



# The In-Store Location of Promotional Displays Alters Shoppers' Attention and Buying Decisions

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**Abstract.** In-store displays are a frequently used tool in shopper marketing. Empirical studies show the effects of promotional displays on sales; however, they seldom attend to the determinants of the effects of displays from the shoppers' perspective. Thus, there are hardly any findings about the role of the display's location in the shop. In this paper, we assume that the congruence of the product presented on the display with its setting has an influence on the effect of the display. In particular, we assume that although a display in an incongruent setting attracts more attention, it can turn this attention into purchases only to a lesser extent than a display in a congruent setting. The results of a field experiment in a Swiss grocery store support this assumption. Using observational techniques and electronic checkout data, we are able to show that displays in an incongruent setting gain more attention but lead to fewer sales than displays in a congruent setting.

**Keywords:** In-store promotion · Promotional display · Attention · Purchase behavior

## 1 Introduction

It is nearly impossible to shop at a grocery store without coming across at least one in-store display. With the use of this merchandising tool, retailers and manufacturers try to adapt to the way consumers shop today (Chandon et al. 2009; Egol and Vollmer 2008). This is because most consumer decisions regarding grocery products are made after entering the store (Bezawada et al. 2009). Actually, most shoppers' mental budgets for a shopping trip already include room to make unplanned purchases (Stilley et al. 2010). In this context, in-store displays are frequently used by retailers and manufacturers to attract customers' attention for specific products, to trigger unplanned purchases, and, thus, to increase brand sales.

Empirical studies consistently show that in-store displays can have large effects on final purchase outcomes (Breugelmans and Campo 2011). These effects remain stable even when controlled for sales, price discounts, and advertising measures (Van Nierop et al. 2010). Gagnon and Osterhaus (1985), for instance, reported that in-store displays in

a supermarket increased the sales of an ointment by 388%. Recently, Bogdanovica et al. (2015) examined in a cohort study the long term effects of in-store displays for cigarettes on the likelihood to cause taking up smoking. The results showed for people who were non-susceptible to ever become smokers and had never smoked before, the likelihood to become a smoker doubled for those who remembered more cigarette brands from in-store displays than those who did not remember any brands from the same displays.

Given the high impact of in-store displays on sales, several studies analyzed the variables that might have an influence on these effects. Chevalier (1975) found an average increase in sales by 572% of eight different product groups through in-store displays. The results also revealed that this increase in sales varied among the eight product groups due to product characteristics such as its market share position and market growth. Curhan (1974) also found differences in the effects of in-store displays for different product groups and showed that display size and price reduction can have a moderating influence on the effects of in-store displays.

Until now, however, the effects of the in-store location of the display have been widely neglected in research. So far, only Bezawada et al. (2009) showed that the cross-category effects of aisle placement are asymmetric across categories. In their empirical analysis of aisle and display placements of beverages and salty snacks, they found that salty snacks had a greater effect on the sales of carbonated beverages than vice versa. Nevertheless, research on the effects of the in-store location of displays is still in its infancy and more studies are needed to better assess its impact on consumer purchases (Ailawadi et al. 2009). This is somewhat surprising as retailers generally regard in-store location as an important strategic decision when using in-store displays. In a survey among retailers, 77% of them preferred a display location close to the shelf of the displayed product (e.g., display of a chocolate bar brand close to the chocolate bar shelf, EHI 2010). Usually, the reasoning behind this strategy is the assumption that the congruence between displayed product and products on the shelf will lead to more unplanned purchases. However, one might argue that a display located close to the shelf of the displayed product would only reach shoppers that would have bought the displayed product in any case. Moreover, an in-store display located in a category that is incongruent to the displayed product (e.g., display of a chocolate bar brand close to dairy products) might lead to more attention of shoppers which had not planned to buy the displayed product, and which could thus evoke more unplanned purchases.

Yet, the role of locational relevance for sales promotion effectiveness remains unclear and demands further research (Grewal et al. 2011). This far, no study has analyzed which of the two in-store location strategies for displays is more conducive to increasing sales. For this reason, our field experiment compared the effects of congruent and incongruent display locations on shoppers' attention and their buying decision process. We assume that an incongruent display location will attract more shoppers but will trigger fewer sales than a congruent display location.

## 2 Location of In-Store Displays and Its Effects on the Decision-Making Process

The in-store location of a display can be chosen in regard to the congruence between the displayed product and the surrounding products. We assume that congruent and incongruent placements will impact shoppers' attention and their decision-making process in different ways.

*Attention.* In the complex settings of retailing environments, shoppers must select from a wealth of competing inputs so that only relevant information is processed and irrelevant information suppressed (Vossel et al. 2014). This process of actively selecting and interpreting relevant external stimuli is called *attention* (Phaf et al. 1990). Besides sensory prior knowledge, reward, task sets, and emotional factors, attentional control is guided by the expectations of shoppers (Vossel et al. 2014). This means that if an in-store stimulus is in line with the expectation of the shopper, it does not require any exceptional attention. Contrastingly, attention is preferentially deployed toward those in-store stimuli that are unexpected to the shopper. This empirical finding is in line with Schema Discrepancy Models, according to which schema-discrepant stimuli lead to more cognitive effort and will attract more attention (Hutter and Hoffmann 2014). Transferred to the in-store location of displays, we conclude that a congruent location will be in line with shoppers' expectations. By contrast, incongruent locations will surprise shoppers and, hence, will attract more attention than a display with a congruent placement. This leads to the following assumption:

H1: Displays with an incongruent (vs. congruent) in-store location will attract more (vs. less) attention from shoppers.

*Buying Decision.* The attitudes of shoppers toward a product and their buying decisions are influenced "by the ease with which instances or associations come to mind" (Tversky and Kahneman 1973). Tversky and Kahneman introduced this as the availability heuristic. In short, the ease with which consumers recognize and process a brand increases perceptual and conceptual fluency. This fluency leads to consumers having more favorable attitudes toward the brand and, hence, will increase the likelihood of product purchase (Schwarz 2004). Bezawada et al. (2009) suggested that visiting a store aisle can evoke knowledge structures of the corresponding product category in shoppers' minds and will make associate information more readily available. For example, going to the chocolate bar shelf can evoke related memory content such as the taste of chocolate and relevant chocolate bar brands. In this situation, confronted with a display for chocolate bars, shoppers will have a more positive attitude toward the displayed products, leading to a higher likelihood to buy a product from the display. In contrast to this, the perceptual and conceptual fluency for an in-store display with incongruent products, like light bulbs, would be lower. This leads to relatively lower positive attitudes toward the displayed product, which makes it more unlikely that a purchase will be made from the incongruent display. Such assumptions are in line with the associated network theory of category knowledge structures as well as the top-down perspective of category representations (Ratneshwar et al. 2001). This discussion leads to the following assumption:

H2: Displays with a congruent (vs. incongruent) in-store location will lead to a higher (vs. lower) likelihood of buying displayed products.

### 3 Empirical Study: Measures and Procedure

We tested our assumptions in a field study by using a quasi-experimental design with the between-subjects factor in-store display location (congruent  $\times$  incongruent location).

*Design and Stimulus.* The study was conducted for the duration of one week in August 2014 in a store of a Swiss grocery retailer in the dairy and chocolate product category. Congruence of the in-store location was manipulated by locating an in-store display for Swiss chocolate in the aisle for chocolate products (congruent condition) or in the aisle for dairy products (incongruent condition). The location altered respectively every five hours, which means that every day the display was placed between 9 a.m. to 2 p.m. in one aisle and between 3 p.m. and 8 p.m. in the other aisle. On the following day, the in-store display was located in the aisles in reverse order. We kept the displayed product, its price and the promotion activities in both categories at a constant level. The display had been restocked each time its location was changed.

*Procedure.* To collect data on the variables of interest, we conducted a non-participating observation (NPO), meaning that consumers were unaware that their behavior was being observed, using a specialized tablet PC solution. Although NPO is rarely used, it is a powerful technique for analyzing consumers' purchase behavior at the point of sale because it overcomes the potential source of bias that is prevalent in exit-interviews, participating observations and when the shopper is aware of being observed (Hoyer 1984). This NPO served to measure shoppers' attention to the in-store display and the final purchase decision in terms of the amount of purchases as well as purchase abandonments of displayed chocolate bars. We chose chocolate as the category because pre-studies had shown that consumers usually buy chocolate products spontaneously. Furthermore, a lot of consumers buy chocolate products and therefore, we anticipated generating a large number of cases.  $N = 1,670$  shoppers were observed (65.6% female) with  $n = 863$  in the congruent location setting (in the aisle for chocolate products) and  $n = 807$  in the incongruent location setting (in the aisle for dairy products). The observers had been intensively trained prior to the data collection. Once an observer had finished an interview, the next shopper entering the category was selected for the next observation to generate a random selection of shoppers.

*Operationalization.* The observation started when the consumer entered the aisle with the in-store display. As for the attention to the displayed products, we collected data on the amount of *visual contacts* and *haptic contacts*. Specifically, a visual contact means that one particular product is focused upon and taken into consideration (no views of orientation). To be counted as a visual contact, three criteria have to be met according to Hui et al. (2013): First, the consumer had to face the displayed product. Second, the consumer had either slowed her pace or come to a complete stop. Third, the consumer's field of vision stabilized on the displayed product. A visual contact ended

when the consumer shifted her gaze to a different product. Following a visual contact, the consumer could come into a haptic contact with the respective product, which means that she touched the product. After this, the consumer made a purchase decision. This purchase decision either resulted in a purchase or purchase abandonment. *Purchase abandonment* refers to a decision in which a consumer returned the product she had had haptic contact with to the shelf. By contrast, *purchase* signifies that the consumer put the respective product into the shopping cart or shopping basket. After the final decision, the consumer either exited the category or started a new decision-making process for the next product.

## 4 Results

*Attention.* Overall, 21.2% of the shoppers that entered the aisles with the in-store display had at least one visual contact with the displayed products. This means that the display attracted the attention of more than every fifth shopper who came into its proximity. In H1 we assumed that the display would evoke more attention in the incongruent setting compared to the display in the congruent setting. Indeed, in the incongruent setting about one quarter of the shoppers in the aisle had visual contact with the displayed product, while only 18% of the shoppers in the congruent setting had visual contact ( $p < .001$ ). In other words, in the incongruent setting the number of shoppers who deployed their attention toward the in-store display was 36% higher than in the congruent setting, supporting H1.

*Buying Decision Process.* While we assumed that the display in the incongruent setting would attract more attention, we expected a larger buying impulse by the display in the congruent setting in H2. First of all, we analyzed the conversion from a visual to a haptic contact. Here, we found in the congruent setting that 61.9% of shoppers who had visual contact also took hold of the displayed product. In the incongruent setting, this share was significantly lower (33.2%,  $p < .001$ ), indicating that the display in the incongruent setting transferred the attention into action to a lesser degree compared to the display in the congruent setting. One might argue that the attention for the display in the incongruent setting was already higher than in the congruent setting, resulting in more haptic contacts even at a smaller conversion from visual to haptic contacts. Hence, in addition to the conversion rate, we also analyzed the share of all shoppers in the aisles with haptic contact in both settings. We found a significantly higher proportion of shoppers in the congruent setting (11.1%), which took hold of the displayed products, than in the incongruent setting (8.2%,  $p < .05$ ). The analyses of actual buying decisions revealed the same pattern: In the first place, we analyzed the conversion from attention to a displayed product (visual contact) to buying the product in both settings. This share was significantly higher in the congruent setting (52.9%) than in the incongruent setting (28.6%,  $p < .001$ ). This indicates that the display in the congruent setting can transfer the attention of shoppers to a higher degree into actual purchases than in the incongruent setting. Again, to control for the higher degree of attention in the incongruent setting, we also analyzed the share of all shoppers in the aisle which bought a displayed product in both settings. We found a significant difference: The share of buyers was larger in the

congruent setting about three percent higher than in the incongruent setting ( $p < .05$ ). Overall, 8.4% of the shoppers that entered the aisles with the in-store display bought at least one of the displayed products.

Since the displayed chocolate was also offered at the regular shelf, it is possible that the observation of the total share of buyers might underestimate the impact of the display in the incongruent setting (that would be, if shoppers have seen the product at the display in the dairy category but travelled to the aisle containing the chocolate products where they picked up the respective chocolate bar). This is why we compared the sales data provided by the retailer's cash desk database for the same time period. We compared the share of shopping baskets that included the displayed product with the time periods when the display was located in the congruent and in the incongruent setting. Again, we found the same pattern: In the time periods when the display was placed in the congruent setting, 6.3% of all shopping baskets included the displayed product compared to 4.7% in the time periods when the display was placed in the incongruent setting ( $p < .001$ ).

## 5 Discussion and Conclusions

This paper reports the results of the study that analyzed the impact of the in-store location of displays on shoppers' attention and their buying decision process. We assumed that displays placed in an incongruent category would attract more attention but would lead to a lower likelihood of purchases than displays in a congruent setting.

The results of our study show support for our assumptions. The display in an incongruent setting attracted substantially more attention from shoppers than in the incongruent setting. Obviously, the displayed chocolate was not expected by shoppers in the dairy aisle, which led to the shoppers' more intensive interaction with the display. However, our results indicate that it is not always enough for an in-store marketing tool to gain attention: The conversion rate from visual contact to purchasing the product and the total share of buyers of the displayed product were both substantially higher in the congruent setting.

There are several implications for marketing research and practice. First, retailers and manufacturers could learn from these results how to improve the design of displays depending on its in-store location: In congruent settings, design elements of the display should aim at gaining attention. Here, the use of striking features that are schema-discrepant for shoppers could improve its effects, like display size, colors, and unusual shapes. If the display is located in an incongruent setting, the design should focus on communicating a fit between the surrounding products and the displayed products. This might be realized by addressing elements from the product category of the aisle or by referencing the surrounding category. Second, our results underscore the impact of relevance of the products for shoppers' buying decisions. Therefore, an in-store display should address aspects relevant to shoppers in the respective aisle. This requires that retailers and manufacturers gain insights into the expectations and needs of shoppers in the relevant aisle. Randomly targeting a message in-store appears unlikely to be of success, so specificity is likely to deliver better results.

This study is subject to some limitations. We observed the interactions with only one specific display and for one special product category only in a single grocery store.

Without doubt, the results of our study might have been different if we had analyzed a different product category or a different display design. Future studies should address this issue and also include several control variables (e.g., consumer characteristics, brand awareness, past buying behavior) to better understand the impact of the location of in-store promotional displays on behavioral outcome variables. Nevertheless, by studying a typical buying decision of a common product in a typical grocery store, we have gained first insights that are likely to stimulate further research.

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