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Nariman Ammar, Jawad Alleil

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When 25% Off Plus 20% off is Equal to 40% Off: Multiple-Discount Promotions are Preferred to Single- Discount Promotions

Nariman Ammar, Jawad Alleil

Dept. of Marketing, Higher Institute of Business Administration
Damascus, Syria

E-mail: nm_ammam@hotmail.com, Jawadalleil1983@gmail.com

Abstract

This paper aimed to investigate the effects of price promotion framing messages (single discount Vs multiple discount) on attitude toward the offer and purchase intention. Experimental design is conducted, the experiment results demonstrated that multiple discount has a greater influence on consumer attitude toward the offer and Purchase Intention than single discounts over an economically equivalent. This finding offers potential for finding better ways for sellers or managers to present discounts in market. Finally, this paper conclusion presents implications, limitations, and directions for future research.

Keywords: Multiple Discount, Single Discount, Purchase Intention, Attitude toward the Offer.

Introduction

Prior studies showed that choices could be influenced by the framing of decision alternatives (Kahneman & Tversky, 1984). Research on price promotions has found that consumers evaluate deals differently depending on how the promotion offer has been presented (Chen et al., 1998; Kim and Kramer, 2006, Krishna et al, 2002). Many studies have focused on different types of promotion discounts on consumer behavior, For Example (Smith & Sinha, 2000) find a preference for price discounts for expensive products but a preference for bonus packs for inexpensive products. Similarly, (Hardesty & Bearden, 2003) find that for small and medium-sized promotions, consumers were indifferent between price discounts and bonus packs, but for large promotions, they preferred price discounts. However, such research has mostly focused on single discount scenarios. This paper is based on offer two percentage discounts. A multiple discount is defined as two discounts offered Simultaneously that can be combined to create a bigger discount. The paper processes a relatively form of price promotion on a single product verse multiple discount. For example, \$100 product could be discounted 30% and 10% additional discount from the remaining sale price after first discount. And given the prevalence of single discounts in the marketplace, coupled with a lack of knowledge

about multiple discount, the need for research on this practice, especially an understanding of how consumers respond to such promotion offers, in contrast to single discount offers that have dominated previous research on price promotions. The focus of this research is to examine the influence of multiple discounts and understanding of how consumers respond to such promotion offers. And what are the advantages and disadvantages of using multiple discounts instead of single discount offers?

Discount Price: Price is typically an important factor influencing consumers' purchasing behavior and it is generally recognized that price indicates monetary sacrifice or a financial loss, and is an inherent component of the perceived financial risk associated with a purchase (Grewal et al., 1994). One of the important factors of consumer is price (Mill et al, 2017, P218) Based on the importance of price in the minds of consumers, previous research has confirmed that price influences the purchase intention of consumers (Biswas et al., 2013; Grewal and Compeau., 1998) In addition, the price paid by consumers for products creates the product value. During the process, consumers generate value consciousness (Lichtenstein et al., 1993; Zeithaml, 1988). Therefore, the value consciousness's created by price promotions affect the attitude of consumers, thereby influencing consumers' purchase intention.

Purchase Intention: Intention refers to consumers' perception of their future behavior. This means that when consumers have a stronger intention toward a particular behavior, they have a greater probability of carrying out this behavior in the future (Bendall-Lyon and Powers, 2004). Purchase intention is defined as the likelihood that the buyer intends to purchase the product (Dodds et al, 1991). Purchase intention is also influenced by unexpected situational factors. The consumer may form a purchase intention based on factors such as expected family income, expected price and expected benefits from the product (Kotler et al., 2005, p285). However, (Chen et al., 2012) found that for high priced products, discounts have a greater influence on consumers compared to the increased value from bonus packs.

Attitude: are evaluative judgments, or ratings of how good or bad, favorable or unfavorable, or pleasant or unpleasant consumers find a particular person (e.g. advertisement, Website, Price, product) evaluative judgments have two main components: direction (positive, negative, or neutral) and extremity (weak, moderate, or strong) (Kardes et al., 2011, P86). The relationship between consumer attitudes and intention has been widely considered in different fields, showing that consumer attitudes have a positive effect on purchase intention (Ajzen, 1991).

How Consumers Process Multiple Discount

According to heuristic-systematic model was developed by (Chaiken, 1980), information is processed either systematically or heuristically.

Systematic processing

If this calculation of multiple discounts could be performed correctly, consumers' perception of overall discount for multiple discounts and an equivalent single discount should be identical. For example, to determine the value of multiple discounts such as "an additional discount of 20% on top of an original discount of 25%," the overall discount is $(100 - 25\% = 75$ and $75 - 20\% = 60$ and total value discount is $= 40\%$). In that case, multiple discounts should have no differential effect on

consumers' attitude toward the offer and purchase intention. However, multiple discounts might require from consumers retaining multiple pieces of discount information and conducting calculations in working memory simultaneously to estimate the real discount level. In response, consumers may use simplifying Heuristics Processing when the discounts become more difficult and prices become longer, instead of engaging in Systematic Processing, more difficult but more precise.

Heuristic Processing (Systematic computational error)

In the multiple discount context, consumers may depend on heuristic processing and the estimations of final price are often inaccurate and systematically distorted. If consumers Using addition as a heuristic process in the context of multiple discount, always results in an upward bias regarding the overall discount level, because the base price remains the same for both discounts (Chen and Rao, 2007). In other word, consumers may perceive each discount to be independent of each other. For example, if a consumer gets two discounts for the same product an additional discount of 20% on top of an original discount of 25%, the consumer will mistakenly add the two discounts (45%), which lead to upward bias regarding the overall discount level, knowing that, the discount value is (40%).

Overall, if consumers depend on heuristics processing to evaluate the overall discount level, heuristic strategies as a systematic computational error tend to inflate the offer compared with an economically equivalent single discount.

Literature Review and hypotheses development

Prior studies have confirmed that Consumers may neglect the base values of percentages in their judgment when processing multiple discount. (Chen and Rao, 2007) argued that When percentage is used as a mathematical function that denotes a specific relationship between two numbers, the specific quantity associated with a percentage depends on its base value. Two percentages that are associated with different base values have different weights and thus cannot be directly combined. Due to whole number dominance, however, people may mistakenly apply a simple whole-number. Similarly, (Chan and Rao, 2012) have found that Consumers tend to mistakenly add up Simultaneously percentages and neglect base values when processing percentage change information.

Our study relates conceptually to (Chen and Rao, 2007) study but differs in fundamental ways. Chen and Rao study how people compute multiple percentage changes. After presenting multiple percentage values, they ask participants to indicate the total percentage change. They find that consumers often just add the two percentages, because they ignore the different base values used in multiple percentage change calculations. In their experiment 1, Chen and Rao also compare attitudes and purchase intentions toward multiple versus single equivalent changes, similar to our study, and the results indicate the use of addition. In their experiment 3, they find that actual sales are higher with two discounts (20% and 25%) compared with one equivalent discount (40%). They explain this finding by asserting that consumers add the two discounts and infer a better deal than the single discount.

Factors Influencing on Ease of Computation

As we discussed that many individual differences would moderate the proposed effect of multiple discounts such as cognitive skills, analytical ability, need for closure (NFC); (Cacioppo and Petty 1982; Webster and Kruglanski, 1994), situational factors such as information overload, time pressure (Eysenck & Calvo, 1992; Suri and Monroe 2003), or even factors embedded in the decision context e.g., Rounded, Nonrounded, the nature of the numbers involved (Thomas and Morwitz, 2005; Thomas et al, 2010). May results a real or perceived difficulty in performing the required computations. In such instances, consumers use heuristics to make inferences (Chaiken, 1980). (Thomas and Morwitz, 2009) demonstrated how computation ease influences judgments of price differences. They find that magnitude differences are judged smaller when computations are harder (e.g. 4.93 - 3.92) versus easier (e.g. 4.00 - 3.00) because harder computations are less fluent. These effects do not manifest when mental computations are not needed.

On other hand, multiple discounts might require consumers retaining multiple pieces of discount information and conducting calculations in working memory Simultaneously to estimate the real discount level. For example, $(100 - 25\% = 75 \text{ and } 75 - 20\% = 60 \text{ and total value discount is } = 40\%)$. In response, consumers may use simplifying Heuristics Processing when the discounts become more difficult and prices become longer, instead of engaging in Systematic Processing, more difficult but more precise (Chaiken, 1980). Such heuristics processing (Systematic computational error) can lead to upward bias in purchase intentions and consumer attitude toward the offer in case of multiple discounts rather than when a single discount of the same value is presented.

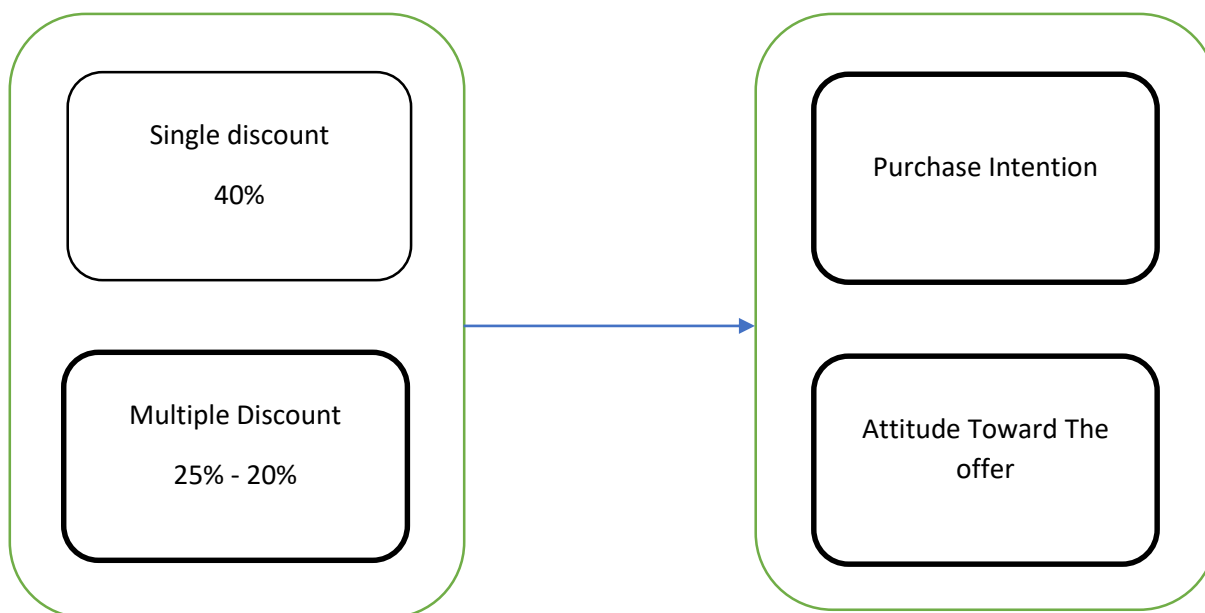
Based on the arguments discussed above, two hypotheses are assumed

H1: When multiple discounts are presented, consumer's Purchase Intention higher with multiple discounts compared to an economically equivalent single discount.

H2: When multiple discounts are presented, consumer's Attitude toward the offer higher with multiple discounts compared to an economically equivalent single discount.

Research Model and Variables

Figure 1: Hypothesized model of the Effect of Independent Variable on Dependent Variable.



Methodology

Two price promotion framing: (40 % VS 25%, 20%), Product type as stimuli (smart watch), Price (SYP 13,500). The data for the empirical study were obtained from a controlled experiment involving undergraduate and postgraduate students. The dependent variables (Purchase Intention) were evaluated on a 7-point Likert scale, anchored by "Strongly Disagree" and "Strongly Agree" based on (Lee JE, JH Chen-Yu, 2018). (Attitude toward the offer) was measured with five bipolar items on a 7-point based on (Chen & Rao, 2007). Accuracy Measure Question: what is the total percentage discount you are getting? Based on (Chen & Rao, 2012), This question was used to reveal the processing approach in Percentage Changes. Data for the study were collected from a 100-student sample at Higher institute of Languages (Syria). Participants were randomly assigned between two conditions (40%, 25%-20) . Six participants dropped from the final analysis, leaving 94 participants in the analyses.

Data analysis and evaluation

The data obtained during the study was analyzed and interpreted using SPSS 24.0, mean, frequency distribution and percentage for sample, the demographic data of the sample used in analysis is shown in Table 1.

table1: Demographic data of the sample

Demographics	Frequency	Percentage (%)
Gender		
Male	41	43.6
Female	53	56.4
Age		
Less than 18	1	1.1
18-24	70	74.5
25-30	16	17.0
More than 30	7	7.4
qualification		
Secondary/Institute	6	6.4
college	80	85.1
post graduate /Master	7	7.4
post graduate /Ph.D.	1	1.1

Exploratory factor analysis was performed as a reliability tool, First, the number of factors must be determined in factor analysis. Factors whose eigenvalues are higher than 1, for determine the number of factors. Varimax rotation method was used for factor analysis in this study. The final factor loads of the variables are checked after rotation; the result of Exploratory factor analysis is shown in table 2.

Table 2: Result of exploratory factor analysis

Item	Factor 1 Purchase Intention	Factor 2 Attitude	Communality
1	.885		.793
2	.876		.825
3	.868		.831
4		.855	.679
5		.821	.689
6		.798	.703
7		.792	.753
8		.790	.735
% Variance	42.974	32.143	
% Cumulative	42.974	75.116	
Determinant = .007			
MSA= .866			
Bartlett's=000			

Cronbach's alpha coefficients of the scales were determined as below table 3. As this value is higher than 60%, it is considered valid and suitable for factor analysis.

Table 3: Reliability analysis

Variables	No of Item	Cronbach's alpha
Purchase Intention	3	0.88
Attitude toward the offer	5	0.89

Hypotheses test

To test the hypotheses, an Independent Sample t test was conducted to determine whether there is a statistically significant difference between the means in two unrelated groups.

H1: posits that multiple discount generate a higher Purchase Intention compared to an economically equivalent single discount.

H2: posits that multiple discount generate a higher Attitude Toward the Offer compared to an economically equivalent single discount.

Result: We found significantly higher Purchase Intention and consumer attitude toward the offer in multiple discount promotion (MD) than single discount Promotion (SD). H1, H2 was supported. show the table (4) below.

Table 4: Summary. Means and standard errors for purchase intent and attitude toward the offer.

Sample	Condition	Purchase intention	Attitude toward the offer
Cell size	Discount Type	Mean (SE)	Mean (SE)
47	SD (40% off)	4.872 (1.14)	4.795 (1.12)
47	MD (25% off + 20% off)	5.305 (.95)	5.303 (1.14)

Discussion

The aim of this research was to investigate the effect of multiple discounts on consumer's attitude toward the offer and purchase intentions. The results provided support the hypotheses that (a) multiple discount has greater influence on Purchase Intention compared to an economically equivalent single discount (b) Multiple discount has greater influence on consumer attitude toward the offer compared to an economically equivalent single discount. Furthermore, the results shown the existence of a systematic computational error when people encounter a series of percentage changes, where a large proportion of participants %90 erroneously added percentages without recognizing that the first percentage change shifts the base. From the point of view of the Researchers (Chen & Roa, 2012) consumer tend a to neglect base values when processing percentage change information. Using addition as a heuristic in the context of multiple discounts always results in an upward bias regarding the overall discount level, because the base price remains the same for both discounts (Chen and Roa, 2007).

Implications

In this research, we identify a systematic and relatively widespread error in how people compute multiple percentage changes that has important marketing consequences. Thus, we realize the implications of this practice on a wide spectrum. It enriches our understanding of how multiple discounts are processed by consumers and how they influence the evaluations of a promotional offer. One of the most interesting contributions of this research is that, Purchase Intention and consumer attitude toward the offer is significantly higher in multiple discount promotion over compared with economically equivalent single discount promotion. which is one of the most important goals that organizations seek to encourage the purchase or sale of a product or service.

Managerially, many companies may be blind to the outcomes of using multiple discounts even though it seems like a tempting innovative promotion method. From our findings, we suggested that multiple discounts are beneficial over compared with economically equivalent single discount promotion. Hence, firms should exploit the systematic computational error in processing of multiple discount by presenting information in a manner designed to appear better than it really is.

Limitation and Future Research

This study has a number of important limitations, which can be seen as starting points for future research, The current study represents a small step toward understanding consumers' response to multiple discount, however, consumers may use simplifying Heuristics Processing instead of engaging in Systematic Processing when the percentage discounts become more complicated, and prices become longer, However, such processing is likely to vary when multiple discounts become more easier. It useful to study Multiple discount on other variables (Perceived quality, Perceived Savings).

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