The Effects of Consumers’ Incidental Emotions on Their Perceptions of Advertised Reference Prices

Introduction

The advertised reference price is defined as the price against which purchasers compare the offered price of a product or service (Monroe 1990). Previous studies have shown that the presence of an advertised reference price enhances the transaction value (Blair and Landon Jr. 1981; Grewal, Monroe, and Krishnan 1988; Kalyanaram and Winer 1995; Lieffeld and Heslop 1985). A retailer can enhance consumer perceptions of the transaction value through advertisements that provide the reference price and a sale price or the reference price and a discount price. The savings can then be directly inferred as the monetary gain distance between the sale price and the reference price. Even though advertisements with exaggerated reference prices are evaluated as less believable, consumers still perceive a higher transaction value for a reference price (Urbany, Bearden, and Weilbaker 1988). However, a research question that remains unanswered is whether providing an advertised reference price always has a greater effect on the transaction value than does no advertised reference price.

Emotions have been shown to play a role in many different consumption related contexts (Adaval 2003; Chuang 2007; Forgas and Ciarrochi 2001; Kahn and Isen 1993; Lin et al. 2007), but it has not been investigated in the area of price advertising. This article developed a conceptual framework that draws on the model of emotions to provide a cognitive account of why and when providing an advertised reference price produces a lower transaction value than the no reference price, in particular, incidental affect. Following the current literature (Baggozzi, Gopinath, and Nyer 1999), this paper used affect-related terms (namely, mood, affect, and emotion) interchangeably when referring to incidental affect. Although most of the research that examines the effect of mood on consumer behavior (e.g., Kahn and Isen 1993; Lee and Sternthal 1999) deals with incidental affect, its role in the advertised reference price has been largely ignored (Garg, Inman, and Mittal 2005). Our major goal is to improve our understanding of how valence-based affective states influence the effect of the advertised reference price. In the study reported herein, this paper examined the effect on the transaction value of the way in which consumers perceive the advertised reference price as a function of consumer emotions. In the first step, this paper manipulated positive and negative affect by using two different induction techniques and then examined the effect of emotions on the reference price in two separate experiments. Second, this paper attempted to gain an understanding of whether the effect of emotions on the advertised reference price varies by format. To do so, this paper manipulated the format by “$-off” versus “%-off.” Finally, this paper determined that the effects of emotions on the influence of the reference price can be explained by perceptions of reference price information as an indicator of monetary gain or quality sacrifice.

Research Methodology

The effect of emotion on the reference price may be explained by the affect-as-information (AAI) perspective. When consumers view an advertised reference price, happy individuals who feel that promotion of price information is an advantage in following a “selling price as monetary gain” procedure will be more likely to infer a large transaction value. The elaboration of information on the promotion price corresponds to the perception of “selling price as a sacrifice” and will lead to a lower magnitude of the reference price effect among individuals who are feeling negative. This leads to the following hypothesis.

H1: The advertised reference price effect is a function of affect valence, such that an advertisement with a reference price will have a greater transaction value than an advertisement with no reference price for people in a positive affective state, compared to those in a negative affective state.

Study 1

The objective of the first experiment was to test the hypothesis that the effect of the reference price on the perceived transaction value is a function of emotions, such that this effect is more pronounced for positive emotions than it is for negative emotions.

Yin-Hui Cheng, Fu-Yung Kuan, Shih-Chieh Chuang, & Chih-Cheng Huang

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Participants, Design and Procedure

One hundred and twenty-six university undergraduates participated (70 females and 56 males) in this study as a requirement for a marketing management course. The study used a 3 (emotions: positive, neutral, negative) x 2 (reference price: present versus absent) between-subjects design. The participants were randomly assigned to one of six conditions. The emotional induction method that was used to manipulate the emotions and memories of the two groups of participants was adapted from the processes that were carried out by Smith and Ellsworth (1985), with the same procedure being followed for the inducement of positive (happy) and negative (sad) emotions.

During the emotional induction procedure, the participants were initially asked to recall some past experience or event that activated a particular emotion (happy or sad), and six general questions (e.g. Please describe this past pleasant situation to me. What was it like to be happy in this situation?) were then asked about that particular experience. After the participants were introduced to the foregone scenario and had recalled the situation for a few minutes, they were asked the series of questions about the experience The subjects in the neutral condition were asked to describe in detail what their typical day is like and the activities that they undertake on a routine day.

Results

The study employed a two-way ANOVA to investigate the effects of the reference price and emotions on transaction value. Our results showed a main effect for the reference price effect, \( F(1, 120) = 5.91, p < .005 \), which indicates that the advertisement with a reference price \( (M = 4.25) \) was perceived to have a higher transaction value than the advertisement without a reference price \( (M = 3.95) \), which is consistent with prior evidence on the reference price effect (Blair and Landon Jr. 1981; Kalyanaram and Winer 1995; Liefeld and Heslop 1985). Moreover, the analysis revealed a significant interaction effect between incidental affect and the reference price \( F(2, 120) = 10.855, p < .005 \). In the positive emotional condition, the reference price was perceived to have a greater effect on the transaction value \( (M = 5.54) \) than was no reference price \( (M = 4.71) \) \( (t=5.95, p<.0001) \). Similar results were found in the neutral emotional condition \( (4.28 \text{ versus } 3.64, t=3.34, \ p<.005) \), whereas the negative emotional condition produced the result that the reference price was perceived to have a lesser effect \( (M = 2.97) \) on the transaction value than was no reference price \( (M = 3.50) \) \( (t=3.01, p<.01) \).

Study 2

In Experiment 2, this paper tested our hypothesis employing a different affect-induction procedure. This approach has been applied in prior studies to “triangulate” mood effects (Forgas 1995) because most mood-induction methods show a tendency toward unintended cognitive and motivational consequences.

Participants, Design and Procedure

One hundred and eight participants (65 females and 43 males) were involved in Study 2 as part of their course requirements. They were randomly and equally assigned to six groups, and the study had a 3 (emotions: positive, neutral, negative) x 2 (reference price: present versus absent) between-subjects design. The procedure of this experiment was identical to that of Experiment 1 except for the affect-induction method. For the positive emotional condition group, a segment from the feature film Pretty Woman was shown to induce a happy mood. For the negative emotional condition group, a clip from the movie Ordinary People was shown to induce a sad mood.

Results

These results predicted in a 3 x 2 ANOVA, there was a main effect of reference price \( F(2, 102) = 7.39, p < .01 \). Participants perceived a greater reference price effect \( (M = 4.47) \) on the transaction value than they did if there was no reference price \( (M = 4.03) \), which is consistent with Study 1 on reference price effects. Moreover, our analysis showed an interaction effect between emotion and the reference price for price attraction \( F(2, 102) = 13.89, p < .0001 \). In the positive condition, the advertisement with the reference price \( (M = 5.39) \) was perceived to have a greater effect on the transaction value than the advertisement with no reference price \( (M = 4.57) \) \( (t=2.87, p < .01) \). Similar results were found in the neutral emotional condition \( (4.97 \text{ versus } 3.72, t=4.43, p<.0001) \), whereas the negative emotional condition meant that the advertisement with the reference price \( (M = 3.06) \) was perceived to have less effect on the transaction value than the advertisement with no reference price \( (M = 3.8) \) \( (t=2.70, p<.01) \).

Study 3

To extend the generalizability of our findings regarding the effect of emotions on the reference price effect, this experiment replicated the first two experiments but focused on a different promotional format for the transaction value. Thus, Study 3 was designed to test whether an implausible reference price rates a higher transaction value in positive and negative emotional conditions.

Participants, Design and Procedure

Three hundred and sixty undergraduate university students (210 females and 150 males) who had enrolled in a marketing management course participated in the study. They spent nearly 15 minutes to complete the study, and they received a required course credit for doing so. The study was a 3 (emotion: positive, neutral, negative) x 3 (reference price: high [implausible], low [plausible], absent) x 2 (format: $-off versus %-off) between-subjects design. All of the manipulations were determined based on the pre-tests that are discussed in the section on Study 1. The third factor was to randomly assign the partic-
ipants to either the $-off or %-off format. The $-off format was identical to that used in Study 1. The %-off format was presented with three levels of reference prices: (a) “Regular Price $315.99, now 40% off” (the high reference price), (b) “Regular Price $237.49, now 20% off” (the low reference price), and (c) “Sale Price $189.99” (no reference price).

**Results**

This study conducted a 3 x 3 x 2 ANOVA analysis. Again, as predicted, the results showed a significant interaction between the reference price and emotions on the transaction value ($F(4, 342) = 10.01, p < .0001$), which indicates that the subjects in the three affect conditions had significantly different perceptions of the three reference prices and their transaction values (Figure 1).

**Study 4**

The objectives of the fourth experiment were dual. First, this study was carried out to examine whether the extent to which respondents use reference price information as an indicator of monetary gain or quality sacrifice is a function of consumer emotions. Second, this paper tested whether consumers with positive emotions perceived that a high transaction value corresponded to a high level of believability and whether consumers with negative emotions perceived that a low transaction value corresponded to believability.

**Participants, Design and Procedure**

One hundred and fifty undergraduates (68 males and 82 females) were recruited and paid to participate in the study. This study adopted a 3 (emotions: positive, neutral, and negative) x 2 (reference price: present versus absent) between-subjects factorial design identical to that in Study 1. Perceived quality sacrifice, monetary gain, transaction value, and believability acted as the dependent variables.

**Perceived Monetary Gain**

The participants were asked to evaluate the perceived price on 7-point semantic scales for two items: (1) good value for money (Chandrashekaran and Grewal 2006) and (2) saving a lot of money (Compeau, Grewal, and Chandrashekaran 2002) ($α = .90$). Perceived Quality Sacrifice. Perceived quality sacrifice was measured by two 7-point semantic scales from previous studies: high quality/low quality (Boulding and Kirmani 1993) and superior/inferior (Keller and Aaker 1992) ($α = .89$).

**Perceived Believability**

Perceived believability was measured by asking participants to respond to two statements: “I believe that the SONY digital cameras are regularly sold at the original price” and “I believe that the original price advertised is the regular price for SONY digital cameras.” ($α = .94$).

**Results**

This paper conducted a paired-samples t-test to compare the perceived monetary gain and the perceived quality sacrifice in pairs. The results indicate that when consumers with positive emotions evaluate an advertised price, the extent of the perceived monetary gain is greater than the extent of the perceived quality sacrifice. Additionally, this result shows that positive emotion increases and negative emotion decreases perceptions of the believability of an advertisement with a reference price (Table 1).
Table 1
Mean Values of the Perceived Quality Sacrifice and Monetary Gain Due to the Reference Price with Emotions in Study 4

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Reference</th>
<th>Mean</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Monetary gain</td>
<td>Quality sacrifice</td>
<td>t</td>
<td>Believability</td>
</tr>
<tr>
<td>Positive</td>
<td>Reference price</td>
<td>5 (1.35)</td>
<td>4.32(1.35)</td>
<td>2.29**</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td>No reference price</td>
<td>4.54(0.91)</td>
<td>4.1(1.714)</td>
<td>1.74*</td>
<td>4.98</td>
</tr>
<tr>
<td>Neutral</td>
<td>Reference price</td>
<td>4.5(0.79)</td>
<td>3.92(0.92)</td>
<td>2.39**</td>
<td>4.08</td>
</tr>
<tr>
<td></td>
<td>No reference price</td>
<td>4.02(0.76)</td>
<td>4.2(0.94)</td>
<td>0.744</td>
<td>4.36</td>
</tr>
<tr>
<td>Negative</td>
<td>Reference price</td>
<td>3.68(0.97)</td>
<td>4.32(1.86)</td>
<td>-2.31**</td>
<td>2.76</td>
</tr>
<tr>
<td></td>
<td>No reference price</td>
<td>3.82(0.76)</td>
<td>4.36(0.74)</td>
<td>-2.54**</td>
<td>3.64</td>
</tr>
</tbody>
</table>

Note: *p< 0.1, **p< 0.05; Standard deviations are given in parentheses.

General Discussion

The data from the four experiments provide cumulative evidence for the role played by incidental affect in the reference price effect. Consistent with ECM explanations, positive affect increases and negative affect reduces the magnitude of the reference price effect. The use of a completely different affect-induction procedure (Experiment 2) established the robustness of this observed effect of incidental affect. This paper also demonstrated this effect in two promotional formats: $-off and %-off (Experiment 3). Finally, the findings of Experiment 4 complement those of the first three to support our claim regarding the relationship between incidental affect and reference price. This paper showed that incidental affect influences the perception of monetary gain or quality sacrifice that is produced by the reference price, which, with few exceptions, has rarely been reported in the literature (Lin et al. 2007; Sheng, Parker, and Nakamoto 2007). This research contributes to the literature by offering empirical evidence that incidental affect influences the advertised reference effects.

Urbany, Bearden, and Weilbaker (1988) found that even when an advertisement with an exaggerated reference price is rated as less believable, consumers perceive a higher transaction value than they do for an advertisement with no reference price. However, our studies examined whether a consumer who experiences negative incidental affect and is provided with an exaggerated (implausible) or plausible reference price will perceive a lower transaction value with a reference price. We shows that an advertised reference price is sometimes, but not always, perceived to be indicative of monetary gain. The perception of monetary gain is more likely to occur when consumers experience a positive emotion, whereas when they experience a negative emotion, they are more likely to perceive quality sacrifice. Thus, there seems to be a domain invariant cognitive phenomenon underlying the popularity of the reference price. Additionally, previous studies have found that the promotional format plays an important role in the effects of the advertised reference price. When an advertisement contains a reference price and a sale price (the $-off format), consumer attitudes toward the deal and the perceived transaction value are significantly more positive than they are when the advertisement contains a reference price and a discount (the %-off format) (Chandrashekar and Grewal 2006; Makienko 2006). However, our studies show that the promotional format does not moderate the effects of emotions on the advertised reference price effect.

This study has some important implications for marketing practice. The results suggest that marketers can influence perceptions of the reference price by inducing consumers to feel mildly happy or sad. Although many of the factors that affect consumer mood are beyond the control of marketers, it can still be greatly influenced by small factors, such as the smile of a salesperson or a long wait in line. For example, if a seller intends to promote a product by providing an advertised reference price, then the selling strategy should be to create a positive mood among consumers to ensure that they perceive the purchase of the product as a monetary gain.
REFERENCES


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