Understanding the Intention to Continue Use of a Mobile Payment Provider: An Examination of Alipay Wallet in China

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ABSTRACT

With rapid advances in information technology and the development of intelligent terminals, more and more people today are attracted to the advantages of fast, easy online or mobile payment. This technology has already transformed the way many people shop, invest, and pay for offline goods and services. Consumer interest has motivated a large number of enterprises to compete aggressively for consumers’ mobile wallets. Today, the largest mobile payment provider in the world is Alipay Wallet, China’s leading third-party mobile payment app. This study used a questionnaire in the Chinese language to collect data from a sample of 332 Chinese users of Alipay Wallet in order to develop a theoretical model depicting the effect of internal and external factors on a person’s intention to continue use of a mobile payment provider. The research model was tested using the partial least squares technique. The results reveal that the intention to continue use is affected by source credibility, perceived usefulness, and perceived integration from use experiences, and that trust is an important mediator in the relationships between these antecedents and the consequence of intention to continue use. Moreover, the results show that the subjective norm of other people has a significant impact on intention to continue use, but that competitors’ marketing efforts do not have an impact. The implications of the findings are discussed.

Keywords: Mobile payment, intention to continue use, use experiences, subjective norm, competitors’ marketing efforts, elaboration likelihood model
1. INTRODUCTION

Mobile payments companies offer convenient and diversified payment services to consumers. With the development of mobile Internet, information technology, and intelligent terminals, more and more consumers are attracted to mobile payment. According to Nielsen (2014), the number of global mobile payment transactions has more than tripled in the last two years. This dramatic increase in consumer interest has motivated a large number of enterprises to compete aggressively for consumers’ mobile wallets (Nielsen, 2014). For example, PayPal, which dominates the mobile payment market in the United States, faces a strong challenge from Google Wallet and Apple Pay (Chang, 2015). Alipay Wallet, the leading mobile payment app in China, is challenged by WeChat Pay and Chinaums (iResearch, 2016).

The cost of obtaining a new customer is five times the cost of retaining an old customer (Schefter & Reichheld, 2000). With the intensification of market competition, how to retain old customers has become an important problem for mobile payment enterprises. Unlike general mobile services, mobile payments involve personal financial information, such as personal bank accounts, assets, shopping lists, and capital flows. For this reason, consumers must be cautious in deciding whether to continue using mobile payment services. It is important, therefore, to study the factors that affect their intention to continue use.

Consumer behavior is influenced by internal and external factors (Pornsakulvanich & Dumrongsiri, 2013), and this is true also with regard to consumer use of mobile payment services. After a period of using these services, consumers gain extensive internal information that may help them evaluate their intention to continue using mobile payments. In today’s environment of fierce market competition, the marketing efforts of competing firms may be an external factor in their decision. Since many mobile payment apps support person-to-person payments, the attitude of other people may be another external factor. In brief, it can be said that consumers’ intention to continue use of mobile payment services is affected by use experiences (an internal factor) and by market competition and the opinions of others (external factors).

Although consumer adoption is a large category of mobile payment research (Dahlberg, Guo & Ondrus, 2015; Dahlberg et al., 2008), there are not enough research studies that examine intention to continue use (Shaikh & Karjaluoto, 2015). Past literature has demonstrated that factors affecting adoption and post-adoption are different (Karahanna, Straub & Chervany, 1999; Chang & Zhu, 2011). Previous studies also focused mainly on the perspectives of information
quality, system quality, service quality, and innovation attributes to examine intention to continue use of mobile payment (Zhou, 2013; Zhou, 2014; Kapoor, Dwivedi & Williams 2015). There is lack of a comprehensive study on the effect of internal and external factors on intention to continue use.

Alipay is China’s leading third-party online payment platform. It was founded in Hangzhou, China, in February 2004 by the Alibaba Group. In 2008, it launched its mobile business, Alipay Wallet, which is today the largest mobile payment provider in the world (China Telecom, 2014). From the perspectives of use experiences, competitors, and other people, the current study develops a theoretical model to depict the effect of internal and external factors on intention to continue use of Alipay Wallet in China. The findings can help mobile payment enterprises to develop more effective consumer retention tactics.

2. THEORETICAL BACKGROUND AND HYPOTHESES

This section discusses the theoretical background for the current study and presents the study hypotheses.

2.1. Theoretical Background

Consumers gain extensive use experience with mobile payment services after a period of use. As internal information sources, these experiences may help consumers evaluate their intention to continue using mobile payments. The elaboration likelihood model (ELM) developed by Petty, Cacioppo, and Schumann (1983) has been widely used to explore the persuasion process of a variety of sources, information, and context variables (Li, 2013; Schumann et al., 2012; Sparks & Areni, 2002). The current study uses the ELM, therefore, to examine how use experiences affect intention to continue use of mobile payments.

The ELM is a dual-process model that summarizes the ways in which information affecting individual attitude flows along two persuasion routes: the central and the peripheral. Petty et al. (1987) pointed out that, in the process of attitude formation, the two persuasion routes may exist at the same time. Based on the ELM, the present study proposes that use experiences affect the attitude formation of consumers regarding the continuous use of mobile payment in the central and periphery routes. In addition, Zhou (2013, 2014) found that trust is a kind of attitude that affects intention to continue use of mobile payment. The present study proposes, therefore, that the peripheral and central cues from use experiences affect intention to continue use through trust.

According to the ELM, attitude formation in the peripheral route depends mainly on the peripheral cues of the information and requires less cognitive effort.
Source credibility is widely used as a peripheral cue to examine the impact of information on individual attitude (Pornpitakpan, 2004). In his study, Pornpitakpan (2004) found that, since mobile payments involve users’ personal financial information, their perception of the credibility of mobile payment providers may influence their trust regarding such payments. Based on the ELM, the current study, therefore, uses source credibility as the peripheral cue.

According to the ELM, attitude formation in the central route is the result of deep consideration of the information (Haugtvedt & Petty, 1989). Perceived usefulness is an important determinant factor of individual attitude and behavior (Purnawirawan, De Pelsmacker, & Dens, 2012). Use experiences may help consumers form their usefulness perception of a mobile payment provider, which is likely to affect their trust of the mobile payment service. In addition, in a multi-screen world, cross-platform consumer behavior is common (Google, 2012). The great coordination and consistency among different platforms is important. Use experiences may help consumers form their perception regarding the integration of mobile payment with other relevant payment platforms, which may also affect their trust of mobile payment. The current study, therefore, uses perceived usefulness and perceived integration as central cues.

From the perspective of use experiences, this study proposes that source credibility, perceived usefulness, and perceived integration are internal factors that affect intention to continue use of a mobile payment provider through trust.

Besides use experiences, external effects from competitors and other people may also affect intention to continue use of a mobile payment provider. The marketing efforts of companies have an impact on consumers’ purchase behavior (Knox, 2006). The competition for consumers’ mobile wallets becomes even hotter (Nielsen, 2014). Effective marketing efforts by competitors may be attractive to customers, and these efforts may stop their intention to continue use of a mobile payment provider. The current study proposes, therefore, that competitors’ marketing efforts influence intention to continue use. Liao, Chen, and Yen (2007) found that customers’ behavioral intention to continue use of electronic services is affected by the subjective norm. Mobile payment is a kind of electronic service. Accordingly, the current study assumes that subjective norm influences intention to continue use.

Figure 1 presents the research model for this study.
Note:
Independent Variables: Source credibility, perceived usefulness, perceived integration, Competitors’ marketing efforts, subjective norm
Dependent Variable: Intention to continue use

Figure 1. Research Model for Current Study

2.2. Hypotheses

Trust is important in using mobile services (Wang, Shen, & Sun, 2013). Previous studies have confirmed that trust is an important antecedent of individuals’ continued use intention in the context of mobile payment. For example, Zhou (2014) demonstrated that consumers’ trust of mobile payment had a crucial effect on their intention to continue using the service. Hence, this study proposes the hypothesis that, when consumers trust a mobile payment service that they are already using, they will have intention to continue using the mobile payment provider:

**H1:** Trust positively affects intention to continue use of a mobile payment provider.

Marketing efforts refer to a series of marketing activities aimed at stimulating the purchase behavior of consumers. In the increasingly competitive mobile payment market, many companies often conduct promotional activities to attract new customers. Previous research has shown that marketing efforts have an important influence on consumer behavior (Knox, 2006; Ansari, Mela, & Neslin,
A company’s existing consumers may be attracted by the marketing efforts of its competitors. These consumers may reduce or even stop using the services of this company when the marketing efforts of other companies are attractive enough. Therefore, the present study proposes the hypothesis that competitors’ marketing efforts have negative impacts on intention to continue use of a mobile payment service:

**H2:** Competitors’ marketing efforts negatively affect intention to continue use of a mobile payment provider.

Subjective norm refers to consumers’ perceived pressure from family, friends, and society to do or not do something (Ajzen, 1991). Previous studies have demonstrated the significant positive influence of subjective norm on consumers’ behavioral intention in many fields (Madden, Ellen, & Ajzen, 1992; Richard & Meuli, 2013; Liao, Chen, & Yen, 2007). Mobile payment can help individuals handle some financial activities with acquaintances when they all use the same mobile payment service. Hence, consumers’ willingness to continue using a mobile payment provider may be affected by other people. Therefore, the present study proposes the hypothesis that subjective norm may have positive impacts on intention to continue use of a mobile payment provider.

**H3:** Subjective norm positively affects intention to continue use of a mobile payment provider.

According to the ELM, source credibility can affect persuasion as a peripheral cue (Petty & Cacioppo, 1983). Cosenza, Solomon, and Kwon (2015) found that the credibility of a blog is persuasive in influencing the trust of the blog readers. Similarly, the present study proposes that, as a peripheral cue, the credibility of a mobile payment service affects the trust that consumers have in that service. In addition, since trust is an important antecedent of intention to continue use (Belanche et al., 2014), the present study hypothesizes that trust plays an important mediating role in the relationship between source credibility and intention to continue use of a mobile payment provider:

**H4:** Source credibility positively affects consumers’ trust in a mobile payment provider that they are already using.

**H4a:** Trust is a mediator between source credibility and intention to continue use of a mobile payment provider.
According to the ELM, people may also have a deep consideration based on the available information to form judgments about a target behavior in the central route (Petty & Cacioppo, 1983). In the context of mobile payment, perceived usefulness and perceived integration may be important central cues when consumers cognitively elaborate on the first-hand information that comes from their use experiences with a mobile payment service they are already using.

Perceived usefulness is the degree to which an individual perceives that using a specific system will improve his or her job/life performance (Davis, 1989). According to the ELM, information may affect individual attitude formation in a central route. In the context of mobile payment, consumers’ deep consideration about the usefulness of a mobile payment service they are already using may be a central route to form their trust in mobile payment. Lee and Jun (2007) found that consumers’ perceived usefulness is one of the crucial predictions of consumer trust in the mobile commerce environment. Amin, Rezaei, and Abolghasemi (2014) also found that users’ usefulness perception positively influenced their trust in a mobile website.

Therefore, the present study hypothesizes that perceived usefulness affects consumers’ trust in a mobile payment service that they are already using as a central cue. In addition, since trust is an important antecedent of intention to continue use (Belanche et al., 2014), the present study hypothesizes that trust plays an important mediating role in the relationship between perceived usefulness and intention to continue use of mobile payment:

H5: Perceived usefulness positively affects consumers’ trust in a mobile payment provider they are already using.

H5a: Trust is a mediator between perceived usefulness and intention to continue use of a mobile payment provider.

Perceived integration refers to the extent of data integration, information consistency, and overall coordination among different platforms of one service (Yang, Chen, & Wei, 2015). With the advent of the multi-screen world (Google, 2012), cross-platform electronic wallet use behavior is common. Low integration among different payment platforms may bring a bad experience to consumers with cross-platform electronic wallet use behavior. According to the ELM, attitude formation in a central route is a deliberate decision on the information (Haugtvedt & Petty, 1989).

In this study, consumers’ deliberate consideration about the integration of a mobile payment provider that they are already using may be a central route to form
their trust in the provider. Therefore, the present study hypothesizes that perceived integration affects consumers’ trust in a mobile payment provider they are already using as a central cue. In addition, since trust is an important antecedent of intention to continue use (Belanche et al., 2014), the present study hypothesizes that trust plays an important mediating role in the relationship between perceived integration and intention to continue use:

**H6:** Perceived integration positively affects consumers’ trust in a mobile payment provider that they are already using.

**H6a:** Trust is a mediator between perceived integration and intention to continue use of a mobile payment provider.

3. **METHODOLOGY**

This section discusses the constructs measured in the current study and describes the data collection process.

3.1. **Measurement**

The present study measured seven constructs:

- Intention to continue use
- Trust
- Competitors’ marketing efforts
- Subjective norm
- Source credibility
- Perceived usefulness
- Perceived integration

All scale items were measured using seven-point Likert scales anchored between “strongly disagree=1” and “strongly agree=7.”

**Intention to continue use** refers to the willingness of a consumer to continue using a mobile payment provider. Measurements for this construct were adapted from the study by Zhu and Chang (2014). This construct includes three items.

**Trust** refers to the degree to which the consumer believes that a mobile payment provider is competent, honest, and benevolent. Measurements for trust were adapted from scales by Wang, Shen, and Sun (2013). This construct includes nine items.

**Competitors’ marketing efforts** refers to the degree to which a consumer notices the marketing activities of other mobile payment providers. Measurements
for competitors’ marketing efforts were adapted from the study of Pauwels et al. (2011) and Baidya and Maity (2011). This portion included three items.

Subjective norm refers to consumers’ perception of the attitude of other people around them regarding use of a mobile payment provider. Measurements for subjective norms were adapted from the study by Chang and Zhu (2011) and Pookulangara, Hawley, and Xiao (2011). This construct includes three items.

Source credibility refers to the degree to which consumers believe that a mobile payment service is safe, reliable, and guaranteed. Measurements for source credibility were adapted from scales by Gurviez and Korchia (2003) and Zhou (2014). This construct includes three items.

Perceived usefulness refers to the degree to which consumers believe a mobile payment provider can improve their life/work performance. Measurements for perceived usefulness were adapted from the scales of Amin, Rezaei, and Abolghasemi (2014). This construct includes three items.

Perceived integration refers to the degree to which consumers think a mobile payment platform is integrated well with other relevant payment platforms. Measurements for perceived integration were adapted from scales by Yang, Wang, and Wei (2014). This construct includes three items.

3.2. Data Collection

A questionnaire in Chinese was used to collect data from the users of Alipay Wallet. Because the original scale items were in English, a back-translation procedure was used to guarantee the validity of translation. First, one researcher translated the English items into Chinese. Second, another researcher translated the Chinese version into English. Third, we compared the two versions of the English items to confirm the accuracy of the Chinese items. This comparison resulted in the first draft of the questionnaire.

Then, we consulted two marketing professors about the measurement items of the questionnaire. Finally, eight graduates majoring in marketing who had knowledge of mobile payment services were recruited to participate in a pilot test. Based on their feedback, we finalized the formal questionnaire. We uploaded the questionnaire to a professional online survey site and offered prizes for those providing data for our study. We used screening questions to exclude non-users of Alipay Wallet.

A total of 332 Alipay Wallet users responded to the questionnaire. Of the total, 12 questionnaires were excluded because the respondents gave essentially the same answer to most of the questions. The final valid sample size was 320.

Following is a profile of the respondents:
Gender

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Male</td>
<td>60.31% (193)</td>
</tr>
<tr>
<td>Female</td>
<td>36.69</td>
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</tbody>
</table>

Age

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</thead>
<tbody>
<tr>
<td>18-30 years</td>
<td>68.09%</td>
</tr>
<tr>
<td>31-45</td>
<td>27.81</td>
</tr>
<tr>
<td>45-60</td>
<td>4.10</td>
</tr>
</tbody>
</table>

In addition, 77.19% of the respondents had more than one year of experience using Table Alipay, and 48.75% had less than one year of experience in using Alipay Wallet.

4. RESULTS

This study used a structural equation modeling technique called partial least squares (PLS) to test the research model. This technique does well in predicting and interpreting the causal model of latent variables. In this study, we used the SmartPLS 2.0 M3 software developed by Ringle, Wende, & Will (2005). Following the two-step analytical procedure (Hair et al., 1998), the present study examined the measurement model first and then the structural model.

4.1. Measurement Model

The measurement model was assessed mainly by reliability and validity tests. With regard to reliability, we tested the Cronbach’s α and composite reliability (CR) values. The results verified the internal consistency of the items. The Cronbach’s α values of all constructs were above 0.8 (Table 1), which meets the criterion suggested by Nunnally (1967). The CR values of all constructs were above 0.9 (Table 1), which meets the criterion of strong reliability (Chin & Gopal, 1995). The Cronbach’s α and CR values demonstrated the reliability of the measurement model.

Regarding validity, the loading values of all items are higher than 0.7, and the average variance extracted (AVE) values of all constructs are above 0.5 (Table 1). The results demonstrated the convergent validity of the measurement model (Fornell & Larcker, 1981). Furthermore, the correlations between all latent constructs are significantly less than the corresponding square root of AVE (Table 2), thus meeting the criterion of discriminant validity suggested by Fornell and Larcker (1981). The convergent and discriminant validities demonstrated the construct validity of the measurement model.
Table 1
Latent Variable Statistics, by Construct

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Loading</th>
<th>α-Value</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Source Credibility</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Alipay Wallet is safe</td>
<td>0.940</td>
<td>0.943</td>
<td>0.963</td>
<td>0.898</td>
</tr>
<tr>
<td>Alipay Wallet is reliable.</td>
<td>0.971</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alipay Wallet is guaranteed.</td>
<td>0.931</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Perceived Integration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alipay’s mobile platform has a strong relationship with other platforms.</td>
<td>0.849</td>
<td>0.833</td>
<td>0.900</td>
<td>0.750</td>
</tr>
<tr>
<td>The integration level of Alipay’s mobile and other platforms is very high.</td>
<td>0.881</td>
<td></td>
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<tr>
<td>Alipay Wallet effectively integrates data from other platforms.</td>
<td>0.868</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Perceived Usefulness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alipay Wallet makes my work and life easier.</td>
<td>0.893</td>
<td>0.885</td>
<td>0.929</td>
<td>0.813</td>
</tr>
<tr>
<td>Alipay Wallet makes my work and life more effective.</td>
<td>0.897</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, Alipay Wallet is useful.</td>
<td>0.915</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>4. Trust</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alipay Wallet is competent in providing financial service.</td>
<td>0.730</td>
<td>0.917</td>
<td>0.931</td>
<td>0.599</td>
</tr>
<tr>
<td>Alipay Wallet performs its role of providing financial service very well.</td>
<td>0.765</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, Alipay Wallet is capable and proficient.</td>
<td>0.829</td>
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<td></td>
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</tr>
<tr>
<td>Alipay Wallet is truthful in its dealings with me.</td>
<td>0.818</td>
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</tr>
<tr>
<td>I would characterize Alipay Wallet as honest.</td>
<td>0.781</td>
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<tr>
<td>Alipay Wallet is trustworthy.</td>
<td>0.772</td>
<td></td>
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<tr>
<td>I believe that Alipay Wallet would act in my best interest.</td>
<td>0.759</td>
<td></td>
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<tr>
<td>If I required help, Alipay Wallet would do its best to help me.</td>
<td>0.716</td>
<td></td>
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<tr>
<td>Alipay Wallet is interested in my well-being, not just its own.</td>
<td>0.790</td>
<td></td>
<td></td>
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<tr>
<td><strong>5. Subjective Norms</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Most of the people around me think it is wise to use Alipay Wallet.</td>
<td>0.889</td>
<td>0.861</td>
<td>0.915</td>
<td>0.782</td>
</tr>
<tr>
<td>Most of the people around me think it is valuable to use Alipay Wallet.</td>
<td>0.897</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Most of the people around me think I should use Alipay Wallet.</td>
<td>0.867</td>
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</table>

--continued
Table 1 (Cont’d)
Latent Variable Statistics, by Construct

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Loading</th>
<th>a-Value</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6. Competitors’ Marketing Efforts</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I often see price discounts from other mobile payment companies.</td>
<td>0.869</td>
<td>0.866</td>
<td>0.918</td>
<td>0.788</td>
</tr>
<tr>
<td>I often see advertising from other mobile payment companies.</td>
<td>0.918</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I often see promotional activities from other mobile payment companies.</td>
<td>0.875</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>7. Intention to Continue Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to continue using Alipay Wallet in the future.</td>
<td>0.866</td>
<td>0.877</td>
<td>0.925</td>
<td>0.806</td>
</tr>
<tr>
<td>I intend to use Alipay Wallet as much as possible.</td>
<td>0.829</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to use Alipay Wallet in the future.</td>
<td>0.990</td>
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</tbody>
</table>

Table 2
Inter-Construct Correlations and AVE

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Source credibility</td>
<td></td>
<td>0.948</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived integration</td>
<td>0.599</td>
<td></td>
<td>0.866</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived usefulness</td>
<td>0.452</td>
<td>0.465</td>
<td></td>
<td>0.902</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Trust</td>
<td>0.554</td>
<td>0.615</td>
<td>0.581</td>
<td></td>
<td>0.774</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Subjective norms</td>
<td>0.413</td>
<td>0.509</td>
<td>0.482</td>
<td>0.639</td>
<td></td>
<td>0.884</td>
<td></td>
</tr>
<tr>
<td>6. Competitors’ marketing efforts</td>
<td>0.249</td>
<td>0.334</td>
<td>0.304</td>
<td>0.398</td>
<td>0.370</td>
<td></td>
<td>0.888</td>
</tr>
<tr>
<td>7. Intention to continue use</td>
<td>0.404</td>
<td>0.406</td>
<td>0.526</td>
<td>0.554</td>
<td>0.548</td>
<td>0.289</td>
<td>0.898</td>
</tr>
</tbody>
</table>

Note: The square root of AVE on the diagonal; correlations between constructs on the off-diagonal

4.2. Structural Model
The results of the structural model test show that the standardization path coefficients are statistically significant (p<0.01), except for the coefficient of competitors’ marketing efforts to intention to continue use. The $R^2$ of trust is 0.513, and the $R^2$ of intention to continue use is 0.372 (Figure 2).
Figure 2 shows that trust ($\beta=0.335$, $p<0.01$) is a strong predictor of intention to continue use. As we hypothesized that trust would positively affect intention to continue use, hypothesis H1 is supported. Competitors’ marketing efforts have no significant effect on intention to continue use ($\beta=0.037$, $p>0.05$), but subjective norm is a strong predictor of intention to continue use ($\beta=0.320$, $p<0.01$). As we hypothesized that competitors’ marketing efforts and subjective norm would positively affect intention to continue use, hypothesis H3 is supported, but hypothesis H2 is not. Source credibility ($\beta=0.200$, $p<0.01$), perceived usefulness ($\beta=0.333$, $p<0.01$), and perceived integration ($\beta=0.340$, $p<0.01$) are predictors of trust. As we hypothesized that source credibility, perceived usefulness, and perceived integration would positively affect trust, hypothesis H4, H5, and H6 are supported.

4.3. Mediation Analysis

A mediation analysis was used to test the mediating role of trust in the relationships between the antecedents of source credibility, perceived usefulness, and perceived integration and the consequence of intention to continue use. The results presented in Table 3 for the four models indicate:

1. The effects of source credibility, perceived usefulness, and perceived integration on intention to continue use are statistically significant.
2. *Source credibility, perceived usefulness, and perceived integration* significantly affect *trust*.

3. The effect of *trust* on *intention to continue use* is statistically significant.

4. When the paths from *source credibility, perceived usefulness, and perceived integration* to *trust* and from *trust* to *intention to continue use* are controlled, a previously significant relationship from *perceived integration* to *intention to continue use* is no longer significant. Although the previously significant relationship between *perceived usefulness* and *intention to continue use* and between *source credibility* and *intention to continue use* are still significant, the coefficients reduce significantly.

These results indicate that *trust* is a full mediator in the relationship between *perceived integration* and *intention to continue use* (H5a); and it is a partial mediator in the relationship between *source credibility* and *intention to continue use* (H4a) and between *perceived usefulness* and *intention to continue use* (H6a). Hypotheses H4a, H5a, and H6a are supported.

Table 3
Mediation Analysis

<table>
<thead>
<tr>
<th>Source of Influence</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>T</td>
<td>β</td>
<td>T</td>
</tr>
<tr>
<td>Intention to continue use</td>
<td>0.139**</td>
<td>5.569</td>
<td>0.199**</td>
<td>3.963</td>
</tr>
<tr>
<td>Perceived integration</td>
<td>0.146**</td>
<td>5.975</td>
<td>0.340**</td>
<td>6.508</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>0.406**</td>
<td>17.263</td>
<td>0.341**</td>
<td>6.719</td>
</tr>
<tr>
<td>Trust</td>
<td>0.556***</td>
<td>24.969</td>
<td>0.325**</td>
<td>12.755</td>
</tr>
<tr>
<td>R²</td>
<td>0.336</td>
<td>0.522</td>
<td>0.309</td>
<td>0.382</td>
</tr>
</tbody>
</table>

Note: ***=p<0.01;  n=not significant
5. DISCUSSION

Trust has a significant positive impact on intention to continue use of a mobile payment provider. This result is consistent with the finding of Zhou (2014), who empirically proved that consumers’ trust in mobile payment significantly affected their intention to continue use. When consumers develop trust in a mobile payment company, they worry less about financial risks and enjoy the benefits from that mobile payment company; therefore, they remain in continuous use.

Subjective norm has a significant positive impact on intention to continue use of a mobile payment provider. Convenience is a major reason that consumers use mobile payment. Since mobile payment can increase convenience in helping individuals deal with some financial activities involving acquaintances, using a mobile payment company that is supported by these acquaintances is important. Hence, intention to continue use a mobile payment service is affected by the subjective norm.

The present study found that competitors’ marketing efforts have no significant influence on intention to continue use of a mobile payment service. This finding is inconsistent with our previous hypothesis. One possible reason is that competitors’ marketing efforts affect consumers’ behavior in the short term, but do not change their continuous use of a trusted mobile payment company. For example, consumers in China use different types of mobile apps at the same time, such as Alipay Wallet and WeChat. When WeChat uses a price discount to attract consumers, the consumers can enjoy the discount by simply using WeChat. They do not have to stop using Alipay Wallet. This reality may be one reason that competitors’ marketing efforts were found to be insignificant.

Source credibility has a significant positive impact on the trust of consumers toward a mobile payment service that they are already using. Trust is a full mediator between source credibility and intention to continue use. When consumers believe that a mobile payment provider is safe, reliable, and guaranteed with less cognitive effort, they intuitively believe that the mobile payment company is trustworthy and therefore have the intention to continue use.

Perceived usefulness has a significant positive impact on the trust of consumers toward a mobile payment service they are already using. Trust is a partial mediator between perceived usefulness and intention to continue use. When consumers find that the use of mobile payment can improve their life or work performance based on prior use experiences, they develop trust in that mobile payment company, and then have the intention to continue use.
Perceived integration has a significant positive impact on the trust of consumers toward a mobile payment company that they are already using. Trust is a full mediator between perceived integration and intention to continue use. With the intensification of market competition, there are too many types of mobile payment techniques. Consumers may be confused and may worry about the safety of these techniques. High data integration, information consistency, and overall coordination of the mobile payment platform with other relevant payment platforms provide proof of the mobile platform’s ability. In addition, high integration can give customers a good experience with cross-platform electronic wallet use behavior. Hence, when consumers find that the integration of a mobile payment platform is based on a deep consideration of prior use experiences, they develop trust in that platform, and then have intention to continue use.

6. CONCLUSIONS, IMPLICATIONS, AND LIMITATIONS

A large number of enterprises are involved in the competition for consumers’ mobile wallets (Nielsen, 2014). From the perspective of use experiences, competitors, and other people, this study develops a theoretical model to understand the effect of internal and external factors on intention to continue use of a mobile payment service. The findings of this study have important implications for both theoretical and practical research.

The theoretical research implications can be summarized as follows:

1. In the field of consumers’ use of mobile payments, most previous studies focused on pre-adoption. The research on post-adoption is still insufficient (Shaikh & Karjaluoto, 2015). The current study explored the antecedents of intention to continue use from the perspective of use experiences, subjective norm, and competitors’ marketing efforts, which provides additional knowledge about the antecedents of intention to continue use of a mobile payment service.

2. Based on the ELM, the current study developed the peripheral and central cues of persuasive information by treating use experiences as internal information sources in the context of mobile payment. The results show that source credibility, perceived usefulness, and perceived integration affect intention to continue use of a mobile payment provider through trust. Prior studies have focused mainly on the perspectives of information quality, system quality, service quality, and innovation attributes to examine intention to continue use. The present study
provides additional insights into the ELM in the context of intention to continue use a mobile payment provider.

3. Although previous studies have confirmed that trust is an important predictor of intention to continue use a mobile payment service, no study has further justified the mediating role of trust. The present study found that trust is a mediator between the independent variables of source credibility, perceived usefulness, and perceived integration and the dependent variable of intention to continue use of a mobile payment company. The findings reveal the psychological process of the formation of consumers’ intention to continue use of the mobile payment provider.

With regard to practical implications, the key points can be summarized as follows:

1. The current study found that trust is an important mediator between source credibility, perceived usefulness, and perceived integration and the intention to continue use of a mobile payment provider. Therefore, mobile payment providers should focus on winning the trust of consumers with regard to credibility, usefulness, and integration. By building a strict system to guarantee the safety of users’ personal financial information and by maintaining high standards of customer service, mobile payment providers may be perceived as credible by consumers.

2. In order to improve the integration, mobile payment providers should work hard to make information easily accessible and available and to avoid potential conflicts across diverse platforms.

3. Mobile payment providers should focus on offering more convenient payment services for consumers, such as expanding use scenarios, simplifying operational processes, and reducing response time. The current study found that subjective norm significantly affects intention to continue use of a mobile payment provider. The results suggest that mobile payment providers can take measures to encourage high-quality consumers to influence other users through word of mouth.

Although this study has meaningful implications, it also has three significant limitations that should be addressed in future research:

1. Trust is a multi-dimensional variable. In order to understand its mediating role concisely, this study treated it as a whole. The role of the second-
order factors of trust can be tested in future research to make clearer the psychological process of consumers.

2. This study uses source credibility as the peripheral cue. Other cues such as brand image and source likeability can be considered in future research.

3. Since it was founded, the main business of Alipay is to provide third-party online payment services. The origin of many emerging mobile payment services is different from that of Alipay Wallet. For example, WeChat is a kind of communications tool. It created WeChat Payment, which is the main competitor of Alipay Wallet in China. Apple, which leads the world in electronics innovation, created Apple Pay. This study focused on the users of Alipay Wallet in China. Future studies could focus on other kinds of mobile payment services outside China.

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