THE ROLES OF CUSTOMER-BRAND RELATIONSHIPS AND BRAND EQUITY IN BRAND EXTENSION ACCEPTANCE

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ABSTRACT

Online service brands launching an extension service (e.g., e-commerce platform) must determine whether their customer-brand relationships and brand equity will induce existing customers to have a favorable attitude toward the extension service and a strong intention to accept that service. This study focuses on mobile shopping platforms to determine the factors that drive users of a mobile messaging service brand (LINE) to intend to accept the brand's newly launched extension service, i.e., a new mobile shopping platform (LINE Mart). Drawing upon the attachment-aversion (AA) model of customer-brand relationships, we propose a research model to investigate the impact of consumer-brand relationships (brand attachment and brand commitment) on brand equity, attitude toward the brand extension, and intention to accept the brand extension (acceptance intention). Data collected from 347 LINE users provide strong support for the research model. The results indicate positive associations among components of consumer-brand relationships and brand equity. We find that brand commitment is positively associated with attitude toward the brand extension, which in turn has a strong effect on acceptance intention. We also find that perceived fit has a positive effect on attitude toward the brand extension, and brand attachment has a positive effect on acceptance intention. We discuss the implications for theory and practice, and provide suggestions for future research.

Keywords: Acceptance intention; Brand attachment; Brand equity; Attitude toward the brand extension; Customer-brand relationships

1. Introduction

The global e-commerce market continues to expand annually. According to market research firm eMarketer, worldwide consumers spent approximately $1.7 trillion (USD) online in 2015, and online purchases are expected to more than double to $3.6 trillion by 2019. Given this trend, some brick-and-mortar firms have started their own online ventures to take advantage of the e-commerce boom. Mobile devices, especially smartphones, are rapidly becoming the dominant means of communication worldwide and are increasingly being used for e-commerce. Since

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mobile commerce (m-commerce) includes all commercial transactions conducted online via a mobile phone or other handheld device, it can be viewed as a subset of e-commerce. Mobile devices account for an ever-increasing share of e-commerce sales. Mobile messaging service brands such as LINE and WeChat have started to launch extension products or services (i.e., m-commerce platforms) to capitalize on their brand's large and active user base. However, if a brand extension fails, it may harm consumer attitude toward other products carrying the same brand name [Armstrong et al 2017]. Therefore to understand the factors affecting the brand extension's success is a crucial issue for the mobile messaging service providers. In order to determine whether a brand extension will succeed, it is crucial to understand how well the extensions are accepted by consumers [Evangeline and Ragel 2016]. In this study, we use LINE as the target mobile messaging service brand and LINE Mart as the target extension service.

Brand attachment plays an important role in successful brand extension, as this concept represents efforts aimed at maintaining the relationship between the brand and the customer [Bahri-Ammari et al 2016]. Brand attachment refers to the strength of the bond connecting the brand with the self [Park et al 2010]. It reflects the perceived distance between a brand and the self and the perceived memory accessibility of a brand to an individual [Park et al 2013]. Consumers with a stronger attachment are likely to be committed to a brand and stay in a long-term relationship with the firm [So et al 2013] In addition, positive beliefs and/or affect from the parent brand can be transferred to its extensions [Pina et al 2010]. Facilitating strong attachment to a parent brand is thus an important means of fostering consumers' acceptance and use of its extension products or services. Dennis et al [2016] have found that brand attachment affects brand commitment in the context of higher education institutions. However, the relationships between consumers' emotional attachment to the mobile messaging service brand, brand equity, their commitment to its extension service (i.e., m-commerce platform), and their intention to accept the extension service has received little research attention thus far.

The functions, concepts and characteristics of a brand can be perceived as brand assets (liabilities) when the brand helps (hinders) consumers achieve their goals [Park et al 2013]. Consumers develop an emotional bond with a brand that helps them achieve their goals. Park et al [2013] proposed three different types of assets a brand may possess: enticing-the-self, enriching-the-self, and enabling-the-self. Enticing-the-self refers to the sensory (hedonic) pleasures or aesthetic pleasures experienced from a brand. Enriching-the-self refers to pleasing the spiritual self by symbolically representing one's past, present, or ideal future self internally and/or externally. Enabling-the-self refers to the extent to which a brand creates a sense of an efficacious and capable self. Although prior research has examined the impact of such brand assets on emotional attachment [e.g., Vlachos et al 2010], we are aware of no study that has tested the underlying causal mechanism or empirically confirmed the impact of brand assets on brand attachment in the online or mobile shopping context.

Brand equity refers to "the differential effect that brand knowledge has on consumer response to the marketing of that brand" [Keller 2008]. Brand equity is important in marketing since a company having brand with high equity might have various competitive advantages, including price premiums, increased customer demand, easy brand extension, more readily accepted communications, better trade leverage, less vulnerability to competitive marketing activity, greater loyalty, and greater financial market returns. [Kalafatis et al 2012; Kotler et al 2012]. In addition, brand equity is a measure of the brand's ability to capture consumer preference and loyalty. Loyalty is defined as "a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior" [Oliver, 1997]. Brand equity signifies the extent to which the brand has a favorable status in the consumer's mind. Therefore, a high level of brand equity has a positive influence on consumers' attitude and purchase intentions toward a new brand extension. Researchers have found that brand equity positively affects consumers' attitude toward the brand extension for physical products [e.g., Dwivedi and Merrilees 2012]. However, the relationship between brand equity and attitude toward the brand extension has received little research attention in the context of online shopping or m-commerce.

Though it has received little attention thus far, habit may be an important determinant of individuals' online shopping behavior. Habit describes a person's psychological and learned dispositions to repeat past behavior [Neal et al 2011]. Habitual behavior is conceptualized as a reflex-like response governed by automaticity and requiring minimal or virtually no cognitive attention [Shah et al 2014]. According to Shah et al [2014], spontaneous use of the major product or service offered by the brand resulting from the automatic retrieval of a learned association implies that habit formation is involved. The impact of cognitive-oriented variables on subsequent behavior decreases because there is no need for conscious evaluation of the usage of the extension product or service. Prior research on e-commerce suggests that habit may interact with cognitive-oriented variables (e.g., trust and satisfaction) to influence behavioral intention [e.g., Chiu et al 2012]. One's attitude toward the brand extension involves the cognitive evaluation of the behavior itself as being favorable or unfavorable and is an important determinant of one's intention to accept the extension service. Unlike prior studies on e-commerce, our measurements of habit and

attitude toward the brand extension involve two different targets: the existing online shopping service (habit) and the new m-commerce platform (attitude toward the brand extension). Habit measures the habitual use of the existing online shopping service, whereas attitude toward the brand extension measures the favorability of the evaluation of using the new m-commerce platform. Accordingly, we theorize that the habitual use of the existing online shopping service may decrease the effect of consumers' attitude toward using the m-commerce platform on their intention to accept that platform. However, this theorized relationship has been largely ignored in prior studies on m-commerce acceptance or usage.

Marketers believe that consumers evaluate brand extensions favorably because they transfer their positive attitudes or affect toward the parent brand to the extension [e.g., Ahmad et al 2011]. The objective of this study is to examine whether emotional attachment to the mobile messaging service (the parent brand) will induce a positive attitude toward the m-commerce platform (the extension) built by the mobile messaging service provider. Broadly, the purpose of this study is to apply the attachment-aversion (AA) model of customer-brand relationships to the m-commerce context to explore whether customer-brand relationships can promote brand equity, attitude toward the brand extension, and acceptance intention. The research questions of specific interest to this study are:

(1) What is the relative importance of the brand assets in fostering brand attachment?
(2) What are the associations between constructs of customer-brand relationships and brand equity?
(3) To what extent does brand equity influence users' attitude toward the brand extension, and to what extent does that attitude influence users' intention to accept the brand extension?
(4) Does habit decrease the influence of attitude toward the brand extension on acceptance intention?

2. Theoretical Background and Research Model

2.1. Attachment-Aversion (AA) Model of Customer-Brand Relationships

Park et al [2013] proposed the conceptual model of customer-brand relationships. The model theorizes that brand assets affect customers' attachment-aversion relationships, which in turn affect motivational strength. Motivational strength drives behavioral intentions and actual brand behaviors. They proposed that the perceived distance of a brand from oneself and the perceived accessibility of brand memories—called "perceived brand-self distance" and "brand prominence," respectively—represent customers' attachment-aversion relationships (AA Relationships) with a brand. In other words, AA Relationships is a higher order construct comprised of brand-self distance and brand prominence. Brand-self distance is operationally defined as the perceived distance between a brand and the self. It refers to the valence of the relationship (a close relationship being positive while a distant/far relationship being negative). Brand prominence refers to the individual's perception of the accessibility of memories regarding the brand.

An individual will be attached to and feel close to a brand when it is perceived as a means of self-expansion. This relationship is called brand attachment [Park et al 2013]. When a brand is perceived as a threat for self-contraction, one will be averse to the brand and feel distant from it [Park et al 2013]. Since our study focuses on the positive end of the relationship spectrum, we use the term "brand attachment" instead of "attachment-aversion relationships."

Emotional attachments have been found to extend beyond person-to-person relationships to the consumer-to-brand context [e.g., Park et al 2010]. Attachment can be used to explain the relationship between a person and a mobile messaging service, since a mobile messaging app is an online communication tool (object) through which people connect with others. Frasquet et al [2015] investigated the role of the retailer as a brand in driving loyal behaviors toward the online shopping channel (e.g., online purchase intentions and electronic word of mouth). There are some studies regarding emotional attachment to a product brand, but the topic of mobile messaging service as a brand has received little research attention. E-commerce and m-commerce studies have largely ignored the relationships among emotional attachment to mobile messaging service (e.g., LINE), attitude toward the brand extension (e.g., LINE Mart) developed by the mobile messaging service provider, and intention to adopt the m-commerce platform (e.g., LINE Mart). Further investigation is needed to enhance our understanding of whether brand attachment to an existing service created by a firm can be transformed into a favorable attitude toward and intention to use a new service launched by the same firm.

Park et al [2013] identified three different types of assets or benefits a brand may possess: enticing-the-self, enriching-the-self, and enabling-the-self (called "the 3Es"). These three self-relevant assets (benefits) serve as key determinants of the strength of the brand attachment. These three assets closely resemble the motivations of consumer innovativeness as articulated by Vandecasteele and Geuens [2010]: instrumental, hedonic and symbolic.

Park et al [2013] theorized that AA Relationships are related directly to the strength of the approach-avoidance motivation toward or against a brand. Consumers' motivational strength explains the effects of AA Relationships on the intention to engage in pro-brand behaviors of varying difficulty. Motivational strength mediates the relationship

between AA Relationships and consumers' behavioral intentions and actual behaviors.

2.2. Brand Equity

Brand equity can be seen as the perception or desire that a brand will meet a salient promise of benefits [Raggio and Leone 2007]. The value that brand equity provides to the firm includes such things as enhanced customer loyalty, an increased likelihood that customers will choose that particular brand and/or pay premium prices, an increased ability to attract new customers, and an increase in brand name extension capabilities [Nah et al 2011]. Recent studies on online shopping have examined the antecedents and consequences of brand equity. For example, Tsao and Tseng [2011] showed that electronic service quality has a significant positive effect on website brand equity, which in turn has both a negative effect on perceived risk and a positive effect on customer value. Bilgihan [2016] shows that brand equity is positively associated with customer loyalty. However, the relationship between brand attachment and brand equity, and the relationship between brand equity and attitude toward the brand extension have received little research attention in the context of online shopping or m-commerce.

2.3. Habit

Habit has been defined by researchers from different perspectives. Neal et al [2011] defined a habit as a person's psychological and learned disposition to repeat past behavior. Liu-Thompkins and Tarn [2013] defined habit as "a behavioral disposition that is exercised frequently and in which responses are triggered directly by contextual cues" (p. 22). In general, these definitions reveal that habit is not the same as behavior. Habit is a behavioral tendency and is gradually laid down in the procedural memory through repeated performance. Habit formation is strongly related to the frequency of previous behavior in a stable and recurring context [Shahet al 2014]. Overall, the online shopping habit can be viewed as an automatic behavioral response that is triggered by a situational stimulus without a cognitive analysis process because of the learned association between the shopping behavior and satisfactory results [Chiu et al 2012].

Habit has been used to predict consumption behavior in both the traditional retail context and the online context. Liu-Thompkins and Tarn [2013] found that, in the traditional retail context, attitudinal loyalty increases the effectiveness of a cross-selling promotion, whereas habit shows the opposite effect and renders the same promotion less effective. There are also several studies regarding habit in the online retailing or shopping context. Pahnila and Warsta [2010] showed that the habitual behavior of online shoppers has a direct and positive impact on their affect. The concept of habit has also been applied to social networking service usage. For example, Chiu and Huang [2015] found that habit has a small but negative moderating effect on the relationship between gratification and the intention to continue using a social networking service. Prior research has examined the moderating role of habit in the e-commerce context. Hsu et al [2015] examined the role of habit as a moderator between value, satisfaction, trust and repeat purchase intention. They found that habit moderates the impact of perceived value and trust on repeat purchase intention. Chiu et al [2012] found that habit exerts a negative moderating effect on the relationship between trust and online repeat purchase intention. They also suggested that when online shopping behavior is repeatedly executed in a stable context and becomes habitual, the need to cognitively evaluate the online seller's trustworthiness is suppressed. However, in their study, measures of habit and repeat purchase intention were targeted at the same service: the Yahoo!Kimo shopping mall (an e-commerce platform). Our measures of habit and acceptance intention address two different services. Figure 1 shows the conceptual model of this research and the relationships between the constructs and the two different services.

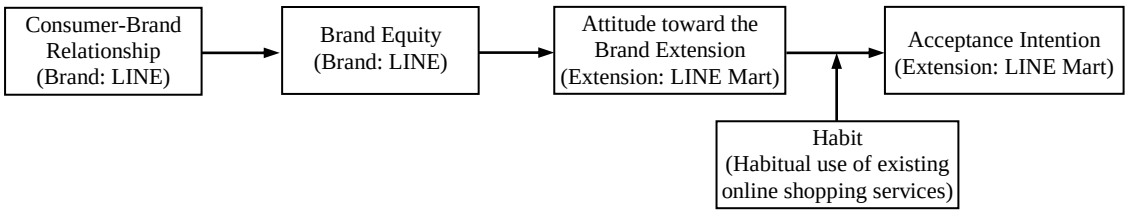

Figure 1. Conceptual Model

3. Research Model and Hypotheses

Figure 2 presents the proposed research model, which is based on the attachment-aversion (AA) model of customer-brand relationships. The dependent variable is the intention to accept mobile shopping (acceptance intention), which refers to the subjective probability that an individual will adopt the mobile shopping platform to purchase products from the online seller or store in the future. We argue that enticing-the-self, enriching-the-self, and enabling-the-self are important determinants of brand attachment. Brand attachment has direct and positive

effects on brand commitment and brand equity, which, together with perceived fit, have direct effects on attitude toward the brand extension. We also argue that the effect of attitude toward the brand extension on acceptance intention decrease as the habitual usage of existing online shopping services becomes more of a habit. In addition, we model brand attachment as a second-order construct with the reflective-reflective approach: the first-order constructs are reflectively defined and the second-order construct is also reflectively defined. In this study, the brand attachment target is LINE, a mobile messaging service provider. Therefore, brand attachment can be viewed as attachment to LINE's major product: its mobile messaging service.

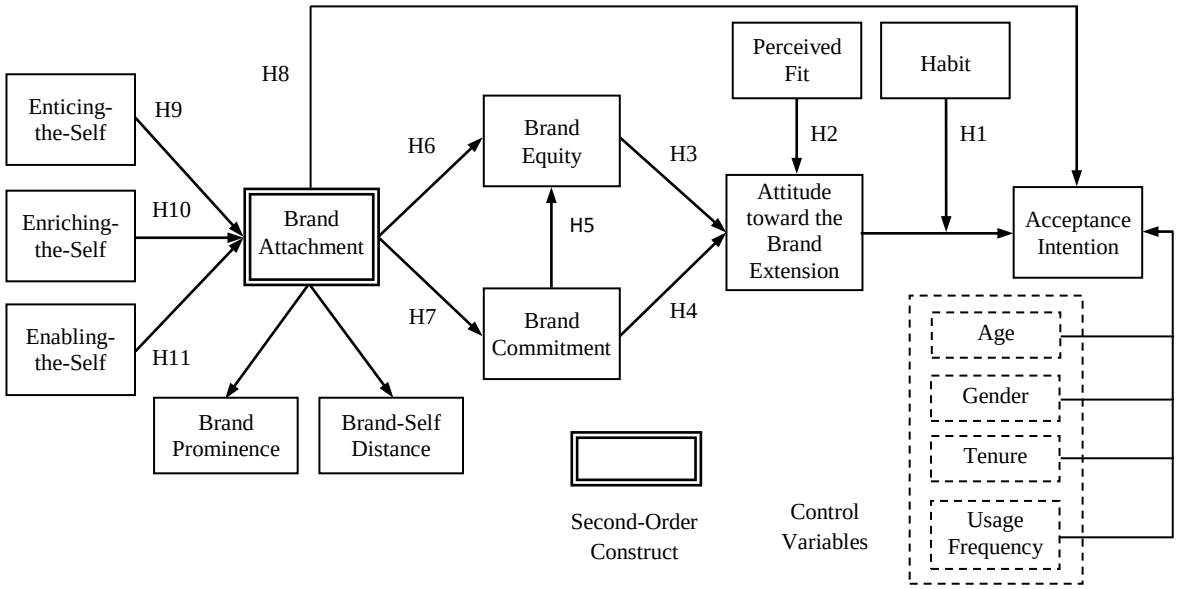

Figure 2. Research Model

3.1. Habit

In this study, habit refers to a person's psychological and learned disposition to repeat past online shopping behavior, while attitude toward the brand extension refers to a person's favorable or unfavorable evaluation of using the brand extension (i.e., the m-commerce platform: LINE Mart). Habit is one way to minimize cognitive effort in information processing [Shah et al 2014]. Shah et al [2014] noted that once a behavior has become a habit it becomes automatic and is carried out without conscious decision. They proposed that when a behavior is performed repeatedly and becomes habitual, it is guided by automated cognitive processes, rather than being preceded by elaborate decision processes (i.e., a decision based on attitudes and intentions). According to Chiu et al [2012], repeated and spontaneous online shopping is a habitual behavior resulting from the automatic retrieval of the learned association. The formation of a habit reduces the impact of attitude by rendering unnecessary the conscious evaluation of the favorability/un-favorability of the behavior itself. The notion that habit negatively moderates the relationship between reason-based concepts and online shopping intention has been supported by Chiu et al [2012] and Hsu et al [2015]. Accordingly, this study theorizes that when online shopping service usage is habitual, the influence of attitude toward the brand extension on acceptance intention is weaker, whereas when online shopping service usage is *not* habitual, the influence of attitude toward the brand extension on acceptance intention is stronger. Thus, we hypothesize as follows.

H1: *Habit negatively moderates the relationship between attitude toward the brand extension and acceptance intention*.

3.2 Perceived Fit

Perceived fit refers to the degree of proximity between the parent brand and the extension product [Lei et al 2008]. When the extension product is perceived as being congruent with the original brand's image and product category, consumers find the extension product easier to process, leading to more favorable attitudes toward the extension [Goh et al 2014]. Generally, a higher level of perceived fit facilitates the transfer of associations and emotions from a parent brand to its extensions, thereby improving the attitude toward the extensions [Pina et al

2010]. The categorization of the brand extension as a member of the parent brand category triggers the transference of perceptions and emotions stored in the consumers' mind [Riley et al 2014]. Therefore, a higher perceived fit between the parent brand and the extension product positively influences the consumer's attitude toward the extension [Riley et al 2014]. When the firm launches a new product that is consistent with the parent brand, consumers perceive a higher degree of fit between the extension product and the parent brand. In this context, consumers regard the new product as credible, which in turn makes them more willing to buy it [Buli, Chernatony, Hem, 2007]. Thus, we hypothesize as follows.

H2: *Perceived fit positively affects attitude toward the brand extension*.

3.3. Brand Equity

Brand equity refers to the incremental utility or value that the brand name can give to a product. Consumers' evaluations of brand extensions are largely dependent on their evaluations of the parent brand and their assessment of the fit between the parent brand and the extension [Salinas and Perez 2009]. Parent brand evaluation is conceptualized as the consumer's perception of parent brand equity. Brand equity is generally considered a multidimensional concept. Various dimensions of brand equity have been identified in previous research, including brand awareness, brand associations, brand loyalty, and perceived quality [Nah et al 2011]. Consumers' attitudes toward brand extensions are likely to be more favorable when consumers are aware of the original brand and perceive the brand as having a high level of quality. A favorable parent brand evaluation leads to a more positive attitude toward the parent brand, and when an extension from a favorable parent brand is introduced, new brand associations are created in consumer memory [Dwivedi and Merrilees 2013]. Thus, because of the transfer of these positive associations from the parent brand to the extension, consumers' attitudes toward brand extensions are likely to be more favorable when existing parent brand associations are positive [Buil et al 2009]. Thus, we hypothesize as follows.

H3: *Brand equity positively affects attitude toward the brand extension*.

3.4. Brand Commitment

Brand commitment is an enduring desire to maintain a long-term and valued relationship with the brand [Nguyenet al 2016]. The attitude toward a brand extension is more favorable when the consumer shows a commitment to maintain a lasting relationship with the brand [Völckner and Sattler 2006]. Committed consumers are more likely to have satisfactory experiences with the brand, and are thus more likely to have favorable attitude toward the extension [Swaminathan 2003]. Gierl and Huettl [2011] confirmed brand attitude transfer as the main process underlying brand extension evaluation. One's attitude toward the parent brand is positively related to one's attitude toward the extension. Committed consumers are more likely to have a favorable attitude toward the parent brand, an attitude which they will then transfer to the extension. Thus, if there is a strong relationship between the brand and the consumer, brand commitment may have a positive influence on the evaluation of a brand extension. According to Dwivedi and Merrilees [2013], consumers who have a strong affective relationship toward the original brand are going to transfer this relationship to the brand extension, thus developing a positive attitude toward the extension. Thus, we hypothesize as follows.

H4: *Brand commitment positively affects attitude toward the brand extension*.

Brand equity evaluations are based heavily on the strength of the continuing relationship with a product or service provider [Lovelock et al. 2007]. Thus, the level of brand commitment is likely to create favorable, strong and unique associations in the minds of consumers, consequently impacting brand equity [Ahmad and Thyagaraj 2015]. When individuals have a strong willingness to maintain an ongoing relationship with the brand without switching to another brand, the equity of the brand improves [Mohan and Sequeira 2016]. Dennis et al [2016] provided support for the notion that brand commitment has a positive effect on brand equity. Thus, we hypothesize as follows.

H5: *Brand commitment positively affects brand equity*.

3.5. Brand Attachment

In this study, brand attachment refers to the strength of the bond connecting the brand with the self. This bond includes a rich and accessible memory network of thoughts and feelings about the brand and the brand's relationship to the self [Park et al 2010]. Brand attachment is a critical driver of brand equity [Park et al 2010]. Consumers for whom the brand-self connection is high, and for whom associations are also prominent, may be more likely to engage in relationship-sustaining behaviors. Thus, there may be greater brand equity in the form of brand loyalty when both brand-self connection and prominence are high [Park et al 2010]. Brand equity is created when customers tend to pay more for an identical level of the product or service quality because of their attachment to the brand [Mohebi1 and Khani 2014]. Individuals who have a strong brand-self connection are more likely to incorporate the

brand into their lives and enthusiastically adopt the brand's values as their own, thereby increasing brand equity [Chang et al 2015]. Thus, we hypothesize as follows.

H6: *Brand attachment positively affects brand equity*.

Strong self-brand connections and automatic retrieval of thoughts and feelings about the brand increase the likelihood of preserving the relationship with the brand (i.e., brand commitment). In Park et al's [2006] conceptual model, brand attachment leads to brand commitment. Commitment is higher when the positive mood and affect of the consumer is higher [Dick and Basu 1994]. There may be greater behavioral commitment when both brand-self connection and prominence are high [Park et al 2010]. Ramaseshan and Stein [2014] suggested that consumers who are attached to a brand not only benefit from the brand, but also reciprocate by showing greater commitment to the brand to maintain their brand relationship. Dennis et al [2016] found that brand attachment affects brand commitment in the context of higher education institutions. Thus, we hypothesize as follows.

H7: *Brand attachment positively affects brand commitment*.

Fedorikhin et al [2008] suggested that consumers with elevated levels of attachment to a parent brand are willing to purchase and to pay more for brand extensions. Brand attachment has strong motivational and behavioral implications regarding the target object, such as proximity maintenance (i.e., the desire to be close) and a willingness to defend and invest such things as cognitive and financial resources in the attachment object (i.e., the brand) [Fedorikhin et al 2008]. Brand attachment induces consumers to act more impulsively regarding the extensions. Thus, a person who is highly attached to a brand tends to be committed to it and willing to preserve interactions with it. Hence, consumers with a strong brand attachment will be likely to view the extension as an opportunity to maintain and strengthen their interactions and relationship with the brand [Fedorikhin et al 2008]. Accordingly, this study theorizes that individuals who are emotionally attached to the brand are likely to maintain a durable relationship with the brand and consequently have a stronger intention to accept or adopt its extension products or services. Thus, we hypothesize as follows.

H8: *Brand attachment positively affects acceptance intention*.

3.6. Brand Assets

Enticing-the-self refers to the sensory (hedonic) pleasures or aesthetic pleasures experienced from a brand. The psychological distance from a brand is short when a customer appreciates the brand's sensorial or aesthetically pleasing qualities [Park et al 2013]. A brand that evokes pleasure from multiple sensory modalities reduces the psychological distance through aesthetic/hedonic elements [Park et al 2013]. The shorter the psychological distance from a brand, the stronger the brand attachment. Bowlby (1951) suggested that pleasure is a major factor leading to attachment in intimate relationships. The obtainment of hedonic or aesthetic pleasure is an important need that individuals desire to fulfill by consuming products or services. Such fulfillment can bring a positive affect, gratification, and favorable feelings about the brand, thereby generating an attachment to the brand. Since individuals tend to form emotional bonds with people who seem especially responsive to their needs, enjoyment can be expected to have a positive, direct effect on consumer-brand emotional attachment [Vlachos et al 2010]. Thus, we hypothesize as follows.

H9: *Enticing-the-self positively affects brand attachment*.

Enriching-the-self refers to pleasing the spiritual self by symbolically representing one's past, present, or ideal future self internally and/or externally. Brands enable brand-self connections by symbolically representing one's ideal past, present, or future self [Park et al 2006]. When a brand internally represents one's coherent self, or externally expresses one's current or desired self, or reinforces one's values or principles, it offers symbolic pleasure, thus enriching the self and leading to a higher level of attachment [Park et al 2013]. Consumers are more likely to form and maintain strong emotional attachments to brands that help them define themselves and retain a positive self-image [Carroll and Ahuvia 2006]. Enriching one's self may involve identity construction and the identification of a lifestyle that will bring self-fulfillment. A consumer's level of emotional bonding with a brand is positively influenced by both self-expression through consumption and symbolic attachment to the brand [Vlachos et al 2010]. Thus, we hypothesize as follows.

H10: *Enriching-the-self positively affects brand attachment*.

Enabling-the-self refers to the extent to which a brand creates a sense of an efficacious and capable self. According to attachment theory, an individual develops an attachment to a caregiver based on the caregiver's responsiveness to the individual's needs [Park et al 2006]. Similarly, individuals develop an attachment to a brand

that they can trust to fulfill their functional needs (i.e., enabling the self). Brands become linked to the self when they offer functional resources that enable a sense of self-efficacy and allow the pursuit and achievement of mastery goals [Park et al 2006]. Brand attachment is influenced by the extent to which a brand creates a sense of an efficacious and capable self, enabling a consumer to exert control over his or her environment so as to approach desired goals and avoid undesired ones [Park et al 2013]. Consumers' beliefs in a brand's competence are therefore critical for an attachment to be formed and sustained [Park et al 2006]. If a brand is not able to serve consumers' needs effectively through reliable functional performance, the basic assumption behind the attachment is proven false [Vlachos et al 2010]. Thus, we hypothesize as follows.

H11: *Enabling-the-self positively affects brand attachment*.

3.7. Control Variables

While our study does not focus on the impact that various demographic variables may have on acceptance intention, we nevertheless include several of these as the control variables in our model. First, the number of years an individual has used the mobile messaging service (i.e., length of tenure) reflects the individual's disposition to maintain the relationship with the service provider, which can have a positive effect on the intention to accept the service provider's newly developed mobile shopping platform. Prior research has shown that length of tenure can predict customer retention (Bolton, 1998). Second, high usage frequency indicates that users are satisfied with the service provided by the mobile messaging service provider. Satisfied users are more likely to accept the newly launched mobile shopping platform. Binge et al [2005] found that young people are more predisposed to adopt mobile shopping than are other Internet users. Cha [2011] found that females are more likely than males to purchase items online. Therefore, gender and age are added as control variables for acceptance intention.

4. Research Methodology

4.1. Measurement Development

All measures of the study were adapted from existing measures to fit the context of mobile shopping (see Appendix A). The questionnaire was originally developed in English. In accordance with the process of translation and adaptation of instruments proposed by Beaton et al [2000], we went through the forward translation, backward translation, and pretest steps to validate the the questionnaire. In the forward translation process, the first author of this study translated the questionnaire from English into Chinese. According to the guidelines proposed by Beaton et al [2000], translators should always aim at the conceptual equivalent of a word or phrase, not a word-for-word translation, i.e., not a literal translation. The second author of this study then verified the conceptual equivalence between the two versions and suggested revisions. The first author then revised the Chinese version of the questionnaire, accordingly. In the backward translation process, an IS professor translated the questionnaire from Chinese into English. The second author then verified the conceptual equivalence between the two versions. Discrepancies were then discussed with the first author. This process was iterated four times until a satisfactory version was obtained. To assess the logical consistency, ease of understanding, item sequence, and contextual relevance of the measures, we conducted pretest involving 12 IS graduate students who had experience with LINE usage and online shopping. All items were measured via a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7).

4.2. Survey Administration

The research model was tested with data collected from LINE users in Taiwan. LINE is a mobile messaging service or app that provides free messages, voice calls and video calls anytime, anywhere. Banners with a hyperlink connecting to our Web survey were posted on Facebook and on a number of bulletin board systems (BBS) and virtual communities. Members who had used LINE during the past four weeks were cordially invited to support this survey. Twenty randomly selected respondents were offered an incentive of US$10 in cash. The first page of the online questionnaire introduced the survey, ensured confidentiality, and provided information regarding the purpose, intent, motivation, potential use of data, methods of data collection, and name and affiliation of the researcher in charge of the study. According to the regulation by Ministry of Science and Technology of Taiwan (R.O.C.), studies involving human participants need to obtain Institutional Review Board (IRB) approval only if using intervention, face-to-face interaction, or data that can identify the participants. This study use online and anonymous survey, so we do not need to obtain the IRB approval. The survey was conducted between August 24 and September 11, 2016. The Web survey yielded a total of 347 complete and valid responses for data analysis. Table 1 lists the demographic information related to the respondents. As noted above, survey participants were recruited through messages posted in BBSs, virtual communities, and on Facebook rather than by individual invitation. This convenience sampling method does not allow for the computation of a response rate.

Because this survey adopted a convenience sample, non-response bias cannot be examined by comparing

respondents and non-respondents. Thus, non-response bias was measured by comparing the responses of early and late responders. We split the sample into two halves based on the time when each response was received [Hew et al 2016]. We then compared the early response group with the late response group in terms of respondent demographics (age and length of tenure) and their responses regarding principal constructs. We divided age into eight groups (e.g., Group 3: 25-29 years old) and asked respondents to check the group to which they belong. The average age scores for the early and late responders were 3.27 and 3.40, respectively, indicating no significant difference (t = -0.82). We divided length of tenure (number of years using LINE) into five groups (e.g., Group 4: 1-2 years). The average length of tenure (number of years using LINE) for the early and late responders was 4.45 and 4.30, respectively, indicating no significant difference (t = 1.16). The t-values for the responses on acceptance intention is significant (t=-2.29). The t-values for the responses on other principal constructs ranged from -1.73 to -0.44, indicating no significant difference at alpha = 0.05. We therefore concluded that nonresponse bias was not a significant threat.

Table 1. Demographic Information of Respondents (N = 347)

Measure	Items	Freq.	Percent	Measure	Items	Freq.	Percent
Gender	Male	163	47.0	Gender	Female	184	53.0
Age	< 25	144	41.5	Education	High school	11	3.2
	25-29	76	21.9		College/University	226	65.1
	30-34	54	15.6		Graduate school	110	31.7
	35-39	36	10.4				
	40+	37	10.6				
Line Usage	< 3 months	24	6.9	Line Usage Frequency	Once per month	6	1.7
	3-6 months	13	3.8		Several times per month	12	3.5
	6 months-1 year	14	4.0			34	9.8
	1-2 years	53	15.3		Several times per week	35	10.1
	>2 years	243	70.0		Once per day	260	74.9
					Several times per day		

4.3. Data Analysis

Data analysis utilized the two-step approach recommended by Anderson and Gerbing [1988]. The first step involved the analysis of the measurement model, while the second step tested the structural relationships among latent constructs. The aim of the two-step approach is to establish the reliability and validity of the measures before assessing the structural model. SmartPLS 2.0 was used to assess both the measurement model and the structural model. According to Hair et al [2012], the PLS-SEM minimum sample size should be equal to the larger of the following: 1) ten times the largest number of formative indicators used to measure one construct, or 2) ten times the largest number of structural paths directed at a particular latent construct in the structural model. Since our research model does not have formative indicators, we used Rule 2 to calculate the minimum sample size. The largest number of structural paths directed at acceptance is 8, including two paths involving the moderating role of habit. Therefore, the minimum sample size is 80 (10*8). The survey yielded a total of 347 complete and valid responses, which is larger than the minimum sample size.

4.3.1. Measurement Model

We modeled brand attachment as a second-order construct. Since PLS does not directly support second-order factors, we generated factor scores for each of the first-order dimensions, which we then used as reflective measures (indicators) of the second-order construct [see Chin et al 2003]. To do so, we first ran the full research model in SmartPLS with the dimensions for each construct disaggregated. We then used the resulting factor scores of the dimensions as the measures of the aggregate construct (i.e., brand attachment). In accordance with Wong et al [2016], we used a two-stage procedure to evaluate the measurement quality of the second-order construct (i.e. brand attachment). First, we evaluated the factor loadings and significance of the indicators of first-order constructs (i.e., brand-self distance and brand prominence). As Table B1 in Appendix B shows, all items exhibited a loading higher than 0.7, and the t-values for those factor loadings range from 23.99 to 87.35. Second, we evaluated the factor loadings and significance of the dimensions of the aggregate (second-order) construct. The results show that the factor loading and t-value for the brand-self distance dimension are 0.9 and 77.97, respectively, while the factor loading and t-value for brand prominence dimension are 0.91 and 99.23, respectively.

Several multivariate assumptions are required in an SEM analysis, including normality, linearity and homoscedasticity. The maximum absolute values of skewness and kurtosis are 0.745 ($<\pm1$) and 1.0 ($<\pm2$),

respectively [Kline 2005; Leong et al 2015], suggesting that the departure from normality is not too extreme. The normal P-P and Q-Q plots of regression standardized residuals further verified the existence of normality while scatter plots verified linearity [Leong et al 2015]. To test homoscedasticity, we conducted a regression analysis by modeling acceptance intention as the dependent variable, and the other ten variables as the independent variables. We then produced a scatterplot of the standardized residuals against the standardized predicted values. The plot has a random (scattered) distribution, therefore there is no violation of the assumption of homoscedasticity.

We evaluated the adequacy of the measurement model with the criteria of reliability, convergent validity, and discriminant validity. Reliability was examined using the composite reliability values. Table 2 shows that all values were above 0.7, the commonly accepted level. The convergent validity of the scales was assessed by two criteria [Fornell and Larcker 1981]: 1) all indicator loadings should be significant and exceed 0.7, and 2) average variance extracted (AVE) by each construct should exceed the variance caused by a measurement error for that construct (i.e., AVE should exceed 0.5). As Table B1 in Appendix B shows, all items exhibited a loading higher than 0.7 on their respective construct, and as shown in Table 2, all the AVEs ranged from 0.73 to 0.88, thus satisfying both conditions for convergent validity.

Table 2. Descriptive Statistics of Constructs

Constructs	AVE	ASV	MSV	Fornell-Larcker's ratio	Composite Reliability	Mean	STD	Cronbach's Alpha
Enticing-the-Self (ET)	0.81	0.35	0.55	0.68	0.95	4.97	1.15	0.92
Enriching-the-Self (ER)	0.78	0.27	0.38	0.49	0.93	4.36	1.33	0.91
Enabling-the-Self (EA)	0.73	0.26	0.46	0.63	0.92	5.48	1.05	0.88
Brand-Self Distance (BD)	0.76	0.30	0.53	0.70	0.93	5.09	1.19	0.89
Brand Prominence (BP)	0.77	0.30	0.48	0.62	0.93	4.35	1.18	0.90
Brand Commitment (BC)	0.77	0.38	0.55	0.71	0.93	4.83	1.23	0.90
Brand Equity (BE)	0.78	0.29	0.53	0.68	0.93	5.01	1.18	0.90
Perceived Fit (PF)	0.74	0.23	0.42	0.57	0.92	4.70	1.12	0.88
Attitude Toward the Brand Extension (ABE)	0.87	0.24	0.44	0.50	0.96	4.72	1.03	0.95
Habit (HA)	0.88	0.08	0.12	0.13	0.97	5.32	1.22	0.96
Acceptance Intention (AI)	0.88	0.25	0.44	0.50	0.97	4.51	1.15	0.96

Discriminant validity is assessed via three criteria. First, the correlations among the constructs should be well below 0.85 [Kline 2005]. Second, when the loading of each measurement item on its assigned construct is larger than its loadings on all other constructs and the cross-loading differences are much higher than the suggested threshold of 0.1 [Gefen and Straub 2005], the scales will be considered as having sufficient discriminant validity [Chin 1998]. Third, the square root of the AVE of a construct should be greater than the correlations between the construct and all other constructs in the model [Fornell and Larcker 1981]. As shown in Table 3, the correlations among the constructs were well below the 0.85 threshold. As Table B1 in Appendix B shows, the differences between loadings on assigned constructs and those on other constructs were larger than the threshold of 0.1. In addition, all square root of AVE values are greater than the construct intercorrelations (see Table 3). Furthermore, as shown in Table 2, all AVEs are greater than their respective average shared variance (ASV) and maximum shared variance (MSV), while Fornell-Larcker's (1981) ratio is less than 1.00. This demonstrates sufficient discriminant validity.

We used a three-step process to check for common method bias (CMB). First, we performed Harman's one-factor test. Evidence for CMB exists when 1) a single factor emerges from exploratory factor analysis (unrotated), or 2) one general factor accounts for the majority of the covariance of the variables [Podsakoff et al 2003]. We entered all the variables into an exploratory analysis using unrotated principal components factor analysis and forcing one factor to be extracted. The merged factor accounted for less than 50% of the variance (43.83%), implying that CMB is not substantial. Second, while CMB is evidenced by extremely high correlations ($r > 0.90$) [Bagozzi et al 1991], the matrix for our model (Table 3) shows that all correlations were below 0.75.

Table 3. Correlations among Constructs and the Square Root of AVE

	AI	BC	BD	BE	ABE	BP	EA	ER	ET	HA	PF
AI	**0.94**										
BC	0.52	**0.88**									
BD	0.41	0.73	**0.87**								
BE	0.44	0.73	0.60	**0.88**							
ABE	0.66	0.50	0.43	0.40	**0.93**						
BP	0.49	0.66	0.63	0.55	0.47	**0.87**					
EA	0.44	0.68	0.60	0.60	0.41	0.47	**0.85**				
ER	0.47	0.62	0.54	0.56	0.48	0.60	0.51	**0.88**			
ET	0.48	0.74	0.73	0.65	0.51	0.69	0.62	0.58	**0.90**		
HA	0.34	0.31	0.27	0.28	0.23	0.34	0.26	0.28	0.28	**0.94**	
PF	0.63	0.50	0.38	0.43	0.65	0.45	0.39	0.49	0.48	0.21	**0.86**

Note: The square roots of AVEs are in **boldface**.

Third, to further assess the possibility of CMB, we used a PLS approach documented in the IS literature [Sarafet al 2007], which involves including a latent method factor in the structural model. Each indicator in the structural model is specified to be determined by its substantive (theoretical) construct, the method factor, and measurement error. However, SmartPLS does not accommodate random errors and does not allow an indicator to be determined by more than one construct. To overcome these constraints, we converted each indicator into a single-indicator construct as suggested by Saraf et al [2007]. As a result, all the research constructs and the method factor became second-order constructs, except for enabling-the-self, gratifying-the-self, and enriching-the-self (a third-order construct).

We then constructed a SmartPLS model with the method factor linking to all the single-indicator constructs converted from the observed indicators. For each single-indicator construct, we examined the coefficients of the incoming paths from its substantive construct and the method factor. These two path coefficients are equivalent to an observed indicator's loadings on the single-indicator construct's substantive construct and the method factor, and can be used to assess common method bias [Saraf et al 2007]. According to Saraf, Langdon, and Gosain [2007], the squared values of the method factor loadings are interpreted as the percentage of the indicator variances caused by the method, whereas the squared loadings of the substantive constructs are interpreted as the percentage of the indicator variances caused by the substantive constructs. Common method bias is unlikely to be a serious concern if the following two criteria are fulfilled: 1) the method factor loadings are insignificant, and 2) the indicators' substantive variances are substantially greater than their method variances. As Table B2 in Appendix B shows, 40 of 44 method factor loadings were insignificant and all of the indicators' substantive variances were substantially greater than their method variances. These findings indicate that common method bias should not be a serious problem with regard to our data.

We used variance inflation factors (VIF) to assess the degree of multicollinearity. We conducted a regression analysis by modeling acceptance intention as the dependent variable and the other ten variables as the independent variables. Except for the VIF of brand commitment, all VIF values ranged from 1.160 to 3.203, all below the suggested threshold of 3.3 [Diamantopoulos and Siguaw 2006]. Even so, the VIF of brand commitment (3.892) is still well below the cut-off value of 10. Therefore, no significant multicollinearity problem exists with regard to our data.

4.3.2. Structural Model

In PLS analysis, the structural paths and the R^2 scores of endogenous variables are examined to assess the explanatory power of the structural model. Figure 3 shows the structural path analysis results. Most paths exhibited a P-value of less than 0.05. The significance of all paths was assessed with 5,000 bootstrapping runs [Hair et al 2012]. Overall, the research model accounted for 54% of the variance of acceptance intention (Figure 3). Although this study did not examine the effect of attitude toward the brand extension on acceptance intention, we still showed its path coefficient (β= 0.51) (see Figure 3).

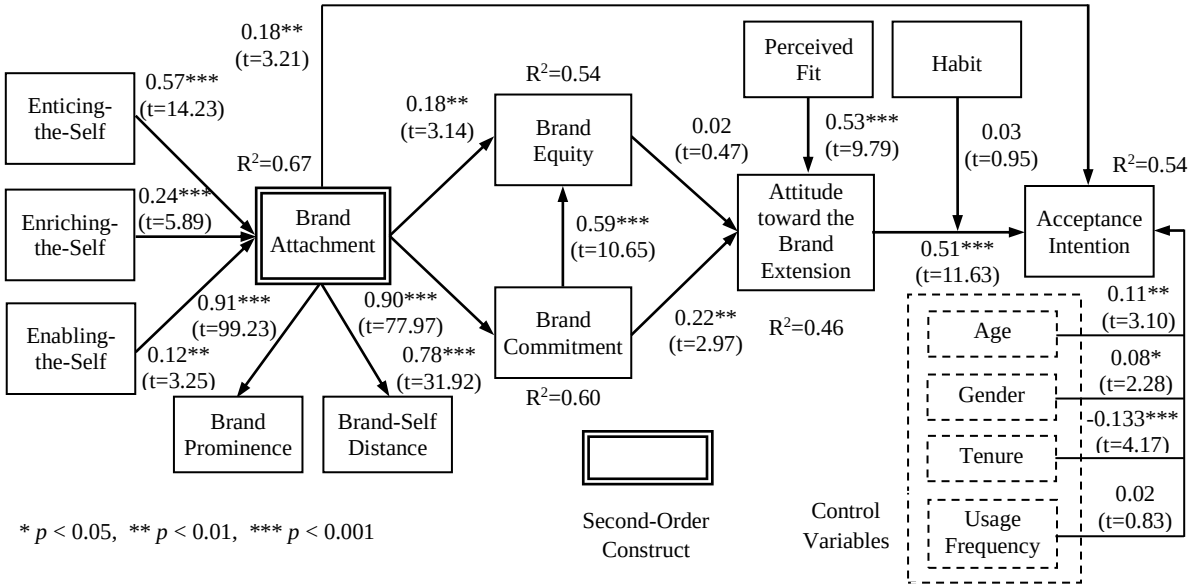

Figure 3. SEM Analysis of the Research Model

The predictive sample reuse technique developed by Stone (1974) and Geisser (1975) can also be used as a criterion for predictive relevance [Henseler et al 2009]. We obtained a cross-validated redundancy Q^2 of 0.477 for acceptance intention. Table 4 shows the cross-validated redundancy Q^2 for all endogenous constructs. In general, a cross-validated redundancy Q^2 that is greater than 0 indicates predictive relevance [Henseler et al 2009]. Another assessment of the structural model involves effect size. The effect size of each effect in the path model can be evaluated by means of Cohen's f^2 [Cohen 1988]. The effect size f^2 is calculated using the following formula: $f^2 = (R^2_{included} - R^2_{excluded})/(1-R^2_{included})$. According to Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 signify small, medium, and large effects, respectively. As Table 4 shows, only two paths have effect sizes less than the small effect, while five paths have effect sizes greater than the medium effect. Thus, the fit of the overall model is fairly good.

Table 4. Q^2 and Effect Size for Each Construct

Construct	Redundancy Q^2	Effect Size	
Enticing-the-Self (ET)	NA	ET -> BA	0.511
Enriching-the-Self (ER)	NA	ER -> BA	0.109
Enabling-the-Self (EA)	NA	ER -> EA	0.024
Habit	NA	HA (moderator)	0.002
Perceived Fit (PF)	NA	PF -> ABE	0.381
Brand Attachment (BA)	0.546	BA -> BE	0.028
		BA -> BC	1.500
		BA ->AI	0.048
Brand Equity (BE)	0.421	BE -> ABE	0.000
Brand Commitment (BC)	0.464	BC -> BE	0.301
		BC -> ABE	0.037
Attitude Toward the Brand Extension (ABE)	0.400	ABE->AI	0.417
Acceptance Intention	0.477	No Path	

NA: Cross-validated redundancy Q^2 values are not available for exogenous constructs.

4.3.3. Moderating Effect

As shown in Figure 3, the moderating effect of habit is not significant. To assess the moderating effect of habit, we also conducted a multiple-group analysis in which the groups were divided into low habit (N_1 = 172) and high habit (N_2 = 175) groups using the median (Baron and Kenny 1986). Habit was divided by the median of the sum of its four measurement items. The statistics were computed as follows [Keil et al. 2000]:

S_{pooled} = SQRT{[(N_1 - 1)^2 / (N_1 + N_2 - 2)]×SE_1^2 + [(N_2 - 1)^2 / (N_1 + N_2 - 2)]×SE_2^2 }

$t = (PC_1 - PC_2) / [S_{pooled} * SQRT(1/N_1 + 1/N_2)]$

where S_{pooled} is the pooled estimator for the variance, t is the t-statistic with $N_1 + N_2 - 2$ degrees of freedom, N_i is the sample size of data set for Group i, SE_i is the standard error of the path in the structural model for Group i, and PC_i is the path coefficient in the structural model of Group i.

Table 5 shows that, for users with a low level of online shopping habit, attitude toward the brand extension has a larger effect on acceptance intention (ß = 0.53) than for those with a high level of habit (ß = 0.49). The difference is not significant, therefore H1 is not supported (t = 0.421, p > 0.05).

Table 5. Path Coefficients and the Results of Moderating Effect Testing

Path	**Low Habit-β (SE)**	**High Habit-β (SE)**	**Difference**	***t***
Attitude Toward the Brand Extension → Acceptance Intention	0.53 (0.075)	0.49 (0.059)	0.04	0.421

4.3.4. Mediating Effect

We employed the Baron and Kenny (1986) technique to test the mediating effects of BE and BC in the BA-BE-ABE and BA-BC-ABE relationships, as well as the mediating effect of ABE in the BE-ABE-AI and BC-ABE-AI relationships, as follows:

1. The IV→M, M→DV and IV→DV relationships must be significant.
2. For the IV + M→DV model:
   (a) M fully mediates the influence of IV on DV if M is significant and IV is not.
   (b) M partially mediates the influence of IV on DV if both M and IV are significant.

Since the M→DV relationship is not significant in the BA-BE-ABE relationship, and the IV→M relationship is not significant in the BE-ABE-AI relationship, BE and ABE have no mediating effect. As shown in Table 6, M is not significant in the BA-BC-ABE relationship, indicating no mediating effect, while M is significant in the BC-ABE-AI relationship, indicating that ABE partially mediates the relationship between BC and AI.

Table 6. Mediating Effect

Variable			Sobel Test Statistics[a]	P-Value	Structural Model's Path Coefficient					Degree of Mediation
IV	M	DV			IV→M β_a (S_a)	M→DV β_a (S_a)	IV→DV	IV+M→DV (M controlled)		
								IV	M	
BA	BC	ABE	1.381	0.084	0.78*** (0.023)	0.22** (0.072)	0.24***	0.19**	0.10	No mediating effect
BC	ABE	AI	2.936	0.002	0.22** (0.072)	0.51*** (0.044)	0.32***	0.18**	0.49***	Partial effect

Note: IV = independent variable; M = mediator; DV= dependent variable. *** p < 0.001 ** p < 0.01.
[a] Sobel test statistic is calculated using z-value = $\beta_a * \beta_b / SQRT(\beta_b^2 * s_a^2 + \beta_a^2 * s_b^2 + s_a^2 * s_b^2)$

5. Discussion and Implications

The purpose of this study was to examine thoroughly the complex relationships between brand assets, brand attachment, brand commitment, brand equity, attitude toward the brand extension, perceived fit, habit, and intention to accept the brand extension. The findings of this study provide partial support for our research model, which posits that emotional attachment to a brand (i.e., a mobile messaging service provider) can be transferred to customer-brand relationships and attitude toward using the brand extension (i.e., a mobile shopping platform newly launched by the mobile messaging service provider), which then affect users' intention to accept the brand extension.

5.1. Summary of Results

Brand attachment to a mobile messaging service, attitude toward using the newly launched mobile shopping platform, and control variables were proposed as the antecedents of intention to accept the mobile shopping platform. The findings show that both brand attachment and attitude are significant determinants of acceptance

intention, and these two factors together with the control variables explain 54% of the variance of acceptance intention. However, attitude toward the brand extension has a stronger effect on acceptance intention than does brand attachment. In addition, brand attachment has a stronger effect on brand commitment, whereas it has less influence on brand equity.

Consistent with prior studies examining the relationships between brand assets and brand attachment [e.g., Vlachos et al 2010], we found that enticing-the-self, enriching-the-self, and enabling-the-self have significant effects on brand attachment. However, some of our results are inconsistent with Vlachos et al [2010] who found that, in the context of grocery store retailing, enriching-the-self has a stronger influence on brand attachment than do either enticing-the-self or enabling-the-self. In contrast, we find that enticing-the-self has a stronger effect than enriching-the-self or enabling-the-self. One possible explanation is that the relative importance of brand assets in determining brand attachment varies according to the context. The stronger effect of enticing-the-self may indicate that when mobile devices are used to support online shopping activities, the ability to leverage hedonic benefits may become more salient than the ability to leverage utilitarian (e.g., enabling-the-self) or symbolic benefits (e.g., enriching-the-self) for fostering individuals' brand attachment.

Our findings support the notion that the perceived fit between the parent brand and its extension is critical to the success of a brand extension. Our findings indicate that perceived fit plays a dominant role in shaping attitude toward the brand extension. Brand equity and brand commitment have less effect on attitude toward the brand extension ($\beta = 0.02$ and $\beta = 0.22$, respectively), while perceived fit has a strong effect ($\beta = 0.53$). The weak effects of brand equity and brand commitment might be explained by the suppression effect of perceived fit. Further data analysis indicates that after perceived fit is removed from the research model, brand commitment has a strong effect on attitude toward the brand extension ($\beta = 0.44$), while the effect of brand equity remains insignificant ($\beta = 0.08$). One possible explanation for the insignificant effect of brand equity is that it may have a stronger effect on customers' attitude toward the brand and less of an effect on customers' attitude toward the brand extension.

Inconsistent with prior research on the moderating role of habit [e.g., Chiu et al 2012; Hsu et al 2015], our findings show that habit has a positive effect on the relationship between attitude toward the brand extension and acceptance intention. However, the path coefficient is not significant. The findings contradict the notion that once a behavior has become a habit, it becomes automatic and is carried out without conscious decision. One possible explanation is that the habit and attitude toward the brand extension are being measured using two different targets. The target for measuring habit is the usage of existing online shopping services or platforms, while the target for measuring both attitude toward the brand extension and acceptance intention is the mobile messaging service provider's newly launched mobile shopping platform (i.e., LINE and LINE Mart, respectively). Our findings suggest that the moderating effect of habit should be examined in the context of the continued usage of information systems or services rather than the acceptance of new ones.

Lastly, certain control variables have significant effects on acceptance intention. Age and gender have positive and significant effects on acceptance intention. This finding indicates that male users of mobile messaging services have a greater intention to accept the extension service than do female users, and that older users have a higher level of acceptance intention than do younger users. Tenure has a negative and significant effect on acceptance intention. This suggests that users with shorter tenure periods have a higher level of acceptance intention than do users with longer tenure.

5.2. Theoretical Implications

This study extends Park et al's [2013] attachment-aversion (AA) model of customer-brand relationships and shows that brand attachment is an important source of brand extension acceptance. Together, brand-self distance and brand prominence effectively represent consumers' attachment to a brand. This study shows that the concept of brand assets or benefits (enticing-the-self, enriching-the-self, and enabling-the-self) can be applied to the context of mobile messaging services. This study extends our understanding of the possible types of assets or benefits that can enhance the brand-self connection. However, there may be additional variables relevant to brand attachment beyond the three factors explored in this study (e.g., brand experience), and these may be the subject of future investigations.

Our results suggest that, in addition to attitude toward brand extension, brand attachment (largely ignored in the literature) could be a significant determinant of acceptance intention. Thus, both concepts should be considered when explaining online shopping in general, and mobile shopping in particular. Park et al (2010) differentiated brand attachment from brand attitude and showed that brand attachment has a stronger effect on outcome variables than does brand attitude. In this study, the magnitude of the path coefficient of brand attachment on acceptance intention is less than that of attitude toward the brand extension. This implies that the relative importance of brand attachment and attitude toward the brand extension varies with the outcome variables and research context. Since our outcome variable is the consumer's intention to accept the brand extension, attitude toward the brand extension plays a more important role than does attachment to the parent brand. This study, therefore, extends the attachment

literature from person-brand relationships to person-service relationships, and sheds new light on the potential of brand attachment in triggering the intention to accept a mobile shopping platform.

Habit and attitude toward the brand extension represent two different promoters of the intention to accept a mobile shopping platform. Attitude-induced behavior often results from a mixture of cognitive and affective attitudes, whereas habit is an automatic behavioral response triggered by a situational stimulus without being preceded by a cognitive analysis process. Therefore, when online shopping is repeatedly executed in a stable context and becomes habitual, the need to cognitively evaluate the attitude toward using the mobile shopping platform will be suppressed. Many studies consider acceptance or adoption of new information technology or online service as being guided by reason. Accordingly, much effort is devoted to trying to explain acceptance intention from the perspectives of attitude and behavioral beliefs (e.g., perceived usefulness, perceived ease of use). However, as online or mobile shopping becomes more popular, and thus people shop at online stores without engaging in much of a reasoning process, the habitual use of existing online shopping services may affect the intention to accept new online or mobile shopping services. Therefore, it is important to examine the interaction of these two variables rather than to assume that they both operate similarly. It is also important to search for moderating variables that turn simple main effects into more insightful conditional relationships. However, this study suggests that the interaction effect of habit and other cognitive variables should be examined in the same context, i.e., measures of habit and and other cognitive variables should target the same object (e.g., online shopping).

Our findings suggest that the notion that consumers transfer positive attitudes or affect toward the parent brand to its extension can be applied to the context of mobile services and shopping. The findings highlight the complexity of the link between brand attachment to an existing service and the intention to accept a new service developed by the same firm. Considering brand equity, brand commitment, attitude toward the brand extension, perceived fit, and habit is a first step toward establishing a better understanding of this relationship. Future research should continue to explore the complex relationships among those variables and consumers' intention to accept different services or applications.

5.3. Practical Implications

Brand attachment has significant effects on brand equity, brand commitment and acceptance intention. Therefore, managers of mobile messaging services should develop strategies to enhance consumers' brand attachment. Brand attachment is conceptualized in terms of brand-self distance and brand prominence. Brand attachment measure can fully reflect one's relationship valence, and is thus able to offer additional important information to brand managers [Park et al 2013]. How to reduce the distance between customers and the brand requires managers to examine the level to which customers perceive the benefits of the brand's current offering in terms of each brand asset: enticing-the-self, enriching-the-self, and enabling-the-self [Park et al 2013]. This examination offers important information that can help brand managers determine how to create a closer brand-self distance. Malär et al [2011] argued that one way to create emotional brand attachment is to match the brand's personality with the consumer's self (i.e., self-congruence). When defining the brand personality, managers of mobile messaging services should adopt a customer-oriented perspective, taking the self-concept of their target customers into consideration. The more effective strategy seems to focus on actual self-congruence with the brand, as opposed to ideal self-congruence, when trying to increase emotional brand attachment [Malär et al 2011]. Frasquet et al [2015] suggest that managers of the mobile messaging service can also build the brand attachment online by promoting a sense of community through social media.

Our results indicate that managers interested in building consumers' brand attachment should focus primarily on strategies intended to entice. For example, mobile messaging services should provide a variety of ways to entertain users, e.g., playful social interactions and playful browsing of information. Managers should also build service offerings that help consumers to express themselves symbolically. Building a social climate that uses the mobile messaging service is one way to follow the trend. Mobile messaging service developers should also design features or functions that help users perform many things more conveniently and quickly, and are useful in users' daily lives.

Brand commitment has a significant effect on both brand equity and attitude toward the brand extension. Managers vying for long-term commitment from their customers should look for creative ways to raise such commitment. For example, managers or marketers can use social media to promote their brands, manage consumers' emotions in order to engender brand commitment, and shape consumers' attitude toward the brand extension.

One finding of potential interest to managers of mobile messaging services and mobile shopping platforms is that brand equity plays a lesser role in shaping individuals' attitudes toward using a mobile shopping platform. From the manager's perspective, it would be especially unfortunate to interpret our results to imply that brand equity is not important to the development of mobile shopping. Given the situational context of our sample, the appropriate interpretation is that further increases in brand equity may be less potent than similar increases in consumers' brand commitment. Managers of mobile messaging services must still develop strategies to maintain or increase the

brand's equity.

Some studies have demonstrated that, especially for mobile shopping websites, fostering consumer attitude is an important step toward increasing customers' purchase intentions and repeat purchase intentions as well. Our findings further indicate that the interaction effect between habit and brand extension attitude is insignificant. This implies that attitude is still the primary factor in stimulating consumers' acceptance or adoption intentions. Higher priority should be given to determining how to build customers' attitude toward the brand extension. While buyers may or may not purchase products from a favorable mobile shopping platform or website, they will definitely not purchase products from an unfavorable one. Gaining consumers' favorable attitude toward the brand extension is largely under the control of the mobile messaging service provider. Perceived fit has a strong effect on attitude toward the brand extension. Thus, companies should ensure that the extension product being launched fits well with the parent brand if they want the consumer's attitude toward the brand extension to be favorable. Companies with a weaker image, or those contemplating launching an extension which does not obviously fit their product line, should develop strategies to overcome these obstacles. Other approaches include increasing awareness of the extension product, and emphasizing the various values or benefits of using that product. For example, companies can provide consumers with specific information about the utilitarian, hedonic and symbolic benefits of using the new product.

5.4. Limitations

Our findings have several limitations. First, though we believe the findings can be generalized to other types of online shopping, some of our findings, such as the relative importance of brand assets in fostering brand attachment, might not be generalizable as such. Caution should also be taken when generalizing our findings to studies in which the construct measurements are aimed at a single target (service or application). Second, the results may have been impacted by selection bias, since we sampled users of only one particular mobile messaging service (LINE). Individuals who have already stopped using the mobile messaging service might have different perceptions about the influence of brand assets, brand attachment, brand equity and brand commitment. Therefore, the results should be interpreted as explaining only the attitude and acceptance intention of individuals who are currently using the mobile messaging service. Finally, as the data are cross-sectional, statistical support for these relationships must be viewed as tentative.

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Appendix A. Questionnaire Items

Enticing-the-Self (ET) - Park et al [2013]	
ET1	LINE is appealing to me.
ET2	LINE is attractive to me.
ET3	LINE is interesting to me.
ET4	LINE is alluring to me.
Enriching-the-Self (ER) - Park et al [2013]	
ER1	Using LINE shows that I want to be a person with the ability to use information technology.
ER2	Using LINE shows that I want to be a person who is able to follow the trend.
ER3	Using LINE shows that I am a friendly and caring person.
ER4	Using LINE shows that I am a person who is willing to share.
Enabling-the-Self (EA) - Park et al [2013]	
EA1	Using LINE helps me perform many things more conveniently.
EA2	Using LINE helps me accomplish things more quickly.
EA3	LINE is useful in my daily life.
EA4	LINE is functionally satisfying to me.
Brand-Self Distance (BD) - Park et al [2010]	
BD1	LINE is like a friend to me.
BD2	LINE is very close to me and who I am.
BD3	I feel personally connected to LINE.
BD4	I feel emotionally bonded to LINE.
Brand Prominence (BP) - Park et al [2010]	
BP1	My thoughts and feelings toward LINE often automatically come to mind seemingly on their own.
BP2	My thoughts and feelings toward LINE come to my mind so naturally and instantly that I don't have much control over them.
BP3	The word LINE automatically evokes many good thoughts about the past, present and future.
BP4	I have many thoughts about LINE.
Brand Equity (BE) - Yoo et al [2000]	
BE1	It makes sense to use LINE instead of any other brand of mobile messaging service, even if their functionalities are the same.
BE2	Even if another brand of mobile messaging service has same features as LINE, I would prefer to use LINE.
BE3	If there is another brand of mobile messaging service as good as LINE, I still prefer to use LINE.
BE4	If another brand of of mobile messaging service is no different from LINE in any way, it still seems smarter to use LINE.
Brand Commitment (BC) - Allen and Meyer (1990)	
BC1	People think highly of LINE.
BC2	I enjoy discussing LINE with people.
BC3	I feel a strong sense of belonging to LINE.
BC4	I consider myself to be loyal to LINE.
Attitude Toward the Brand Extension (ABE) - Dwivedi et al [2010]	
EA1	My attitude toward LINE Mart is positive.
EA2	I am favorably disposed toward LINE Mart.
EA3	I think LINE Mart is a good service.
EA4	I feel good about LINE Mart.
Perceived Fit (PF) - Aaker and Keller [1991]; Taylor and Bearden [2002]	
PF1	Launching LINE Mart is logical for LINE.
PF2	Launching LINE Mart is appropriate for LINE.
PF3	LINE Mart fits with the image of LINE.
PF4	LINE's resources are helpful for developing LINE Mart.
Habit (HA) - Limayem et al [2007]	
HA1	Online shopping has become automatic to me.
HA2	Online shopping is natural to me.
HA3	Online shopping is something I do unconsciously.
HA4	Online shopping is an obvious choice for me.
Acceptance Intention (AI) - Venkatesh et al [2003]	
AI1	I intend to purchase products from LINE Mart in the future.
AI2	I plan to purchase products from LINE Mart in the future.
AI3	I expect to purchase products from LINE Mart in the future.
AI4	It is likely that I will purchase products from LINE Mart in the future.

Appendix B. Detailed Analysis Results

Table B1. PLS Confirmatory Factor Analysis and Cross-loadings

	AI	BC	BD	BE	ABE	BP	EA	ER	ET	HA	PF
AI1	0.94	0.51	0.37	0.43	0.64	0.47	0.41	0.46	0.44	0.34	0.61
AI2	0.95	0.51	0.40	0.46	0.62	0.49	0.43	0.46	0.46	0.33	0.59
AI3	0.95	0.50	0.39	0.40	0.64	0.46	0.40	0.45	0.47	0.31	0.58
AI4	0.91	0.46	0.38	0.36	0.60	0.41	0.41	0.39	0.43	0.30	0.56
BC1	0.43	0.85	0.69	0.62	0.45	0.51	0.70	0.46	0.69	0.28	0.44
BC2	0.45	0.87	0.60	0.58	0.44	0.58	0.61	0.52	0.61	0.27	0.40
BC3	0.49	0.91	0.66	0.65	0.44	0.66	0.57	0.63	0.67	0.30	0.46
BC4	0.47	0.89	0.62	0.70	0.44	0.58	0.54	0.55	0.64	0.25	0.47
BD1	0.35	0.61	0.87	0.49	0.37	0.49	0.55	0.47	0.60	0.24	0.30
BD2	0.36	0.64	0.88	0.57	0.37	0.51	0.57	0.42	0.62	0.26	0.30
BD3	0.38	0.64	0.87	0.52	0.38	0.57	0.53	0.49	0.64	0.23	0.38
BD4	0.33	0.66	0.86	0.50	0.36	0.61	0.46	0.51	0.66	0.19	0.32
BE1	0.32	0.55	0.48	0.81	0.31	0.45	0.47	0.40	0.57	0.27	0.29
BE2	0.40	0.70	0.58	0.93	0.32	0.50	0.59	0.48	0.61	0.28	0.36
BE3	0.40	0.69	0.55	0.93	0.35	0.50	0.55	0.50	0.57	0.24	0.40
BE4	0.43	0.62	0.50	0.85	0.43	0.48	0.48	0.57	0.53	0.19	0.44
ABE1	0.58	0.47	0.41	0.39	0.92	0.44	0.41	0.44	0.51	0.22	0.61
ABE2	0.64	0.49	0.42	0.40	0.93	0.47	0.36	0.49	0.50	0.21	0.63
ABE3	0.64	0.47	0.41	0.36	0.93	0.41	0.39	0.43	0.47	0.24	0.59
ABE4	0.62	0.44	0.36	0.35	0.94	0.43	0.35	0.42	0.45	0.20	0.59
BP1	0.41	0.60	0.59	0.50	0.37	0.91	0.39	0.54	0.59	0.30	0.39
BP2	0.47	0.60	0.58	0.51	0.44	0.92	0.41	0.58	0.62	0.31	0.47
BP3	0.41	0.61	0.55	0.50	0.42	0.87	0.44	0.53	0.64	0.29	0.35
BP4	0.42	0.51	0.48	0.39	0.42	0.81	0.41	0.45	0.56	0.29	0.35
EA1	0.39	0.58	0.52	0.48	0.36	0.39	0.89	0.42	0.50	0.23	0.30
EA2	0.40	0.61	0.52	0.51	0.37	0.43	0.88	0.48	0.51	0.20	0.33
EA3	0.30	0.51	0.49	0.43	0.27	0.34	0.87	0.33	0.47	0.23	0.31
EA4	0.41	0.63	0.53	0.61	0.39	0.44	0.78	0.49	0.62	0.25	0.39
ER1	0.43	0.52	0.50	0.54	0.44	0.56	0.46	0.87	0.53	0.25	0.44
ER2	0.40	0.55	0.51	0.53	0.41	0.50	0.45	0.89	0.54	0.22	0.43
ER3	0.42	0.56	0.49	0.45	0.44	0.56	0.43	0.91	0.49	0.23	0.45
ER4	0.40	0.55	0.42	0.44	0.39	0.50	0.46	0.85	0.47	0.27	0.40
ET1	0.44	0.66	0.67	0.57	0.43	0.64	0.54	0.50	0.92	0.24	0.41
ET2	0.44	0.71	0.70	0.63	0.47	0.63	0.64	0.54	0.92	0.23	0.45
ET3	0.40	0.66	0.64	0.55	0.46	0.58	0.57	0.50	0.88	0.27	0.44
ET4	0.47	0.65	0.61	0.57	0.49	0.64	0.49	0.54	0.89	0.26	0.45
HA1	0.30	0.33	0.26	0.28	0.19	0.30	0.28	0.23	0.25	0.93	0.18
HA2	0.30	0.27	0.25	0.25	0.21	0.28	0.26	0.20	0.25	0.94	0.18
HA3	0.36	0.31	0.26	0.26	0.25	0.37	0.23	0.31	0.31	0.95	0.22
HA4	0.33	0.25	0.23	0.24	0.23	0.31	0.22	0.28	0.23	0.94	0.21
PF1	0.51	0.43	0.37	0.36	0.53	0.36	0.36	0.36	0.45	0.19	0.85
PF2	0.59	0.49	0.36	0.39	0.64	0.40	0.40	0.42	0.44	0.19	0.92
PF3	0.56	0.44	0.32	0.40	0.57	0.39	0.32	0.45	0.43	0.16	0.90
PF4	0.49	0.37	0.25	0.30	0.47	0.40	0.24	0.46	0.33	0.20	0.76

ABE: Attitude Toward the Brand Extension AI: Acceptance Intention BC: Brand Commitment
BD: Brand-Self Distance BE: Brand Equity BP: Brand Prominence EA: Enabling-the-Self
ER: Enriching-the-Self ET: Enticing-the-Self HA: Habit

Table B2. Common Method Bias Analysis

	Items	Substantive factor loading (R_1)	Substantive variance (R_1^2)	T-Statistics	Method factor loading (R_2)	Method variance (R_2^2)	T-Statistics
Enticing-the-Self	ET1	0.98	0.96	**29.37**	-0.07	0.00	**1.96**
	ET2	0.86	0.74	**23.54**	0.07	0.00	1.89
	ET3	0.90	0.81	**22.68**	-0.01	0.00	0.48
	ET4	0.88	0.77	**18.73**	0.01	0.00	0.40
Enriching-the-Self	ER1	0.81	0.66	**20.71**	0.07	0.00	1.82
	ER2	0.89	0.79	**26.04**	0.00	0.00	0.11
	ER3	0.95	0.90	**31.80**	-0.05	0.00	1.47
	ER4	0.88	0.77	**23.19**	-0.03	0.00	0.92
Enabling-the-Self	EA1	0.95	0.90	**30.26**	-0.07	0.00	1.91
	EA2	0.88	0.77	**25.10**	0.00	0.00	0.04
	EA3	1.01	1.02	**37.03**	-0.18	0.03	**4.29**
	EA4	0.55	0.30	**6.87**	0.28	0.08	**3.93**
Brand-Self Distance	BD1	0.92	0.85	**24.16**	-0.06	0.00	1.63
	BD2	0.91	0.83	**28.56**	-0.03	0.00	0.91
	BD3	0.83	0.69	**22.26**	0.05	0.00	1.18
	BD4	0.82	0.67	**17.46**	0.04	0.00	1.14
Brand Prominence	BP1	0.94	0.88	**30.40**	-0.05	0.00	1.54
	BP2	0.90	0.81	**30.33**	-0.03	0.00	1.13
	BP3	0.84	0.71	**23.27**	0.04	0.00	1.09
	BP4	0.82	0.67	**19.27**	0.02	0.00	0.55
Brand Commitment	BC1	0.80	0.64	**13.35**	0.07	0.00	1.30
	BC2	0.94	0.88	**19.34**	-0.08	0.01	1.53
	BC3	0.89	0.79	**22.03**	0.02	0.00	0.77
	BC4	0.89	0.79	**18.15**	-0.01	0.00	0.30
Brand Equity	BE1	0.86	0.74	**18.89**	-0.05	0.00	1.28
	BE2	0.94	0.88	**37.92**	-0.01	0.00	0.55
	BE3	0.94	0.88	**39.39**	-0.02	0.00	0.99
	BE4	0.78	0.61	**16.94**	0.08	0.01	1.89
Attitude Toward the Brand Extension	ABE1	0.91	0.83	**32.31**	0.02	0.00	1.01
	ABE2	0.89	0.79	**31.25**	0.05	0.00	1.70
	ABE3	0.94	0.88	**34.85**	-0.01	0.00	0.52
	ABE4	0.99	0.98	**53.13**	-0.07	0.00	**2.85**
Perceived Fit	PF1	0.85	0.72	**22.22**	0.00	0.00	0.06
	PF2	0.90	0.81	**30.20**	0.03	0.00	0.94
	PF3	0.92	0.85	**29.96**	-0.02	0.00	0.80
	PF4	0.77	0.59	**15.77**	-0.01	0.00	0.23
Habit	HA1	0.94	0.88	**66.01**	0.00	0.00	0.10
	HA2	0.96	0.92	**85.85**	-0.03	0.00	1.67
	HA3	0.92	0.85	**65.82**	0.04	0.00	1.92
	HA4	0.94	0.88	**69.76**	-0.01	0.00	0.75
Acceptance Intention	AI1	0.93	0.86	**37.34**	0.02	0.00	0.80
	AI2	0.93	0.86	**47.79**	0.02	0.00	1.28
	AI3	0.95	0.90	**44.67**	0.00	0.00	0.09
	AI4	0.95	0.90	32.40	-0.04	0.00	1.42

Note: t-statistics in bold are significant (p-value < .05).