(2), 127-144. https://doi.org/10.1002/jtr.2092

Litjens, G., Kooi, T., Bejnordi, B. E., Setio, A. A. A., Ciompi, F., Ghafoorian, M., . . . Sánchez, C. I. (2017). A survey on deep learning in medical image analysis. *Medical image analysis, 42*, 60-88. https://doi.org/10.1016/j.media.2017.07.005

Lorenz, G.-V., & Buhtz, K. (2017). Social influence in technology adoption research: A literature review and research agenda. *Management Review Quarterly, 68*(1), 37-76. https://doi.org/10.1007/s11301-017-0133-3

Lu, L. (2018). Decoding Alipay: Mobile payments, a cashless society and regulatory challenges. *Butterworths Journal of International Banking and Financial Law*, 40-43.

Ma, L., Su, X., Yu, Y., Wang, C., Lin, K., & Lin, M. (2018). What drives the use of m-payment? An empirical study about alipay and wechat payment*IEEE*. Symposium conducted at the meeting of the 2018 15th International Conference on Service Systems and Service Management (ICSSSM)

Magsamen-Conrad, K., Upadhyaya, S., Joa, C. Y., & Dowd, J. (2015). Bridging the divide: Using UTAUT to predict multigenerational tablet adoption practices. *Computers in Human Behavior, 50*, 186-196. https://doi.org/10.1016/j.chb.2015.03.032

Marinkovic, V., & Kalinic, Z. (2017). Antecedents of customer satisfaction in mobile commerce: Exploring the moderating effect of customization. *Online Information Review, 41*(2), 138-154.

Meehan, K., Lunney, T., Curran, K., & McCaughey, A. (2016). Aggregating social media data with temporal and environmental context for recommendation in a mobile tour guide system. *Journal of Hospitality and Tourism Technology, 7*(3), 281-299. https://doi.org/10.1108/Jhtt-10-2014-0064

Morosan, C. (2014). Toward an integrated model of adoption of mobile phones for purchasing ancillary services in air travel. *International Journal of Contemporary Hospitality Management, 26*(2), 246-271. https://doi.org/10.1108/Ijchm-11-2012-0221

Morosan, C., & DeFranco, A. (2016). It's about time: Revisiting UTAUT2 to examine consumers' intentions to use NFC mobile payments in hotels. *International Journal of Hospitality Management, 53*, 17-29. https://doi.org/10.1016/j.ijhm.2015.11.003

Murphy, H. C., Chen, M.-M., & Cossutta, M. (2016). An investigation of multiple devices and information sources used in the hotel booking process. *Tourism management, 52*, 44-51. https://doi.org/10.1016/j.tourman.2015.06.004

Nam, J.-H., & Lee, T. J. (2011). Foreign travelers' satisfaction with traditional Korean restaurants. *International Journal of Hospitality Management, 30*(4), 982-989. https://doi.org/10.1016/j.ijhm.2011.02.006

*New Zealand tourism forecasts 2018-2024*. (2018). Retrieved from https://www.mbie.govt.nz/assets/5c05b7bfce/nz-tourism-forecasts-2018-2024-report.pdf

Oliveira, T., Thomas, M., Baptista, G., & Campos, F. (2016). Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. *Computers in Human Behavior, 61*, 404-414. https://doi.org/10.1016/j.chb.2016.03.030

Park, S., & Huang, Y. (2017). Motivators and inhibitors in booking a hotel via smartphones. *International Journal of Contemporary Hospitality Management, 29*(1), 161-178. https://doi.org/10.1108/Ijchm-03-2015-0103

Petrocelli, J. V. (2003). Hierarchical multiple regression in counseling research: Common problems and possible remedies. *Measurement and evaluation in counseling and development, 36*(1), 9-22. https://doi.org/10.1080/07481756.2003.12069076

Qin, M., Tang, C.-H. H., Jang, S. S., & Lehto, X. (2017). Mobile app introduction and shareholder returns. *Journal of Hospitality and Tourism Management, 31*, 173-180. https://doi.org/10.1016/j.jhtm.2016.11.006

Rita, P., Oliveira, T., Estorninho, A., & Moro, S. (2018). Mobile services adoption in a hospitality consumer context. *International Journal of Culture, Tourism and Hospitality Research, 12*(1), 143-158. https://doi.org/10.1108/Ijcthr-04-2017-0041

Rosenburg, R. F. (2020). AUSTRALIA & NEW ZEALAND.

Sarmah, B., Kamboj, S., & Rahman, Z. (2017). Co-creation in hotel service innovation using smart phone apps: an empirical study. *International Journal of Contemporary Hospitality Management, 29*(10), 2647-2667. https://doi.org/10.1108/Ijchm-12-2015-0681

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of psychological research online, 8*(2), 23-74.

Shankar, A., & Datta, B. (2018). Factors affecting mobile payment adoption intention: An Indian perspective. *Global Business Review, 19*(3_suppl), S72-S89. https://doi.org/10.1177/0972150918757870

Shin, D.-H. (2010). The effects of trust, security and privacy in social networking: A security-based approach to understand the pattern of adoption. *Interacting with computers, 22*(5), 428-438. https://doi.org/10.1016/j.intcom.2010.05.001

Straub, D. W. (1989). Validating instruments in MIS research. *MIS quarterly*, 147-169.

Szolnoki, G., & Hoffmann, D. (2013). Online, face-to-face and telephone surveys - Comparing different sampling methods in wine consumer research. *Wine Economics and Policy, 2*(2), 57-66. https://doi.org/10.1016/j.wep.2013.10.001

Taylor, E. (2016). Mobile payment technologies in retail: A review of potential benefits and risks. *International Journal of Retail & Distribution Management, 44*(2), 159-177. https://doi.org/10.1108/Ijrdm-05-2015-0065

Teo, A.-C., Tan, G. W.-H., Ooi, K.-B., & Lin, B. (2015). Why consumers adopt mobile payment? A partial least squares structural equation modelling (PLS-SEM) approach. *International Journal of Mobile Communications, 13*(5), 478-497. https://doi.org/10.1504/IJMC.2015.070961

tom Dieck, M. C., Jung, T. H., Kim, W. G., & Moon, Y. (2017). Hotel guests' social media acceptance in luxury hotels. *International Journal of Contemporary Hospitality Management, 29*(1), 530-550. https://doi.org/10.1108/IJCHM-10-2015-0552

Triandis, H. C. (1979). Values, attitudes, and interpersonal behavior*University of Nebraska Press.* Symposium conducted at the meeting of the Nebraska symposium on motivation

Vatanasombut, B., Igbaria, M., Stylianou, A. C., & Rodgers, W. (2008). Information systems continuance intention of web-based applications customers: The case of online banking. *Information & Management, 45*(7), 419-428. https://doi.org/10.1016/j.im.2008.03.005

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision sciences, 39*(2), 273-315. https://doi.org/10.1111/j.1540-5915.2008.00192.x

Venkatesh, V., & Davis, F. D. (1996). A model of the antecedents of perceived ease of use: Development and test. *Decision sciences, 27*(3), 451-481. https://doi.org/10.1111/j.1540-5915.1996.tb00860.x

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science, 46*(2), 186-204. https://doi.org/10.1287/mnsc.46.2.186.11926

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. https://doi.org/10.2307/30036540

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly, 36*(1), 157-178. https://doi.org/10.2307/41410412

Wang, D., Xiang, Z., & Fesenmaier, D. R. (2016). Smartphone use in everyday life and travel. *Journal of travel research, 55*(1), 52-63.

William, K. (2019). *New research report on mobile payment solutions market size, share, growth opportunities and future outlook to 2026* Retrieved Oct 24, 2019, from https://www.marketexpert24.com/2019/10/23/new-research-report-on-mobile-payment-solutions-market-size-share-growth-opportunities-and-future-outlook-to-2026-paypal-here-square-stripe-shopify-pos-flint-etc/

Worldpay. (2018). *Global payment reports 2018*. Retrieved from https://www.paymentscardsandmobile.com/wp-content/uploads/2018/11/Global-Payments-Report_Digital-2018.pdf

Zeng, C. F., & Seock, Y.-K. (2019). Chinese consumers' perceptions toward social media platform for shopping and eWOM intention: a study of WeChat. *International Journal of Fashion Design, Technology and Education, 12*(2), 199-207. https://doi.org/10.1080/17543266.2019.1572230

Zhang, T., Abound Omran, B., & Cobanoglu, C. (2017). Generation Y's positive and negative eWOM: Use of social media and mobile technology. *International Journal of Contemporary Hospitality Management, 29*(2), 732-761. https://doi.org/10.1108/IJCHM-10-2015-0611

Zheng, L., & Zheng, Y. (2014). Online sexual activity in Mainland China: Relationship to sexual sensation seeking and sociosexuality. *Computers in Human Behavior, 36*, 323-329. https://doi.org/10.1016/j.chb.2014.03.062

Zhou, T., Lu, Y., & Wang, B. (2010). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior, 26*(4), 760-767. https://doi.org/10.1016/j.chb.2010.01.013

# Appendix A. Survey questionnaire

**Are you 18 years old or over?**

○ Yes

○ No

**Have you ever used WeChat Pay or Alipay to purchase goods or service?**

○ Yes

○ No

**Scenario**

Imagine that you are staying in a hotel when you are travelling in New Zealand. Now you are settling a payment in one of the service counters. There are multiple payment channels including credit card, cash and mobile payment.

**Please select the extent of your agreement with the following statements about performance expectancy of using WeChat Pay or Alipay in a hotel when travelling in New Zealand**

|  | Strongly disagree | Somewhat disagree | Neither disagree nor agree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| 1.Using WeChat Pay or Alipay would increase the efficiency of my hotel consumption experience (for example, faster transaction) | ○ | ○ | ○ | ○ | ○ |
| 2.Using WeChat Pay or Alipay would allow me to have a better view of my purchasing history in hotels | ○ | ○ | ○ | ○ | ○ |
| 3. Using WeChat Pay or Alipay would reduce my need to carry cash or credit cards when staying in hotels | ○ | ○ | ○ | ○ | ○ |
| 4. Overall, I believe that WeChat Pay or Alipay is useful when I am staying in hotels | ○ | ○ | ○ | ○ | ○ |

**Please select the extent of your agreement with the following statements about social influence on your intention to use WeChat Pay or Alipay in a hotel when travelling in New Zealand**

|  | Strongly disagree | Somewhat disagree | Neither disagree nor agree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| 1. Family members influence my intention to use WeChat Pay or Alipay in hotels | ○ | ○ | ○ | ○ | ○ |
| 2. My peers or friends influence my intention to use WeChat Pay or Alipay in hotels | ○ | ○ | ○ | ○ | ○ |
| 3. Other travellers influence my intention to use WeChat Pay or Alipay in hotels | ○ | ○ | ○ | ○ | ○ |
| 4. People on social medias influence my intention to use WeChat Pay or Alipay in hotels | ○ | ○ | ○ | ○ | ○ |

**Please select the extent of your agreement with the following statements about facilitating conditions on your intention to use WeChat Pay or Alipay in a hotel when travelling in New Zealand**

| | Strongly disagree | Somewhat disagree | Neither disagree nor agree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| 1. I have the resources necessary to use WeChat Pay or Alipay | ○ | ○ | ○ | ○ | ○ |
| 2. I have the knowledge necessary to use WeChat Pay or Alipay | ○ | ○ | ○ | ○ | ○ |
| 3. I can get help from others when I have difficulties using WeChat Pay or Alipay in hotels | ○ | ○ | ○ | ○ | ○ |

**Please select the extent of your agreement with the following statements about the perceived security of using WeChat Pay or Alipay in a hotel when travelling in New Zealand**

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| 1.I feel secure providing personal information when using WeChat Pay or Alipay in hotels | ○ | ○ | ○ | ○ | ○ |
| 2.I am not worried that information I provide when using WeChat Pay or Alipay could be used by other people | ○ | ○ | ○ | ○ | ○ |
| 3. Overall, I feel that WeChat Pay or Alipay transmits sensitive information safely | ○ | ○ | ○ | ○ | ○ |

**Please select the extent of your agreement with the following statements about the cost efficiency of using WeChat Pay or Alipay in a hotel when travelling in New Zealand**

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| 1.Given that in most cases there is a 2% surcharge on a credit card transaction in hotels, I prefer to use WeChat or Alipay to settle my bill | ○ | ○ | ○ | ○ | ○ |
| 2. I feel that the currency exchange rates are generally better in WeChat Pay or Alipay than on credit cards or cash | ○ | ○ | ○ | ○ | ○ |
| 3.Overall, I think using WeChat Pay or Alipay to pay in hotels is good value for money | ○ | ○ | ○ | ○ | ○ |

**Please select the extent of your agreement with the following statements about your habits in relation to use WeChat Pay or Alipay**

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| 1.Using WeChat Pay or Alipay has become quite natural to me | ○ | ○ | ○ | ○ | ○ |
| 2.When making general payments, WeChat Pay or Alipay is my first choice | ○ | ○ | ○ | ○ | ○ |
| 3. Overall using WeChat Pay or Alipay has become a habit for me | ○ | ○ | ○ | ○ | ○ |

**Please select your agreement with the following statements about your intention to use WeChat Pay or Alipay in a hotel when travelling in New Zealand**

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|---|---|---|---|---|
| 1.I intend to use WeChat Pay or Alipay in New Zealand hotels in the future | ○ | ○ | ○ | ○ | ○ |
| 2.I will always try to use WeChat Pay or Alipay when I am staying in New Zealand hotels | ○ | ○ | ○ | ○ | ○ |
| 3.I will recommend others to use WeChat Pay or Alipay in hotels if they are travelling in New Zealand | ○ | ○ | ○ | ○ | ○ |
| 4.WeChat Pay and Alipay are two of my preferred technologies for payment when I am staying in New Zealand hotels | ○ | ○ | ○ | ○ | ○ |

**Have you ever travelled to New Zealand?**

○ Yes

○ No

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**Have you ever travelled to any other overseas countries?**

○ Yes

○ No

**Which payment method do you usually use when you are settling payments in a hotel during your overseas travel?**

○  Local cash

○ Credit card

○ Mobile payment

**Have you ever used WeChat Pay or Alipay when travelling overseas?**

○ Yes

○ No

**Which service counters in a hotel would you prefer to use WeChat Pay or Alipay to settle your bill when travelling overseas?  (Multiple Choice)**

○ Reception

○ Bar

○ Restaurant

○ Facilities and service (such as Spa and concierge service)

○ Souvenir store

**What is the amount you are comfortable to pay by WeChat Pay or Alipay when staying in an overseas hotel?**

○ Under 100 RMB

○ Under 500 RMB

○ Under 1000 RMB

○ Under 5000 RMB

○ Under 10000

**Please select your gender**

○ Male

○ Female

**What is your age?**

_____

**Please select your education level**

○ Nine years of compulsory education

○ High School

○ Undergraduate

○ Postgraduate

○ PhD

# Appendix B. Survey questionnaire (in Chinese)

请问您的年龄有超过十八岁吗？

○ 有

○ 没有

请问您有使用微信或支付宝进行过支付吗？

○ 有

○ 没有

_____Page Break_____

请想像您正在新西兰的一家酒店进行支付。 酒店提供现金， 信用卡和手机支付三种支付方式供您选择。

以下问题是关于您对使用微信支付或支付宝的倾向。

您在新西兰酒店使用微信支付或支付宝能有效提高结算效率，请选择您对以下观点的同意程度

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1. 节省时间，提高结算效率 | ○ | ○ | ○ | ○ | ○ |
| 2.方便查看酒店消费记录 | ○ | ○ | ○ | ○ | ○ |
| 3.手机即可结算，无需携带现金或信用卡 | ○ | ○ | ○ | ○ | ○ |
| 4.总的来说，使用微信支付或支付宝更加方便快捷 | ○ | ○ | ○ | ○ | ○ |

在新西兰的酒店使用微信支付或支付宝简便易操作，请选择您对以下观点的同意程度

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1.在酒店使用微信或支付宝进行支付的操作简单 | ○ | ○ | ○ | ○ | ○ |
| 2. 在用微信或支付宝进行结算时，来自这两个应用的提示信息简单易懂 | ○ | ○ | ○ | ○ | ○ |
| 3. 酒店提供的支付设备（含支付二维码）让支付更简便 | ○ | ○ | ○ | ○ | ○ |
| 4. 在酒店熟练地使用微信支付和支付宝，对我来说很简单 | ○ | ○ | ○ | ○ | ○ |

**社会群体可能会影响到您在新西兰酒店使用微信支付或支付宝，请选择您对以下观点的同意程度**

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1.家庭成员会影响我想要在新西兰的酒店使用微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 2.我的同事或朋友会影响我想要在新西兰的酒店使用微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 3.其它游客会影响我想要在新西兰的酒店使用微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 4.社交网络上的人会影响我想要在新西兰的酒店使用微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |

某些便利条件可能会影响您在新西兰的酒店使用微信支付或支付宝，请选择您对以下观点的同意程度

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1. 当我有微信支付或者支付宝的充分资源时（例如，网络通畅，账户资金充足等）我会去使用 | ○ | ○ | ○ | ○ | ○ |
| 2. 当我充分了解微信支付或支付宝在海外使用的相关信息时，我会去使用。（例如，汇率，服务费等） | ○ | ○ | ○ | ○ | ○ |
| 3. 当我在酒店使用微信支付或支付宝遇到不便时，可以及时得到解决。我会愿意去使用 | ○ | ○ | ○ | ○ | ○ |

**安全因素可能会影响到您在新西兰的酒店使用微信支付或支付宝，请选择您对以下观点的同意程度**

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1.当我在新西兰的酒店使用微信支付或支付宝时，我认为个人信息可以得到安全保障 | ○ | ○ | ○ | ○ | ○ |
| 2.我不担心在使用微信支付或支付宝后，个人信息会被泄露 | ○ | ○ | ○ | ○ | ○ |
| 3.总的来说，在新西兰的酒店使用微信支付或支付宝有安全保障 | ○ | ○ | ○ | ○ | ○ |

**信任因素可能影响您在新西兰酒店使用微信支付或支付宝，请选择您对以下观点的同意程度**

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1.即使在新西兰的酒店使用微信支付或支付宝，它们仍值得信任 | ○ | ○ | ○ | ○ | ○ |
| 2.微信支付和支付宝在法律和技术上的支持能够充分保护我免受困扰 | ○ | ○ | ○ | ○ | ○ |
| 3.总的来说，我充分信任微信支付和支付宝 | ○ | ○ | ○ | ○ | ○ |

**经济因素可能影响您在新西兰的酒店使用微信支付或支付宝，请选择您对以下观点的同意程度**

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1.在新西兰的酒店使用信用卡交易，通常会有 **2%**的附加费。所以我更喜欢使用手续费相对更低的微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 2. 我认为微信支付或支付宝的实时汇率结算比信用卡或现金结算更划算 | ○ | ○ | ○ | ○ | ○ |
| 3.总的来说，我认为使用微信支付或支付宝性价比更高 | ○ | ○ | ○ | ○ | ○ |

**支付习惯可能会影响到您在海外使用微信支付或支付宝，请选择您对以下观点的同意程度**

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1.在进行支付时，我下意识地会选择微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 2.在日常支付中，微信或支付宝是我的首选 | ○ | ○ | ○ | ○ | ○ |
| 3.总的来说，使用微信支付或支付宝已经成为我的习惯 | ○ | ○ | ○ | ○ | ○ |

关于您在新西兰的酒店使用微信支付和支付宝意向的表述，请选择您对以下观点的同意程度

| | 完全不同意 | 有些不同意 | 不确定 | 有些同意 | 完全同意 |
|---|---|---|---|---|---|
| 1.我在新西兰的酒店住宿时，考虑使用微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 2.我在新西兰的酒店住宿时，会尽量使用微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 3.如果其他人去新西兰旅游，我会推荐他们在酒店使用微信支付或支付宝 | ○ | ○ | ○ | ○ | ○ |
| 4.我在新西兰的酒店住宿时，微信支付和支付宝是我最喜欢的两种手机支付方式 | ○ | ○ | ○ | ○ | ○ |

您曾经来过新西兰吗？

    ○ 有

    ○ 没有

---

您是否曾在其他海外国家旅行或居住过？

    ○ 是

    ○ 否

您在海外入住酒店时，通常使用以下哪种付款方式结算？

    ○ A. 当地现金

    ○ B. 信用卡

    ○ C. 手机支付

---

您在海外旅行时使用过微信支付或支付宝吗？

    ○ A. 有

    ○ B. 无

在酒店内的哪个区域您更喜欢使用微信或支付宝进行支付

- ☐ 前台

- ☐ 酒吧

- ☐ 餐厅

- ☐ 娱乐场所，比如 Spa 和礼宾服务等

- ☐ 礼品店

当您在海外酒店进行结算时，多少金额会让您更想用微信支付或者支付宝进行结算

- ○ 100 元 人民币以下

- ○ 500 元 人民币以下

- ○ 1000 元 人民币以下

- ○ 5000 元 人民币以下

- ○ 1 万 人民币以下

**请选择您的性别**

&#9711; 男

&#9711; 女

**请选择您的年龄？**
年龄

▼ 18 ... 100

**关于您的受教育程度**

&#9711; A. 九年义务教育

&#9711; B. 高中

&#9711; C. 大学生

&#9711; D. 研究生

&#9711; E. 博士

# Appendix C. Participants information sheet



## Participant Information Sheet

**Date Information Sheet Produced:**

**2/09/2018**

Project Title

**Chinese customers' adoption of near field communication mobile payment applications in New Zealand hotels**

**An Invitation**

My name is Paris Xu- I am a master's student at Auckland University of Technology (AUT). I would like to invite you to participate in a survey about Chinese customers' adoption of mobile payment applications (e.g., WeChat Pay and Alipay) in New Zealand Hotels. This study is a part of the dissertation that I need to write to complete my qualification. Thank you for your support and valuable contribution.

Your participation in the study will be voluntary and anonymous and you have the right to withdraw at any stage during completing the questionnaire. You also have the right to skip any question if you feel uncomfortable answering it. I would appreciate it if you could complete the questionnaire as accurately as possible. It will take you around 10 minutes to answer the questions.

**What is the purpose of this research?**

Mobile payment methods have become increasingly popular among consumers in the retail and food and beverage industries in New Zealand. However, Chinese guests' adoption of mobile payments (specifically, WeChat Pay and Alipay applications) in hotels during their overseas travels is not well researched. This study aims to understand the Chinese people's intentions to use WeChat Pay or Alipay when they are staying in New Zealand hotels. The study expects to help hotel managers have a better understanding of Chinese guests' payment preferences.

The findings of this research may be used for academic publications and presentations.

**How was I identified and why am I being invited to participate in this research?**

Amazon Mechanical Turk will contact you through an invitation email or Hotels will invent you to scan the QR code in the lobby. Your participation in this study is entirely **voluntary** and **anonymous**, and there will be no identifiable personal information collected in this research.

**How do I agree to participate in this research?**

Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

**What will happen in this research?**

You will be directed to the questionnaire once you agree to participate in this study by clicking the link. Then you will be asked to imagine that you are using WeChat Pay and Alipay in a hotel in New Zealand to settle your account. There are eight topics that will test your intention to use WeChat Pay and Alipay. You will be asked to select the extent of your agreement with each statement. Completion of the anonymous questionnaire will indicate your consent to participate.

**What are the discomforts and risks?**

In this research, you will not experience any discomfort or embarrassment.

**What are the benefits?**

Your participation in this research will help in the completion of my master degree. Your answers are acknowledged as an important contribution to knowledge. Your voice may influence hotel management in New Zealand or other overseas countries to use WeChat Pay and Alipay, which will be more convenient for your travel and stay.

**How will my privacy be protected?**

This survey is entirely anonymous. Your contact detail and personal information will not be held or shared with any third party. Your response to the questions will be used for academic research only. Therefore, your privacy and confidentiality will be protected throughout this research.

**What are the costs of participating in this research?**

This survey will take approximately 10 minutes to complete.

**What opportunity do I have to consider this invitation?**

This survey will be available online for 14 working days, or less, if sufficient participants have been recruited.

**Will I receive feedback on the results of this research?**

If you are interested in the results of this research, please contact me by email: sjx9545@autuni.ac.nz

I will send you the results by email as soon as the research is completed.

**What do I do if I have concerns about this research?**

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor:

Associate Professor Peter Kim: pkim@aut.ac.nz, +64 0921 9999 ext. 6105.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, *ethics@aut.ac.nz*, 921 9999 ext. 6038.

**Whom do I contact for further information about this research?**

Please keep this Information Sheet for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Paris Xu - Email: sjx9545@autuni.ac.nz

Project Supervisor Contact Details**:**

Assoc. Prof Peter Kim, pkim@aut.ac.nz, +64 0921 9999 ext. 6105.

Approved by the Auckland University of Technology Ethics Committee on *6th September 2019*, AUTEC Reference number *19/320*.

# Appendix D. Participants information sheet (in Chinese)

## 调查问卷信息表

2019 年 9 月 2 日

亲爱的参与者:

我是一名就读于新西兰奥克兰理工大学酒店管理专业的硕士研究生。由于毕业论文和学位的需要，目前我正在进行一项关于中国游客在新西兰酒店使用微信支付或者支付宝态度和倾向的研究。

这次研究的主要目：通过了解您对在新西兰酒店使用微信支付或支付宝的态度和倾向，来提高中国游客在酒店的入住体验。您的意见可能会影响到新西兰酒店行业对微信支付和支付宝的普及。

我诚挚地邀请您参与这个十分钟的问卷调查。感谢您对我的学习和新西兰酒店行业的支持。

完成本次匿名问卷将视作您同意参与此次问卷调查。在填写过程中，您可以随时退出。但由于这是匿名问卷，您已提交的信息将不会被撤回。

如果您对本次问卷的调研结果感兴趣，请发送邮件至：sjx9545@autuni.ac.nz
我将会在这个学术研究结束后第一时间将调研结果与您分享。

如果您对此课题有任何疑问，欢迎联系项目负责人

导师： Peter Kim 博士
邮箱： pkim@aut.ac.nz;
电话: +64 921 9999 转 6105。

如果您对此次调查的执行有任何疑问，请联系奥克兰理工大学道德委员会
执行秘书： Kate O'Connor
邮箱： ethics@aut.ac.nz, Tel: +64 921 9999 转 6038。

如果您想进一步了解此次课题，欢迎联系课题调研人:

徐琳琳（邮箱: sjx9545@autuni.ac.nz）

第一导师: Peter Kim 博士（邮箱: pkim@aut.ac.nz）

本问卷已经于 2019 年 9 月 6 日通过了奥克兰理工大学道德委员会的审核，审核标号为 19/320。