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Multiple unit price promotions and their effects on quantity purchase intentions

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Abstract

Consumers often encounter multiple unit price promotions whereby a price reduction is presented as a reduced total price for multiple units of the same item (e.g., an item regularly priced at $1.25 each is promoted as "5 for $5"). In a series of experiments, we find that the positive effect of these promotions on quantity purchase intentions is contingent on the magnitude of the quantity specified in the offer and the rate of product consumption. However, offer effectiveness is not influenced by highlighting single unit prices, the unrestricted nature of these promotions, or aggregate savings. As predicted by the selective accessibility explanation, the effect of multiple unit price promotions on quantity purchase intentions is shown to be mediated by accessing anchor-consistent knowledge. An agenda for further research and the implications of our findings for retail practice are discussed.

Keywords: Price promotions; Anchoring effects; Grocery pricing

Popular among retailers of packaged goods, multiple unit price promotions entail a price reduction in which the sale price is presented for multiple units of an item (e.g., "Sale, 3 for $5, You Save $1.25 on 3"). Two previous empirical studies of this price promotion strategy (Blattberg and Neslin 1990; Wansink et al. 1998, Study 1) have demonstrated that multiple unit price promotions often result in greater brand sales volume relative to economically equivalent single unit price promotions. While possible explanations for the effectiveness of multiple unit price promotions have been proposed, these mechanisms have not been directly tested nor have boundary conditions for these effects been examined. Accordingly, the objectives of this research are to examine why multiple unit price promotions increase sales and to explore conditions that may influence the effectiveness of this promotional tool.

Evidence regarding the influence of multiple unit price promotions on sales was first provided by Blattberg and Neslin (1990, pp. 350–351) in a field study briefly reported in their sales promotion book. Their results showed that multiple unit price promotions increased the sales of seven brands to a greater degree than would be expected with single unit promotions. As part of a paper that developed and tested a generalized anchoring and adjustment model regarding purchase quantity decisions, Wansink et al. (1998, Study 1) conducted a field experiment to assess the impact of multiple unit price promotions on the sales volume of thirteen products across a grocery chain's 86 stores. For nine of the thirteen items, multiple unit price promotions increased sales by a greater percentage than single unit price promotions (which employed the same percentage discounts). On average the single unit price promotions increased sales volume by 125 percent, while the multiple unit price promotions increased sales by (a significantly larger) 165 percent. Taken together, the findings of these two studies indicate that multiple unit price promotions are often effective; a finding supporting grocery retailers' wide-spread use of this promotional strategy.

To set the stage for our research, we examined grocery retail practices to assess the usage and characteristics of multiple unit price promotions within the industry. This preliminary work included a content analysis of advertising circulars for large market share grocery retailers in the United

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States and follow-up interviews with store managers from participating firms. We contacted the top 21 grocery firms in terms of U.S. market share and obtained the most recent circular ads from 64 operating divisions of twenty firms (one grocer did not respond). Of the 64 divisions (which operate under 40 different chain names), 63 included at least one multiple unit price promotion. For those using this strategy, on average, 27 percent of the products in their circulars were promoted using this tool. At the time this information was collected (2003), the most common approach was to promote two units of the same brand for a single price (e.g., "2 for $2.50"), although some retailers promoted up to 30 items for a single price. In terms of presenting the offer, 60 percent of the retailers only provided an indication of the number of units and total price (e.g., "3 for $3), while the remainder also provided an indication of the savings associated with the offer (e.g., "3 for $3, save $1.47 on 3").

None of the ads indicated whether consumers needed to purchase the stated number of units in the promotion to obtain the discount. As a follow-up, we examined retailers' policies of allowing consumers to obtain the same discount (as that offered by a multiple unit price promotion) when fewer than the specified number of units are purchased. Store managers representing each of the 63 retail divisions using multiple unit price promotions were contacted. In each instance, the store manager indicated that the percentage discounts reflected in the promotion were also available when purchasing as little as a single unit. Thus, in most (if not all) instances equivalent discounts to those expressed in multiple unit price promotions can be obtained when single units are purchased.

Although the extant research and our own review of grocery practices encourage the use of this promotional form, additional research is needed to examine process mechanisms and to explore boundary conditions. In the first of three studies we assess the viability of an anchoring process, test the effectiveness of these promotions relative to single unit price promotions, and examine whether multiple unit price promotions become less effective when consumers are provided with the single unit price. In Study 2, we focus on three potential boundary conditions. First, we examine whether multiple unit price promotions are equally effective for products that are consumed in lower versus higher quantities. Second, we assess whether multiple unit price promotions become less effective when consumers are explicitly told that they can receive the same discount when purchasing only one unit of the promoted product. Third, we test if these promotions become more attractive to consumers when the offer includes a statement regarding the overall savings associated with purchasing the promoted quantity. In our final study, we test whether (as predicted by the selective accessibility explanation of anchoring) the effects of multiple unit pricing on purchase intentions are mediated by anchor-consistent cognitions. Prior to describing these studies in detail, we highlight the selective accessibility model and introduce the hypotheses related to Study 1.

Explaining the effect of multiple unit price promotions

The previously offered explanation for the effect of multiple unit price promotions on brand sales is based on anchoring effects (Wansink et al. 1998)—a robust finding whereby a numeric estimate is biased towards an arbitrary number that has been encountered prior to formulating the estimate (Jacowitz and Kahneman 1995). Originally, anchoring effects were accounted for via an anchoring and adjustment process whereby people insufficiently adjust from the initial anchor value to the final numeric estimate (Tversky and Kahneman 1974). In this fashion, the units specified in the multiple unit price promotion act as the anchor for consumers who do not fully adjust from this initial value when determining the quantity to be purchased. This view of anchoring was used by Wansink et al. (1998) to account for their multiple unit price promotion field study results.

More recent explanations of anchoring effects focus on the heightened accessibility of anchor-consistent information and the role of this information in arriving at a numeric estimate (e.g., Chapman and Johnson 1999; Jacowitz and Kahneman 1995; Mussweiler and Strack 1999; Strack and Mussweiler 1997). In particular, the selective accessibility model developed by Strack and Mussweiler (1997) holds that anchors result in the selective retrieval of information from memory that is consistent with the anchor, and that anchoring effects are mediated by an increase in the accessibility of this knowledge. From this perspective, a multiple unit price promotion for yogurt indicating "10 for $5.00" would result in consumers accessing knowledge that is consistent with purchasing a large quantity of yogurt. For instance, the consumer may access knowledge regarding those household members who often eat yogurt and various places/occasions where yogurt could be consumed. Even if the consumer knows that ten units are too many to purchase at one point in time, the accessible knowledge (which is consistent with this higher anchor) will influence the quantity decision in an upward fashion. Under circumstances in which high usage scripts are not available in memory, the selective accessibility model would predict that multiple unit price promotions would not enhance purchase quantities.

While Wansink et al. (1998, Study 1) demonstrated that multiple unit price promotions can lead to higher sales levels than economically equivalent promotions focused on single units, they do not demonstrate that anchoring is responsible for these effects. Indeed, Wansink et al. (1998, p. 74) note that "it is unclear whether individual consumers bought more units than normal or whether more consumers bought their normal quantities of the item instead." Wansink et al. did conduct additional studies to provide evidence of anchoring effects at the point of purchase, but none of these studies involved multiple unit price promotions. In particular, they showed (in Study 2) that increasing a purchase limit (i.e., "Limit of X per person") from four to twelve units resulted in a significant increase in quantity purchased per customer. Such a demonstration has not been made within the context of