

Extend to online or offline? The effects of web-brand extension mode, similarity, and brand concept on consumer evaluation

Liyin Jin, *Fudan University, China*

Deqiang Zou, *Fudan University, China*

Abstract This research examines the effects of extension mode (online to online vs. online to offline), web-brand concept (function oriented vs. experience oriented) and extension similarity (high vs. low) on consumer web-brand extension evaluations, attitude, perceived quality, and purchase intention of the extension brands. The analysis reveals two significant interaction effects: (1) the positive effect of brand extension similarity on consumer evaluations is stronger when the parent brand is function oriented compared to the experience-orientated ones; (2) the positive effect of brand extension similarity on consumer evaluations is more pronounced when the web-brands extend to offline markets rather than to online markets. Implications for marketing theory and practice are discussed.

Keywords web-brand extension; extension similarity; web-brand concept extension mode; consumer evaluation

Introduction

In the light of skyrocketing costs for the introduction of new products, brand extensions – the deployment of an existing brand to launch a new product that is not part of the original product family or category – have been a strategic means of increasing popularity (e.g. Rangaswamy, Burke, & Oliva, 1993). Indeed, because of the enormous costs and risks inherent in establishing a new brand, brand managers very often rely on an existing brand image and attempt to transfer the existing beliefs to new products. Even though brand extensions are an attractive way to introduce new products, not every brand extension is successful. Given that about 50–60% of all brand extensions eventually fail (Vašek, 2002), the determinants of successful brand extensions are a critical economic consideration. In addition, the underlying psychological mechanisms that contribute to a successful or an unsuccessful brand extension constitute a highly interesting domain (Bless & Greifeneder, 2009).

As an increasingly popular strategy, brand extension itself has stretched from traditional offline market to the cyber space of e-business. In recent years, web-brands represented by Google, Amazon, and Facebook have witnessed rapid development. With the gradual increase of brand awareness, those web-brands are committed to

diversify business development using brand extension in two ways: from online to online (extension into virtual space) and from online to offline (extension into the traditional marketplace). For example, Tencent QQ (the most popular free instant-messaging computer program in mainland China) is looking to expand to online educational domains in cyberspace. At the same time, QQ instant noodles are on sale in the traditional marketplace. The Google Nexus One smartphone (manufactured by Taiwan's HTC Corporation) became available on 5 January 2010, and the Google Nexus S smartphone (manufactured by Samsung Electronics) was released on 16 December 2010. Google also made Google Gum and the Google wireless mouse available for sale in 2006 and 2008 respectively. In short, there has been a significant trend of online-based brand extension to both online and offline markets.

However, previous research has focused mostly on traditional product brand extensions (Mao & Krishnan, 2006; Smith & Park, 1992; Yeo & Park, 2006) and the differences between product-brand and service-brand extensions (van Riel, Lemmink, & Ouwersloot, 2001). Only limited research has explored web-brand extensions specifically (J. W. Park & Lee, 2005; van Riel & Ouwersloot, 2005). For brand extensions in the traditional offline marketplace, the Aaker and Keller (1990) model with wide acceptance and diffusion hypothesises that evaluations of brand extensions are based on the quality of the original brand, the fit between the parent and extension categories, and the interaction of the two.

Rooted in virtual space, web-brands may differ greatly both in brand meaning and the drivers of brand equity (Page & Lepkowska-White, 2002). As brand extension is a transfer process of brand knowledge, meaning, emotional attachment, and equity, consumer perceptions and evaluations of web-brand extensions are therefore likely to be distinguishable from those traditional brands. Specially, web-brands can extend both from online to online and from online to offline, which differs from traditional brands in terms of extension mode. In addition, the online parent brand can either be function (e.g. navigation service) or experience orientated (e.g. gaming) (C. W. Park, Jaworski, & MacInnis, 1986). Such diversity in online brand association may introduce fruitful contingencies in brand-extension evaluation from consumers.

This research aims to explore consumer evaluations of web-brand extensions by taking into consideration the abovementioned features. Specifically, we focus on the effects of web-brand extension mode (from online to online vs. from online to offline) on consumers' evaluations, such as attitude towards brand extension, perceived quality of extension brand, and purchase intention. Furthermore, we investigate how extension similarity (high vs. low) and web-brand concept type (function vs. experience oriented) influence web-brand extensions, and the possible interaction effects of these two factors in order to shed light on the website's brand-extension strategies.

The next sections are organised as follows. First, we review the existing research on web-brands and brand extension, and formulate our focal research hypotheses. Next, we present a detailed description for the design of and procedures for an experiment, followed by the data analysis. Discussions and relevant managerial implications of the study are presented at the end of the paper.

Literature review and hypotheses development

To investigate the empirical generalisability of Aaker and Keller's (1990) model, Bottomley and Holden (2001) undertook a secondary analysis using a comprehensive

data set containing the data from the original study and seven replications conducted around the world. Several generalisations have emerged from their analysis. First, consumers' evaluations of brand extensions are determined primarily by the quality of the parent brand and the fit between the original and extension product categories. Second, evaluations of brand extensions are further dependent, but to a lesser extent, on (a) interactions of the quality of the parent brand with the complementarity and transferability of assets and skills between the original and extension product categories, and (b) the perceived difficulty of making the extension.

Given the importance of the fit variable in empirical studies (e.g. Bottomley & Holden, 2001), fit or similarity is emphasised as the focus of further research (Völckner & Sattler, 2006). There is no universally accepted conceptualisation of fit, which raises the more general question of what constitutes fit. In other words, what constitutes the basis for consumers to make judgement on similarity?

In Aaker and Keller's (1990) model which frames brand-extension evaluation as an overall affect transfer process, the similarity between the parent brand's product category and the extension category is measured in terms of (1) the transferability of skills and expertise from one category to the other, and (2) the complementarity and substitutability of one category and the other.

In contrast to such conceptualisation of fit or similarity at category level, Broniarczyk and Alba (1994) propose that despite the similarity between parent and extension category, brand-specific associations also play an important role. Brand-specific associations refer to attributes or benefits that distinguish one brand from others and reveal the unique characteristics of that brand. Thus, fit or similarity judgement can be based on brand level instead of category level.

As one typology of brand-specific associations, brand concept can be categorised as functional, experiential, and symbolic (C. W. Park et al., 1986; C. W. Park, Milberg, & Lawson, 1991). The functional brand concept emphasises solving practical problems by purchasing and using a brand. The experiential brand concept aims at bringing (aesthetically) pleasant emotional and sensory experiences to consumers. The symbolic brand concept focuses on identifying consumers' social status and self-worth. Functional brands offer direct connections with product attributes, while the other two kinds do not. Opposed to functional brands, consumers tend to hold an abstract and general association with experiential and symbolic brands.

In investigating the fit or similarity effect due to brand concepts of the parent brand in brand extension, C. W. Park et al. (1986) find that consumers' evaluations of brand extensions are higher when parent-brand concepts are consistent with the benefits of the extended brand.

Till now, few studies have focused on factors that drive consumer attitude towards web-brand extension (J. W. Park & Lee, 2005; van Riel & Ouwersloot, 2005). Following the typology of brand concepts proposed by C. W. Park et al. (1986), in brand-extension evaluations of web-brands, the similarity judgement on basis of brand concepts can also play a key role. Parent brands with experiential and symbolic brand concepts are found to have advantages in extending to more product categories (i.e., including those seemingly less similar) (C. W. Park et al., 1986). The reasoning behind this conclusion is that functional attributes are related to only one specific product or product category, which indicates that the brand concept of the functional brand is very clear. As a result, consumers are inclined to experience cognitive dissonance towards far extensions which occur when the functional brands extend to a very different category.

Given these findings in C. W. Park et al. (1986), we speculate that extensions of functional web-brands (e.g. search engine, navigation, etc.) are influenced more by similarity between extended brand and parent brand. In contrast, for experience-oriented web-brands (e.g. virtual game websites, video and audio websites, etc.), consumer evaluations will be more holistic and abstract. At the same time, brand associations and brand recognition are mainly emotional experiences that can be shared across various product (or service, website) categories. So extensions of experience-oriented web-brands are less likely to be influenced by category similarity. Thus, we propose the following:

H1: There is a significant interaction effect between web-brand concept type and extension similarity in driving the outcome of web-brand extensions. The relationship between web-brand extension similarity and (a) consumer evaluations of the extensions, (b) attitude towards extension brand, (c) perceived quality of the extension brand, and (d) purchase intention will be stronger for function-oriented web-brands than for experience-oriented web-brands.

The parent and extended brand may be similar in several ways (Yeung & Wyer, 2005). When extension modes of web-brands are viewed as the basis of fit or similarity judgement in web-brand extension evaluation, online to offline mode and online to online mode imply different degrees of similarity between the parent and extension product. In other words, the extension modes of web-brands make a new dimension of fit in brand-extension study. Similarity is more likely to occur when extending online rather than offline (J. W. Park & Lee, 2005). Common or different market space (i.e. online or offline) is likely to be leveraged as the element in shaping the customer's attitude towards extension.

According to categorisation and schema theory (Aaker & Keller, 1990), the more similar the extensions are to the parent brand, the more likely consumers are to rely on the parent brand's characteristics to infer the extension. However, when consumers perceive the extension similarity to be low and the categorisation between parent brand and extended brand fails, they will continue elaborate processing and transfer their attitude towards a parent brand to the extended brand based on the parent-brand concepts and shared attributes with an extension brand (Joiner & Loken, 1998).

When a web-brand extends to an online space, the parent and extended brands share some common characteristics in market environment and consumers. But when extending to an offline space, there are large differences in market environment and consumer characteristics between parent and extended brand. Thus, we propose the following:

H2: There is a significant interaction effect between web-brand extension mode and extension similarity in driving the outcome of web-brand extensions. The relationship between extension similarity and (a) consumer evaluations of the extensions, (b) attitude towards the extension brand, (c) perceived quality of the extension brand, and (d) purchase intention will be stronger for online to offline extension than for online to online extension.

Method

Pretests and stimuli

Pretests were conducted in order to select parent web-brands and potential extension categories to be used as stimuli in the later experiment. The parent web-brands needed to be well known, that is, most participants have used the parent brands and there was no informed extension. According to these standards, we choose 20 websites for the pretests. Thirty undergraduate students participated in the pretests in which they evaluated website knowledge, user experience, and knowledge of informed extensions of the parent web-brands. Participants were also required to judge whether the brands are function oriented or experience oriented. Then, they provided suggestions about which extension categories are of high and low similarity in online and offline extension situations. Following the pretests, we selected 9you.com (an online game website) and tudou.com (a video website) as experience-oriented web-brands, and ddmmap.com (a map search engine) and dangdang.com (an online bookstore) as function-oriented web-brands according to our categorisation. We designed scenarios of online extensions and offline extensions under the context of high and low similarity based on the suggestions provided by respondents in the pretests.

The pretest results show that (1) the respondents' familiarity with alternative websites was comparatively high (1 = 'not familiar', 5 = 'very familiar', $M = 4.26$); (2) ddmmap.com and dangdang.com were identified as functional-oriented websites as we expected (1 = 'strongly function oriented', 5 = 'strongly experience oriented', $M_{ddmmap} = 1.72$, $M_{dangdang} = 2.07$); (3) tudou.com and 9you.com were identified as experience-oriented websites ($M_{tudou} = 4.21$, $M_{9you} = 3.98$) as we expected; (4) the extension-fit evaluation of scenarios that were manipulated as a high web-brand extension similarity situation was much higher than when manipulated as a low extension similarity situation ($M_{high\ similarity} = 4.07$; $M_{low\ similarity} = 1.46$; $t = 15.47$, $p < .001$, where 1 = 'not similar', 5 = 'very similar').

Experimental design

We employed a $2 \times 2 \times 2$ between-subjects factorial experimental design examining extension mode (online to online vs. online to offline), extension similarity (high vs. low), and web-brand concept (function-oriented vs. experience-oriented) as the between-subjects factors. Therefore, eight scenarios were developed with two brands in each scenario (see Table 1).

Participants and procedure

In total, 320 online users in Shanghai, China, participated in the study for 30 RMB (approximately equivalent to US\$4.57). Participants were randomly assigned to one of the eight treatments, and completed a questionnaire at their own pace. Each participant received a printed online newspaper and was told to follow the instructions closely. The first part of the experiment stimuli materials provided descriptions of the parent web-brands. The participants were asked to read the information and determine the extent to which they thought the parent web-brand was function oriented or experience oriented. Then, they were required to respond

Table 1 Web-brands used as stimuli in the experiment.

Extension mode	Function-oriented brands		Experience-oriented brands	
	High similarity	Low similarity	High similarity	Low similarity
Online to online extension	dangdang.com → dangdangbook.com (an e-book sharing website)	dangdang.com → dangdanggame.com (a virtual game website)	9you.com → 9youexchange.com (online auction website for items in computer games)	9you.com → 9youbookmall.com (an online bookstore)
	ddmap.com → ddjiaotong.com (a traffic navigation website)	ddmap.com → ddexchange.com (online auction website for items in computer games)	tudou.com → TDLive.com (a web TV platform)	tudou.com → tudouebok.com (an e-book sharing website)
Online to offline extension	dangdang.com → dangdang physical bookstore	ddmap.com → GPS navigator	9you.com → handheld game console	9you.com → 9you physical bookstore
			tudou.com → video player	tudou.com → GPS navigator

to items measuring their relationship strength, familiarity, attitude, and involvement with the parent web-brand.

The second part of the experiment stimuli materials fabricated an online news report stating that the parent web-brand would be extended to other categories. Pictures were included to ensure perceived reality. After reading the information about the brand extension, participants were asked to provide their evaluations about the extension similarity, evaluations of the extension, attitude towards the extension, and purchase intention. Finally, they provided demographic information.

Measurement

The dependent variables included evaluations of the extension, attitude towards the extension brand, perceived quality of the extension brand, and purchase intention. Three items were used to measure evaluations of the extension (Shimp & Sharma, 1987), and three items were used to measure attitude towards the extension brand (Zhang & Sood, 2002). The scale of perceived quality of the extension brand employed the four items created by Dodds, Monroe, and Grewal (1991). Three items were used to measure purchase intention (Coyle & Thorson, 2001). The control variables in the research included familiarity with the parent brand (Kent & Allen, 1994), involvement (Beatty & Talpade, 1994), and attitude towards the parent brand (Putrevu & Lord, 1994).

A single item was used to detect the participants' evaluation of web-brand concept type (1 = 'strongly function oriented', 5 = 'strongly experience oriented'). Three items were used to measure extension similarity judgement (Ahluwalia & Gurhan-Canli, 2000). A detailed description of the measurement scales used is given in Appendix 1.

Results

Manipulation check

The average function/experience-oriented ratings (1 = 'strongly function oriented', 5 = 'strongly experience oriented') of dangdang.com and ddmmap.com ($M = 1.66$) are significantly lower than 9you.com and tudou.com ($M = 4.85$; $t = 17.429$, $p < .001$) and lower than the median of 3 ($t = 4.722$, $p < .001$). The function/experience-oriented ratings of 9you.com and tudou.com are significantly higher than the midpoint in the scale, i.e. 3 ($t = 5.648$, $p < .001$). There is no significant difference between dangdang.com and ddmmap.com concerning the function versus experience orientation perception ($M_{\text{dangdang}} = 1.83$, $M_{\text{ddmap}} = 1.49$, $t = .815$, $p > .1$). The same is true with 9you.com and tudou.com ($M_{\text{9you}} = 4.88$, $M_{\text{tudou}} = 4.82$, $t = .227$, $p > .1$). As a result, we can confirm that 9you.com and tudou.com, as well as dangdang.com and ddmmap.com are good representatives of function-oriented and experience-oriented web-brands respectively. Participants also reported higher perceived extension similarity (e.g. 1 = 'unfamiliar', 5 = 'familiar') (Cronbach's $\alpha = .858$, we took average scale as the indicator) in the high-extension similarity condition ($M = 3.358$) than in the low-extension similarity condition ($M = 2.580$, $t = 6.391$, $p < .001$). This result suggests that our manipulation was successful.

For the measure of reliability of variables, the results show that the Cronbach's alpha coefficients of all variables are more than .75, indicating good reliability of all constructs. In more specific terms, Cronbach's alpha of attitude towards brand evaluation is .765, attitude towards extended brand is .795, perceived quality of extended brand is .815, and purchase intention is .760. For the control variables, Cronbach's alpha of parent-brand familiarity is .773, web-brand involvement is .781, and attitude towards parent web-brand is .791. In order to simplify the following analysis, we used the average scale as the indicator of these variables in the following hypotheses tests.

Hypotheses tests

To test the hypotheses, we ran a series of analysis of covariance tests (ANCOVAs) using attitude towards brand evaluation, attitude towards extended brand, perceived quality of extended brand, and purchase intention as dependent variables. The familiarity with and involvement of parent web-brand and attitude towards parent web-brand were specified as control variables. The web-brand concept type, extension similarity, extension mode, and their interactive items, which were all manipulated in the experiment, were used as independent variables.

Table 2 shows the means and standard deviations of dependent variables in each treatment. Controlling for familiarity, involvement, and attitude towards the parent web-brand, we found significant differences for the effects of evaluations of the extension ($F(1, 308) = 11.528, p < .001$), attitude towards the extended brand ($F(1, 308) = 20.879, p < .001$), perceived quality of the extension brand ($F(1, 308) = 11.745, p < .001$), and purchase intention ($F(1, 308) = 19.282, p < .001$) between different extension similarity conditions. That is, compared with low web-brand extension similarity conditions, participants' reactions to high-similarity web-brand extension were more positive. However, the main effects of both web-brand concept type and extension mode on each dependent variable were non-significant ($p > .38$).

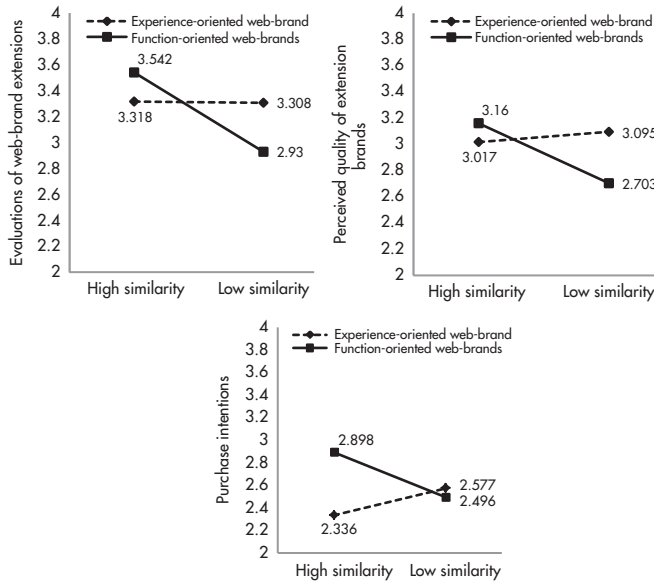
Table 2 The means and standard deviations of dependent variables in each treatment.

	Function-oriented brands		Experience-oriented brands	
	High similarity	Low similarity	High similarity	Low similarity
Online extension	3.553 (0.664) ^a	3.079 (0.821)	2.816 (0.869)	3.237 (0.963)
	2.912 (0.752) ^b	2.859 (0.641)	2.491 (0.740)	2.632 (0.808)
	3.228 (0.556) ^c	3.018 (0.582)	2.719 (0.659)	3.053 (0.848)
	2.614 (0.911) ^d	2.614 (0.687)	2.123 (0.917)	2.386 (0.722)
Offline extension	3.525 (0.658)	3.000 (0.527)	3.675 (1.092)	3.316 (0.533)
	3.217 (0.711)	2.684 (0.698)	3.200 (0.737)	3.123 (0.372)
	3.150 (0.567)	2.614 (0.631)	3.100 (0.742)	3.070 (0.492)
	3.250 (0.601)	2.404 (0.681)	2.433 (1.098)	2.789 (0.779)

Note. ^aConsumers' evaluations of brand extensions (1 = 'bad', 5 = 'good'); ^bConsumers' attitude towards extended brand (1 = 'bad', 5 = 'good'); ^cPerceived quality of the extended brand (1 = 'poor quality', 5 = 'good quality'); ^dPurchase intention (1 = 'unlikely to buy', 5 = 'likely to buy'). Standard deviations are in parentheses.

Figure 1 Consumers' evaluation of extensions as the function of extension similarity and web-brand concept type.

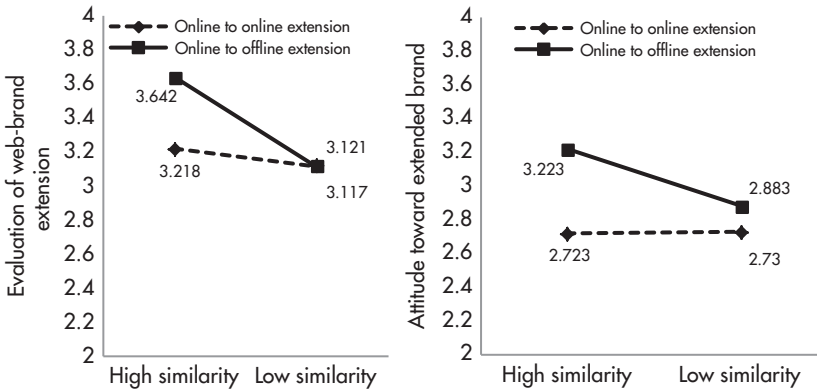
Note. For evaluation of web-brand extensions, 1 = 'bad' and 5 = 'good'; for ratings on perceived quality of extension brands, 1 = 'poor quality' and 5 = 'good quality'; and for purchase intention of the extended brands, 1 = 'unlikely to buy' and 5 = 'likely to buy'.



As mentioned in the hypotheses, this research mainly focuses on the interaction effect between extension mode and extension similarity, and the interaction effect between web-brand concept type and extension similarity on evaluations of proposed web-brand extension, attitude towards the extension brand, perceived quality, and purchase intention of the extension brand. As shown in Figure 1, there exist significant interaction effects of extension similarity and web-brand concept type on the evaluations of the extension ($F(1, 308) = 9.288, p < .01$), perceived quality ($F(1, 308) = 3.499, p < .05$), and purchase intention of the extension brand ($F(1, 308) = 6.175, p < .05$). For experience-oriented web-brands, participants' evaluations of the extension, perceived quality, and purchase intention do not significantly differ between high- and low-extension similarity conditions ($p > .47$) while their ratings differ significantly for function-oriented web-brands ($p < .05$). Specifically, when the brand is extended to a similar instead of a dissimilar field, in comparison to experience-orientated web-brands, function-orientated web-brands receive responses that are more favourable. These results support H1a, H1c, and H1d. However, interaction effect of extension similarity and web-brand concept type on the attitude towards extension brand was not significant ($F(1, 308) = .309, p > .1$), and thus H1b is not supported.

As shown in Figure 2, significant interactive effects were found for extension mode and extension similarity on consumer evaluations of the extension ($F(1,308) = 3.343, p < .05$) and attitude towards the extended brand ($F(1,308) = 3.053, p < .05$). For online to online extension, participants' evaluations on extension and attitude towards extended brand do not differ significantly between high- and low-extension

Figure 2 Consumers' evaluation of web-brand extensions as a function of extension similarity and extension mode.
Note. For evaluation of web-brand extensions, 1 = 'bad' and 5 = 'good'; for attitude towards extended brand, 1 = 'bad' and 5 = 'good'.



similarity conditions ($M_{\text{high similarity}} = 3.218$, $M_{\text{low similarity}} = 3.117$; $t = .620$, $t = .143$, $p > .1$). However, for online to offline extension, participants' evaluations of extension and attitude towards extended brands in high-extension similarity conditions are higher than low-extension similarity conditions ($M_{\text{high similarity}} = 3.642$, $M_{\text{low similarity}} = 3.121$; $t = 2.874$, $t = 2.628$, $p < .01$). Therefore, H2a and H2b are supported. However, the interaction effects of extension similarity and web-brand concept type on the perceived quality evaluation of extension brand ($F(1, 308) = 2.620$, $p > .1$) and purchase intention ($F(1, 308) = 2.112$, $p > .1$) were not significant, and thus H2c and H2d are not supported. Further, certain control variables influenced consumers' evaluation of the extension, attitude towards extended brands, perceived quality, and purchase intention. For example, attitude towards the parent brand positively influenced evaluations of the extensions ($F(1,308) = 5.423$, $p < .05$); consumers' familiarity with the parent brand positively influenced attitudes towards the extended brands ($F(1,308) = 4.578$, $p < .05$) and purchase intention ($F(1,308) = 4.178$, $p < .05$). No other main effects or interaction effects were significant ($p > .58$).

Mediation analysis

To investigate further the mechanism underlying these effects, we speculate that evaluation of web-brand extensions may mediate the effects of extension similarity, web-brand concept type, and extension mode on attitude towards extended brand, perceived quality, and purchase intention. To test this mediation effect, we conducted an ANCOVA in which extension mode (online to online/offline), web-brand concept type (function or experience oriented), and extension similarity (high or low) were between-subjects factors; the evaluation of web-brand extension (the proposed mediator), the familiarity and involvement of parent web-brand, and attitude towards parent web-brand were covariates; and attitude towards extended brand was the dependent variable.

The effect of evaluations of web-brand extension were significant ($F(1, 307) = 37.336, p < .001$), but the interactive effect between brand extension mode and extension similarity (as shown in Figure 2b) was no longer significant ($p > .440$). The same analysis with perceived quality as the dependent variable showed that the interactive effect between extension similarity and web-brand concept type (shown in Figure 1b and c) was eliminated ($p > .38$) after evaluation of web-brand extensions was incorporated as a covariate. Thus, the evaluation of web-brand extension significantly mediated the interactive effects of extension similarity and extension mode on the attitude towards extended brand, as well as the interactive effect of extension similarity and web-brand concept type on perceived quality and purchase intention.

Discussion

Theoretical and managerial implications

Even though seemingly a novel phenomenon, extension of online brands within the cyber world and to the physical marketplace is not a fad but an increasingly pervasive strategic initiative. For instance, since September 2007, Amazon has consecutively released a series of e-book readers, Amazon Kindle, Amazon Kindle 2, Amazon Kindle 3, and Amazon Kindle DX, and so on. This makes a good case in point of brand extension from an online to an offline market. Concerning brand extensions from online to online business, Facebook keeps introducing new applications like marketplace (allowing users to post free classified ads), notes (a blogging feature), places (location base service, which is already known from the 'check-in' feature of Foursquare), and so on.

Although previous work on product brand extension has examined how extension similarity or fit affects consumers' evaluations of extension (e.g. Aaker & Keller, 1990; Bottomley & Holden, 2001; Boush & Loken, 1991), the present study is the first we are aware of to examine how web-brand extension mode (extension to online or offline markets), extension similarity, and web-brand concept type affect evaluations of web-brand extension interactively. Findings in this study expand existing knowledge of brand extension from the offline to the online universe, and offer some new insights into the interactions in this offline–online multiverse.

The experimental study results demonstrate that extension similarity imposes significant effects on web-brand extension as well. Consumers' evaluations were more positive for web-brand extensions with high-extension similarity, which is in line with the conclusions of previous research based on the context of product brand extension. This result indicates that the theoretical framework proposed by Aaker and Keller (1990) is also applicable in the context of web-brand extension.

Specifically, the relationship between brand extension similarity and consumer evaluations of the extension, perceived quality of the extended brand, and purchase intention is stronger for function-oriented brands than for experience-oriented brands. This result is probably due to consumers' knowledge, associations, and memory, with experience-oriented web-brands being mainly comprised of experiential and emotional components that can be transferred to other contexts. Thus, experience-oriented web-brands have more abstract brand concepts than function-oriented web-brands, and as a result, when experience-oriented web-brands are extended to other categories, they are less constrained by extension similarity.

Furthermore, we demonstrated that the effects of extension similarity on consumers' evaluations of the extension and attitude towards the extended brand are more pronounced when the web-brands are extended to offline markets than to online markets. This result can be explained by categorisation and schema theory. When web-brands are extended from online to online markets, the shared features of the parent brand and the extended brand existing in the virtual space will help contribute to the successful categorisation of the extension, and as a result, the attitude towards the parent brand can be easily transferred to the extended brand, thus resulting in positive evaluations of the extension brand. Moreover, consumers may perceive a greater 'market space similarity' when the web-brands are extended from online to online markets, which may mitigate the influences of extension similarity on consumers' evaluations.

Compared with product brands, the association of web-brands is relatively different (e.g. the web-brand is perceived as high-tech and innovative but is possibly weak in physical resources). Regardless of the degree of similarity for web-brand extension, capacities of technology and innovation of websites in online extension conditions are compatible among parent web-brands and extended brands, whereas they are not compatible when extended from online to offline. Therefore, a consumer is more likely to believe that the parent web-brand and extended brand are not compatible when the web-brand is extended to offline space. As a consequence, they would rely more on the perception of extension similarity for the sake of being less compatible.

Our findings provide important insights to website and brand managers. First, we illustrate the power of extension similarity to influence consumers' evaluations of the extension. Extensions with high similarity are more likely to succeed for both traditional product brands and web-brands. In particular, similarity is more important to function-oriented web-brands than experience-oriented web-brands. Therefore, website managers should fully realise how their web-brands are categorised by consumers (functional or experiential) when they consider extending their brands. For function-oriented web-brands, it is inadvisable to extend to the 'far' market space. In contrast, consumers are more likely to accept the 'distant' extension of experience-oriented web-brands. Thus, building an experiential brand concept will help websites stretch into broader areas.

Second, web-brand extension is an important way for online firms to grow in the traditional marketplace. Online firms could launch a web-brand extension with high similarity to develop in traditional marketplaces and realise the integrative development of real and virtual market. When web-brands are extended within the online market space, similarity between the original and extended business does not matter much. But if the websites intend to extend their brands to the traditional marketplace, they should focus on extending to the field with high similarity to the existing business.

Finally, web-brand familiarity and attitude towards parent brand have great influence on web-brand extension, implying that improving the consumer's attitude towards the website can effectively facilitate further brand extensions. Moreover, we show that the evaluation of web-brand extension plays the mediating role on the relationships between independent variables and consumers' attitudes towards extended brand, as well as perceived quality and purchase intention.

Limitations and further research

To identify the exact brand concept of the parent web-brand may be a complex issue. Sometimes, the categorisation of functional versus experiential orientation cannot be completely exclusive without any overlap. In the current study, web-brands are divided into function-oriented brands and experience-oriented brands. However, even function-oriented brands can have experience features. Although we use two brands in each category to increase generalisability, the limitation due to the existence of experience features in function-oriented brands cannot be ignored.

Conventionally, PC-based consumption of online contents or applications is not very publicly visible, which implies the symbolic value derived from it may be negligible. However, with the increasing popularity of smartphones (e.g. iPhone) and tablet computers (e.g. iPad), the situation is changing. Digesting web content, utilising online applications, or updating one's status on a social networking site (SNS) increasingly takes place in view of others. So web-brand usage itself can occur in a social context. The boosted public visibility of web-brands allows individuals to define and express themselves with these brands. Even though function- and experience-orientated web-brands are the focus of the current study, the symbolic brand concept in C. W. Park et al.'s (1986) typology should become a focus of further research in the brand extensions involved in online and offline landscapes.

The brand-extension modes investigated in this study concentrate on online to online and online to offline extensions. While considering the technology hierarchy effect in brand extension, Jun, Mazumdar, and Raj (1999) find that that the quality of an extension is judged more favourably when the parent product category is at a higher technological level than when it is at a lower level. Since people tend to attach the image of hi-tech to web-brands, the unexplored mode of offline to online extensions may be of interest in future research.

Furthermore, concerning the psychological process underlying each extension mode, it is still not clear if a generalised or several adaptive theoretical bases (e.g. affect transfer, brand specific associations, etc.) constitute a valid and reliable account. Future studies should explore this question intensively.

In terms of the features or functions of web-brands, they can be highly differentiated between each other. Among all online businesses, SNSs increasingly grab people's attention with their exponential growth rate and huge impact on consumer behaviour through online word-of-mouth communications. Advertising support has been identified and verified as a key factor that may influence brand-extension success in several empirical studies conducted in an offline context (e.g. Reddy, Holak, & Bhat, 1994; Völckner & Sattler, 2006). In this sense, brand extensions launched by these SNSs enjoy the advantage of buzz marketing or viral marketing largely to accelerate the trial and adoption of the extensions. However, potentially negative implications of SNSs might also bring catastrophic damage to web-brands due to the massive power of online buzz.¹ Further research is needed to focus on this social media feature of SNSs, investigate the mechanism underlying this web-brand extension process, and come up with strategic advice on how to support instead of destroy brand value in web-brand extensions with the involvement of SNSs.

¹We acknowledge one of the *JMM* anonymous reviewers for pointing out this issue.

Even though (a) consumer evaluation of the extension, (b) attitude towards extension brand, (c) perceived quality of the extension brand, and (d) purchase intention are widely accepted as the measurements of brand-extension success, in the present study, research hypotheses related to each of these dependent variables do not necessarily receive converging support. For instance, H1b (on attitude towards extension brand), H2c (on perceived quality rating of extension brand), and H2d (on purchase intention of extension brand) failed to be verified by statistical tests. Given this evidence and the mediating role that the evaluation of extensions plays in relating extension mode, similarity, and web-brand concept to the other three variables measuring extension success, it would be worthwhile examining the possibly complicated structural relations between these measurements of brand-extension outcomes in future research.

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Appendix 1. Measurement scales of variables

Evaluations of the extension, (Shimp & Sharma, 1987)

Rate your overall feelings about this kind of brand extension:

Bad	1	2	3	4	5	Good
Foolish	1	2	3	4	5	Wise
Harmful	1	2	3	4	5	Beneficial

Attitude towards the extension brand, (Zhang & Sood, 2002)

Rate your overall feelings about using this extension website:

Bad	1	2	3	4	5	Good
Unpleasant	1	2	3	4	5	Pleasant
Dislikeable	1	2	3	4	5	Likable

Perceived quality of the extension brand (Dodds, Monroe, & Grewal, 1991)

1 = 'disagree', 5 = 'agree'

This extension website appears to be of good quality

This extension website appears to be reliable

This extension website appears to be dependable

This extension website appears to be superior

Purchase intention (Coyle & Thorson, 2001)

1 = 'disagree', 5 = 'agree'

It is very likely that I will buy [brand]

I will purchase the next time I need [product]

I will definitely try [brand]

Extension similarity judgement (Abuluwalia & Gurhan-Canli, 2000)

Using the phrases below, please indicate how you think __ compares to the image of __

Inconsistent	1	2	3	4	5	Consistent
Different	1	2	3	4	5	Similar
Unrepresentative	1	2	3	4	5	Representative

Familiarity with the parent brand (Kent & Allen, 1994)

Regarding the product _____, are you:

Unfamiliar	1	2	3	4	5	Familiar
Inexperienced	1	2	3	4	5	Experienced
Not knowledgeable	1	2	3	4	5	Knowledgeable

Involvement (Beatty & Talpade, 1994)

1 = 'strongly disagree', 5 = 'strongly agree'

In general, I have a strong interest in this website

This website is very important to me
 This website matters a lot to me
 I get bored when other people talk to me about this website (R)

Attitude towards the parent brand (Putrevu & Lord, 1994).

Rate your overall feelings about using this website:

Bad	1	2	3	4	5	Good
Dislike	1	2	3	4	5	Like
Unfavourable	1	2	3	4	5	Favourable

Evaluation of web-brand concept type (developed by the authors)

In your opinion, what kind of website is this?

1 = 'strongly function oriented', 5 = 'strongly experience oriented'

About the authors

Liyin Jin is an associate professor of marketing at the School of Management, Fudan University. He spent three years as an assistant professor at Paichai University in South Korea. His research interests focus on consumer decision making, identity and consumer value, brand management, and online consumer behaviour. His research has been funded by the National Nature Science Research Grant of China. He has published several papers in the *Journal of Consumer Marketing*, *International Journal of Market Research*, *Journal of Marketing Science*, and *Frontiers of Business Research in China*.

T 86-21-25011202

E jinliyin@fudan.edu.cn

Deqiang Zou is an assistant professor of marketing at the School of Management, Fudan University, China. His current research interests focus on consumer judgement and decision making, consumer identity, and customer satisfaction. He has published several papers in the *Journal of Consumer Marketing* and the *Journal of Marketing Science*.

Corresponding author: Deqiang Zou, School of Management, Fudan University, 670 Guoshun Road, Shanghai, China, 200433.

T 86-21-25011188

E deqiang_zou@fudan.edu.cn

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