The Influence of Negative Information from a Co-brand: The Moderating Roles of Involvement and Brand Popularity

XIAOMENG FAN
School of Economics and Management, Tsinghua University, Beijing, China

EN-CHUNG CHANG
School of Business, Renmin University of China, Beijing, China
E-mail: ecchang@ruc.edu.cn

MOLIN ZHANG
School of Business, Renmin University of China, Beijing, China

YONGCHANG ZHANG
School of Business, Renmin University of China, Beijing, China

Abstract

Existing research on co-branding focused only on co-branding effects on new products and brand attitude at the beginning point of cooperation, without further study on changes occurring after cooperation. On the basis of a review and compilation of the relevant literature, this paper explored how, in a co-branding alliance, the negative information about one co-brand impacts the other co-brand, involving brand popularity as a moderator. This paper also considered the concept of involvement to investigate the effects of co-branded negative information under different involvement levels. The results showed that (1) Negative information about a co-brand decreased consumer attitudes toward that co-brand as well as toward the co-produced product, and then consequently eroded consumer attitudes toward the other co-brand in the alliance; (2) The negative information about a co-brand with high popularity was more influential on the other co-brand in the alliance than was the negative information about the co-brand with low popularity; (3) Given that co-brand A was more popular than co-brand B in an alliance, the negative information about A had a stronger impact on B when their popularity difference was large than when the popularity difference was small. However, when co-brand A was less popular than co-brand B, the negative information about A had a stronger impact on B when their popularity difference was small than when it was large; (4) The effect of co-brand A's negative information on consumer attitudes toward co-brand B was smaller for high-involved consumers than for low-involved consumers.

Key Words: Co-branding, attitudes, negative information, brand awareness differentiation, involvement.

Introduction

Co-branding has been applied in marketing practice across many industries. Marketers increasingly use co-branding to utilize multiple brand names on a single product or service (e.g., Vaidyanathan and Aggarwal (2000); Desai and Keller (2002); Washburn et al. (2004)). It means that two or more brands form a strategic alliance in order to achieve excellent synergy that capitalizes on the unique strengths of each contributing brand (Chang, 2009). For example, the Bank of China and a Chinese airline, Air China, co-branded a credit card, the Phoenixmiles Card. This credit card combines the functions of both a Visa credit card and an Air China membership card. Consumers can purchase airline tickets with this card and synchronously enjoy the privileges of members of Air China, such as redeeming their credit card points for airline tickets. This is marketing tool is commonly used by airline companies nowadays.

Since the 1990's, marketing researchers have paid more and more attention to co-branding. Past research mainly focused on changes in consumer attitude toward each co-brand after the co-brands united, and also on the mechanism during the process (James, 2005; Dickinson and Heath, 2006; Helmig, Huber, & Leeflang, 2007; Dickinson and Heath, 2008). However, these studies, which were relatively static, were mostly concerned with co-branding decisions, which concern the influence of co-branding on the co-produced brand and the interactive influence of each co-brand. Less attention has been directed to what happens to co-branding if one co-brand undergoes changes after brands have united. In 2012, a scandal with the Phoenixmiles Card was exposed: A cardholder could not redeem his points because he was late for a flight, the ticket for which was purchased with credit card points. The scandal arose because he was informed that he could not use those points again, even though he had not actually used them. Chinese consumers, including many Phoenixmiles Card owners, strongly criticized the way Air China handled the situation. However, will this negative incident influence the Bank of China? This study is designed to answer this kind of question. In addition, existing co-branding research has usually measured co-brands as popular or unpopular brands, but not as negative co-brands or co-brands with negative information. Furthermore, most of these researchers have discussed the co-branding effect not within a specific context, but within a general one. For example, it is important to know whether such factors as product category or involvement affect the co-branding effect. In this study, we explore how the negative information about one co-brand impacts other co-brands, especially focusing on the popularity difference of the co-brands. In addition, we introduce the concept of involvement to examine how these effects change under different levels of involvement.

Literature Review

According to much research, co-branding increases brand attitude significantly more than single-branding strategies do. Keller and Aaker (2003) found that by incorporating a popular brand's name into its own brand, the unpopular brand can increase its consumers' perceived quality. A study by Washburn and colleagues (2004) found that after a popular brand unites with another brand, consumers' perceived quality of the partner brand will rise, whether it is popular or unpopular. Therefore, co-branding is beneficial for both popular and unpopular brands. However, the participants in the co-branding benefit differently (Simonin and Ruth, 1998), possibly because of the co-brands' different nature or characteristics and their relatively different positions in the co-branding. Nevertheless, Ueltschy and Laroche (2011) found that although the co-branding of two high-equity brands does provide benefits, the co-branding of high-equity and low-equity brands can be potentially dangerous for the high-equity partner.

Simonin and Ruth (1998) proposed that the reason why co-branding influences consumers' perceived quality of each co-brand is a signal transferring process among co-brands and the co-produced brand. That is to say, consumers will transfer their cognitive information of original co-brands to the new co-produced brand. In this process, co-branding serves as a cue to make consumers' memory of co-brand information clearer, thus making them automatically recall their co-brand evaluations. As a consequence, consumer attitudes toward each co-brand will directly influence their evaluation of co-branding. Simonin and Ruth (1998) also suggested that Integrated Information Theory could help explain the signal transferring process among co-brands. The co-branding itself offers new information about co-brands. Therefore, when consumers deal with co-branding information, their attitudes may change. From this point of view, co-branding has a potential effect on adjusting consumer attitudes toward co-brands.

Furthermore, Levin and Levin (2000) suggested that since popular brands have broader association networks and information, they can play a guiding and connecting role to make consumers infer that the quality of unpopular brands may be similar to that of popular brands, causing assimilation effects. Rao and Ruekert (1994) also pointed out that the common consumer belief that high-quality brands only unite with other high-quality brands significantly decreases their perceived risk of buying the co-produced brands.

However, the co-branding effect may not be positive in all cases. For example, Baumgarth (2004) extended Simonin and Ruth's (1998) study and found that co-branding may have negative effects on unpopular

brands. Farquhar (1994) suggested that if consumers have negative feelings about unpopular co-brands, co-branding may transfer that negativity to the popular co-brands, thus diluting the value of the co-produced brand and popular co-brands. In addition, Helmig and colleagues (2007) showed that negative information about a co-branded product can lead to negative spillover effects. Jap (1993) pointed out that the fit between co-brands is a success factor for spillover effects as long as the brand concepts of the partner brands are consistent with the co-brand. This result must also be investigated in the context where negative information comes from a co-brand rather than from the co-branded product.

Rao, Qu and Ruekert (1999) proposed, based on signaling theory, that co-branding is an effective way to transfer such product signals as quality information. Popular co-brands can increase consumers' perceived quality of the co-produced brand or unpopular co-brands by providing a certain level of promise and assurance; i.e., a highly trusted signal. Park, Jun and Shocker (1996) suggested that the co-branding mechanism is such that the positive information of popular co-brands can be transferred to the co-produced brand or unpopular co-brands. Levin, Davis and Levin (1996) argued that co-branding leads to consistent consumer attitudes toward co-brands with high and low perceived quality, thus improving consumers' original attitudes of co-brands with low perceived value. From a more general perspective, Park and colleagues (1996) considered that since any co-branding alliance involves two or more brands, co-branding offers consumers many more product attributes and much more quality information than a single brand does; thus, consumers' perceived product quality will be higher after co-branding.

Theoretical Framework and Hypotheses

Research Framework

Past research proposed that the perception of negative information about one co-brand may be transferred to another co-brand by the contextual cue of co-branding, which infers that the negative information about one co-brand may affect other co-brands. On the other, since the co-branding effects involve the popularity of the co-brands, this study examines whether the transferring of negative information may be moderated by co-brand popularity. Additionally, involvement is also considered as a moderator to further illuminate the effects of negative information that occur in co-branding. The research framework is shown in Figure 1.
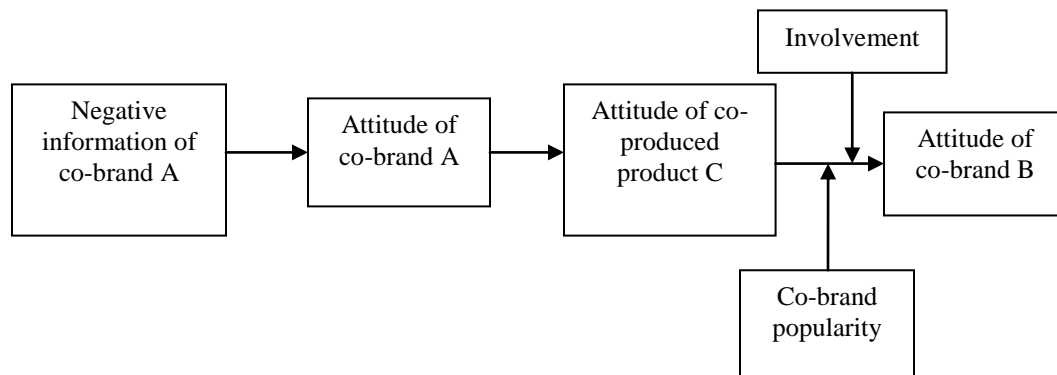
Figure 1: Research Framework

Effect of Negative Information

Many co-branding studies have indicated that consumers' value cognition of co-brands (e.g., product quality and brand value) can impact their judgment of the co-produced product value. For example, Affect Transfer Theory (Levin and Levin, 2000) proposes that consumers tend to consider co-brands and the co-produced product to have consistent and similar quality. Therefore, they may involve their experience and

information of co-brands in a co-branding decision making process. Here we develop the following hypothesis:

H1: Negative information about a co-brand (A) decreases consumer attitudes toward that co-brand and also toward the co-produced product (C), and then consequently erodes consumer attitudes toward the other co-brand (B) in the alliance.

Co-Brand Popularity

The popularity of co-brands is supposed to moderate the main effect in H1. According to signaling theory (Spence, 1974), signal transferring is a process in which people who are informed of certain information apply various means to inform those who do not have the information so that they will involve the information in their decision making process. For consumers, because of information asymmetry between sellers and buyers before transactions, the uncertainty of a product before buying forms a predictable risk (Akerlof, 1970). An effective way to resolve this problem is to acquire information from the market and other consumers (Rao and Ruekert, 1994). Also, popular brands take more risks of investment and of losing trust than others when providing false information or inferior quality. Popular brands therefore are more capable than unpopular brands of signal transferring (Akerlof, 1970; Erdem and Swait, 1998; Rao et al., 1999). Thus it is hypothesized that the negative information about popular brands will be more influential than that of unpopular brands:

H2A: Negative information about a co-brand (A) with high popularity is more influential on the other co-brand (B) in the alliance than negative information about a co-brand (A) with low popularity.

On the other hand, Park and colleagues (1996) found that the compatibility of co-brands has a significant influence on the co-branding effect. If co-brands have unequal positions in an alliance, the co-branding effect differs for each co-brand. Simonin and Ruth (1998) also believed that co-branding has different impacts on co-brands based on their popularity. An unpopular co-brand has a smaller association network and weaker consumer attitudes than a co-brand with high popularity. Therefore, co-branding is more influential on changing consumer attitudes toward unpopular co-brands. In contrast, since a popular brand has a wider association network and a stronger emotional foundation, consumer attitudes toward a popular co-brand are less likely to change, thus reducing the impact of co-branding information on these co-brands. Accordingly, the following hypothesis is proposed:

H2B: Given that co-brand A is more popular than co-brand B in an alliance, the negative information about A has a stronger impact on B when their popularity difference is large than when the popularity difference is small. However, given that co-brand A is less popular than co-brand B, the negative information about A has a stronger impact on B when their popularity difference is small than when it is large.

Involvement

Furthermore, this research also considered involvement and hypothesized that it may moderate the effect of co-brand A's negative information on consumer attitudes toward co-brand B. Helmig and colleagues (2007) argued that product involvement and consumers' brand orientation influence the success of the co-branded product. Goldsmith and Flynn (1992) suggested that upon realizing the importance of a certain product, consumers are in a high involvement state and will actively search for and evaluate product information as part of a serious buying decision. In contrast, consumers in a low involvement state behave passively in looking for and processing product information. They will not spend much time thinking about decision-making information. Their information processing procedure is simple and relies on peripheral cues, such as the brand name of a product (Petty and Cacioppo, 1986). Therefore, high-involved consumers will be less affected by brand information when making purchasing decisions. Low-involved consumers regard the decision as less important and have lower perceived risks. They tend to use the integrated information of the brand to reduce the decision making time and will be more highly influenced by brand information to make a decision. H3 is proposed as follows:

H3: The effect of co-brand A's negative information on consumer attitudes toward co-brand B is less for high-involved consumers than for low-involved consumers.

Methodology

Pretest

Before the main experiments, two pretests were conducted to choose appropriate stimuli. According to Simonin and Ruth (1998), it is better to use virtual brands than fictitious brands in co-branding experiments because virtual brands can easily activate participants' memories, resulting in a co-branding effect relatively similar to that in the real world. In addition, since the main experiments would be conducted in a university campus, the stimuli were to involve product categories with which students were familiar and cover distinct involvement levels. Brands with different popularities also needed to be determined.

In the first pretest, cakes, computers, USB drives, clothes, hair shampoo, and beverages were selected as the alternative product categories. Thirty undergraduate students were asked to evaluate their involvement levels for each product category by scoring 5 items on a 7-point Likert-like scale adapted from Zaichkowsky (1985) and Laurent and Kapferer (1985). The results showed that among the products, computers had the highest involvement level ($M = 5.55$), beverages had the lowest level ($M = 1.90$), and the two levels were significantly different ($t = 13.68$, $p < 0.01$). Therefore, we applied computers in the high involvement context and beverages in the low involvement context.

The second pretest was conducted to determine computer and beverage brands having different levels of popularity. The measurements of brand popularity were adapted from Osgood, Suci, and Tannenbaum (1957), Simonin and Ruth (1998), and Taylor and Bearden (2002). Thirty undergraduate students were asked to evaluate their perceived popularity for each brand by scoring 3 items on a 7-point Likert-like scale. The results showed that in the computer product category, Dell ($M = 5.53$) and Sony ($M = 5.47$) were two significantly more popular brands, and that Ridian ($M = 1.78$) and Huayin ($M = 1.45$), two local computer brands in China, were less popular brands. In the main experiment, Dell and Sony were used as the popular brands, and Ridian and Huayin were used as the unpopular brands. In the beverage category, participants were significantly more familiar with Coca Cola ($M = 6.09$) and Pepsi ($M = 5.84$) and less familiar with Yeshu ($M = 2.12$) and Bingfeng ($M = 1.61$), two local beverage brands in China. Thus, Coca Cola and Pepsi were used as the popular brands, and Yeshu and Bingfeng were used as the unpopular brands.

Experiment 1

Procedure and Measurements.

The first experiment tested the main effect in H1. The participants were 30 students, half of whom were females. At first, the participants recorded their attitudes toward five computer brands. Then they read the descriptions and pictures of these brands as filler tasks to eliminate the participants' original memories. The descriptions involved the real target brands Dell and Sony, and their co-produced fictitious product HERO. The filler tasks lasted nearly five minutes.

Next, they were asked to evaluate their attitudes of the brands. The measurement of attitude included items on perceived quality and purchase intention derived from Osgood et al. (1957), Simonin and Ruth (1998), and Taylor and Bearden (2002), scored on a 7-point Likert-like scale. Then the participants read two news reports. The first described again that Sony and Dell co-produced the product HERO. The second report stated that Dell was reported to have problems with quality. Finally, the participants were asked to evaluate their attitudes of each brand.

Analyses and Results.

The participants' initial attitudes toward Dell, Sony and HERO were respectively $M_{Dell} = 4.85$ ($s = 1.29$), $M_{Sony} = 4.60$ ($s = 1.12$), and $M_{HERO} = 4.42$ ($s = 1.11$). After reading the negative news about Dell, their attitudes became $M_{Dell} = 3.23$ ($s = 0.84$), $M_{Sony} = 3.78$ ($s = 1.04$), and $M_{HERO} = 3.18$ ($s = 0.93$). This showed that after reading the negative news about Dell, the participants' attitudes toward Dell decreased, and their attitudes toward Sony ($t = 11.06$, $p < 0.01$) and HERO ($t = 12.22$, $p < 0.01$) also decreased significantly.

This research proposed that consumer attitudes toward a co-produced brand (C) mediate the effect of attitude toward a co-brand (A) with negative information on attitude toward another co-brand (B). The mediation analyses were conducted based on the method suggested by Holmbeck (1997). The results of the analyses, listed in Table 1, indicate that the impact of consumer attitudes toward Dell on attitudes toward Sony is significantly less after controlling for the attitudes toward HERO. They clearly indicate the existence of the mediator. H1 is supported.

Table 1: The Mediation Effect of The Co-Produced Product Attitude

Independent variable	Dependent variable	β	t-value
Simple regression analysis			
Attitude toward Dell	Attitude toward Sony	0.39*	4.48
Attitude toward Dell	Attitude toward HERO	0.61*	6.04
Multiple regression analysis			
Attitude toward Dell	Attitude toward Sony	0.13	1.09
Attitude toward HERO		0.42*	3.00

Note: *$p < 0.05$

Experiment 2

Procedure and Measurements.

In order to test H2A and H2B, experiment 2 was conducted as a 2 (co-brand A's popularity: high/low) by 2 (co-brand B's popularity: high/low) mixed design. The participants included 120 students, who were randomly assigned to the four treatments. There were 15 males and 15 females in each group. In this experiment, the stimuli were beverage products: Coca Cola, Pepsi, Yeshu, and Bingfeng. In each group, every participant was manipulated in one of the four co-branding contexts: high-high, high-low, low-low, or low-high. The participants were first asked to describe their familiarity of the two co-brands as a manipulation check. Then they read a news report about the product HERO co-produced by the two co-brands and evaluated their attitudes of the two co-brands. After that, they read a news report about the quality defects of co-brand A. Then they recorded their attitudes again. Finally, they were asked to complete an involvement questionnaire including items on time spending, information searching, WOM impacting on their decision making, purchase importance, and risks on a 7-point Likert-like scale derived from Laurent and Kapferer (1985).

Analyses and Results.

Experiment 2 tested whether the effect of one co-brand's negative news on another co-brand is different for brands with different popularities for low-involved products, such as beverages. The result showed that when both co-brands were very popular (high-high scenario), consumer attitudes toward Pepsi decreased by 2.59. When the co-brand with negative information was less popular than the other co-brand (low-high scenario), consumer attitudes toward Pepsi decreased by 1.39. The difference was significant ($t = 3.31$, $p < 0.01$). Similarly, in the high-low scenario, the attitude decrease of Yeshu was 3.52, while in the low-low scenario, it was 2.14, and they were significantly different ($t = 3.70$, $p < 0.01$).

Therefore, whether co-brand B has high or low popularity, the negative information about a popular co-brand has a greater impact on consumer attitudes toward co-brand B than the negative information about a co-brand with low popularity (see Table 2). H2A is supported.

Table 2: The Moderating Effect of Co-Brands' Popularity
(Beverage Products)

	Co-brand A*	Co-brand B	Attitude decrease of co-brand B	SD
High-high	Coca Cola	Pepsi	2.59	1.19
Low-high	Bingfeng	Pepsi	1.39	1.10
High-low	Coca Cola	Yeshu	3.52	1.45
Low-low	Bingfeng	Yeshu	2.14	1.35

Note: * Co-brand A had negative information in the experiment

This experiment also tested the moderating effect of the co-brand popularity difference. From the pretests, it is known that Coca Cola's brand popularity is a bit higher than that of Pepsi and much higher than that of Yeshu. As shown in Table 2, the negative information on Coca Cola resulted in a greater attitude decrease for Yeshu than for Pepsi ($M_{Coca\ Cola\text{-}Yeshu}$ = 3.52, $M_{Coca\ Cola\text{-}Pepsi}$ = 2.59, t = 5.85, $p < 0.01$). On the other hand, Bingfeng's brand popularity is much lower than that of Pepsi and a bit lower than that of Yeshu. The negative information on Bingfeng caused a greater attitude decrease for Yeshu than for Pepsi ($M_{Bingfeng\text{-}Yeshu}$ = 2.14, $M_{Bingfeng\text{-}Pepsi}$ = 1.39, t = 2.64, $p < 0.05$). Generally, a popular co-brand's negative information has greater impacts on the attitudes toward the other less popular co-brands when their popularity difference is large than when the popularity difference is small. On the contrary, a less popular co-brand's negative information has greater impacts on the attitudes toward the other more popular co-brands when their popularity difference is small than when the popularity difference is large. Thus, H2B is supported.

Experiment 3

Procedure and Measurements.

The purpose of experiment 3 was not only to test H2A and H2B in a different context but also to investigate the moderating role of involvement (H3). This experiment had the same procedure as experiment 2, except for two points. First, the stimuli were computers, a high-involvement product category. Second, to increase the participants' involvement during the experiment, they were told at the beginning of this experiment that they would need to recall the reading materials at the end. Therefore, it was a reasonable expectation that the participants in experiment 3 would be more involved than those in experiment 2.

Analyses and Results.

The results of experiment 3 were similar to those in the previous experiment. Whether the co-brand B was Sony or Ridian, as shown in Table 3, the negative information about Dell led to greater attitude decreases of the co-brand B than did the negative information about Huayin ($M_{Dell\text{-}Sony}$ = 1.50, $M_{Huayin\text{-}Sony}$ = 0.77, t = 3.06, $p < 0.01$; $M_{Dell\text{-}Ridian}$ = 2.47, $M_{Huayin\text{-}Ridian}$ = 1.29, t = 6.04, $p < 0.01$). Additionally, the negative information about the very popular brand Dell caused a greater attitude decrease for the unpopular brand Ridian than for the slightly less popular brand Sony ($M_{Dell\text{-}Ridian}$ = 2.47, $M_{Dell\text{-}Sony}$ = 1.50, t = 2.30, $p < 0.05$). The negative information about the unpopular brand Huayin led to a greater attitude decrease for Ridian, a co-brand with slightly higher popularity than Huayin, than for Sony ($M_{Huayin\text{-}Ridian}$ = 1.29, $M_{Huayin\text{-}Sony}$ = 0.77, t = 1.94, $p < 0.10$). Thus, H2A and H2B are again supported.

However, one point should be paid special attention. In experiment 3, the attitude change between the low-high group and the low-low group was not strongly significantly different. It is possible that if the participants were originally unfamiliar with the unpopular brand Ridian they might have been less involved

in the negative information context, and thus their attitudes would have been impacted less. That may be why the result was not strongly statistically significant. Nevertheless, the direction of the data was consistent with H2B.

Table 3: The Moderating Effect of Co-Brands' Popularity
(Computer Products)

	Co-brand A*	Co-brand B	Attitude decrease of co-brand B	SD
High-high	Dell	Sony	1.50	1.34
Low-high	Huayin	Sony	0.77	0.97
High-low	Dell	Ridian	2.47	1.53
Low-low	Huayin	Ridian	1.29	1.23

Note: * Co-brand A had negative information in the experiment

Experiments 2 and 3 were compared to test the moderating effect of involvement (H3). Beverages and computers were regarded as low and high involvement products, respectively. The results in Table 4 showed that the negative effect for each group was weaker in the high-involvement group than in the low-involvement group. H3 is supported. Based on the elaboration likelihood model, the reason could be that consumers engage different information processing mechanisms under different levels of involvement (Petty et al., 1983; Petty and Cacioppo, 1986). The participants in the high-involvement context may have perceived higher risks because of the high purchasing importance. Therefore, they may have searched for more information to support their decisions with central routes. Participants in the low-involvement group, however, in making a purchasing decision that was not so important, may have perceived lower risks and thus not spent much time or other resources. They would then tend to make decisions by depending on the integrated information provided by the brand itself and not other information. Their decisions followed the peripheral routes.

Table 4: The Moderating Effect of Involvement

	Attitude decrease of co-brand B			
	High involvement	Low involvement	t	p
High-high	1.50	2.59	3.93	.001
Low-high	0.77	1.39	3.30	.003
High-low	2.47	3.52	2.18	.038
Low-low	1.29	2.14	1.87	.074

Table 4 shows that for the low-low co-branding group, the negative information in the high-involvement context had a weaker, but not very significant, effect than the negative information in the low-involvement context ($p = 0.074$). One possible explanation may be that consumers behave differently in searching for and processing information under different levels of involvement. Generally, according to the elaboration likelihood model, high-involved consumers tend to search for more information, while low-involved consumers tend to limit their information processing time and costs. For the low-low co-branding context in this research, though, there was not enough information about the four low-popularity brands, so the involvement difference could hardly cause the participants to engage in different information collecting and processing behaviors. As a result, the data of the attitude change was not significantly different.

5 Limitations and Future Research

Due to the complexity of the research question and time restrictions, this research has some unavoidable limitations and problems. First, the product categories were limited to only beverages and computers. Although the pretests showed that the two product categories satisfied the needs of the research, there were still some confounding factors. For example, since computers have more complex traits and information than beverages, participants in the computer groups may have processed more information than those in the beverage groups.

Second, although theoretically, high-involved consumers tend to collect and deal with more product information than low-involved consumers, this research was not able to fully simulate the real world by providing participants enough product information. This could have resulted in the failure to motivate participants with different levels of involvement to perform different information processing patterns. Therefore, the experimental results were not absolutely consistent with the hypotheses.

Since this research had some external validity problems due to the limited product categories, it is suggested that future research test the negative information effect in more product categories. In addition, this research mainly focused on the negative information effect of a co-brand in an alliance. Future research can consider examining the positive information effect and the moderating effect of co-brand popularity. According to past research, the negative information effect of one co-brand on another co-brand is stronger than the positive information effect. But the mechanism of the positive information effect still needs to be investigated.

Finally, the negative information effect can be explained by how consumers process information. Although this research tested the moderating effect of involvement, it did not study extensively the information processing patterns and procedures. The experiments also failed to provide enough information for the participants to choose and process, which limited observation of the participants' information processing procedures. Therefore, future research can further investigate how one co-brand's negative information affects other co-brands by deeply examining consumers' information processing procedures.

References

Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics, 84,* 488-500.

Baumgarth, C. (2004). Evaluations of co-brands and spill-over effects: Further empirical results. *Journal of Marketing Communications, 10,* 115-131.

Chang, W. L. (2009). Roadmap of co-branding positions and strategies. *The Journal of American Academy of Business, 15,* 77-84.

Desai, K. K., & Keller, K. L. (2002). The effects of ingredient branding strategies on host brand extendibility. *Journal of Marketing, 66,* 73-93.

Dickinson, S., & Heath, T. (2006). A comparison of qualitative and quantitative results concerning evaluations of co-branded offerings. *The Journal of Brand Management, 13,* 393-406.

Dickinson, S., & Heath, T. (2008). Cooperative brand alliances: How to generate positive evaluations. *Australasian Marketing Journal, 16,* 22-38.

Erdem, T., & Swait, J. (1998). Brand equity as a signaling phenomenon. *Journal of Consumer Psychology, 7,* 131–57.

Farquhar, P. H. (1994). Strategic challenges for branding. *Marketing Management, 3, 8*-15.

Goldsmith, R., & Flynn, L. R. (1992). Identifying innovators in consumer product markets. *European Journal of Marketing, 26,* 487-508.

Helmig, B., Huber, J. A., & Leeflang, P. (2007). Explaining behavioural intentions toward co-branded products. *Journal of Marketing Management, 23,* 285-304.

Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65,* 599-610.

James, D. (2005). Guilty through association: Brand association transfer to brand alliances. *Journal of consumer marketing, 22,* 14-24.

Jap, S. D. (1993). An examination of the effects of multiple brand extensions on the brand concept. *Advances in Consumer Research, 20,* 607-611.

Keller, K. L., & Aaker, D. A. (2003). The effects of sequential introduction of brand extensions. *Journal of Marketing Research, 29,* 35-60.

Laurent, G., & Kapferer, J. (1985). Measuring consumer involvement profiles. *Journal of Marketing Research, 22,* 41-53.

Levin, A. M., Davis, C., & Levin, I. (1996). Theoretical and empirical linkages between consumers' responses to different branding strategies. *Advances in Consumer Research, 23,* 296-300.

Levin, I. P., & Levin, A. M. (2000). Modeling the role of brand alliances in the assimilation of product evaluations. *Journal of Consumer Psychology, 9,* 43-52.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning*. Urbana: University of Illinois Press.

Park, W. C., Jun, Y. S., & Shocker, D. A. (1996). Composite branding alliances: An investigation of extension and feedback effects. *Journal of Marketing Research, 33,* 453-466.

Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change.* New York: Springer.

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In L. Berkowitz (Ed.), *Advances in experimental social psychology (pp. 123-205)*. New York, NY: Academic Press.

Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research, 10,* 135-46.

Rao, A. R., Qu, L., & Ruekert, R. W. (1999). Signaling unobservable product quality through a brand ally. *Journal of Marketing Research, 36,* 58-68.

Rao, A. R., & Ruekert, R. W. (1994). Brand alliance as signals of product quality. *Sloan Management Review, 36,* 87-97.

Simonin, B. L., & Ruth, J. A. (1998). Is a company known by the company it keeps? Assessing the spillover effects of brand alliance on consumer brand attitudes. *Journal of Marketing Research, 35,* 30-42.

Spence, M. (1974). *Market signaling: Informational transfer in hiring and related screening processes*. Cambridge, MA: Harvard University Press.

Taylor, V. A., & Bearden, W. O. (2002). The effects of price on brand extensions: The moderating role of extension similarity. *Journal of the Academy of Marketing, 32,* 131-140.

Ueltschy, L. C., & Laroche, M. (2011). Co-branding internationally: Everyone wins?. *Journal of Applied Business Research, 20,* 91-102.

Vaidyanathan, R., & Aggarwal, P. (2000). Strategic brand alliances: Implications of ingredient branding for national and private label brands. *Journal of Product & Brand Management 9,* 214-228.

Washburn, J. H., Till, B. D., & Priluck, R. (2004). Brand alliance and customer-based brand-equity effects. *Psychology and Marketing, 21,* 487-508.

Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research, 12,* 341-352.

Acknowledgements