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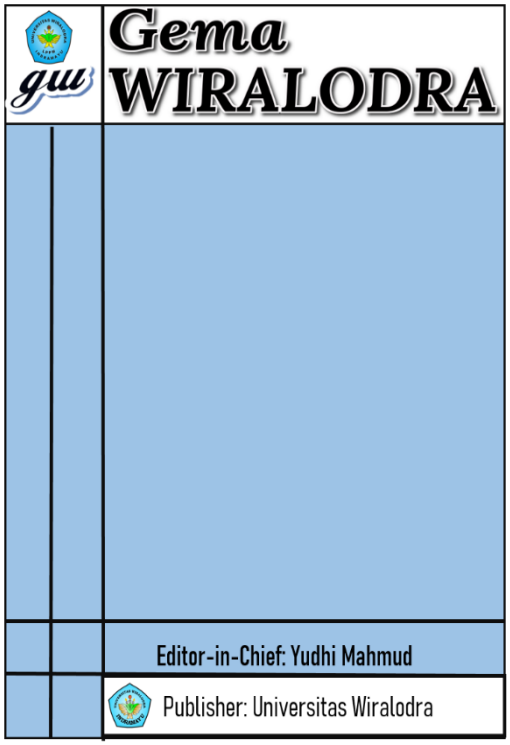

Price framing: monetary discount versus percentage discount format

Rivan Sutrisno
Politeknik Negeri Bandung, Indonesia, rivan.sutrisno@polban.ac.id

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Orginal Article

Price framing: monetary discount versus percentage discount format

Rivan Sutrisno
Politeknik Negeri Bandung, Indonesia, rivan.sutrisno@polban.ac.id

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Abstract
Marketers often use price promotions to stimulate sales and attract new customers. Price promotion widely used in the market applies a monetary discount (e.g., dollar off) or percentage discount (e.g., percentage off) format. However, marketers cannot use a guide on which promotional format can attract customers better. The qualitative descriptive analysis strategy is used in this research method. The review of relevant literature, particularly earlier studies that have covered consumer preferences for price promotion forms, was used to gather research data. This systematic literature review study offers an argument that address which of the promotional format, either a monetary discount or a percentage discount, are more attractive for customers. It is concluded that the consumers favor the price promotion in monetary discount over the percentage discount format due to easier cognitive processing of the price promotion to get the actual selling price. However, the percentage discount format will attract consumers better for a low-price product since it could induce a more significant number effect.
Keywords: Price Framing, Monetary Discount, Percentage Discount, Discount Format

1. Introduction

Companies often use price discounts to influence consumers' perceptions, introduce specific new brand features, or stimulate product sales. Generally, companies advertise price promotion in two distinct ways: monetary discount (e.g., $50 off) or percentage discount (e.g., 50% off, Campbell & Diamond, 1990). For example, a phone retailer in Indonesia promoted a price reduction using a monetary discount format (e.g., Samsung A52 price dropped up to Rp. 2 million), and a giant fashion retailer in Indonesia, Matahari Department Store, used a percentage discount in their promotional campaign (e.g., Up to 70% discount). Even though there is widespread use of types of these promotional campaigns, there is no guide marketers can use to effectively apply one type of discount format over another.

This article will provide a systematic literature review to conclude the practical application of monetary discount and percentage discount formats. Autor only retrieves articles using experimental research methods in developing the conclusion to provide a straightforward comparison between the two discount formats.

Establish studies on price promotion shows that consumer would respond differently to a similar value of a price promotion but presented differently (Gendall et al., 2006; Sinha & Smith, 2000; Weisstein et al., 2013). For example, consumers' perceived value will be differed according to how price promotion is offered (e.g., 50% off, buy one get one free, and buy two-get 50% off) (Sinha & Smith, 2000). Consumers favor more towards a monetary discount (e.g., dollar-off) compared to a percentage discount (e.g., percentage-off) for a high-price product; on the contrary, favor more toward a percentage discount (e.g., percentage-off) compared to a monetary discount (e.g., dollar-off) for low-priced products (González et al., 2016).

The main issue in this study is that consumers need clear guidance on choosing a more effective discount format, specifically whether they should always use a monetary discount or a percentage discount in price promotion campaigns. Previous Research has established that consumers respond differently to the same type of disk, depending on the price of the promotion. In addition, there are differences in consumer preferences about the comparison format between products with high and low prices. Due to this, the current study will provide

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more precise information about consumer preferences and more practical applications than the discon format for various products.

The urgency of this study is high since businesses frequently use price promotions to increase consumer perception of their products, highlight new features, and increase sales of their products. Even though it has been used a lot, there needs to be a clear guideline for decision-makers to choose a disk format that is more effective when used. Due to this, the current study will provide systematic literature recommendations for developing practical applications of the monetary discount and percentage discount formats based on earlier exploratory Research.

This systematic literature review is structured as follows: (a) the literature showing that the monetary discount is better than the percentage discount will be discussed. (b) the study will present that percentage discount is better than monetary discounts. (c) research reveals mixed results either monetary discount or percent discount are better will be discussed. (d) the conclusion will be derived from the literature review.

2. Method

This study examines how a price promotion's format, a dollar amount discount vs a percentage discount, can impact customers' views. The qualitative descriptive analysis strategy is used in this research method. The review of relevant literature, particularly earlier studies that have covered consumer preferences for price promotion forms, was used to gather research data. The information is then summarized (Table 1) to present an in-depth analysis of the pertinent findings. The past research examined in the table included empirical studies utilizing various research techniques, including consumer surveys, lab experiments, and the collecting of transactional data. After that, these data were descriptively evaluated to determine pertinent trends and conclusions. The results of this study will provide a clearer view of consumer preferences towards price promotion formats and how those formats can influence consumer perceptions and purchasing decisions.

3. Result and Discussion

A Monetary Discount Is Better Than A Percentage Discount

The earliest research experiment to test the influence of semantic cues on consumers' price perception was reported by Berkowitz and Walton (1980). In the experiment, they compared the manipulation of price framing containing percentage discount format versus monetary discount format and another type of discount format such as the manipulation containing; (regular price + sale price) vs. (total value + sale price) vs. (compare at + our price) vs. (X percent off + now only). The result showed that percentage discount was evaluated more negatively by participants compared to monetary discount and another cue discount. The author concluded the poor performance of the percentage discount over others because the participants were unwilling or unable to translate that percentage amount to an implied reference price. This finding was supported by Della Bitta et al. (1981) research showing that presenting an ad containing the manipulation of reference price + monetary discount (e.g., Regular Price + $ Amount Off) is perceived better in terms of the transaction value compared to an ad containing the manipulation of reference price + percentage discount (e.g., Regular Price + percentage Off).

Other researchers supported this finding through several direct studies that compare monetary discounts and percentage discounts (Darke & Freedman, 1993; Lehtimäki et al., 2018; Suri et al., 2013). Darke and Freedman (1993) conducted two experiments to test the hypotheses that consumers' decisions were influenced by the frame of the amount of money that can be saved (monetary discount) rather than by the percentage of saving offered (percentage

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discount). In experiment 1, they manipulated subjects' decisions to make an extra effort for a better deal by setting four conditions that the subjects could save either 1% or 5% and either $5 or $25, which were (a) base price of $2500 and 1% off, for savings of $25; (b) base price of $500 and 1% off, for savings of $5; (c) base price of $500 and 5% off, for a savings of $25; and (d) base price of $100 and 5% off, for a savings of $5. The result suggested that the subject's decisions were affected by the absolute amount of money that could be saved (monetary discount) and not by the percentage of the base price (percentage discount). In experiment 2, the authors included the discount and savings size in the manipulation, such as (a) large discount and large savings, initial price of $100 with a discount of 25% and a savings of $25; (b) large discount and small savings, the initial price of $20 with a discount of 25% and a savings of $5; (c) small discount and large savings, the initial price of $500 with a discount of 5% and a savings of $25; and (d) small discounts and small savings, initial price of $100 with a discount of 5% and a savings of $5. The result suggested that the subjects were more likely to exert extra time and effort for a better deal if the sale involved either a large percentage of savings or a large amount of savings. However, the result also showed that, overall, the dollar amount that could be saved (monetary discount) performs better in influencing the subject's decision than the percentage discount.

Suri et al. (2013) argued the preference for the monetary discounts format over others could be explained by consumers' math anxiety and their motivation to process the information. Thus, when consumers are motivated to process information and have low math anxiety, they will be more likely to use their cognitive to compute the saving information contained in the competing promotion formats. But, when consumers with high motivation to process information have high math anxiety, they will insufficiently use their cognitive in converting the saving information contained in the promotion format and, therefore, prefer the price promotion using a monetary discount format (e.g., dollar-off format). The authors tested this argument in the experiment with research design: 2(Motivation to process information: Low vs. High) x 2(Math anxiety: Low vs. High) x 2(Discount presentation: Dollar-Off vs. Percentage Off) and found that individuals with high math anxiety preferred discounts presented in monetary discount (dollars-off) compared to percentage discount (percentage-off) format, while those with low math anxiety exhibited no difference in preference toward either format. Motivation to process information and prices that are difficult to compute was identified as the moderators that exacerbate the math anxiety effect.

Another research to test a discount presentation in monetary format (Euro) versus percentage format, which of them was more attractive for consumers, was conducted by Lehtimäki et al. (2018). In the survey to store visitors, the authors asked the visitor open questions regarding consumer's perception of the attractiveness of the promotion; (a) "If the product regularly sells at xxx €, what would be the discount price that would make you consider the product?" (b) "If the product regularly sells at xxx € what would be the discount amount in EUR that would make you consider the product?" (c) "If the product regularly sells at xxx € what would be the discount amount in percentage that would make you consider the product?". The xxx € price was the actual price category with three distinct levels: low (29 €), medium (199 €), and high (419 €). The consumer's response, then, was transformed into the same scale for a non-parametric test to compare the discount. The result showed that the consumer's evaluation of a discount level in monetary format (EUR) was higher than in percentage format (percentage discount). The exact monetary discount amount was considered more attractive for low-priced products than higher-priced ones.

Percentage discount better than monetary discount

DelVecchio et al. (2007) reported an experiment research result showing a superior percentage discount over a monetary discount format in the context of post-promotion price

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expectation. Their experiment tested the effects of the promotion frame (percentage off vs. dollar off) on future price expectations. In the manipulation, participants were exposed to a 2 (promotion depth: high vs. low) x 2 (promotion frame: percentage off vs. dollar off) experimental research design. The participant was exposed to the promotion of six shampoo brands with discount frames to be either percentage off or dollar off and discount depth of 13% ($ .45) or 43% ($ 1.51). The base price of the shampoo was $3.49, appeared in the advertisement. The expected price was measured by providing the participants with open questions: "Please, indicate the price that you would expect to pay for each of the following brands the next time you shop (in this simulated store)." The authors then converted price expectations for the focal brand from dollar values to a percentage of the regular price. The result showed that post-promotion price expectations were higher in the percentage discount (percentage off) condition than in the monetary discount (dollar off) condition, and the post-promotion choice was higher when high-depth promotions were framed in percentage discount (percentage off) than in monetary discounts (dollar off). The author argued that the mechanism happened due to the difficulty of processing percentages discount that affects the customer's future price expectations.

Mix result monetary discount of percentage discount format is better

Other researchers explained the superior effect of monetary discount over percentage discount format or vice versa depending on the price context (Chen et al., 1998; Gendall et al., 2006; González et al., 2016; McKechnie et al., 2012; Weathers et al., 2012) and on the discount depth (Isabella et al., 2012; McKechnie et al., 2012). Chen et al. (1998) conducted experimental research to test the effect of price framing on consumer's perception and purchase intention with design 2(price level: high vs. low) x 2(Promotion Type: Coupon vs. Discount) x 2(presentation form: $ amount vs. percentage). The authors used a PC with the price of $ 1,595 for the high price product or a floppy disk with the price of $ 7.95 in the manipulation. The 10% price reduction was offered either in dollar-off format or percentage-off format. The result showed that in the high-price condition, the framing of a price reduction in monetary discount (dollar amount) was evaluated as more significant than the same price reduction in percentage discount (percentage off). On the other hand, the result in the low-price condition showed a different effect in that the price reduction in percentage discount was considered more significant than those framed in monetary discount (dollar amount).

The authors argued this phenomenon by explaining that a price reduction in dollar amounts could be perceived relatively small when presented in dollar amounts (e.g., a $ 0.25 discount on a $ 0.5 can of cola) but relatively large when presented in percentage format (e.g., 50% off) and for the high-price product, a price reduction in dollar amount could be perceived relatively large (e.g., a $ 1,000 discount on a $ 20,000 car) but relatively small when presented in percentage format (5% off). This finding was partially supported by Gendall et al. (2006) experiment result for the case of high-priced products. González et al. (2016) reported a consistent result with Gendall et al. (2006) when tested the impact of discount framing on consumer perceptions of value and purchase intention. The manipulated independent variable in the experiment was the product price (lower vs. higher price) and the discount presentation (dollar off vs. percentage off). The result showed that in the higher-price condition, the participants perceived higher value and higher purchase intention to the promotion if presented as a dollar-off format (monetary discount) compared to a percentage-off (percentage discount) format. However, there was no significant evidence could be found for the lower-price condition. Full support of Chen et al. (1998) findings were reported by McKechnie et al. (2012) in their experiment research with design 2(Discount presentation: Percentage saving vs. Dollar saving) X 2(discount size: large vs. small) x 2(price level: high vs. low). They found that for the higher-price product, a discount expressed in monetary discount (dollar amount) will result

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in higher perceptions of transaction value than the discount expressed in percentage discount. The reverse effect was found in the case of the low-price product that a discount expressed in percentage discount will result in higher perceptions of transaction value than the same discount expressed in monetary discount (dollar amount). Weathers et al. (2012) argued that the consumer evaluation of the promotional format of monetary discount (dollar off) or percentage discount (percentage off) was influenced by the face value of the number when the price offered was communicated in the form of "primary charge + secondary charge".

The primary charge was presented in dollar amount; the secondary charge could be a percentage or dollar amount. For example, the total price of the shoe could be presented as $59 + $10.93 for the customization fee or $59.06 + 18.5% for the customization fee. In the experiment design 2(Primary charge; Phone price: <$100 vs. >$100) x 2(secondary charge format; shipping cost: Dollar vs. percentage), Weathers et al. (2012) found that the percentage shipping charge (secondary charge) was evaluated as significantly less favorable than the dollar shipping charge for the <$100 of Phone Price (primary charge), while the percentage shipping charge was evaluated as significantly more favorable than the dollar shipping charge for the >$100 of Phone price (primary charge). The authors argued this finding with a simple mathematical relation from $X + Y%; when the primary charge ($X) is less than $100, the face value (Y) of a percentage secondary charge is always larger than its converting dollar amount. When the primary charge is more significant than $100, the face value of a percentage secondary charge is always smaller than its converting dollar amount.

The effect of discount depth on the framing presentation as a monetary discount (dollar off) versus a percentage discount (percentage off) was reported by Isabella et al. (2012) and McKechnie et al. (2012). In the experiment design 2(Discount presentation: Percentage vs. Reals-Brazilian currency (absolute) amount) x 2(Discount size: Low; R$11 or 37% vs. high; R$ 31 or 62%), Isabella et al. (2012) found that in the low discount size condition, the participants have a higher purchase intention when the discount is presented in Real (Brazilian Currency), but when the discount size is high, the participant showed a greater preference for the percentage discount. This finding was supported by McKechnie et al. (2012) experiment result with design 2(Discount presentation: Percentage saving vs. Dollar saving) X 2(discount size: large vs. small) x 2(price level: high vs. low). That said, if the discount size is small, the customer's purchase intention is greater for monetary discount (dollar off) rather than percentage discount (percentage off) format. However, for a large discount level, the opposite is true. Customer purchase intention is higher when the discount is framed in percentage discount (percentage off) rather than in monetary discount format.

4. Conclusion

Previous research demonstrated that the presence of an equal value of the price promotion can differently affect consumers' perceptions. The presentation of monetary discount (dollar off) versus percentage discount (percentage off) format can attract consumers differently depending on the price level and the discount size level. The Consumers favor the price promotion in monetary discount over the percentage discount format due to the easy cognitive processing of the price promotion to get the actual selling price. Thus, the consumer it easier to understand the contained saving information of the price promotion in dollar amount format while the percentage format is still needed to be translated first into dollar amount to get the discount information from the reference price. Besides, the price level of the product affects consumer preference the dollar amount format is perceived better than the percentage format for the high price product while the opposite is true in the case of the low-price product. It is because a price reduction in dollar amounts could be perceived relatively small when presented in dollar amounts (e.g., a $ 0.25 discount on a $ 0.5 can of cola) but relatively large when

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presented in percentage format (e.g., 50% off) and for the high-price product, a price reduction in dollar amount could be perceived relatively large (e.g., a $ 1,000 discount on a $ 20,000 car) but relatively small when presented in percentage format (5% off) Chen et al. (1998). Table 1summaries the finding of the previous research that has been discussed in the literature review.

Table 1
The finding of the research of "% off vs. $ off" and "reference price level"

Research Finding	References
Dollar Off is better than Percentage Off in terms of the deal's value	Berkowitz and Walton (1980), Della Bitta et al. (1981), Darke & Freedman (1993), Suri et al. (2013), Lehtimäki et al. (2018)
Percentage Off is better than Dollar Off in terms of future price expectation	DelVecchio et al. (2007)
Dollar Off is better than percentage off for high-price products and percentage off better than dollar off for low price product in term of deal's value	Chen et al. (1998), McKechnie et al. (2012), Weathers et al. (2012)
Dollar off better than percentage off for high price product, but there is no significant result for the low-price product in term of deal's value	Gendall et al. (2006), Gonzalez et al. (2016)
Dollar off better than percentage off for the low size discount condition and percentage off better than dollar off for the high size discount condition in term of customer's purchase intention	Isabella et al. (2012), McKechnie et al, (2012)

Although price promotion may help retailer to stimulate sales, marketer should consider on using price promotion format either in monetary discount format or percentage format. Marketer should apply monetary discount format in their marketing campaign to give consumers a convenience cognitive processing in arriving the actual selling price. However, percentage discount format will attract consumers better for a low-price product since it could induce a more significant number effect (e.g., a $ 0.25 discount on a $ 0.5 can of cola seems smaller compared to 50% off).

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