## **Overreliance on mobile payment solutions for purchasing air tickets in China**

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## Abstract

A mobile payment solution allows users to pay for a wide range of products and services by accessing their virtual wallets via their Internet-connected mobile phones. The use of such an innovative payment process has been on the rise in Mainland China, in which Alibaba and Tencent are considered the market leaders. As this payment solution has become the major payment mode preferred by residents of China, businesses may suffer from the risk of overreliance if the service becomes unavailable depending on the regulations imposed by the Chinese government. In this study, five operation department heads of a large-scale online travel agency in Shenzhen were conducted. This study aims to understand the current situation, including the level of reliance, presence of alternative payment solutions, negative impact of the possible absence of these solutions, and contingency plans in risk management.

Keywords: mobile payment solution, Alibaba, Tencent, online travel agent

## 1 Introduction

At present, mobile payment solutions are widely used by residents of China, in which Alipay and Tenpay (i.e., WeChat pay) are the leading providers. Alipay is run by the Alibaba group, which owns Taobao.com, the largest online product trading platform (Alibaba, 2017). Tenpay is established by the Tencent group, which owns the largest instant messaging platforms in China, namely, QQ (for desktop) and WeChat (mobile) (Tencent, 2017). A report published in March 2017 stated that the market share of Alipay was 54.7% in the fourth quarter of 2016, whereas that of Tenpay was 37%. The active users of Tenpay was 200% higher than that of Alipay. The number of active users is the major reason Tencent developed the QQ and WeChat instant messaging platforms, which were offered as free downloads (Rong, Ouyang, Chen, & Xiong, 2015).

# **2** Online air ticket trading platforms and China's mobile payment adoption

Ctrip and Qunar are the largest online air ticket trading platforms in China (Tnooz, 2013). They have established partnerships with Alipay and Tenpay as their payment

solutions, respectively, thereby allowing their customers to complete transactions via mobile payment when checking out on top of the credit card payment system (China Knowledge, 2009; Marbridge Daily, 2014). Customers can avail of 20%–30% discounts when purchasing specific travel products and settling payments via WeChat pay (Technode, 2014).

#### 2.1 Prospect theory

Prospect theory concerns decision making in face of uncertainty (Osberghaus, 2015). This theory was adopted in this study because the mobile payment solution is an alternative decision which involves uncertainty as business risk despite being regarded as a benefit for the business and ignores the relevant potential risks (Tversky & Kahneman, 1986). By adopting qualitative research methods, this study identified the details of the risk involved for the travel agencies in China when using mobile payment solution to fill the gap in the literature resulting from the limitation in previous research that employed quantitative studies.

#### 2.2 Development of mobile payment solutions

The original design of the Alipay payment solution is an escrow system that trickled the problem of trust in the Chinese online trading platform (Harvard Business School, 2016). Fig. 1 shows the workflow of Alipay in the original design.

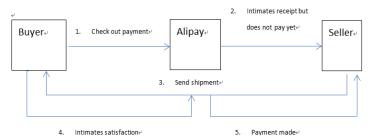


Fig. 1. Alipay payment solution (Harvard Business School, 2016)

## 2.3 Expansion of mobile payment solutions: payment via mobile wallet

"Mobile wallet" is a relatively new concept of mobile payment solution. Under this concept, Alipay and WeChat established more than 500,000 partnerships with merchants from different industries in China, including travel and hospitality, online retail, convenient stores, and many others. This kind of application allows customers to instantly secure their purchase with Alipay or WeChat pay using their smartphones by QR code scan (Harvard Business School, 2016).

## 3 Overlaying information technology in industrial operation

Law and Au (1998) investigated the percentage of tasks assisted by information technology (IT), and found that most of the hotel departments highly rely on IT in accomplishing several tasks. Among all departments, the Engineering and Housekeeping Department have shown less reliance on IT in their daily operations. As for online commerce, e-payment has reached USD0.37 trillion in profits in the

third quarter of 2015 (China Internet Watch, 2015). Alipay and Tenpay, as the market leaders in China, represent 89.1% of the country's e-payment transactions within this period (China Internet Watch, 2016a). Today, more than 200 million users have linked their ATM cards with WeChat. Residents of China now heavily rely on mobile payment solutions for their daily transactions (China Internet Watch, 2016b).

## 4 Research methodology

The researchers interviewed department heads of a large-scale travel agency based in Shenzhen, a first-tier city in China. The large-scale travel agency provides business-to-customer services booking engines, such as Ctrip and Qunar, and distribute them. Ctrip and Qunar sell more than 10,000 air tickets to Chinese customers per day. The heads of the Management Team, Customer Service, Reservation and Ticketing, Finance and Accounting, and the Information Technology Departments participated in the interviews. Twenty-minute one-on-one interviews were conducted, with the aim of understanding the level of reliance on mobile payment solution and their decision making process when considering the mobile payment solution as an alternative based on the prospect theory. The interview questions are related to the involvement, total payment share, benefit, policies driven, alternative, and employee awareness of the risk of mobile payment solutions. The questions are based on the study of Law and Lau (2000), who stated that the "IT problem can seriously threaten all types of business" (p. 171).

## 5 Findings

The job duties of the different departments involve various areas of mobile payment solutions. The department heads shared their ideas on the involvement, reliance, and impact of the unavailability of such a solution.

## 5.1 Management Team

The management is responsible for designing the company strategy to sustain the business and retain its market competence. Transactions via mobile payments represent more than 60% of the total transactions. The Management Team agreed that a mobile payment solution is critical for the business success because it is cost efficient and reduces cash flow pressure unlike other traditional payment methods. Given these advantages, merchants are often willing to offer additional discounts to motivate customers to pay via mobile payment.

Although the availability of mobile payment solution is driven by government policies, the impact of government intervention (e.g., changing the policy on mobile payments) remains unclear, and business licenses must still be renewed after expiration. If the mobile payment solution is no longer available, the Management Team predicted that this will affect more than 60%–70% of their current business operations. Employee awareness as to what should be done when the mobile payment solution is unavailable remains insufficient. Nevertheless, the management does not worry about the risks involved.

## 5.2 Customer Service Department

The Customer Service Department focuses on after sales service, such as when customers ask about their confirmed bookings. If the payment solution is unavailable, then handling customer request can be challenging because the department cannot immediately check the payment status. This limitation can cause serious delay of service and lead to a series of problems or customer complaints.

## 5.3 Reservation and Ticketing Department

The Reservation and Ticketing Department handles bookings after a customer completed and paid for his/her ticket online. The heads of both the Customer Service and Reservation and Ticketing Departments agree that the mobile payment solution is highly involved in their work. If the mobile payment solution is unavailable, then the departments cannot instantly process the air ticket confirmation for the customer, which may increase risk when receiving the payment at a later time.

## 5.4 Finance and Accounting Department

The Finance and Accounting Department prepares financial documents for customers and the management. The mobile payment solution is highly involved in their daily operations because most of the customers purchase through mobile payment solutions. The department agreed that the mobile payment solution simplifies their business operations. If the mobile payment solution becomes unavailable, then it will create unpredictable extra workload, and a clear profit and loss financial report cannot be effectively processed by the management.

## 5.5 Information Technology Department

The IT department ensures the smooth operation of the company's internal system, the online booking engine. The mobile payment solution platform is highly related to their work because the department must ensure that the payment solution gateway is integrated to the system. If the mobile payment solution is no longer available, the external and internal systems are seriously affected as well as the payment gateway of the Internet booking engine.

# 6 Conclusions, recommendations, and suggestions for future research

Online travel agencies in China are highly reliant on mobile payment solution in their operations. Applying the prospect theory, online travel agencies in China have fully adopted mobile payment solution because the solution maximizes the convenience in business operation with commercial benefits. Most importantly, the travel agencies seem to overlook the potential risks and uncertainties. Should this payment mode become unavailable, these agencies will certainly be affected. In this study, the possible unavailability of mobile payment solution is an identified risk, and the risk awareness of the interviewed company is insufficient. The major recommendations are for travel agencies to seriously consider this potential risk and prepare contingency plans to minimize the impact of such a risk to avoid business failure. The following recommendations can also help travel agencies prepare for potential crisis.

Travel agencies should not give up the traditional payment solution and rely only on a single method. Examples of traditional payment solutions are credit or debit cards, cash, and bank transfers. In addition, travel agencies should establish partnerships with other mobile payment companies. Although Tenpay is more convenient than Alipay because of the WeChat platform, Alipay is equally important in customers' perspective. Moreover, staff of travel agencies should be aware of the potential risk of the unavailability of the mobile payment solution. Finally, travel agencies should discuss and establish other payment settlement methods with suppliers to ensure that the product supply chain will not be affected by the possible unavailability of the mobile payment solution.

This study focuses on online travel agencies in China. Future studies can analyze the overreliance on mobile payment of retail travel agencies without an online business model, corporate travel agents managing corporate travels for different organizations, and online travel agencies focusing on hotel bookings.

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