

Interactions between price and price deal

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Abstract

Purpose – The purpose of this study is to examine the interactive effect of price and price deal. Specifically, it desires to measure how consumers' behavioral intentions toward the brand are affected for a high-priced brand and a low-priced brand when a price deal is offered.

Design/methodology/approach – A two (price level: high versus low; between) by two (price deal: absent versus 40 percent off; between) experimental design was used. Study 1 tested the hypotheses for two existing brands, whereas Study 2 did so for a fictitious brand.

Findings – The analysis confirmed a strong interactive effect between price and price deal: price deals do not have a uniform effect across brands but a different effect depending on the price level of the brand. Specifically, for a high-priced brand, a negative effect of price deals on behavioral intentions (brand equity, brand loyalty, and purchase intention) was found. On the contrary, for a low-priced brand, a positive effect of price deals on each of the same behavioral intention variables was found.

Research limitations/implications – Future research needs to study different types of products and samples to enhance the external validity of the findings. Real market data that recorded price changes and price deal offerings over time need to be examined to confirm the findings of the study.

Practical implications – A managerial implication is that high-priced brands should avoid price deals, whereas low-priced brands could benefit from price deals.

Social implications – When the findings are extended to the public-sector or governmental services, providing costly services at a discounted price (e.g. universal healthcare) may not be welcome, as that policy is likely to make fellow citizens underestimate the value of the services and doubt the quality.

Originality/value – The study is very original because it does not repeat any past research, but taps into a problem not previously investigated. The value of the study is very straightforward for brand and promotional managers.

Keywords Prices, Brand equity, Brand loyalty, Price positioning

Paper type Research paper

Many studies found a negative effect of price deals and a positive effect of price on consumers' behavioral intentions, but little research has examined the interactive effect of price and price deals. Consequently it would be very important to study how price and price deals interact to affect behavioral intentions. The result will provide insight into how to use price deals. The purpose of this research is to develop and test a conceptual model of the interactive effect between price and price deals on behavioral intentions, which are measured in brand equity, brand loyalty, and purchase intention.

Price deals versus price

Price deals are found to negatively affect behavioral intentions (Aaker, 1991; Yoo *et al.*, 2000). For example, Grewal *et al.*

(1998) and Chen *et al.* (1998) report that price deals, while often generating traffic in a retail store, cause consumers to discount the perceived quality and the internal reference price of the brand. Other studies find that price deals lead to lower quality perceptions (e.g. Blattberg and Neslin, 1990; Dodson *et al.*, 1978; Rao and Monroe, 1988). Angel and Manuel (2005) also find that price deals are negatively correlated with perceived brand quality and image. Winer (1986) argues that lowering prices, for example, through price deals, can place brands in danger because that creates confusion among consumers and that the instability and variability of prices produce a perception of unstable brand quality.

On the contrary, the level of price is found to positively affect behavioral intentions mainly because price establishes image of the brand in the eyes of the consumers (Aaker, 1991; Yoo *et al.*, 2000; Rao and Monroe, 1989). In a consumer's

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heuristics, a high (low) price connotes a high (low) quality and image. For a conceptual convenience, this study identifies two types of products by price: high-priced brands and low-priced brands. High-priced brands are brands on the market whose image is seen as the key factor. Consumers of these brands often purchase them mainly for image and are willing to pay a premium price for their perceived high quality and status, which make them price-inelastic (Bolton, 1989; Fok *et al.*, 2006). Low-priced brands tend to be purchased for utilitarian value, with the consumer relying on the perceived value for price. Consumers would typically look for low prices of these brands or substitutes to get the best value. Low-image brands tend to be more price elastic, as the driving factor for their purchase is seen in value by consumers. Table I summarizes the findings from selected literature related to the effect of price deals and price.

The interaction between price deals and price

The literature shows that price has a positive impact on behavioral intentions while price deals have a negative impact. One question arises: How will the positive effect of price interact with the negative effect of price deals? As noted earlier, however, there has been little research that examined the interactive effect of price deals and price on behavioral intentions. Therefore, it will be interesting to learn how the interaction would behave. If the interaction exists, the main effect of either price or price deal would be very weak because the effect of one of them would depend on the other. As shown in Table I, not a small number of studies found any main effect for either price or price deal. Such insignificant effects provide a ground to pay attention to the existence of the interactive effect.

Ratneshwar *et al.* (2001) argue that personal purchase goals can have a strong influence on how consumers categorize and compare products. It should be noted that consumers buy high-priced brands (typically luxury goods), driven by either social-adjunctive attitudes that seek design, image, or social status or value-expression attitudes that seek product durability or quality (Wilcox *et al.*, 2009). On the contrary, consumers buy low-priced brands mainly for transaction value, that is, how much they obtain for the price they pay. Therefore, behavioral intentions would depend on the consumer purchase goal. When the goal can be satisfied, consumers will buy the brand, become loyal to the brand, and feel more value by the brand name. If the purchase goal cannot be satisfied, consumers are likely to buy or switch to another brand that would satisfy their purchase goal. But the goal is not uniform across brands. It must be different between high- and low-priced brands. Consumers will seek value for low-priced brands, whereas they will seek quality or status for high-priced brands. Therefore, with price deals offered, consumers will be momentarily attracted to the increased value for low-priced brands by the higher transaction utility (Yoo *et al.*, 2000). However, price deals would lower the perception on quality and status especially for high-priced brands (Grewal *et al.*, 1998). Fok *et al.* (2006) also find that brands with relatively frequent price deals are often considered of lower quality than similar, rarely promoted brands.

Conspicuousness (willingness to spend a great amount of money to demonstrate their social status) also plays an important role on brand purchases. Wilcox *et al.* (2009) find that high-priced brands are highly related to consumer conspicuousness. When price deals lower the final price they

pay, conspicuousness will be damaged, which makes consumers unhappy. Similarly, consumers pursue exclusivity (they want to be the only buyers who belong to the elite society) from high-priced brands. Price deals will unfortunately decrease exclusivity, which lowers the attractiveness of high-priced brands. In contrast, low-priced brand buyers are not concerned with conspicuousness or exclusivity desires. Instead, they would be pleased with the increased value garnered by the price deals.

In summary, the consumer's goals for high-priced brands and low-priced brands are completely different. Thus, consumers looking for quality, status, self expression, and image will gravitate toward high-priced brands to fulfill their goals, the achievement of which can be signaled through promotional messages of conspicuousness and exclusivity. But the consumers looking for price value will be attracted to low-priced brands to satisfy their goals. Price deals can work positively or negatively for the purchase goals. Specifically, price deals are expected to have a positive effect on low-priced brands because they provide transaction value, the major purchase goal towards low-priced brands. On the contrary, they are likely to have a negative effect on high-priced brands because they do not serve, but rather damage, quality and status perceptions, the major purchase goal toward high-priced brands.

Therefore, we hypothesize as follows:

- H1. Price deals decrease consumers' behavioral intentions toward a high-priced brand.
- H2. Price deals increase consumers' behavioral intentions toward a low-priced brand.

In this study, behavioral intentions were represented by brand equity, brand loyalty, and purchase intention. These specific measures were selected for three reasons. First, among many other marketing activities, price and price deal are found to particularly affect actual product purchases. From this understanding, it would be ideal to measure consumers' behavioral intentions toward the brand rather than cognition or attitudes. Second, they can be interpreted as a proxy measure of sales and financial success in the market. Third, in particular, brand equity and loyalty belong to the group of the best marketing performance metrics (Yoo *et al.*, 2000).

Methodology

Experimental design

The purpose of this study was to test the interactive effect of price deals and price. Specifically, we wanted to measure how behavioral intentions are affected for a high-priced brand and a low-priced brand when the price deal is offered. To test the research hypotheses, we created a two (price level: high versus low; between) by two (price deal: absent versus 40 percent off; between) experimental design, under which we conducted two studies: Study 1 involved two real, existing brands and Study 2 created a fictitious brand. Study 1 aimed at obtaining high external validity, whereas Study 2 was expected to guarantee high internal validity.

Study 1

We selected a Prada handbag as a high-priced brand and a Mossimo handbag as a low-priced brand. These two brands, available in stores, showed a significantly different price level to each other. Price deals had two categories: absent versus 40 percent off. We felt that 40 percent off would represent a price

Table I Selected literature review on the effect of price and price deals

Dependent variable	Effect ^a	Sources
<i>Effect of price on:</i>		
Brand choice	Positive	Lemon and Nowlis (2002)
Brand equity	Positive	Aaker (1991); Yoo <i>et al.</i> (2000)
Brand loyalty	Positive	Yoo <i>et al.</i> (2000)
Likelihood of permanent price reduction	Positive	Chen <i>et al.</i> (1998)
Likelihood of regular price inflation	Positive	Chen <i>et al.</i> (1998)
Perceived quality	Positive	Grewal <i>et al.</i> (1998); Rao and Monroe (1989); Yoo <i>et al.</i> (2000)
Significance of savings	Positive	Chen <i>et al.</i> (1998)
Brand choice	Negative	Jedidi <i>et al.</i> (1999)
Promotional price elasticity	Negative	Karande and Kumar (1995)
Quantity	Negative	Jedidi <i>et al.</i> (1999)
Perceived quality	Mixed	Bolton (1989); Fok <i>et al.</i> (2006); Wilcox <i>et al.</i> (2009)
Perceived discount	n.s. ^b	Gupta and Cooper (1992)
Promotional cross-price elasticity	n.s.	Karande and Kumar (1995)
Purchase intention	n.s.	Chen <i>et al.</i> (1998)
Purchase intention change	n.s.	Gupta and Cooper (1992)
<i>Effect of price deal on:</i>		
Brand choice	Positive	Jedidi <i>et al.</i> (1999)
Forward buying	Positive	Helsen and Schmittlein (1992)
Immediate effect	Positive	Fok <i>et al.</i> (2006)
Likelihood of permanent price reduction	Positive	Chen <i>et al.</i> (1998)
Likelihood of regular price inflation	Positive	Chen <i>et al.</i> (1998)
Long-term effect	Positive	Fok <i>et al.</i> (2006)
Number of transactions	Positive	Lam <i>et al.</i> (2001)
Perceived price	Positive	Sheng <i>et al.</i> (2007)
Perceived value	Positive	Grewal <i>et al.</i> (1998)
Purchase intention	Positive	Chen <i>et al.</i> (1998)
Store traffic	Positive	Lam <i>et al.</i> (2001)
Brand equity	Negative	Yoo <i>et al.</i> (2000)
Brand loyalty	Negative	Yoo <i>et al.</i> (2000)
Effort to find promotion	Negative	Campo and Yagüe (2008)
Estimates of average brand prices	Negative	Alba <i>et al.</i> (1999)
Internal reference price	Negative	Grewal <i>et al.</i> (1998)
Loyalty to tour operator	Negative	Campo and Yagüe (2008)
Perceived monetary price	Negative	Campo and Yagüe (2008)
Perceived quality	Negative	Angel and Manuel (2005); Blattberg and Neslin (1990); Dodson <i>et al.</i> (1978); Fok <i>et al.</i> (2006); Rao and Monroe (1988); Sheng <i>et al.</i> (2007); Winer (1986) Yoo <i>et al.</i> (2000)
Store sales	Mixed	Lam <i>et al.</i> (2001)
Front traffic	n.s.	Lam <i>et al.</i> (2001)
Long-run effect	n.s.	Nijs <i>et al.</i> (2001)
Perceived quality	n.s.	Grewal <i>et al.</i> (1998)
Quantity of purchase	n.s.	Jedidi <i>et al.</i> (1999)
Satisfaction	n.s.	Campo and Yagüe (2008)
Short-run effect	n.s.	Nijs <i>et al.</i> (2001)
Significance of savings	n.s.	Chen <i>et al.</i> (1998)

Notes: ^a Direction of effect of the independent variable on the dependent variable and ^b Not significant

deal because retailers offer 40 percent price deals on average for handbag brands (Klonick, 2008). We chose handbags for women because the gender we surveyed (female) was well aware of the product category. We conducted a pilot study to examine female consumers' use of handbags, awareness of the brands available in the market, and their involvement with the product. We felt that a handbag would be a good fit for the survey based on its involvement, usage, and brand awareness levels.

Each survey of the two-by-two scenarios was presented to participants in a print advertisement format. Each ad, shown in a letter-size paper, consisted of the logo, the photo, the copy message, and a price deal amount for the focal brand. The font size for the ad copy and the photo size of each brand remained the same, and the copy on the ads was carefully modified from the original ads so as to give a realistic and professional sense to participants.

Procedure

Because the product was a female handbag, we decided to ask female college students to participate. A total of 80 college female students taking undergraduate- or graduate-level business classes voluntarily participated for a minimal extra credit. Their age ranged from 19 to 42, with an average of 23.40 and standard deviation of 3.94. Their working hours per week ranged from 0 to 55, with an average of 20.08 and standard deviation of 14.39. Participants showed no significant difference in purchase experiences between Prada and Mossimo (chi-square = 1.25, $df = 1$, $p = 0.26$). The four versions of the survey were randomly assigned to participants. Each survey consisted of four pages: a brief description of the study and a stimulus ad on the first page, manipulation checking questions and effect measures on the second and third pages, and demographic measures on the last page. Participants were requested to respond to every question of the survey. The ad was shown in a smaller scale as a reminder on the top of the second and third pages. Through this procedure, we collected 20 responses per survey version. The price perception, when measured by one question, "The final price of the above brand is high," was used to check the manipulations. It was significantly different for the price manipulation: Prada ($M = 5.72$) versus Mossimo ($M = 3.50$) ($t = 5.80$, $df = 78$, $p < 0.0001$) and for the price deal manipulation: no deal ($M = 4.90$) versus 40 percent off ($M = 4.32$) ($t = 1.27$, $df = 78$, $p < 0.10$).

Measures

As the effect of two independent variables (the level of price and the level of price deal), behavioral intentions were measured threefold: brand equity, brand loyalty, and purchase intention. Brand equity is defined as "the difference in consumer choice between the focal branded product and the unbranded product, given the same level of product features" (Yoo *et al.*, 2000). Brand 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). Like purchase intention that is a popular and direct indicator of actual purchase of the future, both brand equity and brand loyalty are concerned with brand choice behaviors showing the extent to which a consumer shows favorable responses to the focal brand (Chaudhuri and Holbrook, 2001; Grover and Srinivasan, 1992). Therefore, these three outcomes were deemed appropriate as performance measures of price and price deal stimuli.

The measures of the three types of effect were adopted from Yoo *et al.* (2000) and anchored on 1 = strongly disagree and 7 = strongly agree. The detailed measure items are reported in Appendix 1. Brand equity, measured by four items, showed reliability of 0.93. Brand loyalty, measured by three items, earned reliability of 0.87. And purchase intention, measured by three items, showed reliability of 0.96. We also measured product involvement (reliability of 0.87) by adopting four items from Zaichkowsky's (1994) scale, which allowed a participant to express how important and relevant to her the handbag is. Product involvement was included in analysis for the purpose of controlling participants' product experiences and knowledge levels and estimating the pure effect of the independent variables. Product involvement is known to affect consumer purchase activities, representing the perceived relevance of the product category to the individual

consumer (Quester and Lim, 2003; Slama and Tashchian, 1985). Richins and Bolch (1986) observe that consumers with high product involvement find the product interesting and occupy the consumer's thoughts. Quester and Lim (2003) insist that this interest in the product category may arise from the consumer's perception that the product class meets important values and goals. Thus, product involvement must be identified and controlled in evaluating the behavioral intentions for both high-priced and low-priced brands.

Result

Multivariate analysis of covariance (MANCOVA) was conducted to test the effect of two independent variables (price and price deal) and their interaction, taking product involvement as a covariate, on three dependent variables (purchase intention, brand loyalty, and brand equity). For the factorial design, the multivariate test for the assumption of homoscedasticity was insignificant (Box's $M = 18.40$, $p = 0.52$), failing to reject the null hypothesis of homogeneity of variance-covariance matrices. In the Levene's univariate test for each dependent variable, brand loyalty and purchase intention showed an insignificant result ($p > 0.10$), confirming homoscedasticity, but as for brand equity, the significance level was 0.05, indicating possible heteroscedasticity.

The multivariate test results by MANCOVA clearly showed no main effect of either price ($p = 0.92$) or price deal ($p = 0.25$), but a significant interactive effect ($p < 0.05$), supporting the research hypothesis that the effect of price deals depends on the price level of a focal brand. Figure 1 visually shows the interaction effect between price and price deal on three behavioral intention variables. The interaction was a classic case as represented by the X-shaped crossed lines. In other words, the effect of price deal was reversed at two different levels of price. For the low-priced brand, Mossimo, presence of price deal was much more favorable than was absence of it by increasing each behavioral intention index. On the other hand, for the high-priced brand, Prada, absence of price deal was more favorable than was presence of it. Therefore, the effect of price deal depends on at what level the brand is priced, which supports *H1* and *H2* at the overall behavioral intention level.

As there was a strong interaction effect, the main effect of price deal was invalid, which means that it is not possible to expect similar price deal effects across brands, which was also not found in Gupta's (1988) study. Because of the significant interaction effect, univariate tests (ANCOVA) were conducted to examine the combined impact of price and price deal on the individual dependent variables. As shown in Table II, it turned out that there was a strong interaction effect between price and price deal in every dependent variable: brand equity ($F = 6.36$, $p < 0.01$), brand loyalty ($F = 6.33$, $p < 0.01$), and purchase intention ($F = 7.51$, $p < 0.01$). This result supports *H1* and *H2* at the individual behavioral intention level. The effect size of the interaction was 0.08 for both brand equity and loyalty and 0.09 for purchase intention, as shown by η^2 . However, neither price nor price deal, whose p-value was higher than 0.30, had a significant main effect on any dependent variable. It is noteworthy that product involvement showed a significant effect for brand equity ($p < 0.10$) and brand loyalty ($p < 0.05$).

Figure 1 Study 1. Graphical presentations of interaction effect between price and price deals**Table II** Study 1. Univariate tests for group differences in dependent variables

Source	Dependent variable	Sum of squares	df	Mean square	F	p-value
Product involvement	Brand equity	7.92	1	7.92	2.98	0.09
	Brand loyalty	10.76	1	10.76	4.18	0.04
	Purchase intention	3.77	1	3.77	1.18	0.28
Price	Brand equity	0.00	1	0.00	0.00	0.98
	Brand loyalty	0.27	1	0.27	0.10	0.75
	Purchase intention	0.35	1	0.35	0.11	0.74
Price deal	Brand equity	2.95	1	2.95	1.11	0.30
	Brand loyalty	0.26	1	0.26	0.10	0.75
	Purchase intention	0.42	1	0.42	0.13	0.72
Price × price deal	Brand equity	16.92	1	16.92	6.36	0.01
	Brand loyalty	16.30	1	16.30	6.33	0.01
	Purchase intention	24.04	1	24.04	7.51	0.01

Study 2

Using real brands, Study 1 clearly showed that with a low price brand the price promotion had favorable effects on behavioral intentions, whereas with a high-priced brand it had unfavorable effects. Despite such impressive findings, however, Study 1 cannot be free from criticism. Specifically, in Study 1, in an effort to increase the realism by using existing brands, price was tied to the brand name and the ad content. Therefore, the effect of price could have been confounded with that of brand name and/or ad content. As a result, the very question, “Does price level interact with the presence versus absence of a price promotion?” was not answered yet in a sense. That was why Study 2 was designed. In Study 2, two factors only, price and price deal, were manipulated without changing anything else. In particular, to remove preexisting perceptions on any brand, we created a fictitious brand and a fairly neutral ad content such that the brand could be viewed as either a low- or a high-priced alternative. Both low- and high-priced products had the same brand name, called BSM, and the same model name, Unisex G316W Sunglasses, both of which were fictitious. We selected unisex sunglasses to be able to study both gender types. Two specific price levels (\$24.95 as low and \$274.95 as high) were selected because they represented the 90th and 10th percentile of the market prices, respectively, among about

36,000 sunglasses models. As in Study 1, we hired the same two levels of price deal: absent versus 40 percent off. We took 40 percent off as a price deal because that was the most popular price deal for sunglasses. We clearly informed participants of the regular prices in all four conditions:

- 1 high price/no discount;
- 2 high price/discount;
- 3 low price/no discount; and
- 4 low price/discount.

Then, the reduced price was shown within the two discount conditions. Appendix 2 exhibits two of the four ads conveying the experimental design.

Procedure

Four versions of the survey (2 levels of price, between, × 2 levels of price deal, between) were developed in the same manner and structure reported for Study 1. The surveys were randomly assigned to participants, each of whom was exposed to one version only. A total of 119 undergraduate and graduate business students (60 females and 59 males) voluntarily participated in Study 2 for a minimal extra credit. They were 28.97 years old on average. They owned one to four pairs of sunglasses (2.13 on average). Across four versions of the survey, participants showed no significant difference in age ($F = 0.15$, $p = 0.93$), the number of owned

pairs of sunglasses ($F = 1.29$, $p = 0.28$), the price that they were willing to pay if they would buy a pair of sunglasses ($F = 0.99$, $p = 0.40$), product involvement with sunglasses ($F = 0.36$, $p = 0.79$), and gender (chi-square = 0.59, $df = 1$, $p = 0.90$).

To check the manipulation, we developed a three-item scale of perceived price and a three-item scale of perceived price deal in a seven-point scale: reliability was 0.95 and 0.86, respectively (see the scales in Appendix 1). Price perception was significantly different between low ($M = 2.23$) versus high ($M = 6.34$) price scenarios ($t = 24.95$, $df = 117$, $p < 0.0001$), and price deal perception was also significantly different between no deal ($M = 2.94$) versus 40 percent off ($M = 5.16$) scenarios ($t = 13.79$, $df = 117$, $p < 0.0001$). As in Study 1, the effect of two independent variables (price and price deal) was measured in three types of behavioral intentions. The items were measured in a seven-point scale (1 = Strongly disagree and 7 = Strongly agree) and reliability was highly satisfactory: 0.88 for brand equity, 0.81 for brand loyalty, and 0.95 for purchase intention. Factor analysis of the items of the three measures produced a clear three-factor structure, which explained 81.5 percent of total variances: 28.7 percent for brand equity, 27.0 percent for purchase intention, and 25.8 percent for brand loyalty.

Result

Four groups (two levels of price x two levels of price deal) had a statistically equivalent sample size to one another, ranging from 26 to 36 (chi-square = 2.04, $df = 3$, $p = 0.56$). The result of MANCOVA was conducted to simultaneously test the effect of price and price deal and their interaction, taking product involvement as a covariate, on three dependent variables (purchase intention, brand loyalty, and brand equity). Unlike in Study 1, the main effect of both price ($p < 0.05$) and price deal ($p < 0.01$) was significant. Nevertheless, the interaction effect of price and price deal was also significant at the 0.10 level, which warrants the investigation of univariate tests at each dependent variable level. Table III reports the results of ANCOVA, which identified a significant interaction effect between price and price deal in brand equity ($F = 3.50$, $p < 0.05$) and brand loyalty ($F = 3.00$, $p < 0.01$), while having no significant main effect of either price or price deal on these two dependent variables. Figure 2 exhibits the same X-shaped interaction effects as found in Study 1. However, the interaction was directionally supported for purchase intention ($F = 1.26$,

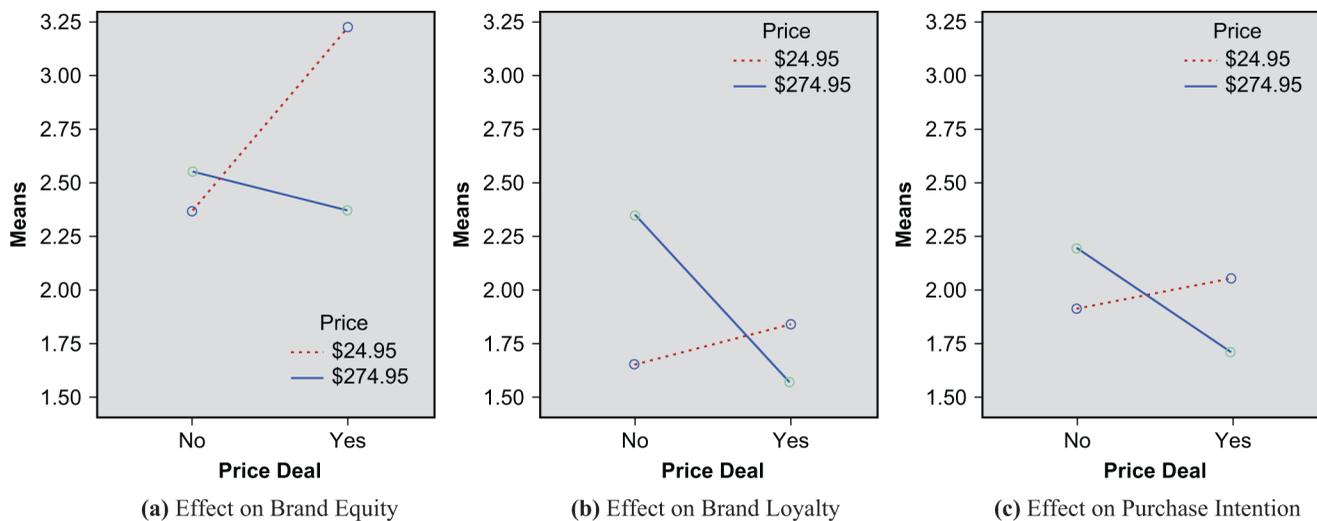
$p = 0.17$), although its shape was also crossover as shown in Figure 2c. Therefore, $H1$ and $H2$ were clearly supported for two dependent variables (brand equity and loyalty) but directionally supported for the third variable (purchase intention). The effect size of the interaction was 0.03 for brand equity and 0.05 for brand loyalty, but just 0.01 for purchase intention. As found in Study 1, however, according to ANCOVA, neither price nor price deal ($p > 0.10$) showed a significant main effect in any dependent variable in Study 2. This indicates that the effect of price deal is opposite, depending on the price level of the brand. For the low-priced brand, presence of price deal increased behavioral intentions more than the absence of it. On the other hand, for the high-priced brand, absence of price deal increased the behavioral intentions than the presence of it. In conclusion, the effect of price deal depends on the level at which the brand is priced. It was significant for brand equity and loyalty, but directional for purchase intention. Study 1 and Study 2 together confirm that the effect of price deal depends on the level of the original price and that price deal should be encouraged for a low-priced product but discouraged for a high-priced product.

Conclusion and discussion

Unlike previous research, this study examined the effect of price deals in the context of price level, using an experimental design. Both Study 1 (two existing brands) and Study 2 (a fictitious brand) confirmed that price deals do not have a uniform effect across brands but a different effect depending on the price level of a brand. Depending on the price level, the consumer's behavioral intentions were quite different when exposed to price deals. Specifically, for a high-priced brand, we observed that price deals have a negative effect on brand equity, brand loyalty, and purchase intention. On the contrary, for a low-priced brand, we observed a positive effect on each of the same behavioral intention variables. This study expands our understanding of consumer behavior toward a brand when consumers have to process the information of price and price deals simultaneously. We found a significant behavioral difference when there a price deal exists in comparison to no-price deal. However, the direction of the behavior was reverse depending on the level of price.

Table III Study 2. Univariate tests for group differences in dependent variables

Source	Dependent variable	Sum of squares	df	Mean square	F	p-value
Product involvement	Brand equity	1.56	1	1.56	2.03	0.15
	Brand loyalty	1.18	1	1.18	2.70	0.10
	Purchase intention	0.27	1	0.27	0.40	0.52
Price	Brand equity	1.46	1	1.46	1.90	0.17
	Brand loyalty	0.58	1	0.58	1.31	0.25
	Purchase intention	0.01	1	0.01	0.01	0.89
Price deal	Brand equity	1.48	1	1.48	1.93	0.16
	Brand loyalty	1.14	1	1.14	2.59	0.11
	Purchase intention	0.38	1	0.38	0.56	0.45
Price × price deal	Brand equity	3.50	1	3.50	4.54	0.03
	Brand loyalty	3.00	1	3.00	6.82	0.01
	Purchase intention	1.26	1	1.26	1.84	0.17

Figure 2 Study 2. Graphical presentations of interaction effect between price and price deals**Managerial implications**

The findings of this research suggest that marketers have to rethink the promotional strategies for their brands. For instance, Ghodeswar (2008) argues that brands evolve over time and require a lot of time and resources to construct a brand image and build an identity. So he insists that each single promotional message needs to be carefully designed as it can contribute to building or destroying the brand. Upshaw (1995) also argues that brand identity hinges on who consumers are as individuals, the environment they live in, and the signal sent from the brand itself. For instance, high-priced brands (typically, luxury brands) target those who see image as their goal of purchase. To impress these consumers, marketers invent a unique promotional strategy that shapes the image, which could be the function of uniqueness of the product in the competitive market that tries to defy the image. However, the moment the high-priced brand is on sale through price promotions that uniqueness and image can be damaged, and consumers' behavioral intentions diminish because the brand does not satisfy the goal of its target market any more. For low-priced brands, the opposite is the case. The goal of the consumer is the pursuit of value for the money, which can be much more successful with price deals, consequently increasing the behavioral intentions.

High-priced brands are seen as image-related goods. They have been successful in developing their own unique image, which was a formed through not only physical quality but also advertising activities. Prada, for instance, promotes "Hollywood stars use it why not you? Be noticed, Be admired." This message clearly satisfies the goal of consumers, which is to possess image and status. Thus, consumers make a purchase. However, the very moment there is a price deal offered on Prada, even with the same advertisement text, the behavioral intentions become weakened. The price deal clearly obstructs the consumer's purchase goal of image, decreasing the purchase intention along with brand equity and brand loyalty, because it sends negative vibes toward high-priced image brands. On the contrary, low-priced brands are seen to serve functional goals. Their consumers are price-sensitive and typically go for value. A lower-price tag, thanks to a price deal, justifies their purchase. Therefore, the implication of the findings is obvious

that high-priced brands should avoid price deals, whereas low-priced brands could benefit from price deals.

We admit that our study does not provide enough detailed insights into many related issues such as whether price deals should be completely stopped for high-priced brands, whether occasional price deals can be acceptable for high-priced brands, what dollar-amount price level is objectively or subjectively high enough in defining high-priced brands, and what percent or dollar-amount price deal can make a difference in each of the high- and low-priced brands. Nevertheless, it seems to be a reasonable conclusion that price deals should be avoided, if possible, if image and status, rather than value or functionality, is a primary positioning of the brand. On the contrary, price deals can be relatively freely used for a brand, which pursues competition based on value for money or functionality.

Limitations and future research

Overcoming the weaknesses of the study would be the directions of future research. First, our experimental design could be stronger. Specifically, we selected a 40 percent sale to measure the effect of a price deal. Although the discount rate was derived from the industry's common practice, it could strengthen the confidence in the findings if a range of various rates is examined. Likewise, we relied on two product categories (handbag and sunglasses) and one type of sample (undergraduate and graduate business students). Future research needs to study different types of products and samples to enhance the external validity of the findings.

Second, our sample consist of consumers of the US, but the reaction to price and price deals might vary across nations as the same marketing strategy is often received differently in different countries. Likewise, individuals' personal cultural tendencies might show similar differences in evaluating marketing stimuli. For instance, Yoo (2009) found collectivism has a significant effect on brand loyalty and equity. In his study, regardless of the national identity, collectivist individuals showed higher brand loyalty and equity across brands than did individualist individuals. Therefore, whether the findings of our study are consistent across national cultures or individual-level cultural tendencies needs to be examined. Along with this line, the role of

sociodemographics (e.g. personal income, marital status, employment status, and education level) and psychological characteristics (e.g. perceived social class, vanity, materialism, life style, and self-esteem) needs to be studied in processing price and price deal combinations.

Third, the study was based on experiments. Although an experiment is a reliable method to test causality, it lacks reality. Thus, future research needs to examine real market data that have recorded price changes and price deal offerings at the brand level across product categories over many time periods. Related to this, when studying real data, competition needs to be included because the interactive effect of price and price deals must be different depending on how competing brands act and react.

Fourth, in investigating the interactive effect of price and price deal, this study observed behavioral intentions as dependent variables. However, future research needs to also pay attention to mediating variables to show more details of the procedural mechanism of how price interacts with price deal. Then researchers and marketers could discover strategic insights into how to intervene in the middle of the procedure to generate more favorable outcomes when using price promotions.

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Appendix 1. Measures of constructs

Perceived price (Cronbach’s alpha = 0.95^b)

- The final price (the actual price you should pay) is expensive.
- The final price is cheap. (reverse)
- The final price is high.

Perceived price deal (Cronbach’s alpha = 0.86^b)

- XYZ is on great sale.
- The final price of XYZ is now much cheaper than the regular price.
- The final price makes me save a lot, compared to the regular price.

Brand equity (Cronbach’s alpha = 0.93^a and 0.88^b)

- It makes sense to buy XYZ instead of any other brand, even if they are the same.
- Even if other brand has same features as XYZ, I would prefer to buy XYZ.
- If there is another brand as good as XYZ, I prefer to buy XYZ.
- If another brand is not different from XYZ in any way, it seems smarter to purchase XYZ.

Brand loyalty (Cronbach’s alpha = 0.87^a and 0.81^b)

- I consider myself loyal to XYZ.
- XYZ would be my first choice.
- I will not buy any other brand ABC if XYZ is available in the store.

Purchase intention (Cronbach’s alpha = 0.96^a and 0.95^b)

- I will definitely purchase XYZ in the near future.
- I intend to purchase XYZ in the near future.
- It is likely that I will purchase XYZ in the near future.

Product involvement (Cronbach’s alpha = 0.87^a and 0.87^b)

To me, ABC is:

- Unimportant _____ Important
- Irrelevant _____ Relevant
- Means nothing _____ Means a lot
- Worthless _____ Valuable

Notes: XYZ and ABC denote the focal brand and the product category, respectively; ^a Measured in Study 1; and ^b Measured in Study 2.

Appendix 2. Experimental stimuli for Study 2 (two examples)

Figure A1



This pair of sunglasses from BSM is absolutely breathtaking, exciting, and alive. It features clean, modern lines that mirror the minimalism of today. This is a classic look at its absolute best. It signifies complete style and sophistication with its unique detailing, while the ear pieces finish it with perfection. It combines exceptional quality, great styling and 100% protection from UV rays. A protective case for storage included.

- Lightweight Polycarbonate Shatterproof lens
- Full UV400 protection lens
- Lifetime Breakage Warranty

Example 1. The ad for a high-priced brand without a price deal



This pair of sunglasses from BSM is absolutely breathtaking, exciting, and alive. It features clean, modern lines that mirror the minimalism of today. This is a classic look at its absolute best. It signifies complete style and sophistication with its unique detailing, while the ear pieces finish it with perfection. It combines exceptional quality, great styling and 100% protection from UV rays. A protective case for storage included.

- Lightweight Polycarbonate Shatterproof lens
- Full UV400 protection lens
- Lifetime Breakage Warranty

Example 2. The ad for a low-priced brand with a 40% off price deal

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