STORE FLYER DESIGN, STORE TRAFFIC, AND INTENTIONS TO BUY: THE MODERATING ROLE OF PERCEIVED VARIETY AND PERCEIVED STORE IMAGE

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Abstract

Store flyers are still one of the most important marketing communication tools used by retailers to promote new products, announce new stores, and communicate special offers. Considering the important budget share of store flyers as a promotional tool in retailing, retailers and academics are interested in understanding how their design influences consumers’ behavior and retailers’ performance. This study aims to investigate the influence of store flyer design on the intentions to visit the store and buy. We also investigated the intention to buy a store brand and how the consumer’s perceived variety of the retailer’s assortment and perceived store image moderate such decisions. A fictitious flyer including real national brands and a fictitious store brand was created for a fictitious supermarket. The methodology included a half-factorial laboratory experiment and a moderator variables analysis. The results suggest that shorter flyers (containing 8 pages) have the strongest impact on the evaluated consumer’s decisions. Store perceived variety and perceived image positively affected the relationship between flyer design and the dependent variables.

Paper type: Research paper

Keywords: Store Flyers; Perceived Variety; Store Image; Store Traffic; Store Brand.

Introduction

Grocery stores use many tactics to increase store traffic (Haans and Gijsbrechts, 2011; Srinivasan and Bodapati, 2006). Targeted direct mail communications and feature and television advertising are the three most common tactics. Feature advertising is the most cost-effective method to deliver information that influences consumer’s store-related decisions. In addition, once consumers have already decided to enter a store, feature advertising also helps them to decide which brands to purchase (Lam et al., 2001).

Feature advertising can be defined as the weekly advertising of price reductions in newspapers inserts and store flyers (Srinivasan and Bodapati, 2006:1). Ads printed on store flyers are the most representative share of retailers communication budgets in the United States and Europe, reaching more than 65% in 2012 in the former country (Ziliani and Ieva, 2015). In Italy, France, and Spain, store flyers contribute more than 50% of the average retail marketing budget (Gázquez-Abad and Martínez-López, 2016). Manufacturers and retailers attribute these representative budget indexes to the strategic role of store flyers in their marketing communication strategies (Miranda and Kónya, 2007). Manufacturers are mainly interested in the attractiveness of his specific brands and seek strategies to increase their purchases. Retailers are more interested in increasing the store flyer impact in an attempt to intensify the store traffic and store sales (Gázquez-Abad and Martínez-López, 2016). In this context, store flyers are easy to use, save consumers time and money, and display more information than other print ads. In addition, online flyers can reach targeted audiences in a cost-effective way. Undoubtedly, store flyer advertising is a communicative tool well accepted by consumers (Swoboda et al., 2010).

Although store flyers have a representative budget share in the retailer's communication strategy, they have been underestimated in academic researches. Several studies have examined the impact of store flyers on consumers’ behavior (e.g., Arnold et al., 2001; Chiang, 1991; Gauri et al., 2017; Gázquez-Abad and Martínez-López, 2016; Gijsbrechts et al., 2003; Gupta, 1988; Luceri et al., 2014;
Mimouni Chaabane et al., 2010; Miranda and Kónya, 2007). However, relatively few investigations have specifically focused on store flyers design (Gijsbrechts et al., 2003; van Lin and Gijsbrechts, 2016; Luceri et al., 2014; Mimouni Chaabane et al., 2010). Overall, little is known about store flyers design and its moderating role on consumers’ decision. Currently, store flyers are the main tool for advertising the retailer assortment (Solgaard and Hansen, 2003) and for communicating the store image (Pieters et al., 2007). Therefore, it is not surprising that these two variables (retailer assortment and store image) play an important role when considering the flyers influence on the advertising strategy.

In this study, we intend to clarify how store flyer features affect the store traffic and consumers’ intentions to buy from the store and to buy a store brand (SB) product. In order to enhance this knowledge, we also estimated how consumers’ perception of the retailer’s assortment variety and store image moderates the influence of store flyers on purchase decisions. To estimate the influence of store flyers on consumers’ behavior, a half-factorial laboratory experiment design was developed. We created fictitious flyers, of a fictitious supermarket, featuring real national brands (NBs) and a fictitious SB. Different flyer designs (scenarios) included the following features: (1) store flyer size (i.e., number of pages); (2) brand type (NB or SB) on the cover page; and, (3) an institutional slogan on the cover page as an incentive advertising. The experimental sample was composed of 406 Spanish consumers who received the flyers and answered an online survey. Data were evaluated through moderator variables analysis. The intentions to visit the store, buy from the store, and buy the SB were the dependent variables and the different flyer scenarios were the independent variables. The analysis also included the moderating effect of consumers’ perceptions of the retailer’s assortment and of the store image within each scenario. Models explaining consumers behavior through moderator variables analysis have high predictive power (e.g., Batra and Sinha, 2000; Mittal and Kamakura, 2001).

The outcomes of this research are relevant to academics, manufacturers, and retailers. As an academic research, we offer an improved understanding of the
relationship between the availability of different store flyer designs and the consumer's perceptions of these flyers. Our results can assist manufacturers to achieve a significant profit from their heavy investment in store flyers. Finally, our results help retailers to make the correct decisions when designing store flyers depending on whether they want to stimulate store traffic and general sales or improve SB sales. Having this previous knowledge, retailers are more prone to guarantee the successful exposure of store flyers and convince manufacturers of their importance to their brands and sales (Mimouni Chaabane et al., 2010).

Our research contributes to marketing literature in several ways. First, it complements previous information on store flyers design (e.g., Gijsbrechts et al., 2003; Mimouni Chaabane et al., 2010) by including the intention to buy the SB as one of the variables. This is relevant because store flyers enable retailers to emphasize their own brands (Urbany et al., 2000). Second, this is the first academic research to study store flyers through a half-factorial lab experiment. Most papers relied on econometric models at the aggregate level (e.g., Gijsbrechts et al., 2003; van Lin and Gijsbrechts, 2016; Luceri et al., 2014). Only Mimouni Chaabane et al. (2010) conducted a lab experiment; however, they did not use any factorial design.

The paper is organized as follows. The ‘Theoretical background’ introduces the relevant background information on store flyer design and the two moderating aspects that led up to our research problem. The methodology and data we used to test our hypotheses are discussed in the section ‘Method and data’. The section ‘Results’ presents the outcomes of the empirical analysis. We conclude with the contributions of this study and discussions about its managerial implications and directions for further research.
Theoretical background

Previous researches have shown that feature advertising plays a key role in retail management by increasing store traffic and sales (Kaul and Wittink, 1995; Walters and Mackenzie, 1988) and stimulating consumer consideration and choice (e.g., Allenby and Ginter, 1995; Zhang, 2006). As a particular form of feature advertising (Burton et al., 1999), store flyers may have a similar influence on sales outcomes (Mimouni Chaabane et al., 2010).

The time interval between store flyers exposure and product purchase opportunity is shorter than it normally is when consumers are exposed to other advertising methods (Burton et al., 1999). Exposure to store flyers should lead to quickly access to information related to the promoted brand and deal offers (Burton et al., 1999). This finding points to a positive influence of store flyers advertisements on consumer purchase decisions (Blattberg and Neslin, 1990). Indeed, most studies show a positive influence of store flyers on store traffic, purchase acceleration, and consumption rate of flyer-promoted and in-store promoted items (e.g., Ailawadi et al., 2006; Gauri et al., 2017; Gázquez-Abad and Martínez-López, 2016; Gijsbrechts et al., 2003; Guyt and Gijsbrechts, 2018).

Figure 1 summarizes our framework on how store flyer design influences intentions to visit the store, buy from the store, and buy the SB and the moderating role of perceived variety and image.
Figure 1 - Conceptual framework

Store flyer design

Store flyer is an informative advertising of which retailers primarily control creative execution and media placement (Zhang et al., 2009). The most effective store flyer composition features affecting customer attention and response are those proposed by advertising and sales promotion literature (Gijsbrechts et al., 2003). Physical stimuli (e.g., size and color), value (e.g., price information or slogans), positioning in the media (e.g., cover vs. inside pages), or the advertised category and brand are few of the most appealing features of printed advertisements for consumers.

The cover page is the first contact that consumers have with the flyer. Therefore, retailers should use features that have the greatest impact on consumers behavior (Pentus et al., 2018). Traditionally, retailers include a slogan on the cover page such as “get used to our good prices”, "what is worth a lot, costs very little”, or “quality and price are very close to each other”. This marketing strategy is an attempt to attract consumers’ attention to improve brand recall (Kohli et al., 2013). A slogan sends a message that highlights primary benefits (e.g., products variety and quality, services, and differentiated economic conditions), affects brand image (e.g., increases affinity and fidelity) (Iacobucci, 2016) and positively influences the consumer’s intention to visit the retailer and buy (Smith et al., 2008). These arguments suggest a positive influence on consumers purchase decisions.

Studies have shown that there are no differences in the acceptance, recall, and recognition between SB and NB products exposed on the cover page of printed
flyers (see Ieva et al., 2015). The consumer confidence and perceived value are the same for both SB and NB products, sometimes SB products are even overrated (Gázquez-Abad et al., 2015). Since the perceptions of quality, trust, recall, and strength of SB and NB are similar, the presence of any of these brands would positively influence the store traffic and intention to buy. However, the presence of the SB on the flyer cover is expected to exert a stronger influence on consumers’ intention to buy that SB.

Considering the store flyer size, the higher the number of pages, the higher the variety of offered products. One of the main features of flyers is that they can hold more information than most of the other advertising exposure situations (Gijsbrechts et al., 2003). Consumers often have a preference for larger and varied assortments since they provide a higher probability of finding an item that best suits consumers preferences (Townsend and Kahn, 2014). The consumer’s perception of a store offering a wide variety of products is one of the main factors indicating the retail performance and significantly contributes to greater satisfaction and loyalty (Mimouni Chaabane et al., 2010). Therefore, store traffic and intention to buy are expected to be higher when retailers advertise in longer flyers.

Moderating variables

*Consumer’s perceived variety of the retailer’s assortment*

Hoch et al. (1999), clearly documented the importance of assortment variety to consumer behavior. Consumers have a preference for stores with a wide assortment variety which influences the intentions to visit the store and buy (Pan and Zinkhan, 2006; Mimouni Chaabane et al., 2010). In this context, Kahn and Wansink (2004) also demonstrated the benefits achieved by those retailers offering a higher variety of items. Nevertheless, previous studies demonstrated a decline in the buying intention of consumers exposed to an extremely wide variety of products, particularly due to the increased number of categories (e.g., Chang, 2011; Dhar, 1997). A wide diversity of products within a single category may lead to an increased search effort (time waste and perceived difficulty) and make consumers quit purchasing (Sloot and Verhoef, 2011). Nonetheless, our intent is to measure
the consumer’s perceived variety when looking at the store flyer rather than buying. Hence, we expect a positive moderating influence of perceived variety on consumer’s purchase decisions.

*Consumer’s perceived store image*

Store image is the overall impression that consumers have of a retail store (Lindquist, 1974). Huvé-Nabec (2002), defined it as the set of brand associations linked to the store in the consumer memory. The store image is usually composed of cognitive and affective components (Hu and Jasper, 2007). Factors such as assortment variety, aggregate services, promotional incentives, and other perceived store conditions are usually part of the consumer’s perceived store image (Semeijn et al., 2004). The perceived image is also crucial to the judgment and evaluation of the store quality and its assortment (Bao et al., 2011), especially in stores with a low market penetration (Wu et al., 2011). Based on all these aspects of store image, one of the main alternatives to achieve a positive perceived image is through the use of store flyers (Pieters et al., 2007).

Positive consumer perception of the store image will increase the visiting and buying probabilities (Grewal et al., 1998). Similar to the perceived variety, positive or negative evaluations of the store image are made upon flyer visualization and consequently affects the intention to purchase either NB and SB products (Mimouni Chaabane et al., 2010; Pieters et al., 2007).

Table 6 summarizes the expected effects of store flyer designs.
**Table 1 – Summary of expected effects**

<table>
<thead>
<tr>
<th>Impact on intentions to visit the store and buy</th>
<th>Expected effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence/presence of slogan on cover page (main effect)</td>
<td>(+/++)</td>
</tr>
<tr>
<td>NBs/SB featured on cover page (main effect)</td>
<td>(++)</td>
</tr>
<tr>
<td>Number of pages (main effect)</td>
<td>(++)</td>
</tr>
<tr>
<td>Moderators</td>
<td></td>
</tr>
<tr>
<td>Perceived variety</td>
<td>(+)</td>
</tr>
<tr>
<td>Perceived store image</td>
<td>(+)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact on intentions to buy the SB</th>
<th>Expected effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence/presence of slogan on cover page (main effect)</td>
<td>(+/++)</td>
</tr>
<tr>
<td>NBs/SB featured on cover page (main effect)</td>
<td>(++)</td>
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</tr>
<tr>
<td>Moderators</td>
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<td>(+)</td>
</tr>
<tr>
<td>Perceived store image</td>
<td>(+)</td>
</tr>
</tbody>
</table>

**Method and data**

Two different approaches were used to test our hypotheses. First, we designed an online half-factorial laboratory experiment. Next, we evaluated the impact of different store flyer designs through moderator variables analysis.

**Lab experiment**

An exploratory study was performed to support the creation of store flyer prototypes. We wanted to guarantee that the layout was consistent with the flyers used in the retail industry and if consumers could correctly understand their concept. A sample of 20 volunteers was used for the exploratory study. Flyers from the main hypermarkets, supermarkets, and discount chains in Spain were used to support our experimental flyer design. The preliminary results of the exploratory study were discussed with academic experts. The analyses provided the main aspects (cover page and size) and variables included in this study. A fictitious retailer and a fictitious brand were created to avoid bias due to consumers’ preferences for certain retailers and their respective brands. The flyers had advertisements of real NBs, selected according to their market share. To enhance external validity, we used two product categories (yogurt and gel), according to Ainslie and Rossi (1998).

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2El Corte Inglés, DIA, Eroski, Alcampo, El Árbol, Aldi and Lidl. It is worth mentioning that Mercadona – leader in the Spanish FMCG sector – does not print any flyer, as they follow an Every-Day-Low-Prices strategy.
To avoid any store image and brand preference among respondents, different flyers of the fictitious retailer and its respective SB products were designed. The basic flyer structure was the following. The front cover had the name of the store (with and without an institutional slogan), including the advertising of a “hook” product, either a SB or a NB. The flyers had different number of pages and included the advertised products (NBs and SB products) grouped by categories (fresh products such as vegetables, meat, and fish; semi-finished products such as vegetables, olives, cereals, bread, potato chips, sausages, beverages; personal care products such as gels, perfumes; and household products such as detergents). In addition, some promotional incentives, such as discounts and “three units for the price of two (3 for 2)” messages, were also included in the flyer. To identify the brand products of the fictitious retailer (Supermarket MÁS MARKET), names related to the brand were elaborated (e.g., Yogurt YOGUMÁS; Gel JABONMÁS; Milk LACTOMÁS; Beans, Lentils, Chickpeas LEGUMÁS). Appendix 1 contains an example of an experimental condition.

The lab experiment was performed in a between-subject design combining three factors related to the store flyer design. The first factor (F1) was related to the “hook” brand item promoted on the cover page (+1 = a national brand, or -1 = a store brand). The second factor (F2) was the size of the store flyer (+1 = 20 pages, or -1 = 8 pages); and the third factor (F3) was related to the use of an institutional slogan on the cover page (+1 = presence or -1 = absence). A fractional factorial design based on Huertas-Garcia et al. (2016) guideline was used to build the four models (or scenarios). In each scenario, three blocks of two categories were included (we used yogurt and gel categories) (see table 2):

- **Scenario I** (SI) (NB on the cover, 8 pages, without a slogan);
- **Scenario II** (SII) (SB on the cover, 20 pages, without a slogan);
- **Scenario III** (SIII) (SB on the cover, 8 pages, with a slogan);
- **Scenario IV** (IV) (NB on the cover, 20 pages, with a slogan).
Procedure and sampling

Our sample was comprised of 5,426 individuals who were asked to participate in the online experiment. All of them claimed to purchase online as a routine. Each respondent received an explanatory message as a request for participating in the experiment, which was endorsed by two Spanish universities. To avoid any bias during the answers, the message exposed only the general purposes of the study, without making any specifications. Respondents were randomly assigned to each scenario and received a link that allowed access to a flyer and a questionnaire. Four hundred and six (7.5% of the total sample) complete responses were obtained, an average of 34 questionnaires per scenario (minimum of 26 and maximum of 42). Tests for non-response bias were performed comparing the results of the fully completed and incompleted questionnaires of the four scenarios through a t-test. Results showed that non-response bias was not a major problem in this study (Armstrong and Overton, 1977).

Each scenario had different numbers of answered questionnaires: SI, n = 106; SII, n = 103; SIII, n = 101; and SIV, n = 96. For each scenario, a discriminant analysis was performed. Women were slightly more abundant than men: SI = 54.7%, SII = 60.2%, SIII = 58.4%, and SIV = 54.2%. Most participants were between 26 and 40 years-old: SI = 69.8%, SII = 54.4%, SIII = 66.3%, and SIV = 70.8%. Most participants belonged to a family of two persons living in the same house: SI = 51.9%, SII = 47.6%, SIII = 44.6%, and SIV = 45.8%. Most participants had a college degree: SI = 62.3%, SII = 46.6%, SIII = 55.4%, and SIV = 63.5%. Besides responding to socio-demographic questions, the participants evaluated

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Brand in cover</th>
<th>Number of pages</th>
<th>Presence of slogan</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>+1</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>II</td>
<td>-1</td>
<td>+1</td>
<td>-1</td>
</tr>
<tr>
<td>III</td>
<td>-1</td>
<td>-1</td>
<td>+1</td>
</tr>
<tr>
<td>IV</td>
<td>+1</td>
<td>+1</td>
<td>+1</td>
</tr>
</tbody>
</table>
different issues related to the perceived variety, store image, their intentions to visit the store and buy, and intention to buy the SB, among other questions.

Measurements

We asked respondents to evaluate the retailer’s assortment variety using a three-item scale adapted from Chowdhury et al. (1998) and Mimouni Chaabane et al. (2010): a) “it seems that this store has a great variety of products”, b) “everything I need seems to be in this store”, and c) “this store seems to have a wide variety of brands”. Perceived store image was measured using three bipolar-item on a seven-point scale adapted from Baker et al. (1994) and Liljander et al. (2009). Based on the store flyer: a) “I think the store is boring (or entertaining)”, b) “I think the store is classic/antique (or modern)”, and c) “I think the store has very interesting offers (or none interesting offers)”. These items were ranked on a scale from 1 (totally disagree) to 7 (totally agree).

To measure intentions to visit the store and buy, we used a four-item scale based on different authors (Grewal et al., 1998; Mimouni Chaabane et al., 2010; Sweeney et al., 1999): a) “after browsing this flyer, I would like to visit the retailer store”, b) “after browsing this flyer, I will definitely buy from this store”, c) “after browsing this flyer, there is a high probability that I will buy from this store, and d) “after browsing this flyer, I would like to buy some product advertised in the flyer”. Finally, a two-item scale was used to measure the intention to buy a SB product (adapted from Calvo Porral and Levy-Mangin, 2016; Diallo, 2012; Liljander et al., 2009): a) “after browsing this flyer, I will definitely consider buying a store brand product”, and b) “after browsing this flyer, there is a high probability that I will buy a store brand product”. Again, all these items were ranked on a scale from 1 (totally disagree) to 7 (totally agree).
Regression models with moderator variables

Four regressions\(^3\) with moderator variables were estimated (see, Jaccard et al., 1990 for details). Intentions to visit the store and buy (IVB) and the intention to buy a SB product (ISB) were treated as the dependent variables. The four scenarios were considered the independent variables. Based on Hardy (1993), we included three dummy variables (i.e., 4-1) using scenario II as the baseline. The analysis also included the moderating effects of consumer’s perceived variety of the retailer’s assortment (PV) and consumer’s perceived store image (PSI) within each scenario. Using a regression model with moderating variables, we first included only the main effects in the estimation and then the main effects and the two-way interactions.

Model 1: \[ IVB/ISB = \alpha_0 + \alpha_1 SI + \alpha_2 SIII + \alpha_3 SIV \] \[1\]

Model 2: \[ IVB/ISB = \alpha_0 + \alpha_1 SI + \alpha_2 SIII + \alpha_3 SIV + \alpha_4 SI \times PV + \alpha_5 SIII \times PV + \alpha_6 SIV \times PV + \alpha_7 SI \times PSI + \alpha_8 SIII \times PSI + \alpha_9 SIV \times PSI \] \[2\]

To analyze the explanatory power of the interactive terms, we used the F-test (Jaccard et al., 1990):

\[ F = \frac{(R_2^2 - R_1^2)/(k_2 - k_1)}{(1 - R_2^2)/(N - k_2 - 1)} \] \[3\]

where,

\[ R_2^2 = \text{coefficient of determination for model 2, including the moderating effects with } k_2 \text{ variables} \]

\[ R_1^2 = \text{coefficient of determination for model 1, with no moderating effects with } k_1 \text{ variables} \]

Results

\(^3\)Since the sample (N=406) answered the questionnaire for two categories (yoghurt and gel), we have estimated separated models for each of them.
Table 3 summarizes the regression results. To avoid multi-collinearity problems, moderating variables were mean-centered (Jaccard et al., 1990). The variance inflation factor (VIF) for all regressions ranged below the cut-off value (< 10) established by Neter et al. (1996). Multi-collinearity was not an issue for our data. All models had significant F-value.

Table 3 – Estimation results (Intentions to visit the store and buy vs. intentions to buy the SB)

<table>
<thead>
<tr>
<th>Intentions to visit the store and buy</th>
<th>Unstd. Beta (t-value)</th>
<th>Intentions to buy the SB product</th>
<th>Unstd. Beta (t-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoghurt</td>
<td>Gel</td>
<td>Model 1 (main effects)</td>
<td>Model 2 (main effects + two-way interactions)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.553* (-27.091)</td>
<td>3.553* (26.941)</td>
<td>3.553* (28.345)</td>
</tr>
<tr>
<td>SI</td>
<td>-0.009 (-0.045)</td>
<td>-0.014 (-0.067)</td>
<td>-0.014 (-0.067)</td>
</tr>
<tr>
<td>SIII</td>
<td>-0.014 (-0.045)</td>
<td>-0.014 (-0.067)</td>
<td>-0.014 (-0.067)</td>
</tr>
<tr>
<td>SIV</td>
<td>-0.014 (-0.045)</td>
<td>-0.014 (-0.067)</td>
<td>-0.014 (-0.067)</td>
</tr>
<tr>
<td>SI x PV</td>
<td>0.155 (1.359)</td>
<td>0.149 (1.293)</td>
<td>0.155 (1.359)</td>
</tr>
<tr>
<td>SIII x PV</td>
<td>0.194 (1.488)</td>
<td>0.241* (1.893)</td>
<td>0.194 (1.488)</td>
</tr>
<tr>
<td>SIV x PV</td>
<td>0.224* (1.823)</td>
<td>0.224* (1.818)</td>
<td>0.224* (1.823)</td>
</tr>
<tr>
<td>SI x PSI</td>
<td>0.352* (3.149)</td>
<td>0.347* (3.091)</td>
<td>0.352* (3.149)</td>
</tr>
<tr>
<td>SIII x PSI</td>
<td>0.394* (3.276)</td>
<td>0.403* (3.344)</td>
<td>0.394* (3.276)</td>
</tr>
<tr>
<td>SIV x PSI</td>
<td>0.174 (1.582)</td>
<td>0.174 (1.578)</td>
<td>0.174 (1.582)</td>
</tr>
<tr>
<td>F-value (significance)</td>
<td>6.185 (0.000)</td>
<td>6.320 (0.000)</td>
<td>6.185 (0.000)</td>
</tr>
<tr>
<td>R²</td>
<td>0.026</td>
<td>0.022</td>
<td>0.026</td>
</tr>
</tbody>
</table>

| F-value (significance)               | 3.534 (0.000)         | 2.327 (0.015)                   | 3.534 (0.000)          |
| R²                                   | 0.004                 | 0.004                           | 0.004                 |

Significant relations (*p<0.01; **p<0.01) are bolded.

The moderating role of perceived variety and image

In comparison with models considering only the direct effect of scenarios, F-tests indicated that models including the moderating effect of perceived variety and store image had a significantly improved capacity to explain the intentions to visit the store and buy (F₆, ₃₉₆ = 7.299, p<0.01 (yogurt); F₆, ₃₉₆ = 7.853, p<0.01 (gel)) and the intention to buy the SB (F₆, ₃₉₆ = 4.989, p<0.01 (yogurt); F₆, ₃₉₆ = 3.196, p<0.01 (gel)). Both perceived variety and perceived image had a significant moderating influence on how store flyer design affects store traffic and intention to buy. Our results suggest that store flyer design and its moderators play different roles.
according to the analyzed intention (intentions to visit the store and buy or intention to buy the SB) and product category (yogurt vs. gel).

Regarding intentions to visit the store and buy, perceived variety (PV) had a significant positive effect (scenario IV: 0.224 (yogurt and gel), p < 0.1; scenario III: 0.241 (gel), p < 0.1) on the influence of longer flyers (20 pages) featuring the NB with a slogan on the cover page and shorter flyers (8 pages) featuring the SB with a slogan, respectively. The perceived image (PSI) had a positive influence on the intentions to visit the store and buy when considering shorter flyers (scenario I: 0.352 (yogurt) and 0.347 (gel), p < 0.01; scenario III: 0.394 (yogurt) and 0.403 (gel), p < 0.01). Therefore, we can assume that consumer’s perceived variety of the retailer’s assortment enhances the effect of both longer (especially those featuring a NB with a slogan) and shorter (especially those featuring a SB with a slogan) flyers. The perceived image improves the positive influence of shorter flyers on the store traffic and intentions to buy regardless of the brand type on the cover (NBs or SB) and the presence or not of an institutional slogan.

The intention to buy the SB was affected differently depending on the variables of the scenarios and especially the category under analysis. First, both variables appeared to be significant for the yogurt category. Thus, perceived image (PSI) had a positive influence on all three scenarios (scenario II was used as a baseline; scenario I: 0.265, p < 0.1; scenario III: 0.274, p < 0.1; scenario IV: 0.257, p < 0.1). We can assume that the perceived image plays a very important role when considering flyers influence on the intention to buy the SB. These results are supported by previous findings claiming that the store image acts as an important predictor of attitude towards a SB (e.g., Dick et al., 1995; Richardson et al., 1994; Semeijn et al., 2004), which greatly influences the purchase intention (Kim and Kim, 2016). The perceived variety (PV) also had a positive influence (0.348, p < 0.01) on the relationship between scenario I and the intention to buy the SB. It suggests that the greater the consumer’s perception of the retailer’s assortment variety, the stronger the influence of shorter flyers featuring NB on the cover without an institutional slogan. Analyzing the gel category, the studied variables
seemed to play a smaller role since only perceived image had a positive influence on the intention to buy the SB (0.284, p < 0.1) when considering the scenario I. These differences between yogurt and gel categories could be related to their purchase features. According to Dhar et al. (2001), yogurt is an essential item of consumers’ shopping baskets and it is considered a “staple category” (high-penetration, high-frequency). Gel products are considered as a “variety-enhancer product”⁴ (high-penetration, low-frequency). Since consumers have a preference for these daily categories, they will consider different store aspects, such as variety and image, before buying (Voss et al., 2003).

As expected, our results confirm that the consumer’s perception of the retailer’s assortment variety and image positively moderates the impact of store flyers design on their intentions to visit the store and buy and the intention to buy the SB.

Store flyers design and intentions to visit the store and buy

Using the regression model coefficients, it is possible to quantify the overall impact of store flyer design on the intentions to visit the store and buy and the intention to buy a SB product. For this, we made estimations [2] (for the models with IVB as the dependent variable) considering SI, SIII, and SIV⁵, respectively, using the following equation⁶:

\[
\frac{\partial IVB}{\partial SI} = \begin{cases} 
\alpha_{PSI} = 0.352PSI \text{ (Yogurt)} \\
\alpha_{PSI} = 0.347PSI \text{ (Gel)}
\end{cases}
\]

\[
\frac{\partial IVB}{\partial SIII} = \begin{cases} 
\alpha_{PSI} = 0.394PSI \text{ (Yogurt)} \\
\alpha_{PSI} + \alpha_{PV} = 0.403PSI + 0.241PV \text{ (Gel)}
\end{cases}
\]

\[
\frac{\partial IVB}{\partial SIV} = \begin{cases} 
\alpha_{PV} = 0.224PV \text{ (Yogurt)} \\
\alpha_{PV} = 0.224PV \text{ (Gel)}
\end{cases}
\]

The effect of store flyer designs (of each scenario) on intentions to visit the store and buy can be evaluated based on equations [4]. The result is achieved by

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⁴ For a greater detail on product categories, please see (Dhar et al., 2001).
⁵ Scenario II has been used as the baseline.
⁶ Authors only considered significant parameters.
substituting the mean values\textsuperscript{7} of the perceived variety and image in the sample of consumers under analysis. The mean values for perceived variety and image in our sample were 3.739 and 3.127, respectively. Substituting these values in the equations [4], we obtained the following values:

Scenario I  \[ IVB = 0.352 \times 3.127 = 1.100 \text{ (yogurt) / IVB = 0.347} \times 3.127 = 1.085 \text{ (gel)} \]

Scenario III  \[ IVB = 0.394 \times 3.127 = 1.232 \text{ (yogurt) / IVB = 0.403} \times 3.127 + 0.241 \times 3.739 = 2.161 \text{ (gel)} \]

Scenario IV  \[ IVB = 0.224 \times 3.739 = 0.837 \text{ (yogurt) / IVB = 0.224} \times 3.739 = 0.837 \text{ (gel)} \]

Since the model constant estimates the expected IVB value for the reference design (scenario II), we can evaluate the actual influence of each design on consumer’s intentions to visit the store and buy after estimating the moderating role of perceived variety and image, as follows:

Scenario I:  \[ IVB = 3.553 + 1.100 = 4.653 \text{ (yogurt) / IVS = 3.553 + 1.085 = 4.638 \text{ (gel)} } \]

Scenario II:  \[ IVB = 3.553 \text{ (yogurt/gel)} \]

Scenario III:  \[ IVB = 3.553 + 1.232 = 4.785 \text{ (yogurt) / IVS = 3.553 + 2.161 = 5.714 \text{ (gel)} } \]

Scenario IV:  \[ IVB = 3.553 + 0.837 = 4.390 \text{ (yogurt and gel)} \]

Our analyses demonstrated that scenarios I and III had the strongest influence on consumer’s intentions to visit the store and buy. Longer flyers (scenarios IV and II) had the weakest influence, especially those with a SB, without a slogan on the cover page. These results partially confirm our expectations (see table 1). Considering the presence/absence of a slogan, we confirmed our expectations that the presence of an institutional slogan increases the consumer’s intentions to visit the store and buy. Nevertheless, scenario I (without a slogan) had a stronger influence on intentions to visit the store and buy than scenario IV (with a slogan). Considering the brand type on the cover page, all scenarios had a positive influence.

\textsuperscript{7}We used mean item-scores instead of factor scores since they are more suitable for linear regression analyses (they assume no measurement error while factors scores assume some measurement error) (Hair et al., 1998).
on consumer’s intentions to visit the store and buy. Finally, regarding the number of pages, the results did not confirm our expectations. Shorter flyers had a stronger influence on consumer’s intentions to visit the store and buy.

Nonetheless, the overall positive influence of store flyers on intentions to visit the store and buy, regardless of their design, corroborated previous studies affirming that this influence may positively impact sales (e.g., Allenby and Ginter, 1995; Dhar et al., 2001; Gijsbrechts et al., 2003; Zhang, 2006). Indeed, store promotions in store flyers are expected to positively influence the purchase (Mulhern and Leone, 1991; Volle, 1997).

Store flyers design and intention to buy the store bran

To evaluate the consumer’s intention to buy the SB, we made estimations [2] (for the models with ISB as the dependent variable) considering SI, SIII, and SIV\(^8\), respectively, using the following equation\(^9\).

\[
\frac{\partial ISB}{\partial SI} = \begin{cases} 
0.466 + \alpha PV + \alpha PSI = 0.466 + 0.348PV + 0.265PSI (Yogurt) \\
0.470 + \alpha PSI = 0.470 + 0.284PSI (Gel)
\end{cases}
\]

\[
\frac{\partial ISB}{\partial SIII} = \begin{cases} 
\alpha PSI = 0.274PSI (Yogurt) \\
0 (Gel)
\end{cases}
\]

\[
\frac{\partial ISB}{\partial SIV} = \begin{cases} 
\alpha PSI = 0.257PSI (Yogurt) \\
0 (Gel)
\end{cases}
\]

Substituting the mean values of perceived variety (3.739) and perceived image (3.127) in the equations [5], we obtained the following values:

Scenario I \rightarrow ISB = 0.466 + 0.348 \times 3.739 + 0.265 \times 3.127 = 2.596 (yoghurt) / ISB = 0.470 + 0.284 \times 3.127 = 1.358 (gel)

Scenario III \rightarrow ISB = 0.274 \times 3.127 = 0.857 (yoghurt) / ISB = 0 (gel)

Scenario IV \rightarrow ISB = 0.257 \times 3.127 = 0.804 (yoghurt) / ISB = 0 (gel)

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\(^8\) Scenario II has been used as the baseline

\(^9\) Authors only considered significant parameters
Finally, we could evaluate the actual influence of each flyer design on consumer’s intention to buy the SB after estimating the moderating role of perceived variety and image, as follows:

Scenario I: $\text{ISB} = 3.053 + 2.596 = \mathbf{5.649}$ (yogurt) / $\text{ISB} = 3.053 + 1.358 = \mathbf{4.411}$ (gel)

Scenario II: $\text{ISB} = \mathbf{3.053}$ (yogurt/gel)

Scenario III: $\text{ISB} = 3.053 + 0.857 = \mathbf{3.910}$ (yogurt) / $\text{ISB} = 3.053 + 0 = \mathbf{3.053}$ (gel)

Scenario IV: $\text{ISB} = 3.053 + 0.804 = \mathbf{3.857}$ (yogurt) / $\text{ISB} = 3.053 + 0 = \mathbf{3.053}$ (gel)

Our results suggest that scenario I had a stronger influence on consumer’s intention to buy the SB of the yogurt category. Similarly to the previous results on consumer’s intentions to visit the store and buy, shorter flyers had the strongest influence on the consumer’s intention to buy the SB. Scenario II had the weakest influence on the intention to buy the SB. Scenarios III and IV had the same influence as scenario II when considering the gel category since neither perceived variety nor perceived image had a significant moderating role on the intention to buy a SB.

These results did not confirm our expectations (see table 1). Considering the presence/absence of a slogan, the presence of an institutional slogan did not increase consumer’s intentions to buy the SB since scenario I did not include an institutional slogan. Our expectation on the influence of the brand type on the cover page was also not confirmed since scenario I featured a NB on the cover page. Finally, shorter flyers had a stronger influence on consumer’s intentions to buy the SB, especially for the yogurt category.

**Conclusions and managerial implications**

The goal of this research was to evaluate the effect of different store flyer design features on the consumer’s intentions to visit the store and buy from the store and to buy the SB. The experimental results revealed some surprising and challenging conclusions.
First, we could observe that the size of the flyer was the first aspect that retailers must consider. This result corroborates previous findings by Gijsbrechts et al. (2003) and Luceri et al. (2014)\textsuperscript{10} that a higher number of pages does not influence the store sales performance. Thus, irrespective of the type of brand featured on the cover page and the presence of an institutional slogan, the improved store traffic and sales outcomes are achieved with shorter flyers (i.e., 8 pages) (see table 4).

Table 4 – Summary of conclusions

<table>
<thead>
<tr>
<th></th>
<th>Optimal flyer design</th>
<th>Moderating influence (PV/PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensions to visit the store and buy</td>
<td>SB on the cover, 8 pages, with a slogan</td>
<td>Yes</td>
</tr>
<tr>
<td>Intensions to buy the SB</td>
<td>NB on the cover, 8 pages, without a slogan</td>
<td>Yes</td>
</tr>
</tbody>
</table>

This result seems to support the saturation phenomenon related to large flyers (containing 20 pages or more) indiscriminately sent by most retailers (e.g., Gijsbrechts et al. 2003). For instance, in Denmark, the average distribution frequency of flyers went up from once every month during the '90s to once a week or even twice a week (Schimth and Bjerre, 2003). Spanish households frequently receive an average of five flyers per week, including food and non-food retailers (Larizgoitia, 2015). Nearly 89% of Dutch shoppers receive three flyers per week from supermarkets (Ravensbergen et al., 2015).

Therefore, we advise retailers to print shorter flyers to positively influence the store traffic and intentions to buy their own brand. The strongest impact of shorter flyers is good news for retailers focused on reducing the costs of their marketing-communication strategy since longer flyers clearly increase expenses (Ieva et al., 2018). Printing shorter store flyers is also positive for the environmental issues\textsuperscript{11} derived from this promotional tool.

Our results demonstrated that the type of brand featured on the cover page and the presence/absence of a slogan will depend on what the retailer wants to enhance (intentions to visit the store and buy or intentions to buy the own brand).

\textsuperscript{10} This result refers to the hypermarket format in which the authors found a significant influence of number of pages

\textsuperscript{11} The increasing environmental burden of store flyers has led to many initiatives in countries such as Denmark, France, Germany, the U.S, and the UK, where direct marketing associations have created mail preference lists through which consumers can decline to receive (unsolicited) store flyers (Simon, 2016).
If the goal is to increase store traffic and general sales, then the SB with a slogan should be featured on the cover page. This result seems to confirm previous findings that featuring a wide variety of SB products throughout a flyer is more effective in increasing store traffic and sales (Lourenço and Gijsbrechts, 2013). Our findings extend this conclusion to the cover page of flyers. Our results are broader than the idea that featuring the SB on the cover page enables the retailer to strengthen its image. This strategy offers a flexible way to achieve a positive price positioning, which is an essential attribute of a retailer’s store image in price-sensitive contexts (Volle, 2001) and helps to attract consumers into the store (Burton et al., 1999).

Contrary to our expectations, the best way to increase consumer’s intentions to buy the SB is to feature a NB (without slogan) on the cover page. The “halo effect” (Ailawadi et al., 2006) could be a possible explanation for this result. Once inside the store, consumers rarely purchase only the items featured in flyers, but also other in-store promoted (non-featured) and non-promoted products (Mulhern and Leone, 1991). In other words, promoting one product category increases sales of other categories. Since store flyers are a type of feature advertising that increases sales by attracting customers attention, their use should have similar outcomes. Therefore, featuring well-known (national) brands on the cover page probably increases the probability of purchasing such NBs and also the intention to buy in-store promoted SB products (e.g., as special displays). This conclusion is especially relevant since the profit margins of non-promoted SB are presumably higher than those of promoted NBs (Luceri et al., 2014). In addition, the retailer can increase the fee revenues charged by manufacturers whose brands appear on the cover page.

Finally, retailers must carefully evaluate how consumers perceive their assortments and their image since these aspects have a distinct moderating influence on the effectiveness of store flyers. Both aspects positively increase the influence of store flyers on consumers responses. Although it is true that such influence will depend on the scenario under analysis, the whole influence of consumer’s perception on the store is clearly positive. The better the consumer’s perception of the retailer’s variety and store image, the stronger the impact of flyers.
on intentions to visit the store and buy from the store and buy a SB product. This finding is supported by previous researches affirming that these variables are the main attributes that consumers consider when evaluating a retailer, which influence their purchasing behavior (Chang, 2011; Diallo, 2012). Since the perceived variety is also considered a functional attribute of image perception, retailers are advised to strengthen their store image to enhance the impact of store flyers. It is known that the frequency of store visits strongly depends on the store image and attitude (see the meta-analysis by Pan and Zinkhan, 2006). Finally, our findings also suggest that retailers should consider the product categories when evaluating the role of store image. For instance, we recommend retailers to use the penetration-frequency criterion proposed by Dhar et al. (2001) to control the moderating influence of store image and perceived variety.

**Limitations and further research**

Clearly, our study has limitations that require further research. Future researches should investigate whether our findings could be implemented using alternative manipulations of store flyers. That is, there may be other design features that can be used to modify the consumer’s perceived store variety and image when browsing a store flyer. These features could be the number and proportion of NBs featured in the flyer, the presence of less-known NBs, or the number of product categories. Another limitation arises from the online context in which the experiment was developed. Although it is true that retailers are increasingly investing in online flyers, the expenses with printed flyers continue to grow. Future research should replicate this study in an offline context. Finally, evaluating the impact of flyers design on other aspects, such as consumer satisfaction or store loyalty, would be also interesting. It would be also important to replicate this experiment with flyers of other store formats (e.g., discounters) and in other geographical contexts.
Bibliography


