

**UNCERTAIN-MONETARY PROMOTIONS: A CONSUMER MOTIVATIONAL  
PERSPECTIVE**

by

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THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE  
IN  
BUSINESS ADMINISTRATION

UNIVERSITY OF NORTHERN BRITISH COLUMBIA

December 2018

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## **Abstract**

Uncertain-monetary promotion, for example scratch-and-save cards, is an extensively used store-level promotional tool in the retail marketplace. These promotions can have low- or high-discount gaps as well as have variable discount options. The present research explores whether the effectiveness of different types of uncertain-monetary promotions depends on characteristics of the consumer. This thesis reports two studies. Study 1 theorized and found support for the hypotheses that buyers' motivational orientation and depth of a discount gap influenced the perceived attractiveness of an uncertain-monetary promotion. Specifically, a low-gap uncertain-monetary promotion is more appealing to shoppers compared with a high-gap uncertain-monetary promotion. However, consumers' promotion-focus intensity (that is, individuals primarily motivated by growth and advancement) reduces the negative effects of a high-discount gap on the effectiveness of an uncertain-monetary promotion. In addition, consumers' prevention-focus intensity (i.e., individuals primarily motivated by safety and security) increases the negative effects of a high-discount gap on the effectiveness of an uncertain-monetary promotion. Study 2 shows that more discount options are preferred by consumers compared with fewer discount options in an uncertain promotion. However, the positive effect of more discount options is only conspicuous with prevention-focused consumer motivation. Finally, academic and managerial implications as well as future research directions of this master thesis are discussed.

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## Chapter One: Introduction

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The needs for safety and security as well as growth and advancement are the basic, fundamental human needs that influence our motivation in every aspect of life (Maslow, 1943, 1954; Higgins, 1997). Research in the past few decades on self-regulatory focus has shown that the salience of fundamental need for growth over the fundamental need for security (and vice versa) can influence motivation, judgment, decision-making and behavior (for reviews, see Boesen-Mariani, Gomez, & Gavard-Perret, 2010; Higgins, 2015). In particular, regulatory-focus theory (Higgins, 1997), a theory of motivation, classifies two independent motivational systems: a promotion-focused motivation that is derived by the need for growth and advancement and a prevention-focused motivation that is derived from the need for safety and security. This research examines how promotion- and prevention-focused motivations of consumers influence their behavior in the context of uncertain-monetary promotions.

Consumers encounter uncertainty in retail promotions on a daily basis. Recent examples include the Tim Horton's "Roll Up the Rim" and Canadian Tire's "Scratch & Win." A critical feature of such promotions that distinguishes them from other types of retail promotions is uncertainty; that is, an actual reward is determined by chance, and usually consumers are uncertain about the possible outcome. Such forms of promotions are omnipresent and suggest that marketers might use these promotions to excite shoppers, or they simply consider uncertainty as cost-efficient. Prospect theory suggests that people are risk averse in the domain of gain. This implies that they have a preference for sure rewards rather than risky rewards in the domain of equally probable gains.

However, Goldsmith and Amir (2010) show that consumers' innate optimism can produce positive effects of uncertain promotions, which is contrary to prospect theory. Previous research defines innate optimism as the positive interpretation, being a reflex or automatic response, to a probabilistic event (Taylor & Brown, 1988; Goldsmith & Amir, 2010). These results suggest that risk aversion is not the sole factor influencing people's responses to uncertain rewards. Thus, it is important to understand what underlies consumer motivation that produces positive responses in uncertain promotions. There has been no empirical investigations on how consumers' motivational orientations influence the effectiveness of uncertain promotions. The present research aims to address this gap in the literature. Although the subject can be viewed from various perspectives, this study approaches the topic from the viewpoint of regulatory-focus theory. The objective of this research is to investigate whether, and to what extent, consumers' heterogeneity of motivational orientation (i.e., chronic promotion- and prevention-focus motivations) influences their response to uncertain-monetary promotions.



## **Chapter Two: Theoretical Background and Hypothesis Development**

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### **2.1 Uncertain Consumer Promotions and Discount Gap Size**

Fundamental factors which can influence the effectiveness of uncertain-monetary promotions are the discount gap size of the reward, namely the economic contribution of the reward, the number of uncertain discount options, and the consumer's motivation and perception about the retail promotion. Therefore, when marketers design their uncertain promotions, in addition to the mean value of the uncertain discount gap size, they should consider consumers' heterogeneity of motivational orientation, which could produce more or less positive responses. This study aims to address the aforementioned issues.

In an uncertain promotion offer, the discount gap size is the magnitude of the value assigned or perceived by the customers towards the uncertain rewards (Goldsmith & Amir, 2010; Mazar, Shampanier, & Ariely, 2015). For the purpose of this research, the researcher operationalizes the discount gap size on two levels: low versus high. In particular, the discount gap size of an uncertain-monetary promotion is said to be low when there is a shallow gap between the most desirable outcome and the least desirable outcome. Whereas, the discount gap size of the monetary promotion is said to be high when there is a deep gap between the least desirable outcome and the most desirable outcome in an uncertain offer.

Research on the positive effects of uncertainty in retail promotions involving free gifts finds that in low-gap size scenarios, where the difference between the economic contribution of rewards is low, shoppers positively evaluate an uncertain promotion, due to innate optimism (Goldsmith & Amir, 2010). However, a high-gap size between the rewards of an uncertain promotion inhibits the innate optimistic responses of consumers, and as a result, the effectiveness of uncertain non-monetary promotion declines as the gap size increases (Goldsmith & Amir, 2010). In a similar application, Laran & Tsios (2013) demonstrated that a retail promotion where free gifts have similar value to shoppers, uncertainty as to which gift the consumer will receive is viewed as a positive surprise and hence uncertainty produces positive results.

Recently, Ailawadi, Gedenk, Langer, and Neslin (2014) found positive effects of uncertainty on a specific type of uncertain promotion: the conditional rebate (e.g., if “A” happens, then “B” will be given to customer). The uncertain conditional rebates require shoppers to make a purchase decision where the future possibility of getting the reward and receipt of reward depends on an external sports event (e.g., get “X” off when Boston Red Sox win). These conditional rebates fall under the category of uncertain promotions due to the fact that uncertainty is related to the external sports event that is (usually) unrelated to the existent retail shopping environment and the reward is redeemed a specific amount of time after the uncertain event in question. Ailawadi et al. (2014) found that uncertain conditional rebates, which are usually offered on sports events, can also generate the positive effects of uncertainty due to consumers’ affinity aspect to sports and their upward bias in judging the probability of the (desirable) outcome of the sports event. Similarly, it is expected that a low-gap size monetary discount will generate the positive effects of uncertainty in a consumer promotion, compared with a high-gap size

monetary discount. The next section describes this rationale in more depth, followed by the hypotheses.

## **2.2 Promotion- and Prevention-Focus, the Discount Gap Size, and Uncertain Promotions**

In order to study consumer motivation in this context, the author draws theoretical background from regulatory-focus theory (Higgins, 1997). Regulatory-focus theory (Higgins, 1997) is a theory of self-regulation and motivation that categorizes two separate and independent motivational systems: promotion-focus and prevention-focus. Promotion-focus is where subjects adopt an eager strategy to pursue their goals. Similarly, prevention-focus where individuals adopt a vigilant strategy to pursue their goals (Higgins, 2015). Substantial empirical research reports the importance of promotion and prevention-focus motivations as the origin of different strategic preferences that has strong implications for marketing and consumer behavior in many different contexts (for a review, see Boesen-Mariani, Gomez, & Gavard-Perret, 2010).

In the context of behavioral pricing and promotion, it has been reported recently that promotion and prevention foci have different effects when it comes to the attractiveness of a promotion involving partitioned and combined pricing (Lee, Choi, & Li, 2014). In particular, promotion-focus motivates consumers to prefer promotion involving partitioned pricing. Similarly, prevention-focus motivates consumers to be indifferent towards price promotion concerning partitioned vs combined pricing (Lee et al., 2014). In predicting future outcomes, individuals who are primarily motivated by growth and advancement (i.e., promotion-focus) prefer optimistic forecasts. Furthermore, individuals

primarily motivated by safety and security, i.e. prevention-focus, tend to be more vigilant and prefer pessimistic forecasts when predicting future outcomes (Hazlett, Molden, & Sackett, 2011; Grant & Higgins, 2003).

Furthermore, promotion and prevention foci motivate consumers to evaluate products differently. Prevention-focus motivates consumers to base their judgments on rational, analytical, highly contextualized and concrete assessments and to check each detail in isolation. Moreover, promotion-focus motivates consumers to predominantly engage in experiential thinking and base their judgments on abstract assessments, centered on intuition and affect. This reliance on intuition generates automatic, effortless, less thoughtful and decontextualized responses (Förster & Higgins, 2005; Zhu & Meyers-Levy, 2007; Novak & Hoffman, 2009; Lee, Choi, & Li, 2014).

The present research theorizes that when a discount gap size of an uncertain monetary-promotion is small, (i.e., the gap between the most desirable and the least desirable uncertain outcome remains shallow), uncertainty does not negatively influence the consumers' evaluation of an uncertain-monetary promotion. Hence shoppers show a positive response with low uncertain discount gap size. On the other hand, when the gap size between the uncertain rewards is high, (i.e., the gap between the most desirable and the least desirable uncertain outcome become deep and noticeable), uncertainty will negatively influence the evaluation of the monetary-promotion. The rationale behind this theorization is that high monetary differences between the uncertain rewards make people cautious. Hence consumers vigilantly and quantitatively assess the uncertain incentive as a result, positive consumer evaluations gradually decline as the uncertain discount gap size gradually increase.

As mentioned earlier, individuals primarily motivated with safety and security (Prevention-focus) tend to be more vigilant and prefer pessimistic forecasts when predicting future outcomes (Hazlett, Molden, & Sackett, 2011; Grant & Higgins, 2003). Thus, it is predicted that consumers' prevention-focus intensity increases the negative effects of a high-discount gap on the effectiveness of an uncertain-monetary promotion. Therefore, consumers high degree of prevention-focus will negatively moderate the relationship between uncertain discount gap and the effectiveness of the promotion.

Furthermore, individuals primarily motivated by growth and advancement (Promotion-focus) tend to be more eager and prefer optimistic forecasts when predicting future outcomes (Hazlett, Molden, & Sackett, 2011; Grant & Higgins, 2003). Thus, it is expected that consumers' promotion-focus intensity decreases the negative effects of a high-discount gap on the effectiveness of an uncertain-monetary promotion. Hence, shoppers' high degree of promotion-focus will positively moderate such that it works as a buffer to reduce the negative relationship between uncertain discount gap size and the effectiveness of the promotion. Formally,

**H1:** Low-gap uncertain-monetary promotion would be more appealing to shoppers compared with the high-gap uncertain-monetary promotion.

**H2:** Consumers' prevention-focus intensity will negatively moderate such that it increases the negative relationship of a high-discount gap on the effectiveness of an uncertain-monetary promotion.

**H3:** Consumers' promotion-focus intensity will positively moderate such that it reduces the negative relationship of a high-discount gap on the effectiveness of an uncertain-monetary promotion.

## **2.3 The Number of Discount Options in Uncertain-Monetary**

### **Promotions**

The number of discount options is another factor under the control of managers that can influence the effectiveness of an uncertain-monetary promotion. In particular, after determining a discount gap size of the promotion, a manager should consider whether or not the number of uncertain discount options influences the attractiveness of the promotion. Marketers who have fixed promotional budget will want to know the most appealing discount options to attract potential shoppers across different consumer segments in the marketplace. To answer this question, this study aims to reveal the role of consumer heterogeneity of motivational orientation, and a number of discount options in an uncertain-monetary promotion.

People's judgment and subjective experience not only change with respect to the presence of positive outcomes, and the presence of negative outcomes, but also changes with respect to the absence of a positive outcome, and the absence of a negative outcome (Idson, Liberman & Higgins, 2000). In the domain of certainty, the absence of desired prospective monetary outcome also causes the negative subjective judgment and experience (Idson et al., 2000). Consequently, when outcomes are uncertain, decision makers prefer more alternative options, especially options which represent the possibility of avoiding the undesired outcomes. This preference for more options is derived from the general aversion to undesired outcomes, that is, disutility that can accompany the presence of undesired outcome in the face of uncertainty (Shin & Ariely, 2004). This implies that in the context of uncertain-monetary promotion, more discount options should be preferred by shoppers over fewer discount options. Moreover, the presence of multiple

positive outcomes can be regarded by consumers as a chance to receive more than the guaranteed minimum discount. The absence of a positive outcome can be regarded by consumers as receiving only the guaranteed minimum discount.

When there are fewer discount options (e.g., get either A% or B% off), more consumers are likely to expect the lowest discount option, due to the general aversion to undesired outcomes in the face of uncertainty. Therefore, fewer discount options can negatively influence consumers expected savings. Thus, consumers' judgment and subjective evaluations towards the imagined prospective discount outcome would be negative. Consequently, overall attractiveness of the monetary-promotion will gradually decline, as the number of discount options decline.

However, when the consumer is presented with more discount options (e.g., get either A%, B%, C%, D%, or E% off), the consumer will be less likely to use the highest possible discount option as a reference point to judge the lowest possible discount outcome (Tversky & Kahneman, 1974; Northcraft & Neale, 1987). Therefore, more discount options can positively influence consumers expected savings. Therefore, consumers' judgment and subjective evaluations towards the uncertain-monetary promotion would be positive, by having more discount options. As a result, overall attractiveness of the monetary-promotion will gradually increase as the number of discount options increase.

## **2.4 Promotion- and Prevention-Focus and The Number of Uncertain Discount Options**

Regulatory-focus theory (Higgins, 1997) provides a novel perspective on the issue of a number of uncertain discount options. The theory posits that promotion-focus and prevention-focus are two separate and independent constructs. Thus, it is expected that the intensity of promotion-focus and prevention-focus should influence consumers' evaluation differently. Chronic dispositions towards the promotion-focus motivation leads individual's attention towards growth and advancement and increases sensitivity to positive outcomes. Therefore, promotion-focused motivation has a natural preference for the eager approach strategy towards the desired outcome (Crowe & Higgins, 1997; Idson, Liberman & Higgins, 2000; Molden, Lee & Higgins, 2008, Higgins, 2015). As mentioned earlier, people with a promotion-focused motivation have more optimistic outlooks in forecasting future outcomes (Hazlett et al., 2011; Grant & Higgins, 2003), and are more sensitive to positive outcomes (Crowe & Higgins, 1997; Idson, Liberman & Higgins, 2000). Thus, the intensity of promotion-focus leads consumers to anticipate (a reference point) getting more than the guaranteed minimum discount in an uncertain offer. Accordingly, fewer uncertain discount options increase the possibility of getting the highest possible discount, therefore, people with a strong promotion-focus will prefer fewer uncertain discount options.



Similarly, chronic prevention-focus motivation guides individual's attention towards safety, security and increases sensitivity to negative outcomes. Consequently, people with a prevention-focus are naturally vigilant and use avoidance strategies towards the desired outcome (Crowe & Higgins, 1997; Idson, Liberman & Higgins, 2000; Molden, Lee & Higgins, 2008, Higgins, 2015). This strategic inclination in decision making and outcome sensitivity of individuals with prevention-focus should lead to a different preference when provided with a variable number of uncertain discount options. Since people with a prevention-focused motivation have a less optimistic outlook in predicting future outcomes (Hazlett et al., 2011; Grant & Higgins, 2003), and are more sensitive to negative outcomes (Crowe & Higgins, 1997; Idson, Liberman & Higgins, 2000). Thus people with a strong prevention-focus will anticipate (a reference point) receiving a low-discount option. Accordingly, more uncertain discount options increase the possibility of avoiding the lowest possible outcome, therefore, high prevention-focused consumers will be attracted by more discount options. Hence, prevention-focus will positively moderate the relationship between a number of discount options and effectiveness of an uncertain-monetary promotion. Formally,

**H4:** More uncertain discount options lead to be a more favorable evaluation of an uncertain-monetary promotion.

**H5:** Consumers' prevention-focus intensity enhances the positive relationship between more discount options and effectiveness of an uncertain-monetary promotion.

**H6:** Consumers' promotion-focus intensity decreases the positive relationship of more discount options on the effectiveness of an uncertain-monetary promotion.

## Chapter Three: Study 1

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### 3.1 Regulatory Focus, the Discount Gap, and Uncertain Monetary Promotion

Studies conducted by Goldsmith and Amir (2010) illustrate strong evidence for the proposition that low-gap uncertain promotion would be more appealing to shoppers compared with high-gap uncertain promotion. The current study extends this work by introducing regulatory-focus motivations into uncertain-monetary promotion. A single factor (discount gap: low vs. high) between-subjects design experiment was used to test the hypotheses *H1*, *H2* and *H3*. Both chronic promotion and prevention foci were measured using Regulatory Focus Composite (RFC) scale (Haws et al., 2010). The scale has been widely used and validated in published research (Westjohn, Arnold, Magnusson, & Reynolds, 2016; Xie & Kahle, 2014; Yang, Stamatogiannakis, and Chattopadhyay, 2015; Wiener & Farnum, 2013).

### 3.2 Method

Ninety-three participants from a public university in Western Canada completed the study. Non-student participants received cookies for completing the survey. The chronic regulatory foci motivations were measured using the Regulatory Focus Composite (RFC) measure (Haws et al. 2010). The RFC comprises of ten items. Five items each to measure chronic promotion-focus as well as chronic prevention-focus. Participants answered the questions on the seven-point scales (1 = “strongly disagree,” and 7 = “strongly agree”). Thus, both regulatory-focus orientations were quantified by the

average of the corresponding set of items. Furthermore, all subjects were randomly assigned to one of two discount gap conditions: low-discount gap and high-discount gap. Participants in the experiment read instructions asking them to imagine that they were shopping for shoes. The overall scenario was: "Please imagine you are shopping for shoes. You are exploring a number of shoes at a store. You come to know that the store is running a price promotion. Anyone buying Nike Runners (original price \$80) will receive a discount by scratching a scratch-off card." Participants in the low (versus high) discount gap condition were told that their discount will be "either 10% or 30% off (versus either 10% or 60% off)." After reading the depiction of price promotion, subjects rated their attractiveness of the price promotion using a seven-point scale (1 = "not at all attractive," and 7 = "very attractive"). They also indicated their likelihood of purchasing the shoes on a seven-point scale (1 = "not at all likely," and 7 = "extremely likely"). Finally, the respondents filled out a section consisting of demographic data (age and gender).

### 3.3 Results and discussion

Before testing the effect of chronic promotion and prevention motivations, a reliability analysis was conducted for Regulatory Focus Composite (RFC) scale developed and psychometrically tested by Haws et al., (2010). The 10 items (RFC) scale showed lower reliability scores: promotion Cronbach's Alpha .56 and prevention Cronbach's Alpha .54. However, the reliability scores significantly improved to an acceptable level after excluding one promotion item and two prevention items (RF1, RF6, and RF7): promotion Cronbach's Alpha .71 and prevention Cronbach's Alpha .68. Furthermore, factor analysis with principal component extraction method and varimax rotation extracted the three-factor solution for the 10 items RFC scale. On the other hand, excluding the very same three items from factor analysis found the two-factor solution (namely, promotion-focus and prevention-focus) for the RFC scale. It is interesting to note that recently published research also reported low-reliability scores due to similar items in the RFC scale and dropped the disqualified items from their analysis (Westjohn, Arnold, Magnusson, & Reynolds, 2016; Xie & Kahle, 2014; Yang, Stamatogiannakis, and Chattopadhyay, 2015; Wiener & Farnum, 2013). Hence, the author proceeded with further analysis dropping the disqualified items.

The data were subjected to moderated multiple linear regression models to test hypotheses as used in recent studies (Haws et al., 2012; Bui & Krishen, 2015; Byrne & Barling, 2017). For that matter, indices were created for each of the two chronic regulatory foci, and then product terms were created between uncertain discount gap and chronic prevention-focus and chronic promotion-focus (Haws et al. 2010, Haws et al. 2012). The discount gap was dummy coded such that "0" represents a low-discount gap and "1" represents a high-discount gap. Following Tabachnick and Fidell's (2001) approach for

correction of multicollinearity, discount gap, chronic promotion-focus, chronic prevention-focus, and the interaction terms for both chronic promotion, and chronic prevention foci were included as mean-centered independent predictors with attractiveness and purchase likelihood as dependent variables separately.

### **3.3.1 The effect of the discount gap**

*H1* predicts that low-gap uncertain-monetary promotion will be more appealing to shoppers compared with high-gap uncertain-monetary promotion. The results of study 1 support this prediction. In particular, results revealed a significant effect of discount gap on attractiveness of the uncertain price promotion ( $\beta = -0.81$ ,  $p = .010$ ). That is, participants in the low (versus high) discount gap condition perceived the uncertain promotion offer to be more attractive. Likewise, there was a significant effect of discount gap on purchase likelihood ( $\beta = -0.75$ ,  $p = .014$ ), whereby consumers were more likely to purchase a product with low-discount gap than the high-discount gap in uncertain price promotion. Figure 1 and Figure 2 demonstrate these results. Consistent with previous research, such findings suggest that the depth of a discount gap has a negative influence on the overall effectiveness of an uncertain-monetary promotion. Thus, consumers comparatively prefer an uncertain monetary promotion where the difference between the lowest and the highest possible outcome is small, in contrast to when the difference between uncertain outcomes is big. These results are also moderated with motivation-orientation which are discussed in more depth in the next sub-section.

### **3.3.2 Moderation Analysis-The effects of regulatory-focus motivations**

*H2 and H3* posit that individual shoppers' characteristics, (i.e. chronic promotion and prevention foci), will moderate the effectiveness of uncertain-monetary promotions. To test this proposition, a moderated multiple linear regression analysis was conducted where the attractiveness was the criterion and discount gap, chronic promotion-focus, chronic prevention-focus, and an interaction term for chronic promotion and chronic prevention foci were the predictor variables. The overall *F*-test for the moderated regression model on the attractiveness with all five predictors was significant  $F_{(5, 87)} = 3.99$ ,  $p = .003$ ,  $R = .432$ ,  $R^2 = .196$ . Central to the hypotheses *H2 and H3*, the interaction of discount gap and chronic promotion-focus was significant ( $\beta = 0.81$ ,  $p = .022$ ), and the regression coefficient for the prevention-focus interaction was significant in the opposite direction ( $\beta = -0.60$ ,  $p = .026$ ). Moreover, the significant interaction terms also resulted in a significant increase in variance explained by the model, for promotion-focus interaction term ( $\Delta R^2 = .059$ ,  $F_{(1, 87)} = 6.42$ ,  $p = .013$ ) and for prevention-focus interaction term ( $\Delta R^2 = .062$ ,  $F_{(1, 87)} = 6.73$ ,  $p = .011$ ). Table 1 reports the regression results for the attractiveness of uncertain monetary-promotion. These findings indicate that individual's chronic promotion-focus interacts positively with a high-discount gap to influence the attractiveness of an uncertain-monetary promotion, and chronic prevention-focus interact negatively with a high-discount gap to affect the attractiveness of the promotion.

To better understand the significant interaction effects, separate simple slope analysis was conducted for both regulatory foci (Aiken & West, 1991; Hayes, 2012, 2013; Bui & Krishen, 2015; Byrne & Barling, 2017). For prevention-focus, the conditional effect of the discount gap on attractiveness was computed when prevention-focus was one standard deviation below the mean, at the mean, and one standard deviation above the mean (hereafter low prevention-focus, moderate prevention-focus, and high prevention-focus, respectively).

For low prevention-focus, there was no relationship between discount gap and attractiveness ( $\beta = -0.21$ ,  $t_{(89)} = -0.43$ ,  $p = .672$ ); however, at moderate prevention-focus, there was significant and negative relationship between discount gap and attractiveness ( $\beta = -0.79$ ,  $t_{(89)} = -2.40$ ,  $p = .019$ ). This relationship was even stronger for high prevention-focus ( $\beta = -1.35$ ,  $t_{(89)} = -2.95$ ,  $p = .004$ ). Supporting *H2*, this result indicates that an individual's moderate to high chronic prevention-focus interacts negatively with a high-discount gap to reduce the attractiveness of an uncertain-monetary promotion. Put another way, when the discount gap was low, there were no significant differences in attractiveness among low, moderate and high prevention-focus consumers, however, the significant differences in attractiveness emerged at a high-discount gap. This result is illustrated in Figure 3.

Similarly for significant promotion-focus interaction, the conditional effect of discount gap on attractiveness was computed when promotion-focus was one standard deviation below the mean, at the mean, and one standard deviation above the mean (hereafter low promotion-focus, moderate promotion-focus, and high promotion-focus, respectively). There was a significant relationship between discount gap and attractiveness at low promotion-focus ( $\beta = -1.39$ ,  $t_{(89)} = -3.01$ ,  $p = .003$ ). The strength of



regression coefficient decreased at moderate promotion-focus ( $\beta = -0.79$ ,  $t_{(89)} = -2.45$ ,  $p = .016$ ) and become insignificant at high promotion-focus ( $\beta = -0.19$ ,  $t_{(89)} = -0.40$ ,  $p = .688$ ). This result indicates that promotion-focus reduces the negative effects of a high-discount gap on the attractiveness of an uncertain-monetary promotion. To put it differently, when the discount gap was low, there were no significant differences in attractiveness among low, moderate and high promotion-focus consumers. Whereas, significant differences in attractiveness emerged among low, moderate and high promotion-focus consumers at the high-discount gap. Figure 5 represents this result. This pattern of result indicates that consumers' chronic promotion-focus has a buffering effect on the relationship between discount gap and effectiveness of the uncertain-monetary promotion. These results lend support to *H3*, that is: consumers' promotion-focus intensity reduces the negative relationship of a high-discount gap on the effectiveness of an uncertain-monetary promotion.

Accordingly, a moderated multiple linear regression analysis was run where purchase likelihood was the criterion, and discount gap, chronic promotion-focus, chronic prevention-focus, and the interaction terms for chronic promotion and chronic prevention foci were the predictor variables. The overall *F*-test for the moderated regression model on purchase likelihood with all five predictors was significant ( $F_{(5, 87)} = 3.63$ ,  $p = .007$ ,  $R = .416$ ,  $R^2 = .173$ ). Pivotal to the hypothesis *H2 and H3*, the interaction of discount gap and chronic prevention-focus was significant ( $\beta = -0.61$ ,  $p = .020$ ); however, the regression coefficient for the promotion-focus interaction was not significant but directionally consistent ( $\beta = 0.50$ ,  $p = .143$ ). Furthermore, the significant interaction term for chronic prevention-focus also resulted in a significant increase in variance explained by the model ( $\Delta R^2 = .060$ ,  $F_{(1, 87)} = 6.31$ ,  $p = .014$ ). This result shows that individual's chronic prevention-

focus interacts negatively with the uncertain discount gap to decrease the purchase likelihood. This pattern of results supports *H2*. Table 2 reveals the regression results for the purchase likelihood of uncertain-monetary promotion.

Again, a simple slope analysis was conducted to probe this significant interaction. The conditional effect of discount gap on purchase likelihood was assessed when prevention-focus was at the mean as well as one standard deviation above and below from the mean. Significant relationship between purchase likelihood and uncertain discount gap emerged at moderate prevention-focus ( $\beta = -0.73$ ,  $t_{(89)} = -2.30$ ,  $p = .024$ ), and the relationship was stronger at high prevention-focus ( $\beta = -1.28$ ,  $t_{(89)} = -2.67$ ,  $p = .009$ ), whereas, there was no relationship between discount gap and purchase likelihood at low prevention-focus ( $\beta = -0.18$ ,  $t_{(89)} = -0.36$ ,  $p = .722$ ). These results indicate that consumers' prevention-focus intensity (moderate to high chronic prevention-focus) interacts negatively with a high-discount gap to reduce the effectiveness of an uncertain-monetary promotion. In other words, there were no significant differences in purchase likelihood for low, moderate and high prevention-focus at the low-discount gap. Whereas, significant differences in purchase likelihood appeared among low, moderate and high prevention-focus at the high-discount gap. Graphical depictions of these results are provided in Figure 4. These results further support *H2*. That is, consumers' prevention-focus intensity increases the negative relationship of a high-discount gap on the effectiveness of an uncertain-monetary promotion.

### **3.3.3 Discussion**

Consistent with previous research, study 1 demonstrates that the small difference between the lowest and the highest outcome does not negatively influence the positive consumer evaluation (innate optimistic responses) of an uncertain-monetary promotion. However, high differences between the lowest and the highest outcome negatively influence the favorable evaluation of an uncertain-monetary promotion. This phenomenon of diminishing positive consumer evaluation was even stronger for those with a strong prevention-focus. People with a high promotion-focus, however, were not negatively affected by a large uncertain discount gap.

In other words, people generally will be allured with uncertain-monetary promotions that employ a small discount gap, but prevention-focus people might be alienated and avoid large discount gaps. This finding is important for marketers who consider uncertain-monetary promotion as a cost-efficient retail tool. Therefore, when marketers design an uncertain-monetary promotion, in addition to the mean value of the uncertain discount gap, they should consider consumers' heterogeneity of motivational orientation and potential consumer segments which could produce more or less favorable evaluation of an uncertain-monetary promotion.

Another important variable under marketers' control, which can improve the effectiveness of uncertain-monetary promotion, is the number of discount options. (For example, scratch and get 10% or 30% off vs. scratch and get either 10%, 15%, 20%, 25%, or 30% off). That is to say, after the determination of discount gap of the promotion, consequently, the next managerial question comes into mind that either a number of uncertain discount points positively influence the attractiveness of the promotion, or else

uncertainty could be aversive for a number of different gain options when the discount gap of the promotion is fixed. In practice, this should be important for marketers who have a fixed promotional budget to design an uncertain-monetary promotion where the discount gap of the promotion is fixed. Thus, study 2 investigates consumer heterogeneity of motivational orientation in a fixed promotional budget environment by exploring the role of a number of discount options in an uncertain-monetary promotion.

## Chapter Four: Study 2

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### 4.1 The Number of Discount Options and Promotion and Prevention Foci in Uncertain-Monetary Promotion

Study 1 offers evidence that the discount gap and chronic promotion and prevention foci influence the perceived attractiveness and purchase likelihood of an uncertain-monetary promotion. Building on Study 1, Study 2 aims to investigate an uncertain-monetary promotion in a fixed promotional budget environment. In particular, study 2 keeps the discount gap constant across conditions and examines the role of the number of discount options. A single factor (number of discount options: 2 vs. 5) between-participants design experiment was used to test the hypotheses *H4*, *H5* and *H6*. Consistent with study 1, chronic promotion and prevention-focus motivations were measured variables.

### 4.2 Method

One hundred and five undergraduate students from a public university in western Canada participated in the study. The measurement procedure for promotion- and prevention-focus was the same as study 1, thereupon, the chronic promotion and prevention foci were assessed using the Regulatory Focus Composite scale (Haws et al 2010). Participants rated the questions on a seven-point scale (1 = “strongly disagree,” and 7 = “strongly agree”). Hence, both regulatory focus motivations were measured by the mean of the corresponding set of questions. Moreover, all participants were randomly

assigned to one of two discount options conditions: two discount options and five discount options. Subjects in the experiment read instructions asking them to imagine that they were shopping for a computer backpack. The overall scenario was: "Please imagine you are shopping for a computer backpack. You are exploring a number of computer backpacks at a store. You come to know that your favorite backpack company is running a price promotion. Anyone buying Computer Backpack-17 Inch (original price \$70) will receive a discount by scratching a scratch-off card." Participants in the fewer discount options (versus more discount options) condition were told that their discount will be "either 10% or 30% off (versus either 10%, 15%, 20%, 25% or 30% off)." After reading this description of the price promotion, respondents rated their attractiveness of the price promotion using a seven-point scale (1 = "not at all attractive," and 7 = "very attractive"). They also indicated their purchase likelihood of the focal product on a seven-point scale (1 = "not at all likely," and 7 = "extremely likely"). Finally, the participants filled out a section consisting of demographic information (age and gender).

### 4.3 Results and discussion

To maintain consistency for the chronic regulatory-foci measure with the study 1, RF1, RF6, and RF7 were omitted from analysis (Xie and Kahle, 2014). The mean of the remaining set of questions was used to measure chronic promotion motivation (Cronbach's Alpha = .68) and chronic prevention motivation (Cronbach's Alpha = .66). In line with the latest research, the investigator created separate indices for each of the two chronic regulatory foci, and then created interaction terms between the measures of both chronic promotion motivation, chronic prevention motivation, and the number of uncertain discount options (e.g, Westjohn et al 2016; Hui, Khajehzadeh, Oppewal, and Tojib, 2015; Molden and Finkel, 2013; Haws et al 2010, 2012). The number of discount options conditions were dummy coded as such that "0" represents fewer discount options and "1" represents more discount options. The data were subjected to moderated multiple linear regression models to test the moderating effects of each of the two chronic motivational orientations as used in recent studies (e.g., Byrne & Barling, 2017; Bui & Krishen, 2015; Yang, Stamatogiannakis, and Chattopadhyay, 2015; Haws et al 2010, Haws et al., 2012). In consonance with the guidelines of comprehensive literature to avoid multicollinearity and to satisfy the assumptions of regression models, number of discount options, chronic promotion-focus, chronic prevention-focus, and the interaction terms for both promotion and prevention foci were included as mean-centered independent predictors with attractiveness and purchase likelihood as dependent variables separately (Tabachnick and Fidell 2001; Yang et al, 2015; Kammerlander, Burger, Fust, and Fueglistaller, 2015).

#### **4.3.1 The effect of the number of discount options**

*H4* states that more uncertain discount options will be preferred in an uncertain-monetary promotion. The results of Study 2 support this proposition. Specifically, results showed a significant effect of the number of discount options on perceived attractiveness of the uncertain-monetary promotion ( $\beta = 0.99, p < .001$ ). That is, participants found the promotion to be more attractive when there were more rather than fewer discount options. Similarly, there was a significant effect of the number of discount options on purchase likelihood, ( $\beta = 0.80, p < .01$ ), thereupon shoppers were more likely to purchase the focal product when offered more discount options than fewer discount options in an uncertain promotion offer. Figure 6 and Figure 7 illustrate these outcomes. In conjunction with these results, 85% of the participants in the fewer uncertain discount options condition expected to receive the lowest discount. On the other hand, 62% of the participants in the more discount options condition expected to receive the lowest discount,  $\chi^2(1, N = 105) = 6.91, p = .009$ . Consistent with *H4*, such findings indicate that more discount options have a positive influence on consumers' expected savings in an uncertain-monetary promotion. Therefore, an uncertain-monetary promotion with more discount points is comparatively more appealing to shoppers. These main effects were, however, qualified by significant interactions with motivation-orientation.



#### **4.3.2 Moderation Analysis-The effects of regulatory-focus motivations**

A moderated multiple linear regression analysis was run where the attractiveness was the criterion and number of discount options, chronic promotion motivation, chronic prevention motivation, and interaction terms for chronic promotion and chronic prevention foci were the predictor variables. The overall F-test for the moderated regression model on the attractiveness was significant,  $F_{(5, 99)} = 6.28$ ,  $p < .001$ ,  $R^2 = .241$ . Pivotal to the hypotheses *H5* and *H6*, the interaction of number of discount options with chronic prevention-focus on attractiveness was significant ( $\beta = 0.54$ ,  $t(99) = 2.18$ ,  $p = .032$ ); even though the regression coefficient for the chronic promotion-focus interaction was directionally consistent, it was not significant, ( $\beta = -0.07$ ,  $t(99) = -0.20$ ,  $p = .840$ ). Additionally, the significant interaction of prevention-focus motivation with number of discount options on attractiveness also resulted in a significant increase in variance explained by the model, ( $\Delta R^2 = .049$ ,  $F_{(1, 101)} = 5.13$ ,  $p = .025$ ). Table 3 shows the regression results for the attractiveness. Supporting *H5*, these findings suggest that individual's chronic prevention-focus interacts positively with more discount options to increase the attractiveness of an uncertain-monetary promotion. On the other hand, the strength of participant's chronic promotion-focus does not moderate the relationship between the number of discount options and attractiveness of an uncertain-monetary promotion (within low-discount gap).

Simple slope analysis was conducted to explore the nature of chronic prevention-focus interaction with a number of discount options (Aiken & West, 1991; Hayes, 2012, 2013). The conditional effect of the number of discount options was calculated when prevention motivation was one standard deviation below the mean, at the mean, and one

standard deviation above the mean (henceforth, low prevention-focus, moderate prevention-focus, and high prevention-focus, correspondingly).

For low prevention-focus, there was no relationship between number of discount options and attractiveness ( $\beta = 0.25$ ,  $t_{(101)} = 0.67$ ,  $p = .506$ ); notwithstanding this fact, the statistical significance emerged in the hypothesized direction at moderate prevention-focus ( $\beta = 0.87$ ,  $t_{(101)} = 3.39$ ,  $p = .001$ ). The strength of this relationship was almost double in the theorized direction at high prevention-focus ( $\beta = 1.49$ ,  $t_{(101)} = 4.03$ ,  $p < .001$ ). Supporting *H5*, this finding indicates that participant's moderate to high chronic prevention motivation interact positively with more discount options to enhance the attractiveness of an uncertain-monetary promotion. To put it differently, the post-hoc test revealed that the positive effect of more discount options on attractiveness was small and statistically insignificant at low prevention-focus. Whereas, the statistically significant positive effect of more discount options on the offer's attractiveness emerged at moderate prevention-focus. The strength of the positive effect of more discount options on the offer's attractiveness became even stronger at high prevention-focus. A graphical depiction of this finding is plotted in Figure 8.

Similarly, a moderated multiple linear regression was run where purchase likelihood was the criterion, and a number of discount options, chronic promotion motivation, chronic prevention motivation, and the interaction terms for chronic promotion and chronic prevention foci were the predictor variables. The overall *F*-test for the moderated multiple linear regression model on purchase likelihood was significant,  $F_{(5, 99)} = 5.44$ ,  $p < .001$ ,  $R^2 = .216$ . Central to the hypotheses *H5* and *H6*, the interaction of chronic prevention-focus with a number of discount options on purchase likelihood was directionally consistent, but did not reach statistical significance ( $\beta = 0.40$ ,  $t(99) = 1.60$ ,  $p$

=.112). Likewise, the interaction term of chronic promotion-focus with a number of discount options on purchase likelihood was nonsignificant with a very small regression coefficient, ( $\beta = 0.05$ ,  $t(99) = .15$ ,  $p = .879$ ). Subsequently, a separate regression was run for chronic prevention-focus on purchase likelihood. The results displayed that the interaction of chronic prevention-focus with the number of discount options on purchase likelihood was marginally significant in the hypothesized direction ( $\beta = 0.49$ ,  $t(101) = 1.96$ ,  $p = .052$ ). Moreover, the marginally significant interaction also resulted in a marginally significant increase in variance explained by the model ( $\Delta R^2 = .034$ ,  $F_{(1, 101)} = 3.85$ ,  $p = .052$ ). Table 4 summarizes the regression results for the purchase likelihood. This result demonstrates that individual's chronic prevention-focus interacts positively with more discount options to enhance the purchase likelihood in an uncertain-monetary promotion. Moreover, the strength of participant's chronic promotion-focus does not moderate the relationship between the number of discount options and purchase likelihood in an uncertain-monetary promotion (within low-discount gap). This pattern of results support *H5* only, however, *H6* is not supported. Neither of the control variables (age and gender) was significant.

Again, a simple slope analysis was conducted to probe this interaction. The conditional effect of the number of discount options on purchase likelihood was computed for low prevention-focus, moderate prevention-focus, and high prevention-focus respectively. For low prevention-focus, the positive effect of more discount options on purchase likelihood was small and statistically insignificant ( $\beta = 0.16$ ,  $t_{(101)} = 0.47$ ,  $p = .642$ ). Nevertheless, the statistically significant positive effect of more discount options on purchase likelihood emerged at moderate prevention-focus ( $\beta = 0.67$ ,  $t_{(101)} = 2.53$ ,  $p = .013$ ). The strength of the positive effect of more discount options on purchase likelihood

became even stronger at high prevention-focus ( $\beta = 1.18$ ,  $t_{(101)} = 3.14$ ,  $p = .002$ ). This result indicates that individual's moderate to high chronic prevention motivation works positively with more discount options to enhance the purchase likelihood in an uncertain-monetary promotion. To express it in another way, there were no significant differences in purchase likelihood at low, moderate and high prevention-focus with fewer discount options. In contrast, significant differences in purchase likelihood become visible among low, moderate and high prevention-focus with more discount options. A line graph is provided for this interaction effect in Figure 9. These results support *H5*. That is, consumers' prevention-focus intensity enhances the positive relationship between more discount options and effectiveness of an uncertain-monetary promotion.

This pattern of findings suggests that, chronic prevention motivation has a positive catalyst effect on the relationship of the number of discount options and effectiveness of an uncertain-monetary promotion, such that more discount options are preferred in the presence of moderate to high chronic prevention motivation. In essence, study 2 provides embryonic support for the hypothesis that regulatory focus motivation moderates the relationship between the number of discount options and consumers' evaluation of an uncertain-monetary promotion.

## Chapter Five: Conclusion and Discussion

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### 5.1 Conclusion and general discussion

How do buyer's motivational orientation and depth of a discount gap influence the perceived attractiveness of uncertain-monetary promotions? In the presence of a fixed promotional budget, how do buyer's motivational orientation and a variable number of discount options influence the attractiveness of an uncertain-monetary promotion? Such questions are theoretically as well as practically important. The current research helps to answer these questions by showing that regulatory-focus motivations influence the perceived attractiveness of an uncertain-monetary promotion. In particular, both studies provide strong empirical evidence that regulatory-focus motivations are important factors to consider as consumers' heterogeneity in two different uncertain promotional contexts. Specifically, the present research provides empirical support that regulatory-focus motivations of shoppers interact with an uncertain discount gap as well as a variable number of discount options to influence an uncertain-monetary promotion. The nature of the interactions is such that both promotion and prevention foci respond dissimilarly to the same marketing phenomena.

For this purpose, study 1 supports previous research on uncertain non-monetary promotions by showing that generally, a big difference between the lowest and the highest outcomes prevent positive consumer evaluation of uncertain-monetary promotions (excluding high promotion-focus consumers). The phenomenon of diminishing positive consumer evaluations of a high-gap uncertain-monetary promotion is stronger when

paired with prevention-focused consumers. However, the interaction of high promotion-focused consumers with a high uncertain discount gap does not show any significant decline in the positive evaluation of an uncertain promotion offer. Furthermore, study 2 demonstrates support for the hypothesis that generally more discount options enhance the attractiveness of an uncertain-monetary promotion, accordingly the positive impact of more discount options more strongly resonates with prevention-focused consumers.

The current research suggests that promotional manipulations were important for consumers with prevention-focus motivation, but were less influential for consumers with a promotion-focus motivation. Thus, it might be useful to know the population statistics on prevention-focus when marketers apply the framework of customer segmentation. Advanced techniques in the field of big data and marketing analytics can be useful in this regard. One potential explanation for this pattern of results could be that within the context of uncertain rewards, uncertainty aversion could be positively related to prevention-focused consumers but not with promotion-focused consumers. More research is needed to establish the relationship among uncertainty aversion, promotion, and prevention foci in the context of uncertain consumer promotions.

## 5.2 Contributions and implications

Uncertain promotions (for example scratch-and-save promotions) are omnipresent in the marketplace, particularly in the retail industry. Yet there is a very limited empirical investigation on how consumers' motivational orientations influence the effectiveness of uncertain promotions. The present research contributes to the uncertain marketing promotions literature in a number of ways. First, the present thesis addresses the gap in the literature by introducing chronic promotion- and prevention-focus motivations as an important factor in uncertain promotions. Consequently, the application of regulatory-focus theory to the uncertain promotions provide a solid theoretical foundation to study the interaction effects associated with chronic individual differences. Furthermore, comparing different types of uncertain promotions is an understudied area in the domain, thus the present research addresses this issue by comparing relative attractiveness of different types of uncertain-monetary promotions. Likewise, the present thesis also contributes to uncertain promotion literature by investigating the role of variable discount options as well as low- or high-discount gaps on the attractiveness of the promotion.

In addition, findings of the current research also provide a guideline to marketers for the design of uncertain-monetary promotions by shedding light on the variables which can be influenced by marketers. To be precise, the results of this research indicate that the depth of a discount gap and the number of discount options are among important variables that are under the control of marketers. These variables significantly influence the effectiveness of uncertain-monetary promotions, especially for prevention-focused consumers. Therefore, when retailers design their uncertain promotions, in additions to the mean value of the uncertain discount gap, they should consider the depth of a

discount gap as well as consumers' heterogeneity of motivational orientation, the interactions of which could produce more or less positive evaluations of uncertain-monetary promotions. To put it differently, consumers generally will be happy with uncertain-monetary promotions that use a small discount gap, but prevention-focused consumers can be turned off and avoid large discount gaps. Similarly, with a fixed promotional budget, marketers can significantly improve their promotions by considering consumers' heterogeneity of motivational orientation and adding more discount options to their promotional offers.

Overall prevention-focused consumers were found to be influenced and negatively evaluate an uncertain promotion as a result of uncertainty. On the other hand, promotion-focused consumers did not show such a negative evaluation of an uncertain-monetary promotion. Thus, the current research suggests that marketers should concentrate their marketing strategies more on consumers with a prevention-focus to ensure that uncertain promotion does not alienate this consumer segment. The theoretical framework that this research proposed and tested and rudimentary nature of this research topic open avenues for future research on consumers' regulatory-focus motivation in the context of uncertain consumer promotions.



### 5.3 Limitations and future research directions

Although both studies are consistent that chronic promotion and prevention-focus motivations moderate the effectiveness of uncertain monetary promotions, one of the constraints of the current investigation is that it was not able to incorporate a situational regulatory-focus in uncertain-monetary promotions. This is due to the embryonic nature of the research topic and was outside the scope of this investigation. In particular, it would be interesting for future research to investigate, how a context affects consumers' promotion and prevention foci in uncertain promotions. As studies suggest that regulatory-focus can vary chronically across individuals as well as across situations. A context can induce a specific regulatory orientation, making one focus temporarily more salient than the other (Higgins, 1997; Idson, Liberman & Higgins, 2000; Molden, Lee & Higgins, 2008). Thus, by the same token, future research is also needed to study the individual determinants of promotion and prevention motivations in an uncertain promotional context. Furthermore, much of the research on uncertain promotions is done in the context of judgment and decision making among individuals as a group. Consequently, it would be worthwhile to study interaction effects of promotion-focus and prevention-focus with uncertain non-monetary promotions. Additionally, the current research also paved the way to explore more complex interactions in uncertain-monetary promotions, for instance, how does depth of a discount gap, coupled with a variable number of discount options interplay with regulatory-focus motivation to influence the effectiveness of an uncertain-monetary promotion. In conclusion, the theoretical framework that the present research suggests and tests open doors for future research to explore consumers' heterogeneity of motivational orientation in the domain of uncertain promotions.

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*Table 1. Regression Results for the Attractiveness of Uncertain-Monetary Promotion (Study 1)*

Predictors	$\beta$	$t$
Constant	4.01	26.53***
Discount Gap	-0.81	-2.62*
Promotion-Focus (PM)	0.32	1.80 <sup>†</sup>
Prevention-Focus (PV)	-0.20	-1.45
PM × Discount Gap	0.81	2.34*
PV × Discount Gap	-0.60	-2.26*
$R^2$	.196	
$F$ change for $R^2$	3.99**	

<sup>†</sup> $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

*Table 2. Regression Results for the Purchase Likelihood of Uncertain-Monetary Promotion (Study 1)*

Predictors	$\beta$	$t$
Constant	3.88	25.96***
Discount Gap	-0.75	-2.51*
Promotion-Focus (PM)	0.36	2.13*
Prevention-Focus (PV)	-0.16	-1.19
PM $\times$ Discount Gap	0.50	1.48
PV $\times$ Discount Gap	-0.61	-2.36*
$R^2$	.173	
$F$ change for $R^2$	3.63**	

† $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

*Table 3. Regression Results for the Attractiveness and Number of Discount Options of Uncertain-Monetary Promotion (Study 2)*

Predictors	$\beta$	$t$
Constant	4.37	35.64***
Discount Options	0.99	4.05***
Promotion-Focus (PM)	0.53	3.22*
Prevention-Focus (PV)	-0.09	0.73
PM $\times$ Discount Options	-0.07	-0.20
PV $\times$ Discount Options	0.54	2.18*
$R^2$	.241	
$F$ change for $R^2$	6.28	

† $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$



*Table 4. Regression Results for the Purchase Likelihood and Number of Discount Options of Uncertain-Monetary Promotion (Study 2)*

Predictors	$\beta$	$t$
<b>Model 1</b>		
Constant	4.51	36.35***
Discount Options	0.80	3.22**
Promotion-Focus (PM)	0.59	3.55*
Prevention-Focus (PV)	-0.01	-0.03
PM $\times$ Discount Options	0.05	0.15
PV $\times$ Discount Options	0.40	1.60
$R^2$	.216	
$F$ change for $R^2$	5.44***	
<b>Model 2</b>		
Constant	4.53	35.01***
Discount Options	0.67	2.58*
Prevention-Focus (PV)	0.12	0.96
PV $\times$ Discount Options	0.49	1.96*
$R^2$	.113	
$F$ change for $R^2$	4.29**	

† $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Figure 1. Discount gap affects the relative attractiveness of uncertain-monetary promotion (Study 1)

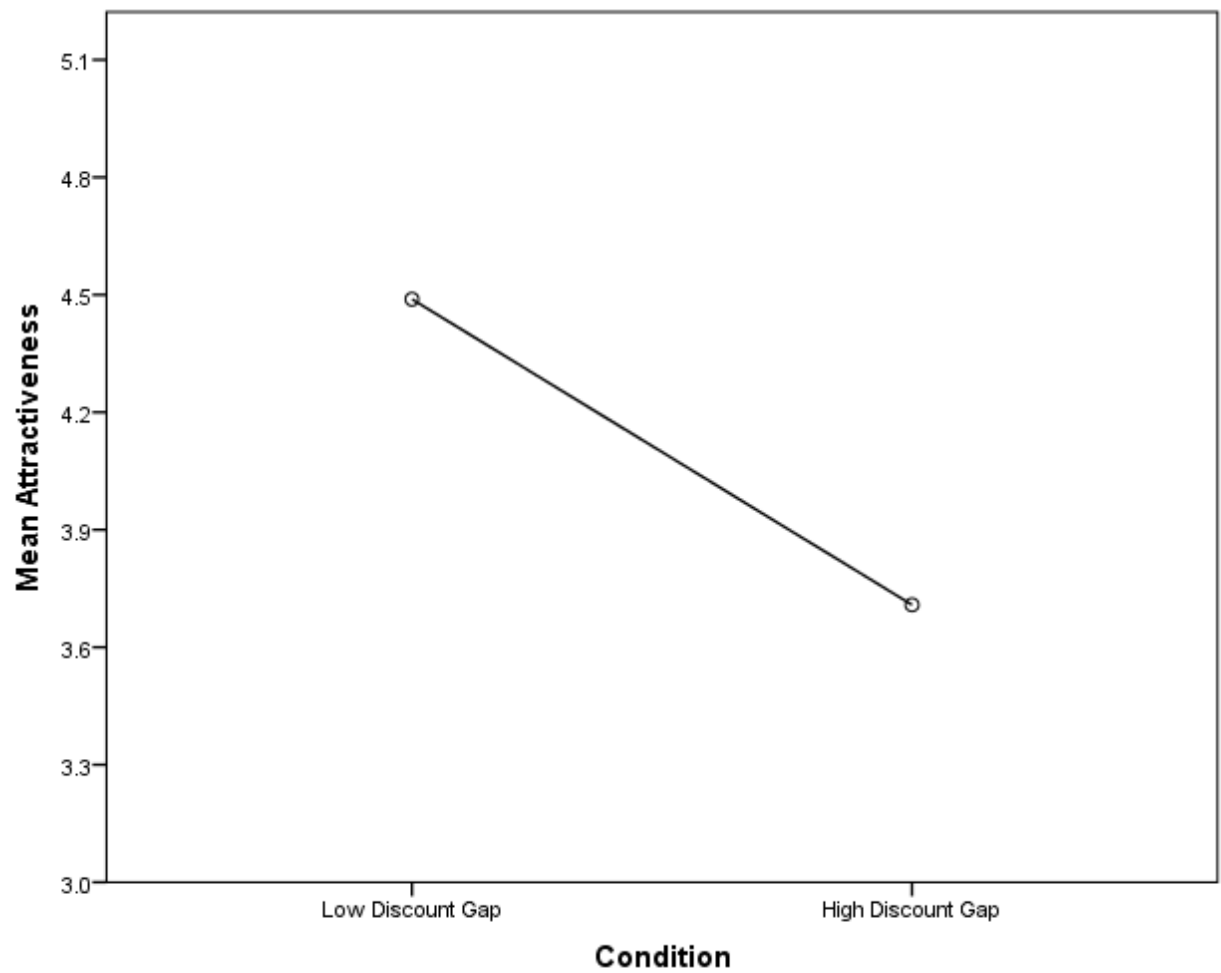


Figure 2. Discount gap affects the relative purchase likelihood of uncertain-monetary promotion (Study 1)

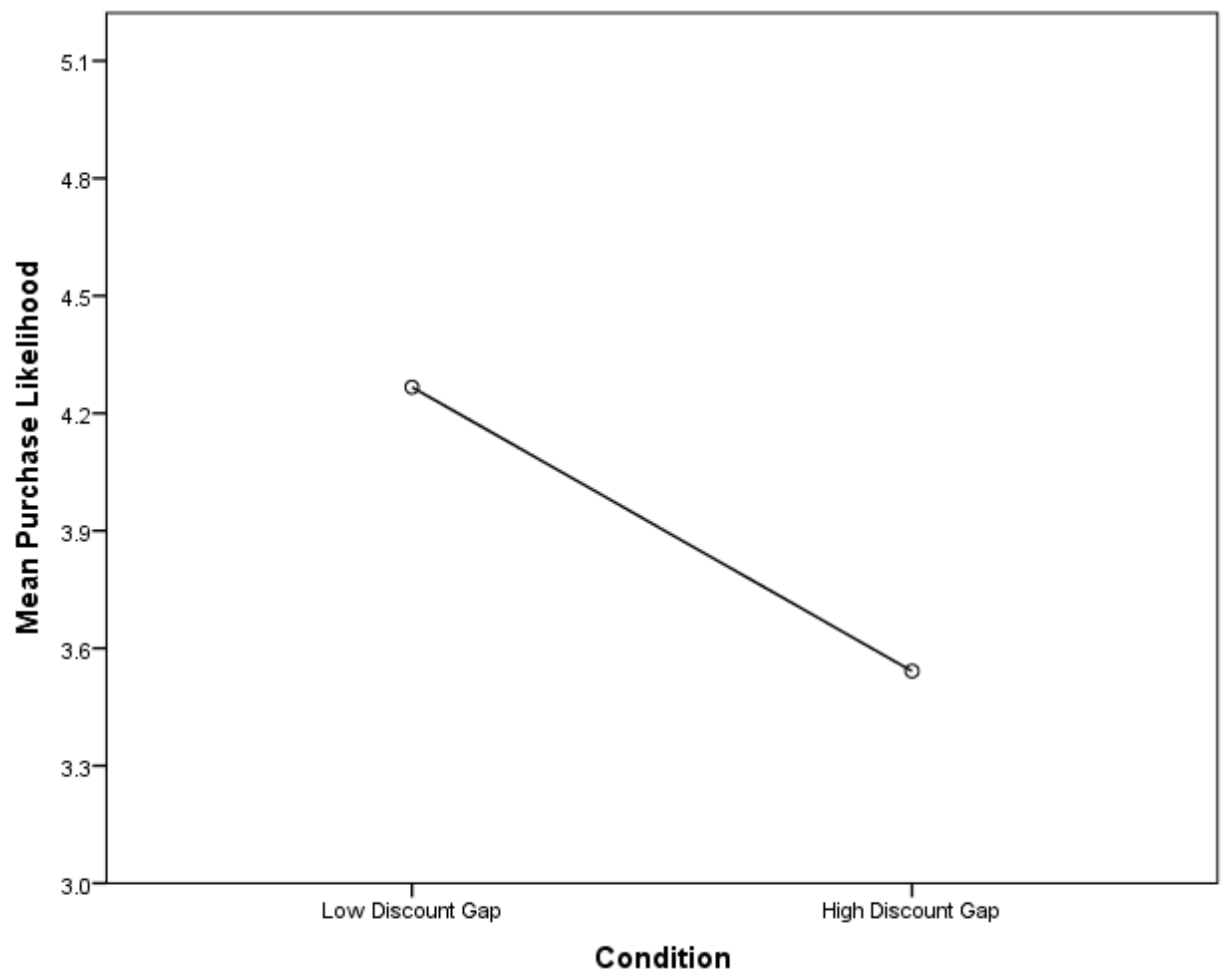


Figure 3. Chronic Prevention-focus affects the relative attractiveness of uncertain-monetary promotion (Chronic prevention focus moderation in Study 1)

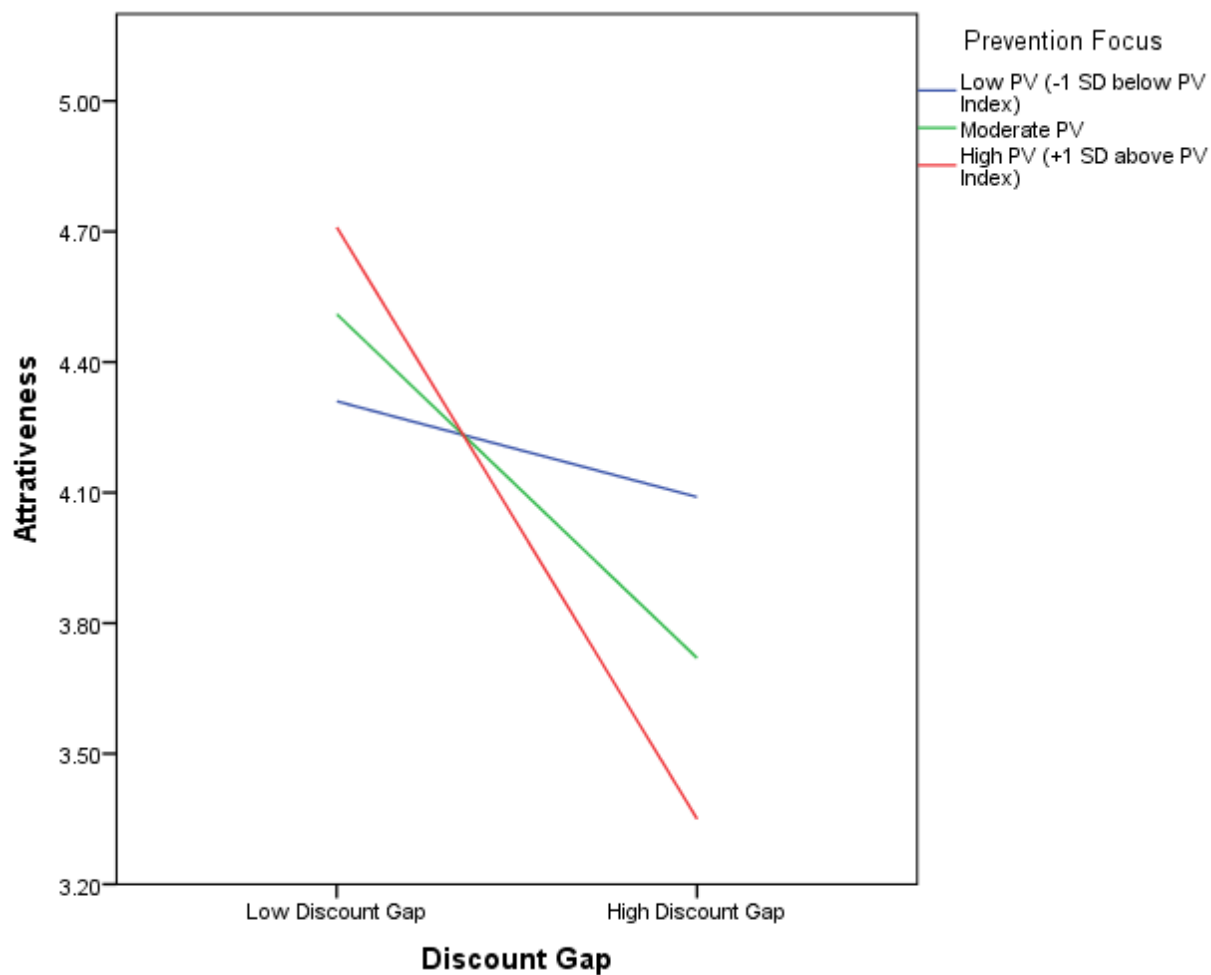


Figure 4. Chronic Prevention-focus affects the relative purchase likelihood of uncertain-monetary promotion (Chronic prevention-focus moderation in Study 1)

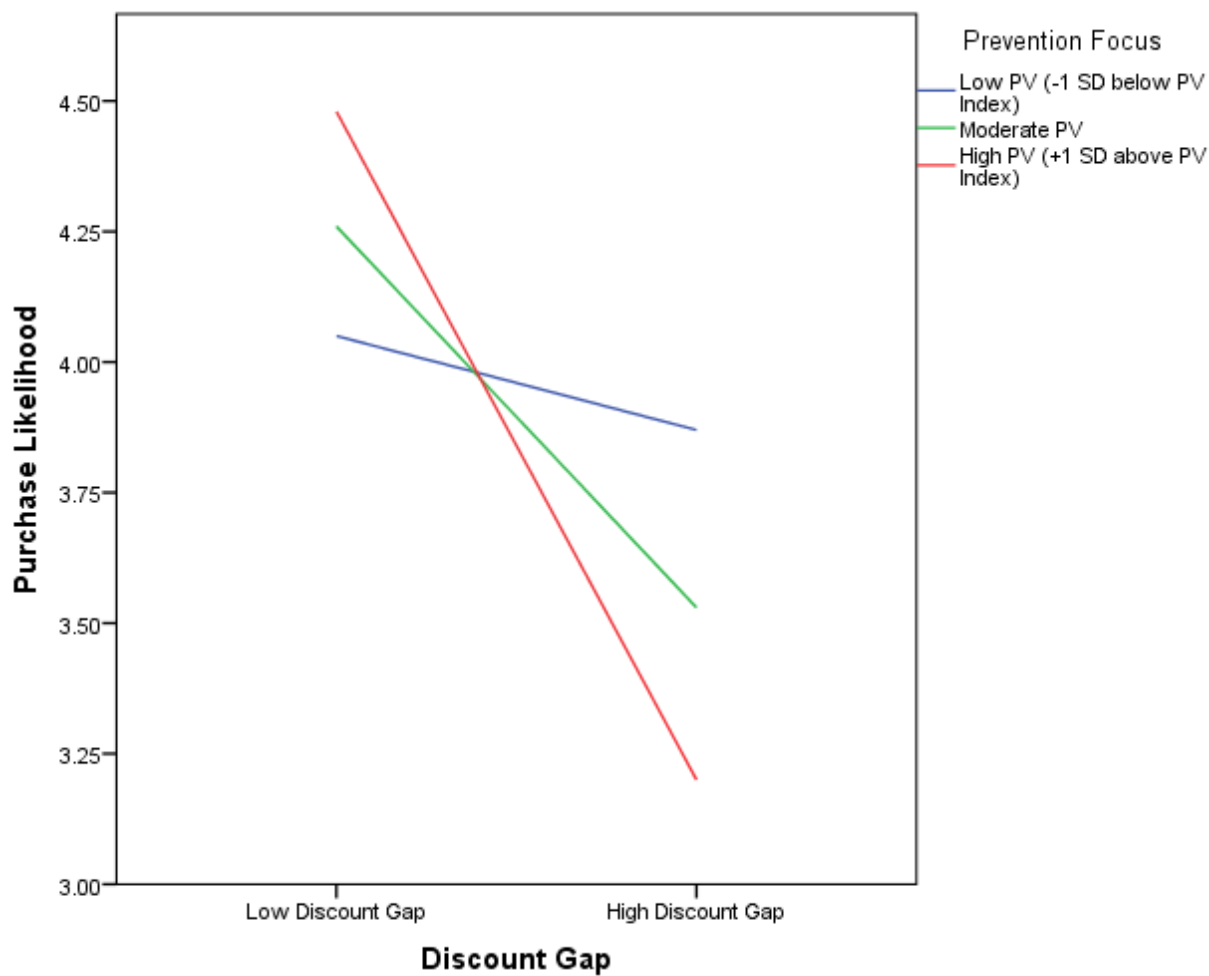


Figure 5. Chronic promotion-focus affects the relative attractiveness of uncertain-monetary promotion (Chronic promotion-focus moderation Study 1)

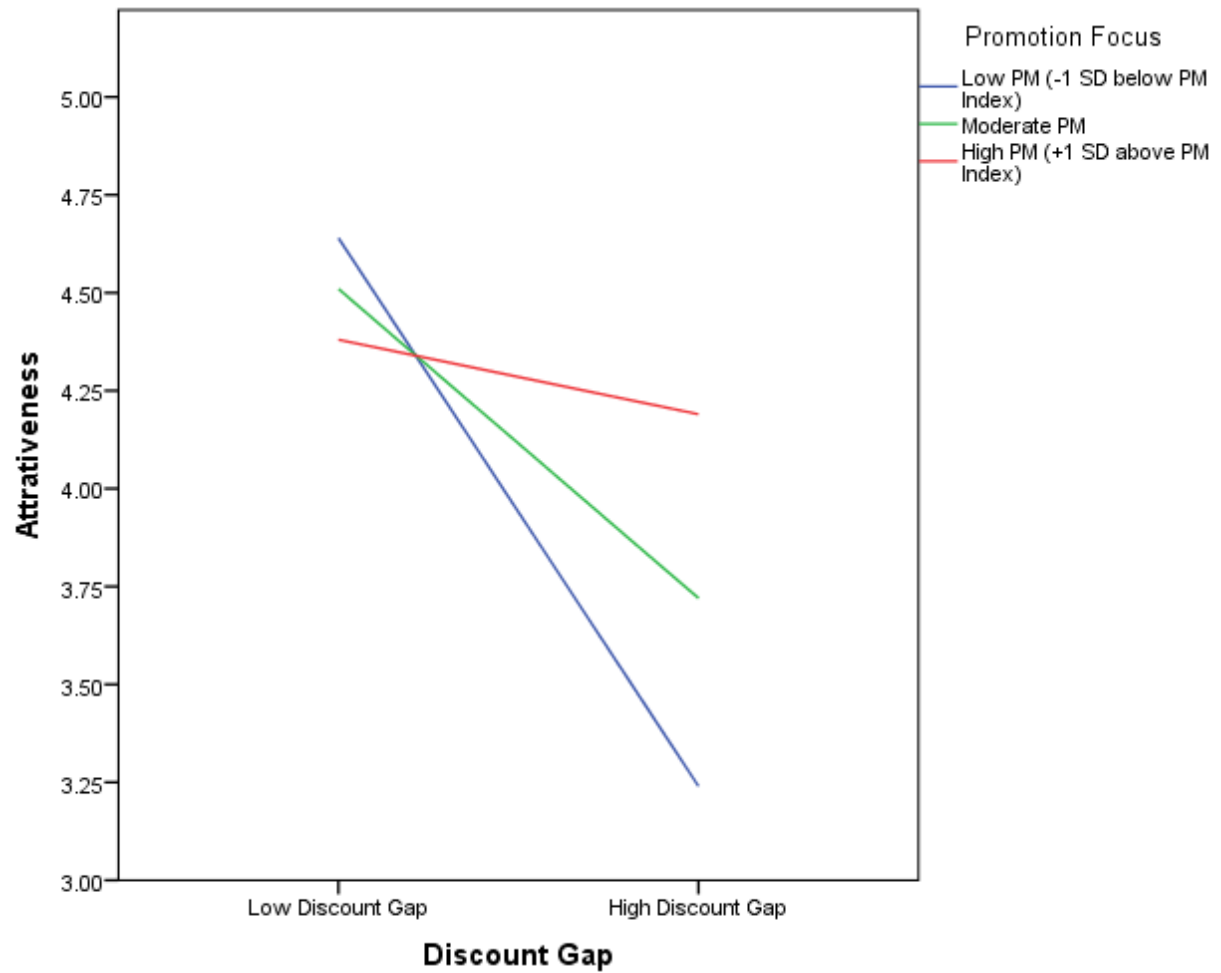


Figure 6. A number of discount options affect the relative attractiveness of uncertain-monetary promotion (Study 2)

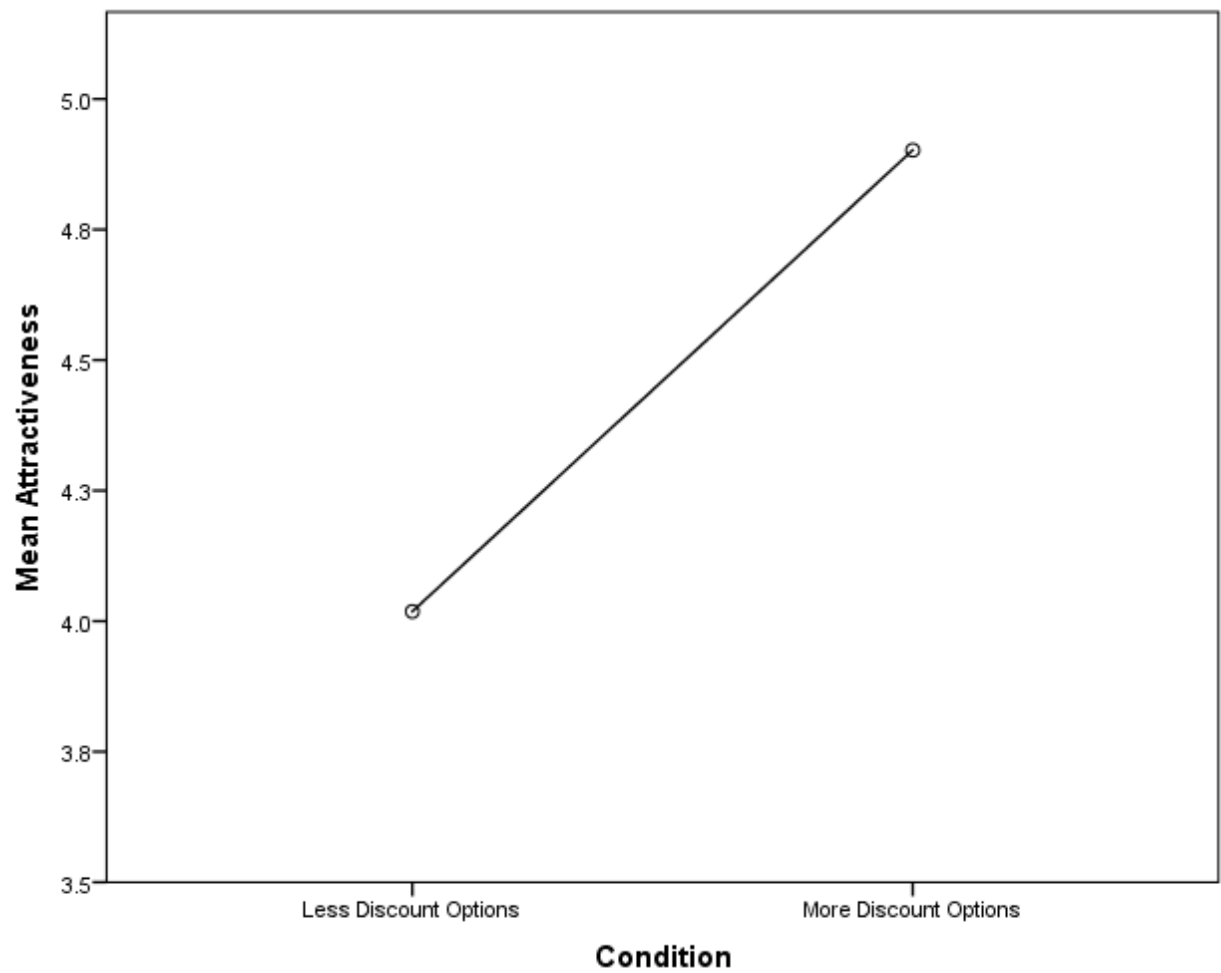


Figure 7. A number of discount options affect the relative purchase likelihood of uncertain-monetary promotion (Study 2)

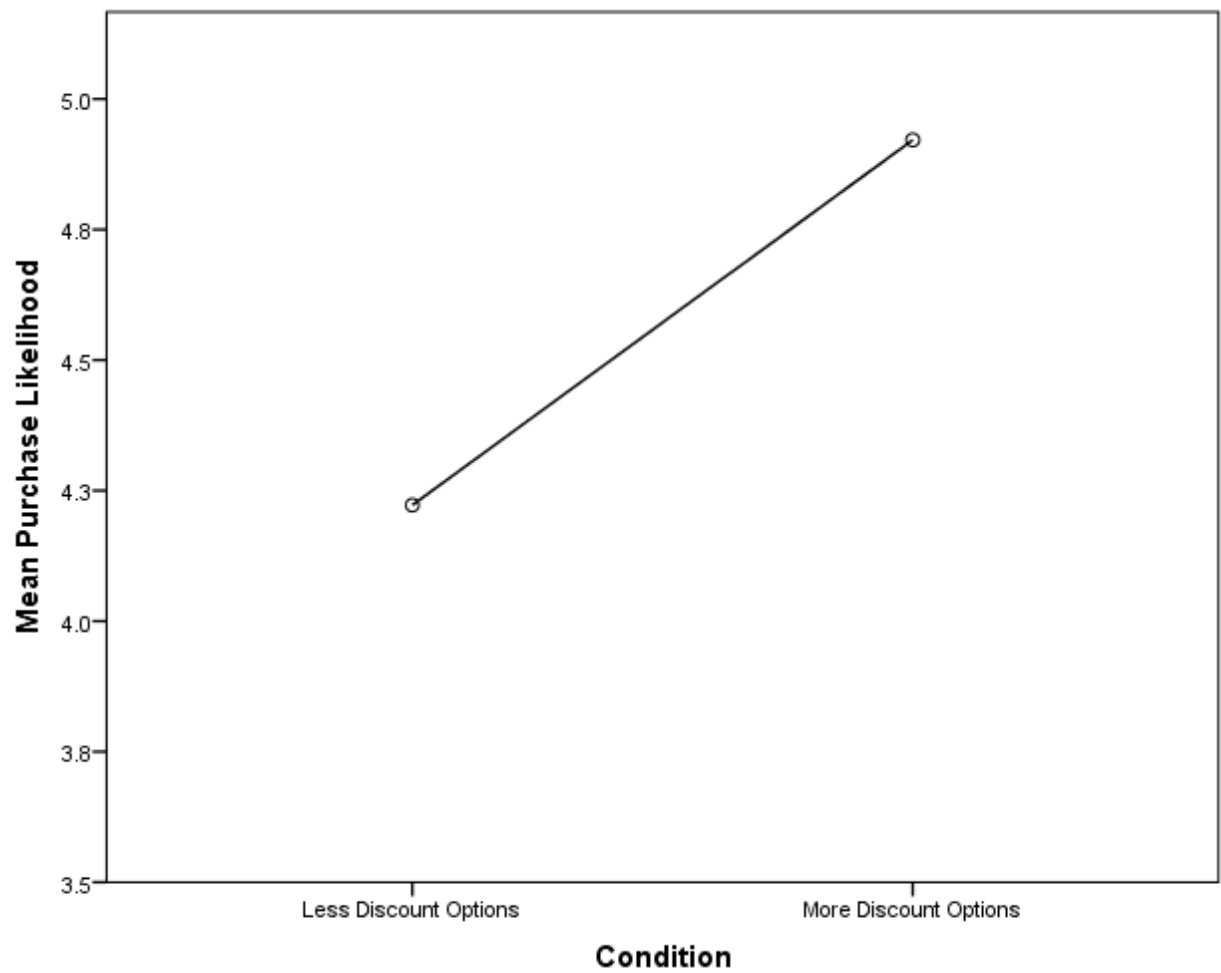




Figure 8. Chronic Prevention-focus and a number of discount options affects the relative attractiveness of uncertain-monetary promotion (Study 2)

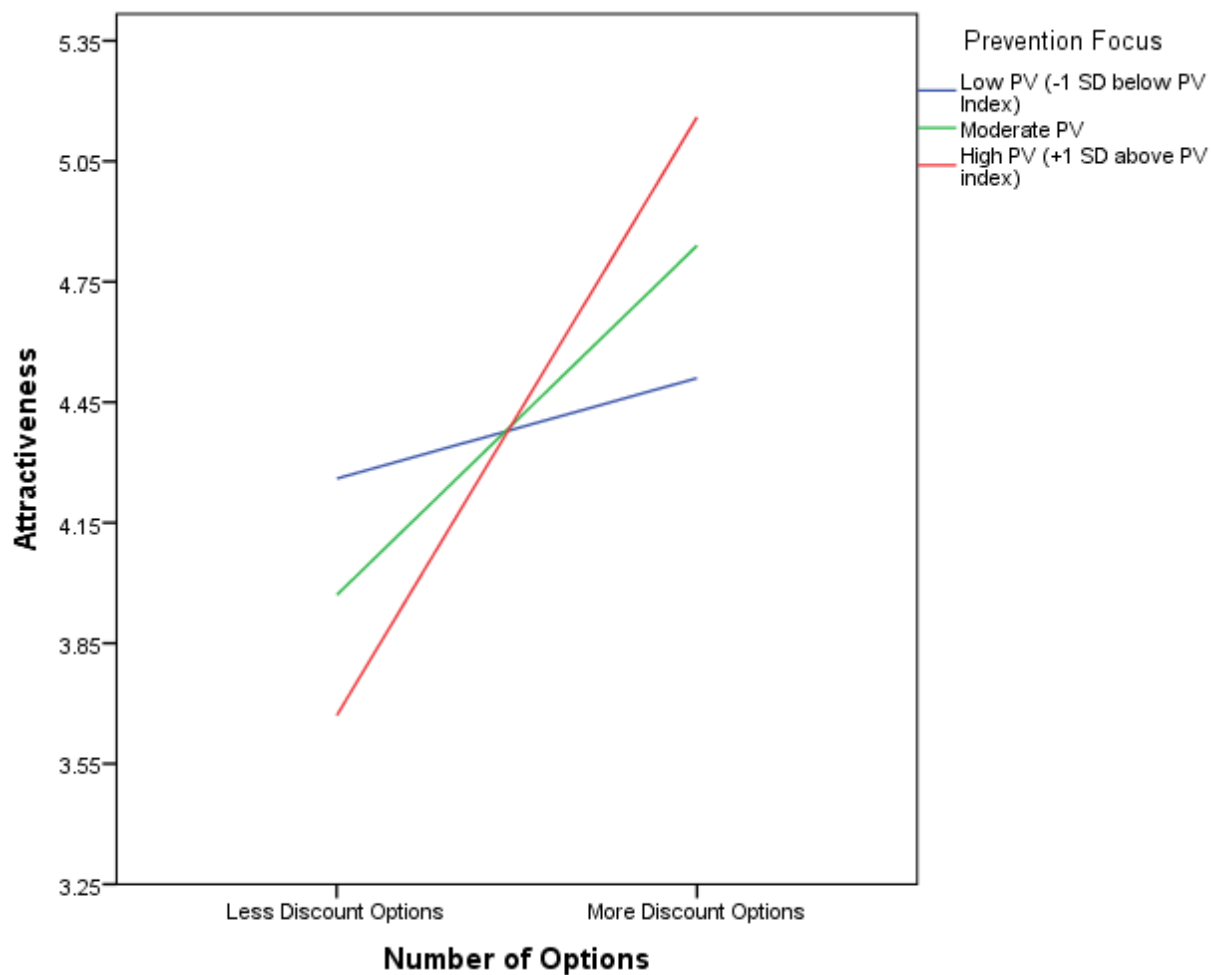
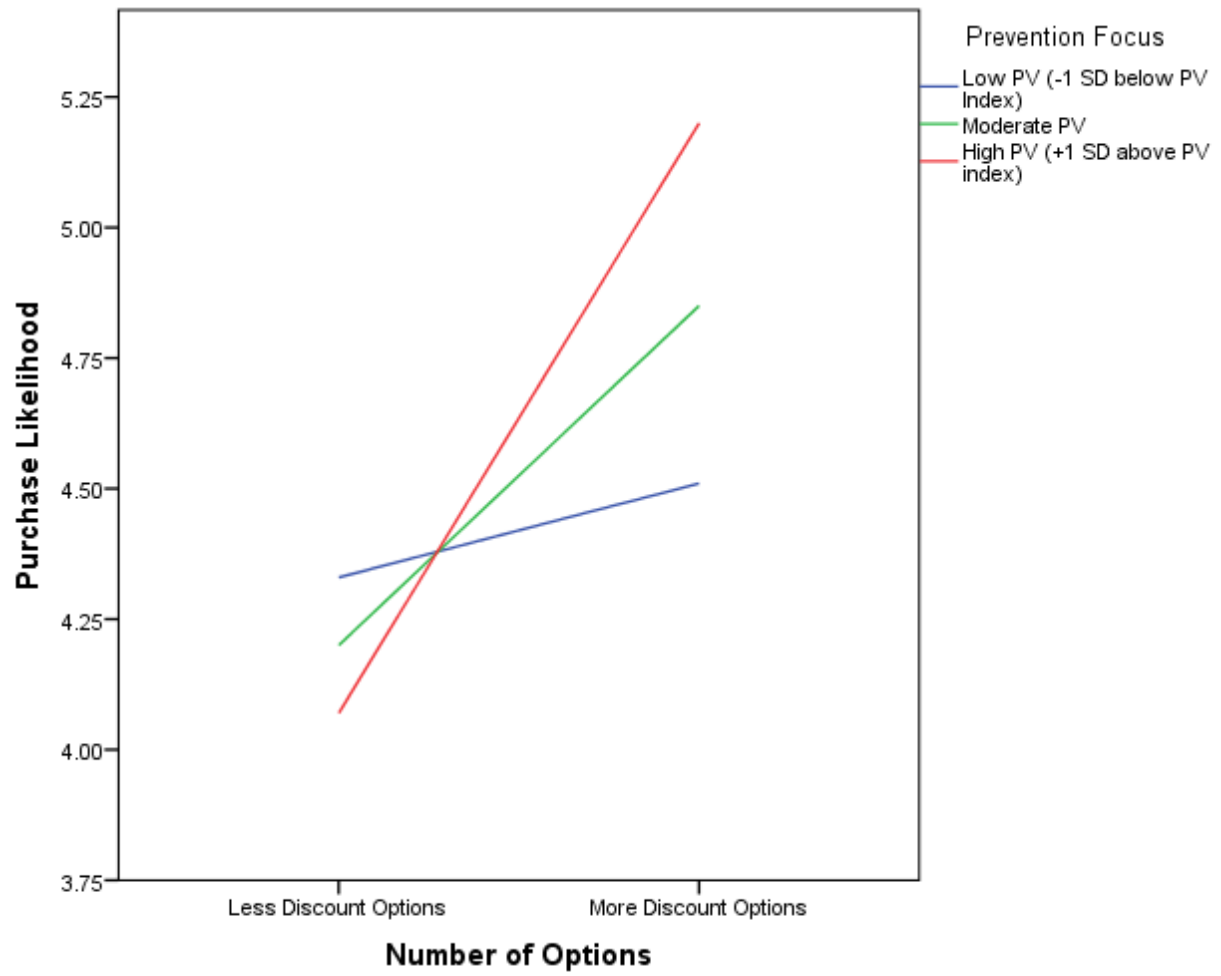


Figure 9. Chronic Prevention-focus and a number of discount options affects the relative purchase likelihood of uncertain-monetary promotion (Study 2)



## Appendix

### Appendix 1 – Study 1 research questionnaire: Low gap promotion

#### SECTION (A)

1. Age
2. Gender: Male ☐ Female ☐ Other ☐

#### SECTION (B)

**Now please read the scenario to answer the following questions:**

**PLEASE Imagine** you are shopping for shoes. You are exploring a number of shoes at a store. You come to know that the store is running a **price promotion**. “anyone buying **Nike Runners (original price \$80)** will receive **either 10% or 30% discount** by scratching a scratch-off card and the odds of winning one or the other are **unknown**.” Please note that the original price **\$80 is also an average market price**.

**1. How attractive do you find this price promotion to be?**

- |                          |                       |                       |                       |                       |                       |                       |                       |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not at all<br>attractive |                       |                       |                       |                       |                       |                       | Very<br>attractive    |
| 1                        | 2                     | 3                     | 4                     | 5                     | 6                     | 7                     |                       |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**2. What is your likelihood of purchase if you were to buy shoes with this price promotion?**

- |                       |                       |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not at all<br>likely  |                       |                       |                       |                       |                       | Extremely<br>likely   |
| 1                     | 2                     | 3                     | 4                     | 5                     | 6                     | 7                     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**3. What discount do you expect if you were to buy shoes with this price promotion? (Select one)**

- a. 10% off                      b. 30% off

**4. How confident were you to receive the specific discount selected in Question 3 if you were to purchase shoes with this price promotion?**

- |                         |  |  |  |  |  |                     |
|-------------------------|--|--|--|--|--|---------------------|
| Not at all<br>confident |  |  |  |  |  | Highly<br>confident |
|-------------------------|--|--|--|--|--|---------------------|

1	2	3	4	5	6	7
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5. Which of the following thoughts came to your mind when you assessed the attractiveness of this price promotion? (Select one)**

- (a) It is more likely for me to receive the lowest discount (10% off).  
 (b) It is more likely for me to receive the highest discount (30% off).  
 (c) Others please specify \_\_\_\_\_)

**6. This price promotion involves two possible outcomes (i.e., 10% off or 30% off). How effortful was it for you to process this information when you evaluated the price promotion?**

Not at all effortful							Highly effortful
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**7. This price promotion involves two possible outcomes (i.e., 10% off or 30% off). To what extent do you agree that two is the appropriate number of possible outcomes in an uncertain price discount?**

Not at all agree							Completely agree
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**8. This price promotion involves two possible outcomes (i.e., 10% off or 30% off). Please estimate the probabilities (%) with which you expect to receive each of the two possible outcomes below. (Please note that the probabilities should add up to 100%.)**

10% off \_\_\_\_\_

30% off \_\_\_\_\_

**9. I am interested in buying shoes in a year.**

Very unlikely							Very likely
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10. This price promotion involves the purchase of shoes; to what extent do you agree that \$80 is a reasonable price for the Nike Running Shoes.**

Not at all reasonable							Highly reasonable
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### SECTION (C)

Please answer the following to rate various aspects of motivational orientation.

1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	<b>(1 = <u>Strongly Disagree</u>; 7 = <u>Strongly Agree</u>)</b>						
	1	2	3	4	5	6	7
2. I feel like I have made progress toward being successful in my life.	1	2	3	4	5	6	7
3. When I see an opportunity for something I like, I get excited right away.	1	2	3	4	5	6	7
4. I frequently imagine how I will achieve my hopes and aspirations.	1	2	3	4	5	6	7
5. I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	1	2	3	4	5	6	7
6. I usually obeyed rules and regulations that were established by my parents.	1	2	3	4	5	6	7
7. Not being careful enough has gotten me into trouble at times.	1	2	3	4	5	6	7
8. I worry about making mistakes.	1	2	3	4	5	6	7
9. I frequently think about how I can prevent failures in my life.	1	2	3	4	5	6	7
10. I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	1	2	3	4	5	6	7

***Thank you***

**Appendix 2 – Study 1 research questionnaire: High gap promotion**

### SECTION (A)

1. Age

2. Gender: Male ☐ Female ☐ Other ☐

### SECTION (B)

**Now please read the scenario to answer the following questions:**

**PLEASE Imagine** you are shopping for shoes. You are exploring a number of shoes at a store. You come to know that the store is running a **price promotion**. “anyone buying **Nike Runners (original price \$80)** will receive **either 10% or 60% discount** by scratching a scratch-off card and the odds of winning one or the other are **unknown**.” Please note that the original price **\$80 is also an average market price**.

**1. How attractive do you find this price promotion to be?**

Not at all attractive							Very attractive
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**2. What is your likelihood of purchase if you were to buy shoes with this price promotion?**

Not at all likely							Extremely likely
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. What discount do you expect if you were to buy shoes with this price promotion? (Select one)**

- a. 10% off                      b. 60% off

**4. How confident were you to receive the specific discount selected in Question 3 if you were to purchase shoes with this price promotion?**

Not at all confident							Highly confident
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5. Which of the following thoughts came to your mind when you assessed the attractiveness of this price promotion? (Select one)**

- (a) It is more likely for me to receive the lowest discount (10% off).

- (b) It is more likely for me to receive the highest discount (60% off).
- (c) Others please specify\_\_\_\_\_)

(c) Others please specify\_\_\_\_\_)

**6. This price promotion involves two possible outcomes (i.e., 10% off or 60% off). How effortful was it for you to process this information when you evaluated the price promotion?**

Not at all effortful							Highly effortful
1	2	3	4	5	6	7	
○	○	○	○	○	○	○	

7. This price promotion involves two possible outcomes (i.e., 10% off or 60% off). To what extent do you agree that two is the appropriate number of possible outcomes in an uncertain price discount?

[illegible]

**8. This price promotion involves two possible outcomes (i.e., 10% off or 60% off). Please estimate the probabilities (%) with which you expect to receive each of the two possible outcomes below. (Please note that the probabilities should add up to 100%.)**

10% off \_\_\_\_\_

60% off \_\_\_\_\_

**9. I am interested in buying shoes in a year.**

Very unlikely							Very likely
1	2	3	4	5	6	7	
○	○	○	○	○	○	○	

**10. This price promotion involves the purchase of shoes; to what extent do you agree that \$80 is a reasonable price for the Nike Running Shoes.**

Not at all reasonable                      Highly reasonable

1                  2                  3                  4                  5                  6                  7



### SECTION (C)

Please answer the following to rate various aspects of motivational orientation.

1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	(1 = <b>Strongly Disagree</b> ; 7 = <b>Strongly Agree</b> )						
	1	2	3	4	5	6	7
2. I feel like I have made progress toward being successful in my life.	1	2	3	4	5	6	7
3. When I see an opportunity for something I like, I get excited right away.	1	2	3	4	5	6	7
4. I frequently imagine how I will achieve my hopes and aspirations.	1	2	3	4	5	6	7
5. I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	1	2	3	4	5	6	7
6. I usually obeyed rules and regulations that were established by my parents.	1	2	3	4	5	6	7
7. Not being careful enough has gotten me into trouble at times.	1	2	3	4	5	6	7
8. I worry about making mistakes.	1	2	3	4	5	6	7
9. I frequently think about how I can prevent failures in my life.	1	2	3	4	5	6	7
10. I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	1	2	3	4	5	6	7

***Thank you***

### Appendix 3 – Study 2 research questionnaire: Fewer discount options

#### SECTION (A)

1. Age





2. Gender:    Male                      Female ☐ Other

### SECTION (B)

Please answer the following to rate various aspects of motivational orientation.

1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	<b>(1 = <u>Strongly Disagree</u>; 7 = <u>Strongly Agree</u>)</b>						
	1	2	3	4	5	6	7
2. I feel like I have made progress toward being successful in my life.	1	2	3	4	5	6	7
3. When I see an opportunity for something I like, I get excited right away.	1	2	3	4	5	6	7
4. I frequently imagine how I will achieve my hopes and aspirations.	1	2	3	4	5	6	7
5. I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	1	2	3	4	5	6	7
6. I usually obeyed rules and regulations that were established by my parents.	1	2	3	4	5	6	7
7. Not being careful enough has gotten me into trouble at times.	1	2	3	4	5	6	7
8. I worry about making mistakes.	1	2	3	4	5	6	7
9. I frequently think about how I can prevent failures in my life.	1	2	3	4	5	6	7
10. I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	1	2	3	4	5	6	7



**5. Which of the following thoughts came to your mind when you assessed the attractiveness of this price promotion? (Select one)**

- (a) It is more likely for me to receive the discount (10% off).  
 (b) It is more likely for me to receive the discount (30% off).  
 (c) Others please specify \_\_\_\_\_)

**6. This price promotion involves two possible outcomes (i.e., 10% off or 30% off). How effortful was it for you to process this information when you evaluated the price promotion?**

Not at all effortful							Highly effortful
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**7. This price promotion involves two possible outcomes (i.e., 10% off or 30% off). To what extent do you agree that two is the appropriate number of possible outcomes in this uncertain price discount?**

Not at all agree							Completely agree
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**8. This price promotion involves two possible outcomes (i.e., 10% off or 30% off). Please estimate the probabilities (%) with which you expect to receive each of the two possible outcomes below. (Please note that the probabilities should add up to 100%.)**

10% off \_\_\_\_\_

30% off \_\_\_\_\_

**9. I am interested in buying computer backpack in a year.**

Very unlikely							Very likely
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10. Have you ever purchased computer backpack before?**

☐ Yes ☐ No

**11. This price promotion involves the purchase of computer backpack; to what extent do you agree that \$70 is a reasonable price for a 17-inch computer backpack.**

Not at all  
reasonable

1

☐

2

☐

3

☐

4

☐

5

☐

6

☐

Highly  
reasonable

7

☐

## Appendix 4 – Study 2 research questionnaire: More discount options

### SECTION (A)

1. Age

2. Gender: Male ☐ Female ☐ Other ☐

### SECTION (B)

Please answer the following to rate various aspects of motivational orientation.

1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do.	(1 = <b>Strongly Disagree</b> ; 7 = <b>Strongly Agree</b> )						
	1	2	3	4	5	6	7
2. I feel like I have made progress toward being successful in my life.	1	2	3	4	5	6	7
3. When I see an opportunity for something I like, I get excited right away.	1	2	3	4	5	6	7
4. I frequently imagine how I will achieve my hopes and aspirations.	1	2	3	4	5	6	7
5. I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.	1	2	3	4	5	6	7
6. I usually obeyed rules and regulations that were established by my parents.	1	2	3	4	5	6	7
7. Not being careful enough has gotten me into trouble at times.	1	2	3	4	5	6	7
8. I worry about making mistakes.	1	2	3	4	5	6	7
9. I frequently think about how I can prevent failures in my life.	1	2	3	4	5	6	7
10. I see myself as someone who is primarily striving to become the self I "ought" to be—fulfill my duties, responsibilities and obligations.	1	2	3	4	5	6	7

### SECTION (C)

Now please read the scenario carefully and answer the following questions:

**PLEASE Imagine** you are shopping for computer backpack. You are exploring a number of computer backpacks at a store. You come to know that your favorite backpack company is running a **price promotion**. “anyone buying **Computer Backpack-17 Inch (original price \$70)** will receive **either 10%, 15%, 20%, 25% or 30% discount** by scratching a scratch-off card and the chances of receiving any particular discount are **unknown**.” Please note that the original price **\$70 is an average market price** for 17-inch computer backpack.

**1. How attractive do you find this price promotion to be?**

Not at all attractive							Very attractive
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**2. How likely are you to purchase the computer backpack with this price promotion?**

Not at all likely							Extremely likely
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. What discount do you expect to receive if you were to buy computer backpack with this price promotion? (Select one)**

- a. 10% off      b. 15% off      c. 20% off      d. 25% off      e. 30% off

**4. How confident were you to receive the specific discount selected in Question 3 if you were to purchase computer backpack with this price promotion?**

Not at all confident							Highly confident
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5. Which of the following thoughts came to your mind when you assessed the attractiveness of this price promotion? (Select one)**

- (a) It is more likely for me to receive discount (10% off).
- (b) It is more likely for me to receive discount (15% off).
- (c) It is more likely for me to receive discount (20% off).
- (d) It is more likely for me to receive discount (25% off).
- (e) It is more likely for me to receive discount (30% off).
- (f) Others please specify \_\_\_\_\_)

**6. This price promotion involves five possible outcomes (i.e., 10% off, 15% off, 20% off, 25% off or 30% off). How effortful was it for you to process this information when you evaluated the price promotion?**

Not at all effortful							Highly effortful
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**7. This price promotion involves five possible outcomes (i.e., 10% off, 15% off, 20% off, 25% off or 30% off). To what extent do you agree that five is the appropriate number of possible outcomes in this uncertain price discount?**

Not at all agree							Completely agree
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**8. This price promotion involves five possible outcomes (i.e., 10% off, 15% off, 20% off, 25% off or 30% off). Please estimate the probabilities (%) with which you**

expect to receive each of the five possible outcomes below. (Please note that the probabilities should add up to 100%.)

10% off \_\_\_\_\_  
 15% off \_\_\_\_\_  
 20% off \_\_\_\_\_  
 25% off \_\_\_\_\_  
 30% off \_\_\_\_\_

9. I am interested in buying computer backpack in a year.

Very unlikely							Very likely
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Have you ever purchased computer backpack before?

☐ Yes ☐ No

11. This price promotion involves the purchase of computer backpack; to what extent do you agree that \$70 is a reasonable price for a 17-inch computer backpack.

Not at all reasonable							Highly reasonable
1	2	3	4	5	6	7	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***Thank you***