How rational thinking style affects sales promotion effectiveness

Bi Yang\textsuperscript{a,b,*}, Anna S. Mattila\textsuperscript{b}

\textsuperscript{a} School of Hospitality Management, The Pennsylvania State University, 221 Mater Building, University Park, PA, 16802, United States
\textsuperscript{b} School of Hospitality Management, The Pennsylvania State University, 224 Mater Building, University Park, PA, 16802, United States

\textbf{ARTICLE INFO}

Keywords: Sales promotions \hspace{1em} Price framing \hspace{1em} Buy one get one free \hspace{1em} Multi-unit price promotion \hspace{1em} Rational thinking style

\textbf{ABSTRACT}

Despite the widespread use of “buy one get one free” (BOGOF) and “multi-unit price” (MUP, e.g., buy two get 50\% off, 2 for $Y/2) promotions in the hospitality industry, no prior research has compared their effectiveness. The current study examines consumers’ purchase intention as a function of (a) BOGOF vs. MUP promotions and (b) rational thinking style, which reflects the level of capability and enjoyment of thinking analytically and logically. The results indicate that people low in rational thinking style exhibited a higher purchase intention toward BOGOF (vs. MUP) promotions while their counterparts high in rational thinking style were indifferent across the two promotion types. Further, this study identifies an important boundary condition. When the amount of savings (e.g., buy 2, save $Y/2) is salient in the MUP promotion, consumers low in rational thinking style are equally attracted to both types of offers. Theoretical and managerial implications are discussed.

1. Introduction

Sales promotions, a significant component of restaurants’ marketing budgets, are commonly utilized to attract consumers and to boost sales (Huang et al., 2014; Kimes and Dholakia, 2011; Nusair et al., 2010). Surveying 931 American consumers, Kimes and Dholakia (2011) show that sales promotions are the third most important reason for restaurant choice after past experience and convenient location.

The two most frequently-used sales promotions in the restaurant industry are “buy one get one free” (BOGOF) and “multi-unit price” (MUP) promotions. For example, McDonald’s uses BOGOF and “2 for $Y” to promote its burgers and beverages, and Pizza Hut takes advantage of both types of promotions to increase the sales of its pizzas. But are these two promotions equally effective?

This study investigates the effect of BOGOF vs. MUP promotions on consumers’ purchase intention in the context of fast-casual restaurants. Despite the popularity of sales promotions in the hospitality industry, a limited number of studies have examined their effectiveness, and mainly in the context of casinos (e.g., Lucas, 2018; Lucas and Bowen, 2002; Suh et al., 2014) and online price discounts on hotel rooms (e.g., Chen et al., 2016; Christou, 2011; Yang et al., 2016). This study contributes to the literature by exploring two types of commonly-used sales promotions in the restaurant context. To the best of our knowledge, this work is the first to examine the effect of BOGOF and MUP promotions in the hospitality domain.

It is worth noting that the two types of promotions examined in this study are mathematically equal, thus allowing us to investigate the semantic effect of the presentation format (Das, 1992). Since the efficiency of sales promotions is contingent on consumer characteristics (Hawkes, 2009; Li et al., 2007), we also explore the moderating role of rational thinking style, which can be defined as the level of capability and enjoyment of thinking analytically and logically (Pacini and Epstein, 1999). We propose that the extent to which individuals think rationally can affect their preference for BOGOF vs. MUP promotions. A better understanding of the relative effectiveness of the two promotion types would assist marketing managers in deciding which type of promotion to adopt.

2. Literature review

2.1. “BOGOF” vs. “MUP” promotions

“BOGOF” is a bonus pack promotion offering consumers extra product(s) without additional cost (Ong et al., 1997; Yin-Fah et al., 2011). This promotion is a commonly-implemented marketing tool because the word “free” is very effective in attracting consumers’ attention and igniting their excitement (Jayaraman et al., 2013). In addition, a gain of an additional free product tends to increase consumers’ value perceptions (Zeng and Hao, 2016). According to a report conducted by UK’s Competition Commission, BOGOF leads to a 3000\% sales increase in British supermarkets (Hawkes, 2009).

Previous research on BOGOF mainly centers on comparing its
effectiveness with price discounts (e.g., 50% off) in terms of perceived transaction value (Lowe, 2010; Sinha and Smith, 2000), store preference (Smith and Sinha, 2000), promotion preference (Li et al., 2007), promotion attractiveness (Spiegel et al., 2011), consumer attitudes (Yin-Fah et al., 2011) and purchase intention (Lowe and Barnes, 2012). Specifically, Sinha and Sinha (2000) show that since the price discount (i.e., 50% off) results in a lower expenditure than BOGOF, the former will lead consumers to perceive a higher transaction value. Their findings further indicate that the superiority of a 50% off promotion is more salient for perishable products, which are difficult to stock up. In the context of new product development, Lowe and Barnes (2012) show that consumers respond more favorably to an innovative product when it is promoted via price discount as the reduced price can offset perceived risks associated with innovations. In contrast, Li et al. (2007) demonstrate that when the product has a high consumption level (i.e., the product can be quickly used up), a BOGOF promotion is more effective than a price discount. Lowe (2010) shows similar findings for products characterized by low performance risk.

Another everyday promotion format is MUP (Drechsler et al., 2017) involving a sale price for multiple units in a form of price reduction (e.g., 2 for 54 with regular price at $2.5 per item; Manning and Sprott, 2007). Blattberg and Neslin (1990) demonstrate that an MUP promotion is superior to a single unit price (SUP) promotion. Similarly, Wansink et al. (1998) and Manning and Sprott (2007) show the superiority of an MUP promotion over an SUP promotion due to the anchoring effect. Specifically, based on real sales data, Blattberg and Neslin (1990) employ econometric modeling and reveal that MUP promotions result in a 12% boost in sales. In a context of a supermarket chain, Wansink et al. (1998) show that compared to a SUP promotion, an MUP promotion induces a 32% increase in sales. Finally, Akaichi et al. (2015) study the price discount distribution in MUP promotions and demonstrate that an increasing price discount distribution leads to higher willingness to pay than a uniform distribution.

Previous research comparing the effectiveness of the two types of promotions is limited to a supermarket (Sinha and Smith, 2000; Smith and Sinha, 2000) or retail store context (Drechsler et al., 2017). Smith and Sinha (2000) show that a BOGOF promotion (vs. buy two, get 50% off) leads to a higher store preference. Using perceived transaction value as the dependent variable, Sinha and Smith (2000) conclude that, for stock-up items, BOGOF promotion is superior. They attribute the superiority of BOGOF to two reasons. First, BOGOF indicates a gain of an additional amount, whereas buy two get 50% off signals a reduction of loss. Consumers find gain-framed deals more attractive (Diamond and Sanyal, 1990). Second, MUP promotions (e.g., buy two, get 50% off) imply a precondition that consumers have to purchase two units to receive the discount. Contrary to the above findings, Drechsler et al. (2017) compare BOGOF vs. 2 for $Y/2 promotions and find that a 2 for $Y/2 promotion results in a higher purchase intention. They argue that BOGOF promotion is perceived as a gain while an MUP promotion is perceived as a reduced loss. According to the prospect theory, the impact of perceived reduced loss is stronger than that of perceived gain, and consequently, consumers prefer MUP promotions.

In sum, the findings on the superiority of BOGOF vs. MUP promotions are mixed. Hawkes (2009) suggests that individual differences might affect the effectiveness of sales promotions. Responding to his proposition, we propose that individual differences in consumers’ capability and enjoyment of calculating the savings might influence their reactions to sales promotions. Such differences are captured by the notion of rational thinking style.

2.2. Rational thinking style

According to the cognitive-experiential self-theory, individuals rely on two thinking styles to process information and make decisions, i.e., rational and experiential (Epstein et al., 1996; Pacini and Epstein, 1999). Rational thinking style is characterized by logical, analytical and intentional processing, whereas experiential thinking style features affective, heuristic and automatic processing (Epstein et al., 1996). Although the two thinking styles contribute jointly to individuals’ decision-making processes, they are independent and the relative dominance hinges on a variety of factors, including situational factors (Simon and Usunier, 2007). For example, people tend to activate and depend on their rational mode to deal with mathematical problems (Brown and Bond, 2015; Sladek et al., 2010). When faced with sales promotions, consumers need to calculate the amount of savings, and therefore, the rational mode should predominate. Accordingly, this study focuses on rational thinking style.

Previous literature shows that individuals low in rational thinking style tend to be impacted by framing (i.e., the way information is presented), and thus they are more inclined to exhibit judgmental biases. For example, the ratio bias suggests that people tend to believe that a large-numbered ratio (e.g., 10/100) is bigger than a smaller-numbered, yet equal ratio (e.g., 1/10) (Ayal et al., 2011; Smith and Levin, 1996). In addition, Shiloh et al. (2002) show that rational thinking style is positively related to normative-statistical judgments. Specifically, their results indicate that individuals high in rational thinking style are more likely to perceive that there is a 50% chance that a pregnant woman will give birth to another daughter, regardless of the gender of her previous children.

In this study, we argue that although BOGOF and MUP promotions are economically equivalent, their relative effectiveness is affected by consumers’ rational thinking style. Specifically, the savings of a BOGOF promotion can be easily captured via regular unit prices, thus calling for minimal analytical effort. In contrast, MUP promotions require more processing since arithmetic operations are needed to determine the amount of savings. For example, facing a “buy two get 50% off” promotion, consumers need to conduct multiplications (i.e., 2 × regular price × 50%), which require a high level of mathematical effort (Estelami, 2003). Similarly, facing a 2 for $Y/2 promotion, consumers need to carry out two arithmetic tasks (i.e., 2 × regular price-Y/2) to compute the amount of savings. Since individuals low in rational thinking style are unable or unwilling to think in an analytic manner, they will find it easier to capture the benefits of a BOGOF promotion, thus leading to a higher purchase intention. Conversely, individuals high in rational thinking style are fond of analytical thinking, and consequently, they can easily determine when the discount of BOGOF and MUP promotions is equal. Therefore, they should exhibit similar levels of purchase intention across the two promotion types. Further, when the benefits of an MUP promotion can be perceived with ease (e.g., buy 2 save $Y/2), the superiority of a BOGOF over an MUP promotion should disappear among consumers low in rational thinking style.

Taken together, we put forth the following hypotheses:

H1. Rational thinking style will moderate the influence of promotion type on consumer’s purchase intention.

H1a. Low rationality scorers will show higher levels of purchase intention with BOGOF (vs. MUP) promotions.

H1b. High rationality scorers will show similar levels of purchase intention across BOGOF and MUP promotions.

H2. Adding information about the amount of savings will make any analytical calculation redundant.

3. Methodology

3.1. Study design

This study employed a promotion type (BOGOF vs. MUP) × rational thinking style quasi-experimental design with promotion type manipulated between participants and rational thinking style as a
measured variable. Participants were recruited via MTurk and randomly assigned to one of the two promotion conditions. We conducted three studies and all the procedures and stimuli were the same across the three experiments expect for the MUP promotion manipulation. Specifically, MUP was operationalized as a “buy two get 50% off” promotion in study 1, as a “2 for $Y/2” promotion in study 2 and as a “buy 2 save $Y/2” promotion in study 3.

3.2. Procedures and stimuli

Participants were asked to imagine themselves in a scenario where they patronized a fast-casual restaurant with a friend. Next, they were exposed to one of the two promotions for an avocado smoothie (see Appendix A). Finally, participants completed a series of questions, including purchase intention, covariates (i.e., product liking and perceived price fairness), manipulation checks and demographic information.

3.3. Measures

Purchase intention was measured via a 7-point bipolar scale (not probably/very probably, not likely/very likely; r = 0.91, p < 0.01) adapted from Burton et al. (2009). Rational thinking style was measured via a 20-item scale (α = 0.90) adopted from Pacini and Epstein (1999), with 10 items measuring rational ability (α = 0.84) (e.g., “Using logic usually works well for me in figuring out problems in my life” and “I usually have clear, explainable reasons for my decisions”) and 10 items measuring rational engagement (α = 0.94) (e.g., “I enjoy solving problems that require hard thinking” and “I enjoy intellectual challenges”).

Considering previous study findings, we measured two possible covariates. Product liking was captured by asking participants “How much do you like avocado smoothies?” adapted from Landwehr et al. (2011). Perceived price fairness was measured by a 7-point bipolar scale (unfair/fair, unreasonable/ reasonable, unacceptable/acceptable; α = 0.95) adapted from Martin et al. (2009). Items of each scale were averaged and the mean scores were used in the data analyses.

Demographic questions captured participants’ gender, age, ethnicity, income and education. Scenario realism was captured by asking participants how realistic the scenario was.

4. Study 1

In order to test H1, we used a “buy two, get 50% off” promotion to manipulate MUP. This manipulation is in line with previous research comparing BOGOF and MUP promotions (e.g., Sinha and Smith, 2000; Smith and Sinha, 2000). Although “buy two, get 50% off” promotions are widespread in both online and offline environment (Zeng and Hao, 2016), there is scant research on the topic (Drechsler et al., 2017). As for BOGOF, we kept it consistent with previous literature (e.g., Sinha and Smith, 2000; Smith and Sinha, 2000) and industry practice (e.g., Starbucks and Domino’s) by using “buy one, get one free” promotion.

Seventy-one MTurkers were randomly assigned to either a BOGOF (see Appendix A.1; n = 36) or an MUP promotion (see Appendix A.2; n = 35). The mean age of the participants was 33 years, 59% were male, 65% were Caucasian, 54% had an annual income of more than US $40,000 and 55% earned a four-year college degree.

4.1. Manipulation checks

The results showed that participants perceived the scenario as realistic (M = 5.82). In addition, participants in the BOGOF condition had a mean of 6.69 on “The promotion I saw was buy one get one free” as opposed to their counterparts in the MUP condition (M = 1.74; t (69) = 20.96, p < 0.01). In contrast, participants in the MUP condition had a mean of 6.49 on “The promotion I saw was buy two get 50% off” while the corresponding figure was 2.08 in the BOGOF condition (t (69) = 12.43, p < 0.01). Therefore, our experimental manipulations were effective.

4.2. Regression results

We conducted a multiple regression on purchase intention as a function of promotion type, rational thinking style and their interaction. Among the two possible covariates (i.e., product liking and perceived price fairness), only product liking was significant. The results reveal an insignificant effect of rational thinking style (β = −0.97, t (66) = −1.82, p > 0.05, η² = 0.05) and a significant effect of promotion type (β = −4.61, t (66) = −2.68, p < 0.01, η² = 0.10). However, this significant main effect is qualified by a significant rational thinking style × promotion type interaction (β = 0.78, t (66) = 2.48, p < 0.05, η² = 0.09). Since rational thinking style was a continuous variable, we investigated the interaction effect via floodlight analysis (Spiller et al., 2013). This analysis was conducted through
Model 1 in Hayes’ PROCESS procedure (Hayes, 2013). As shown in Figs. 1 and 2, the impact of promotion type was significant for all values of rational thinking style below the Johnson-Neyman point of 5.01: low-rationality individuals showed a higher purchase intention toward BOGOF (vs. MUP) promotions, supporting H1a. In contrast, high-rationality individuals did not differ in purchase intention across the two promotions, lending support to H1b.

5. Study 2

In Study 2, we used a “2 for $Y/2” promotion to manipulate MUP. This type of promotion is frequently used by retailers (Manning and Sprott, 2007), especially by restaurants (e.g., McDonald’s, Burger King and Pizza Hut). Despite its popularity, only a few articles have examined its effectiveness (Drechsler et al., 2017; Huang, 2016).

We recruited 124 MTurk participants with 61 assigned to a BOGOF and 63 to an MUP promotion (i.e., “2 for $5”; see Appendix A.3). The mean age of the participants was 34 years, 57% were male, 68% were Caucasian, 57% had an annual income of more than US$40,000 and 46% had a four-year college degree.

5.1. Manipulation checks

The mean rating of scenario realism was 5.83, indicating that the scenario was perceived as realistic. As for the promotion manipulation, participants in the BOGOF condition had a mean of 6.69 on “The promotion I saw was buy one get one free” as opposed to their counterparts in the MUP condition (M = 1.67; t (122) = 23.89, p < 0.01). In comparison, participants in the MUP condition had a mean of 6.81 on “The promotion I saw was 2 for $5” while the corresponding figure was 2.33 in the BOGOF condition (t (122) = 18.70, p < 0.01). Therefore, our experimental manipulations were successful.

5.2. Regression results

We ran a multiple regression including purchase intention (the dependent variable), promotion type, rational thinking style and their interaction (the independent variables) as well as product liking (the covariate). The results indicate an insignificant effect of rational thinking style (β = −0.42, t (119) = −1.31, p > 0.05, η² = 0.01) and a significant effect of promotion type (β = −2.15, t (119) = −2.01,
only 40% of the grocery savings are as effective as a BOGOF promotion. According to Manning and Sprodt (2007), only 40% of the grocery firms in the U.S. include the savings amount (i.e., “saving $Y”) in their MUP promotions. Therefore, we used a “buy 2, save $5” (See Appendix A.4) as an MUP promotion to test H2.

We recruited 122 MTurkers; 61 assigned to BOGOF and 61 to MUP. The mean age of the participants was 32 years, 62% were male, 59% were Caucasian, 57% had an annual income of more than US$40,000 and 58% had a four-year college degree.

6. Study 3

The purpose of study 3 was to investigate the boundary condition i.e., H2: adding information about the amount of savings will make any promotion type superior to a BOGOF promotion. According to Manning and Sprodt (2007), only 40% of the grocery firms in the U.S. include the savings amount (i.e., “saving $Y”) in their MUP promotions. Therefore, we used a “buy 2, save $5” (See Appendix A.4) as an MUP promotion to test H2.

Table 1

Multiple regression results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>coefficient</th>
<th>Std. Error</th>
<th>t value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational thinking style</td>
<td>-0.10</td>
<td>0.36</td>
<td>-0.27</td>
<td>0.79</td>
</tr>
<tr>
<td>Promotion type</td>
<td>-0.54</td>
<td>1.13</td>
<td>-0.49</td>
<td>0.63</td>
</tr>
<tr>
<td>Interaction</td>
<td>0.12</td>
<td>0.21</td>
<td>0.55</td>
<td>0.58</td>
</tr>
<tr>
<td>Product liking</td>
<td>0.75</td>
<td>0.06</td>
<td>11.91</td>
<td>0.00</td>
</tr>
<tr>
<td>Constant</td>
<td>1.94</td>
<td>1.89</td>
<td>1.03</td>
<td>0.31</td>
</tr>
</tbody>
</table>

Table 1

Multiple regression results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>coefficient</th>
<th>Std. Error</th>
<th>t value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational thinking style</td>
<td>-0.10</td>
<td>0.36</td>
<td>-0.27</td>
<td>0.79</td>
</tr>
<tr>
<td>Promotion type</td>
<td>-0.54</td>
<td>1.13</td>
<td>-0.49</td>
<td>0.63</td>
</tr>
<tr>
<td>Interaction</td>
<td>0.12</td>
<td>0.21</td>
<td>0.55</td>
<td>0.58</td>
</tr>
<tr>
<td>Product liking</td>
<td>0.75</td>
<td>0.06</td>
<td>11.91</td>
<td>0.00</td>
</tr>
<tr>
<td>Constant</td>
<td>1.94</td>
<td>1.89</td>
<td>1.03</td>
<td>0.31</td>
</tr>
</tbody>
</table>

p < 0.05, $\eta^2 = 0.03$. However, this significant main effect was qualified by a marginally significant rational thinking style × promotion type interaction ($\beta = 0.36$, t (119) = 1.74, p = 0.08, $\eta^2 = 0.03$). We conducted a floodlight analysis to identify the range of rational thinking style for which the simple effect of promotion type was significant. As shown in Figs. 3 and 4, the significant effect of promotion type occurred when the value of rational thinking style was below the Johnson-Neyman point of 4.37: low rationality scorers exhibited a higher purchase intention toward BOGOF (vs. MUP) promotion, validating H1a; whereas, high-rationality counterparts are unaffected. Additionally, we reveal a boundary condition for such effect among consumers low in rational thinking style. When the value of savings is stated in the promotion, the inferiority of an MUP promotion disappears.

6.2. Regression results

We performed the same multiple regression incorporating consumer purchase intention, promotion type, rational thinking style, their interaction, and product liking. As shown in Table 1, the effects of rational thinking style ($\beta = -0.10$, t (117) = -0.27, p > 0.05, $\eta^2 = 0.001$), promotion type ($\beta = -0.54$, t (117) = -0.49, p > 0.05, $\eta^2 = 0.002$) and their interaction ($\beta = 0.12$, t (117) = 0.55, p > 0.05, $\eta^2 = 0.003$) were all insignificant. Therefore, H2 was supported.

7. Conclusion and discussion

In the restaurant industry, both BOGOF and MUP promotions are common, but no prior hospitality research has compared their effectiveness. The current study sheds some light into how individual differences and semantic cues can affect the effectiveness of sales promotions. Specifically, we examine the joint effect of promotion type (BOGOF vs. MUP) and rational thinking style on purchase intention. The findings show that consumers low in rational thinking style exhibit higher levels of purchase intention when faced with BOGOF (vs. MUP) promotions, while their high-rationality counterparts are unaffected by promotion type. Additionally, we reveal a boundary condition for such an effect among consumers low in rational thinking style. When the amount of savings is stated in the promotion, the inferiority of an MUP promotion disappears.

7.1. Theoretical contributions

This study makes several theoretical contributions to the hospitality literature. First, we extend research on information processing in the sales promotion literature. Previous work investigates the relative difficulty consumers have in processing monetary benefits across various types of promotions. For instance, price discounts are easier to process than bonus packs (Diamond and Campbell, 1989). In a similar vein, a “$ off” discount is superior to a “% off” discount in terms of the ease by
which consumers can perceive the savings (Estelami, 2003). This study adds to the literature by examining four different price frames, i.e., BOGOF, “$ off”, “% off” and “2 for $Y”, and our findings imply that the first two require less processing effort than the latter two. Additionally, prior research indicates that consumers’ willingness to process discount information differs across promotional benefit levels, such as 25% off vs. 50% off (Grewal et al., 1996; Hardesty and Bearden, 2003). This study adds to their findings by showing that at the same discount level, such a difference remains.

Second, previous research comparing BOGOF and MUP promotions has mixed findings (Sinha and Smith, 2000; Drechsler et al., 2017). This study adds to this stream of literature by showing that individual traits can affect the relative effectiveness of the two types of promotions. Specifically, our findings indicate that consumers low in rational thinking style prefer BOGOF to MUP promotions, whereas their high rational thinking style counterparts show no difference. In addition, we demonstrate that when the framing of an MUP promotion has the savings clearly displayed, the superiority effect is attenuated.

Third, consistent with prior research on judgment and decision-making (Ayal et al., 2011; Shiloh et al., 2002), our findings indicate that the framing effect is affected by individual differences in thinking styles delineated by the cognitive-experiential self-theory (Epstein et al., 1996). In addition, the study findings are in line with other similar frameworks, such as the heuristic-systematic model (Chaiken, 1980) and the reflection-reflexion model (Lieberman et al., 2002). These frameworks suggest that systematic processing and reflective thinking are characterized by cognitive effort and logical reasoning, and thus are less likely to be influenced by the framing effect (McElroy and Seta, 2003).

Finally, extant literature has drawn upon a variety of theories to investigate consumer responses to sales promotions, such as prospect theory (Diamond and Sanyal, 1990), acquisition-transaction utility theory (Fraccascino et al., 1993), adaptation level theory (Kalwani and Yim, 1992) and mental accounting theory (Liu and Chou, 2015). This study adds to this stream of research by introducing the cognitive-experiential self-theory (CEST). This theory proposes that people’s decisions and behaviors are affected by experiential and rational thinking (Simon and Usunier, 2007) and it has been tested in various contexts such as moral behaviors (Ward and King, 2015), food choices (Ares et al., 2014), customers’ authenticity perceptions (Lechner and Paul, 2019) and self-service technology adoption (Simon and Usunier, 2007). In addition, unlike other dual process models, reliable individual differences exist in terms of the relative dependence on the two processing styles (Ward and King, 2015), including observable personality characteristics, such as gender and age (Pacini and Epstein, 1999; Sladek et al., 2010). Therefore, research on the two thinking styles can be easily used for targeted marketing activities (Lechner and Paul, 2019). It is somewhat surprising that this theory has been ignored in the hospitality literature.

7.2. Managerial implications

In the hospitality field, marketing managers often use BOGOF and MUP promotions to draw consumers’ attention and to boost their purchase intention. For instance, Burger King utilizes both BOGOF and “2 for $6” promotions to sell whoppers. Since the two promotions offer identical savings to consumers, marketers might believe that they are equally effective. However, as the findings of this study suggest, the effectiveness of the two types of sales promotions is contingent on the consumer’s rational thinking style. In particular, consumers low in rational thinking style might be unwilling to spend cognitive effort in calculating the savings, and therefore, react less favorably to MUP (vs. BOGOF) promotions.

Previous research suggests that consumers’ rational thinking style is related to gender and age. Specifically, females tend to show a lower preference for rational processing than males (Sladek et al., 2010) and mature consumers are more likely to engage in rational processing (Phillips et al., 2016). Therefore, when targeting young people and women, it might be more effective to use BOGOF promotions. In addition, Phillips et al. (2016) suggest that time pressure can inhibit rational thinking. Hence, MUP promotions might not be effective during busy periods and for drive-through windows.

As our study findings indicate, the superiority of BOGOF promotions among consumers low in rational thinking style disappears when the amount of savings is clearly stated in the MUP promotion. Thus, restaurant marketers might want to incorporate “save $Y/2” or “$Y/2 off” into their MUP promotions.

7.3. Limitations and future research

The present study has several limitations. First, the experiments were scenario-based. Future research should be conducted in a field setting. Second, this study focused on low-priced products. Moderately-priced and highly-priced products should be examined in the future to further explore the effectiveness of price promotions in the restaurant context. Third, previous research shows that the level of savings can affect consumer evaluations of promotions (Hardesty and Bearden, 2003). The discount in our study was 50%. Smaller discounts (e.g., 20%) and larger discounts (e.g., 80%) should be examined in future research. Finally, our stimuli was limited to a single product. Future research with other types of foods is warranted.

Acknowledgements

The authors thank the Marriott Foundation for the funding of this research.

Appendix A

1 Buy one, get one free
2 Buy two, get 50% off

3 2 for $5

4 Buy 2, save $5

References


