Technology Leadership, Brand Equity, and Customer Loyalty towards Fintech Service Providers in China

Abstract

China claims the world's largest mobile payments market and serves as the global benchmark for other markets to pursue. As the battle over the Chinese mobile wallet market wages on, the gap between leading players WeChat Pay (owned by Tencent) and Alipay remains narrow. Based on brand equity theory and symbolic value theory, a research model is proposed to investigate the relationship between Fintech's technology leadership, brand equity, and customer loyalty. The results show that Alipay provides more innovative and diversified financial services and outperforms WeChat Pay in technology leadership. The study confirms that technology leadership positively affects brand equity, which in turn positively affects customer loyalty. The boundary condition for different type of customers is considered and implications for theory and practice are also discussed.

Keywords

Technology leadership, brand equity, customer loyalty

Introduction

FinTech defines companies that provide or facilitate financial services by using technology (“The Future of FinTech”, 2015). Fund transfers & payments are one of the most disrupted sectors in FinTech and the mobile payment transaction value keeps increasing all around the world, China's third-party mobile payment kept a faster growth rate and the transaction volume exceed 58.8 Trillian in 2017 (PwC Global FinTech Survey 2017). China claims the world's largest mobile payments market and serves as the global benchmark for other markets to pursue. As the battle over the Chinese mobile wallet market wages on, the gap between leading players WeChat Pay (owned by Tencent) and Alipay remains narrow. Each platform is unique in its service innovation strategy and has its own ecosystems emphasizing on different aspects. WeChat is China’s most popular chat app and WeChat Pay relies on social interactions to grow (Tech In Asia). WeChat Pay embeds payments in services that consumers are already using and make mobile transactions through its social network. Though Alipay also provides social network functions, it emphasizes on payment usage scenarios and financing capabilities. Payment usage scenarios in various circumstances in daily life bring great convenience to customers of FinTech and play important roles in the formation of the brand equity of the FinTech service providers and actually usage of the FinTech service. On the other hand, WeChat Pay embeds payments in services that consumers are already using and make mobile transactions through its social network. Though WeChat is China’s most popular chat app and currently 35% of all time on mobile in China is spent within WeChat, with 55% of all time on
mobile is spent within Tencent’s products (Wang, Jan 9, 2017), Wechat Pay does not focus on payment usage scenarios directly, but mainly relies on social interactions to create payment usage scenarios (Tech In Asia). On the other hand Alipay also provides social network functions, but its usage is quite limited and customers may use it after they already find specific payment usage scenarios. For example, consumers have to add the Alipay account of the payee before they could make payment in an online shop or in small restaurants which do not provide an Alipay QR code.

Following the wide penetration of mobile phones and the stability of mobile communication technologies, the Fintech services have been rapidly developed and will go on developing (Mallat et al. 2004). As Fintech is closely relevant to users’ financial information which is very sensitive, whether or not users would like to adopt Fintech services has attracted a lot of scholars’ attention (Gu et al. 2009; Luarn et al. 2005; Luo et al. 2010). Like all the technology acceptance studies, previous studies on Fintech focus on understanding the factors that affect users intention to adopt Fintech services at the initial-adoptions stage (Gu et al. 2009; Lin 2010; Luarn et al. 2005; Zhou 2011), unified theory of acceptance and use of technology (UTAUT) (Luo et al. 2010; Zhou et al. 2010), task-technology fit theory (TTF) (Zhou et al. 2010), information systems (IS) success model (Chung et al. 2009; Zhou 2011), theory of planned behavior (TPB) (Luarn et al. 2005), trust theory (Chung et al. 2009; Gu et al. 2009; Kim et al. 2009; Lin 2010; Luo et al. 2010; Zhou 2011) and risk theory (Luo et al. 2010). Although these studies provide insightful explanations for users’ initial adoption behavior, it may be not so appropriate to apply them in the research on the post-adoptions of Fintech.

The technological competences to provide Fintech services vary across different Fintech service providers, as reflected by the quality of different Fintech services. Some Fintech service providers may be in a leading position while the others may be lagging behind the competition. To capture the differences in technological competences across different mobile service providers, Xu et al. (2014) proposed a term namely technology leadership which refers to consumers’ perceptions of a service provider’s technology innovation efforts. Thus, it is interesting to know whether or not technology leadership can exert its impact on customer loyalty. So the first research question of this study can be interpreted as

RQ1: Whether or not and how technology leadership can affect customer loyalty towards Fintech service provider?

Brand equity theory can be used to explain the underlying mechanism about the relationship between technology leadership and customer loyalty (Johnson et al. 2006). Brand equity is defined as “a consumer’s personal identification with focal brand and the brand’s relevance to the consumer’s personal situation” (Xu et al. 2014, p.711). As using a leading Fintech service not only provides users with some functional utilities but also delivers some personal and social meanings for consumers (Escalas et al. 2005), technology leadership may have an indirect effect on customer loyalty through brand equity. Thus, to answer the first research question, we will empirically examine the relationship between technology leadership, brand equity, and customer loyalty.

Further, the impact of technology leadership on customer loyalty through brand equity may be contingent upon certain conditions. Specifically, we focus on the individual differences and try to understand whether or not the relationship between technology leadership, brand equity and customer loyalty varies across different individuals. As the underlying mechanism about the role of brand equity relies on the social meanings delivered by the technology usage behavior (Escalas et al. 2005), the extent to which users care about these social meanings will determine the strengths of the proposed relationships. According to the symbolic value theory, this individual difference can be captured by the concept of need for uniqueness (Smith et al. 2007). Need for uniqueness refers to “the individual’s tendency to seek individuality through the adoption and use of symbolic products or innovations, which represents a kind of counter-conformism” (Arbore et al. 2014, p. 90). When users have a strong need for uniqueness, they will more likely to chase social meanings of the technology usage behavior and the brand equity mechanism will work better. Therefore, the second research question is

RQ2: Whether or not need for uniqueness moderates the relationship between technology leadership, brand equity, and customer loyalty?

This study can contribute to prior literature on Fintech in two ways. First, this is the first study, to the best of our knowledge, that examines the factors influencing customer loyalty towards Fintech services at the post-adoptions stage drawing upon the brand equity theory. Second, this study defines the boundary
The conditions under which technology leadership affects brand equity which in turn influences customer loyalty by proposing and empirically testing the moderating effect of need for uniqueness.

The remainder of the paper is organized as follows. First, we review the literature on Fintech based on which we propose a research model that integrates the brand equity theory and symbolic value theory. Second, the procedures to conduct the survey are introduced and the data analysis results are reported. Finally, the theoretical implications, practical implications and limitations of the paper are discussed.

Theoretical Development

To reveal the customer loyalty formulation process, we propose a research model based on the brand equity theory and symbolic value theory (see Figure 1). In this model, technology leadership is proposed to affect customer loyalty through brand equity, and need for uniqueness moderates the relationship between technology leadership and brand equity and between brand equity and customer loyalty.

Brand equity is conceptualized as “a consumer’s personal identification with the brand and the brand’s relevance to a consumer’s situation, which goes beyond the effects of performance/instrumental values of the product/service” (Xu et al. 2014, p.715). Brand equity theory suggests that even two brands can bring same instrumental values to a consumer, if the consumer considered one brand to be more favorable, s/he will believe this brand as more valuable. The extra value is generated not based on the functions of the product or service but the social meanings delivered by the brand name per se (Escalas et al. 2005). That is to say the extra value captures the value a brand adds to a product or service in comparison with the same product or service without the brand name (Keller 1993; Simon et al. 1993).

The extra value or the social meaning of brand is derived from the association between the brand and the consumer. It reflects the extent to which brand fits a customers’ personality and lifestyle (Johnson et al. 2006). Regarding brand as a person with certain identity, the brand equity captures the degree to which the identity of brand is overlapped with the customer’s own identity. Therefore, brand equity is always described as brand association (Keller 1993; Rego et al. 2009; Yoo et al. 2000).

According to brand equity theory, brand equity is positively associated with customer loyalty (Johnson et al. 2006). Customer loyalty is defined as consumers’ preference toward the brand in terms of cumulatively satisfying usage experiences. As brand equity describes the consistency between a consumer’s self-identity and the product or service s/he purchases (Johnson et al. 2006), previous studies further argue that this consistency can develop a feeling of affinity and increase the consumer’s preference to the brand (Del Río et al. 2001). The marketing literature also suggests that self-identity expressiveness and identification have positive impacts on consumers’ positive attitude toward the product or service (Thorbjornsen et al. 2007). Thus, brand equity should be positively associated with customer loyalty.
Within our research context, because the usage of Fintech services is visible to others (Lin 2010), using certain Fintech services not only has instrumental values but also delivers signals to others reflecting a customer’s identity and taste. Thus, when a customer considers a certain Fintech service to be fit with his/her identity, s/he will more like the service and form a commitment to this service. Therefore, we propose that

H1: Brand equity positively affects customer loyalty.

Individuals have a tendency to build a good image, chase for superiority (Fisher et al. 1992). Brand equity theory assumes that a consumer tries to achieve the fit between his/her self-identity with the identity of the product or service (Johnson et al. 2006). When Fintech service is innovative and leading its competitors, users would like to position themselves as trend leaders. They would find the Fintech service provider’s brand reflects users’ lifestyle and fits well with their personality, then the brand equity can be formed accordingly. Therefore, we propose that

H2: Technology leadership positively affects brand equity.

Brand equity theory proposes that brand equity captures the extra value beyond the instrumental value and the extra value is derived from the identity association between brand and customer (Keller 1993; Simon et al. 1993). Beyond distinguishing symbolic value from functional or instrumental value (as done by brand equity theory), symbolic value theory further identifies the individual differences in symbolic actions. Specifically, need for uniqueness which is defined as the individual’s tendency to seek individuality has been regarded as the most important factor to capture the individual difference (Hong et al. 2006).

Specifically, when a customer of Fintech service has a strong need for uniqueness, s/he will pay more attention to whether or not there is a symbol can be used to reflect his/her identity (Arbore et al. 2014). In this case, the customer will take brand equity (i.e., the consistency between the brand identity and self-identity) as a critical decision factor during the purchase decision process. In contrast, if a customer does not have a need to be unique, s/he randomly selects one brand with excellent performance and neglects what the brand name is. Thus, whether or not the brand is fit with his/her identity becomes not so important. Therefore, we propose that

H3: Need for uniqueness strengthens the relationship between brand equity and customer loyalty.

Individuals with strong need for uniqueness heavily rely on the symbols (e.g. novel or popular technologies) that can send signals to reflect his/her identity (Arbore et al. 2014). These individuals have strong desires to demonstrate that they are different from others by searching for the symbols. Technology leadership provides an opportunity for these individuals to show that they are different, consistent with their self-identities. Thus, when need for uniqueness is high, the relationship between technology leadership and brand equity is strong. In contrast, for those individuals with weak need for uniqueness, they don’t rely on the symbols to reflect their identities. In this case, using leading technology is not an appropriate symbol to reflect their identities, so the relationship between technology leadership and brand equity should be weak. Therefore, we propose that

H4: Need for uniqueness strengthens the relationship between technology leadership and brand equity.
Methodology

All constructs were measured with the items adapted from prior empirical studies with adjustments to fit with the specific research context. Seven-point Likert scales were used for all measures. Specifically, the measures for technology leadership, brand equity, and customer loyalty were adapted from Xu et al. (2014). Need for uniqueness was measured with the items adapted from Arbore et al. (2014). Since the survey was conducted in China, all the instruments were translated into Chinese adopting a translation committee approach (Van de Vijver et al. 1997). The measures for the constructs were shown in Table 1.

<table>
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<th>Constructs</th>
<th>Items</th>
<th>References</th>
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TL2. My Fintech service provider frequently introduces technological innovations for its customers.  
TL3. My Fintech service provider is always among the first that introduce the latest generation of technology.  
TL4. My Fintech service provider always deploys innovative technologies to the market before others. | (Xu et al. 2014) |
| Brand Equity | BE1. The brand of my Fintech service provider reflects my personal lifestyle.  
BE2. My Fintech service provider’s brand fits well with my personality.  
BE3. I can identify with my Fintech service provider’s brand  
BE4. If my Fintech service provider were a person, I would like to take him or her out for dinner.  
BE5. I would like to wear clothing with the logo of my Fintech service provider’s brand on it. | (Xu et al. 2014) |
| Customer loyalty | AL1. I take pleasure in being a customer of my current Fintech service provider.  
AL2. My Fintech service provider takes the best care of its customers.  
AL3. There is presence of reciprocity in my relationship with my Fintech service provider.  
AL4. I have feelings of trust toward my Fintech service provider. | (Xu et al. 2014) |
| Need for uniqueness | UQ1. I often think of the things I buy and do in terms of how I can use them to shape a more unusual personal image.  
UQ2. I am often on the lookout for new products or brands that will add to my personal uniqueness.  
UQ3. I actively seek to develop my personal uniqueness by buying special products or brands.  
UQ4. Buying and using products that are interesting and unusual assists me in establishing a distinctive image. | (Arbore et al. 2014) |
Results

To test the research model and hypotheses, we collected data from customers of two Fintech service providers in China, Alipay and WeChat Pay. The target population for the projects was users who are using Alipay or WeChat Pay, or both. A snowball approach was adopted. Participants were senior year college graduates and they could choose any of the two Fintech services for evaluation. Finally, we obtained 257 valid responses. Among these students 71.2% are female and 85.51% of them declared that Alipay was their first choice when they made payments. As Table 2 shows, the technology leadership and brand equity of Alipay is significantly higher than those of WeChat Pay.

<table>
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<th>Table 2 Descriptive Statistics for</th>
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<tr>
<td>1. Tech Leadership</td>
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<td>2. Brand Equity</td>
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<td>3. Need for Uniqueness</td>
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<td>4. Customer Loyalty</td>
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Partial least squares (PLS) approach was used to analyze the data. It was selected because, compared to the first generation of statistic techniques, it could simultaneously and systematically test the measurement model and structural model. Compared to other structural equation modeling (SEM) techniques such as co-variance based method, PLS is more appropriate for dealing with the sample with small sample size and abnormal distribution (Hair et al. 2011). Specifically, SmartPLS was used in the data analysis. Following the recommended two-stage analytical procedures (Hair et al. 1998), the measurement model and structural model were examined respectively.

Measurement Model

Reliability and validity of the constructs were assessed in the measurement model. Reliability can be evaluated by checking the composite reliability (CR), Cronbachs alpha and average variance extracted (AVE). The alpha and CR values for all the constructs were above 0.7 and the AVE values for all the constructs were above 0.5, suggesting that these constructs were with good reliabilities (Fornell et al. 1981).

The validity assessment includes convergent and discriminant validity assessments. Convergent validity can be evaluated by checking the loadings of constructs, while the discriminant validity can be evaluated by checking whether or not the loadings on the expected construct are higher than the loadings on other constructs. As shown in Table 3, the loadings on the expected constructs were high enough and significant, and greater than those on other constructs, suggesting good convergent validity and discriminant validity for these constructs (Fornell et al. 1981).

<table>
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<th>Table 3. Cross-loadings</th>
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Technology Leadership, Brand Equity and Customer Loyalty in Fintech

<table>
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<tr>
<th></th>
<th>UQ1</th>
<th>UQ2</th>
<th>UQ3</th>
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<td>0.445</td>
<td>0.264</td>
<td><strong>0.840</strong></td>
<td>0.161</td>
<td>0.110</td>
<td>0.198</td>
<td><strong>0.971</strong></td>
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<td>0.049</td>
<td>0.225</td>
<td><strong>0.968</strong></td>
<td>0.104</td>
<td>0.171</td>
<td>0.392</td>
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<td>0.321</td>
<td>0.139</td>
<td>0.028</td>
<td>0.936</td>
<td>0.315</td>
<td>0.139</td>
<td>0.084</td>
<td><strong>0.935</strong></td>
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<td></td>
<td>0.323</td>
<td>0.110</td>
<td>0.040</td>
<td><strong>0.659</strong></td>
<td>0.272</td>
<td>0.490</td>
<td>0.025</td>
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Note: CL = Customer Loyalty, BE = Brand Equity, UQ = Need of Uniqueness, TL = Technology Leadership.

Structural Model

The PLS results for the structural model were shown in Figure 2. The results showed that the relationship between brand equity and customer loyalty and the relationship between technology leadership and brand equity were significant, lending supports to H1 and H2. Sobel’s z test suggested that the indirect effect of technology leadership on customer loyalty though brand equity was significant. The results also showed that need for uniqueness positively moderated the relationship between brand equity and customer loyalty and between technology leadership and brand equity, so H3 and H4 were supported.

![Figure 2. PLS Results](image)

The results showed that the relationship between technology leadership and brand equity was much stronger when need for uniqueness was high than when it was low, and the relationship between brand equity and customer loyalty was much stronger when need for uniqueness was high than when it was low.
Discussions

The study makes two key theoretical contributions to Fintech literature. First, this study examines the customer loyalty formulation process at the post-adoption stage by drawing upon brand equity theory. Previous studies on Fintech focused on the initial Fintech adoption by addressing a variety of technology acceptance theories such as TAM and UTAUT (Gu et al. 2009; Lin 2010; Luarn et al. 2005; Zhou 2011). In this study takes into consideration the theoretical importance of understanding customer loyalty at the post-adoption stage. More importantly, rather than focusing on specific Fintech service, the concept of technology leadership can better capture the intense competition between two different Fintech service providers and view the loyalty formulation from a comparative perspective. Apparently Alipay outperforms Wechat Pay in both technology leadership and brand equity. Users use both Fintech services very often, while the contexts of using each technology are very different. Alipay provides more contexts and includes a lot of innovative and diversified Fintech services which enable users to accomplish more tasks and feel more fits between its brand and their life styles.

Second, this study identified a boundary conditions under which technology leadership affects brand equity and brand equity affects customer loyalty by integrating the symbolic value theory and brand equity theory. Previous studies applying brand equity theory in the analysis may stress on the main effects of brand equity (Xu et al. 2014). In this study, we confirmed that need for uniqueness is a key individual factor that affects the effectiveness of the brand equity mechanisms in the context of Fintech.

This study also has several practical implications. First, Fintech service providers should recognize that customer loyalty is determined by brand equity. Therefore, when providing Fintech services to customers, Fintech service providers should pay attention not only to the performance of their services but also to customers’ self-identities so as to achieve the fit between customer identity and brand. Second, technology leadership is found to be an approach to enhance brand equity, so Fintech service providers should increase their mindfulness about the fashion wave of technology to keep their leading position.

Limitations

This study also suffers from a few of limitations. First, a convenience sampling from was adopted in the analysis, so the generalizability of the conclusion should be further examined in future research by applying a random sampling method. Since more respondents chose Alipay for evaluation and the sample sizes for two fintech services are not balanced for more comprehensive comparative studies. Second, the study was conducted in China which is with a collectivistic national culture. The conclusion may not be generalized to other countries with individualistic culture (Hofstede et al. 2010). Finally, since this study focused on understanding the customer loyalty formulation processes from the brand equity perspective only, many extraneous factors such as satisfaction and trust were not included in the study. Future research can add more influential constructs in the model to provide more insights to the Fintech studies.

Acknowledgements

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References


