

Consumer response to private label brands' negative publicity: a relational effect on retailer's store image

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Abstract

Purpose – This study aims to examine the effect of private label brand (PLB) products' negative publicity (NP) events on PLB general image and retailer's store image, because of the suggested interdependency between retailer's store image and PLB image.

Design/methodology/approach – Three empirical studies were conducted to test the NP effect – Studies 1 and 2, respectively; and test the occurrence of moderate and extreme NP events regarding the functional PLB product category. Study 3 replicates prior studies conducted on the hedonic product category. In these studies, participants were randomly assigned to treatment and control groups. The studies use factor analysis methods following *t*-tests and paths analyses, using structural equation modeling (SEM).

Findings – Findings show that both moderate and extreme NP have an influence on the PLB's image dimensions. These effects "spilled over" to the entire range of PLB products, regardless of the category of the damaged product. Regarding retailer's store image, the effect of NP was retained in the product-related image context and did not exceed that of the store-related image. However, in relation to functional products, when NP is very extreme, the effect on PLB image exceeds that of retailer's store image.

Practical implications – Retailers should invest more efforts in their PLB product selection, quality maintenance and supervision to eliminate potential damage from events related to their PLB products.

Originality/value – The originality of this study is in the association of two streams of research: NP effects and the relationship between PLB image and retailer's store image.

Keywords Private labels' Brand image, Products' negative publicity, Retailer's store image

Paper type Research paper

Introduction

In a world of brands, where the brand name is essential to consumers' image perception, private label brands (PLBs) are of major importance, mainly because of their central role as extrinsic cues in predicting retailers' product quality, consumers' purchase intention (Richardson *et al.*, 1994), contribution to store loyalty (Koschate-Fischer *et al.*, 2014) and market share (Steenkamp and Dekimpe, 1997). The research literature extensively discusses the positive or negative relationships among PLB, store image and store loyalty (Ailawadi *et al.*, 2008; Martos-Partal and González-Benito, 2011; Sethuraman, and Gielens, 2014; Koschate-Fischer *et al.*, 2014). These studies suggest an interdependency between retailers' overall store image and PLB image (Collins-Dodd and Lindley, 2003; Semeijn *et al.*, 2004; Vahie and Paswan, 2006; Ailawadi *et al.*, 2008; Olbrich *et al.*, 2016). However, this relationship may be disrupted by complications, like negative publicity (NP) – either toward the PLB or the retailer's store. The potential effect of NP toward brands has been extensively researched in the literature (Ahluwalia *et al.*, 2000; Monga and John, 2008; Berger *et al.*,

2010; Rea *et al.*, 2014; Cleeren, 2015; Jeon and Baeck, 2016). Yet, to the best of our knowledge, there are no academic studies to date that associate these streams of NP research with PLBs and their potential negative effect on the retailer's store image. Thus, given the great interest in the PLB literature (Koschate-Fischer *et al.*, 2014), research investigating the influence of a PLB's related NP is highly important.

The importance of such a study also stems from the strategic trend characterizing the retail industry in recent years – the fast growth of store brands, especially in regard to non-durable consumer goods (Koschate-Fischer *et al.*, 2014; Sethuraman and Gielens, 2014; Hyman *et al.*, 2010; Burt, 2000). The key motive for implementing the PLB strategy is that PLBs can help retailers differentiate themselves, and build positive perceptions toward the store (Corstjens and Lal, 2000; Collins-Dodd and Lindley, 2003). In other words, retailers consider private labels as a tool that allows them to improve their store image. However, in light of the above-suggested interdependency between PLB image and retailer's store image, an inverse influence also seems a reasonable possibility, which retailers must consider. PLB-related NP can damage the store brand and "spill over", negatively impacting the store's image as well (Mackalski and Belisle, 2015).

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The objectives of the current study are to check whether PLB-related NP could affect the retailer's store image and/or PLB image, and provide a better understanding of how consumers react to PLB-related NP. The study's contribution to the literature is twofold. First, the study proposes a framework that facilitates the understanding of the effect of NP in the PLB context, and provides a deeper understanding of the relationships between PLB and retailer's store image. Second, the study provides retailing practitioners with further insights into efficient and effective PLB strategy execution and maintenance.

Toward this endeavor, three experiments were conducted, representing two different levels of NP and two different product categories. Study 1 demonstrates a moderate case of NP, while Study 2 demonstrates a more extreme case of the same product category – a functional product. Study 3 replicates the previous studies, focusing on a different product category – a hedonic product. The studies are followed by discussions and managerial conclusions.

Theoretical and empirical background

The current study merges two fields of research: PLB literature in regard to its relationship with the retailer's store (Ailawadi *et al.*, 2008; Pepe *et al.*, 2011; Martos-Partal and González-Benito, 2011; Sethuraman and Gielens, 2014; Koschate-Fischer *et al.*, 2014), and literature on the effects of NP (Monga and John, 2008; Berger *et al.*, 2010; Hansen and Onozaka, 2011; Jeon and Baeck, 2016). Following are reviews of existing literature in these fields as a theoretical base for the conceptual framework.

The relationship between private label brand and store image

PLBs are products manufactured on behalf of retailers, sold through their own outlets and under the retailer's own name or trademark. Traditionally, PLBs offer consumers lower and fairly priced products, very similar in quality to national brands (Koschate-Fischer *et al.*, 2014). For retailers, PLBs result in higher margins, stronger negotiation power with national brand manufacturers and higher consumer store loyalty (Corstjens and Lal, 2000; Ailawadi *et al.* 2008; Martos-Partal and González-Benito, 2011).

PLBs have become of major importance for retailers, mainly because of their central role as extrinsic cues in predicting retailers' product quality and consumers' purchase intention (Richardson *et al.*, 1994), and as a means of differentiation (Collins-Dodd and Lindley, 2003). A PLB's positive perception is developed through advertising and consistent improvement of quality in product offering (Sethuraman and Gielens, 2014). Indeed, retailers these days are constantly introducing "premium" store brands to their customers (Kumar and Steenkamp, 2007; Huang and Huddleston, 2009) and investing in advertising to design positive brand perception and build positive brand image (Baltas, 1997; Kumar and Steenkamp, 2007; Huang and Huddleston, 2009).

Brand image relates to the inclusive beliefs the customer has regarding the brand (Anselmsson *et al.*, 2014), and has been defined as "the sum of total brand associations held in consumer memory that leads to perceptions about the brand"

(Keller, 1993; Vahie and Paswan, 2006, p. 70). Following Keller's (1993) conceptual model of brand associations, Faircloth *et al.*'s (2001) study implies that brand attitudes, as part of brand associations, are antecedents for brand image. Brand attitudes, such as *quality perception* (Vahie and Paswan, 2006) and *buying intention*, were treated as dimensions of *brand image* in previous research (Schiffman *et al.*, 2008; Hansen and Onozaka, 2011; Schmitt, 2012), and perceived as important aspects of brand judgment (Beneke and Zimmerman, 2014). This perspective is applied in the current study to *PLB image*. In addition, *store image* is specifically defined as "the way in which the store is defined in the shopper's mind by its functional qualities and partly by an aura of psychological attribute" (Martineau, 1958, p. 47; Vahie and Paswan, 2006, p. 70).

Research indicates a positive relationship between store image and PLB image (Richardson *et al.*, 1996; Collins-Dodd and Lindley, 2003; Semeijn *et al.*, 2004; Vahie and Paswan, 2006). Collins-Dodd and Lindley (2003) found store image to be a significant predictor of PLB image and uniquely related to store positioning. In their eyes, "private label brands are seen as extensions of the store image" (Collins-Dodd and Lindley, 2003, p. 351). Semeijn *et al.* (2004) reached the same conclusion. Overall, retailer's store image can act as a cue for PLB quality and contribute to its image; the higher its association, the higher the attribution (Burnkrant, 1978). In addition, experience and loyalty to the retailer's PLB can enhance consumers' acceptance of the retailer's brand products (Allen Broyles *et al.*, 2011; Leingpibul *et al.*, 2013). In contrast, other studies indicate that brands sold in a store have an effect on the store's image (Pettijohn *et al.*, 1992; Porter and Claycomb, 1997). Jacoby and Mazursky (1984) found that retailer's store image could be improved by carrying brands with favorable images; however, it could just as easily be damaged by association with unfavorable brands. Thus, one can assume that treating PLB as a "brand" like national brands means a similar potential effect on store image. Furthermore, the more the consumer perceives the connection between the store and PLB, the higher the interdependency. PLBs are owned by retailers and sold exclusively in their stores; thus, store images act as high relevance cues for PLBs. Therefore, while the positive image of one identity might contribute to the image of the other identity by attribution, an image that is not positive may detract from the other identity's image (Ahluwalia and Gurhan-Canli, 2000).

Brand image and negative publicity

Consumers' attitude formation and change toward brands are a result of acquiring information from others, external sources (Ulrich and Brunner, 2015) or from personal experience, and play a critical role in consumer behavior. Consumer attitudes and associations influence brand evaluation and are the basis for brand image (Aaker, 1991; Keller, 1993; Faircloth *et al.*, 2001).

Publicity refers to information that comes from public, authoritatively perceived and relatively trusted sources. Brand information acquired from public sources can be positive or negative and the literature on the subject shows that consumers attribute high credibility to this type of publicity (Bond and Kirshenbaum, 1998). The extensive research on

NP indicates that consumers pay more attention to NP and place more weight on negative information, rather than positive information, when making decisions (Fiske, 1980; Herr *et al.*, 1991; Eagly and Chaiken, 1993). This study follows Ahluwalia *et al.* (2000) and defines *performance-level brand NP* as publicity about specific brand attributes that calls into question a brand's ability to provide functional benefits or those that may jeopardize users. This type of NP may cause a dilution in consumers' brand image perceptions (Ahluwalia *et al.*, 2000; Pullig *et al.*, 2006) and has a high potential to damage the marketing company's image (Dawar and Pillutla, 2000). Nevertheless, there are some indications suggesting that NP may not always be a bad thing (Berger *et al.*, 2010). Though extreme NP could negatively affect the brand, slight NP may draw just enough attention and awareness to the product to spark consumer interest and lead to positive effects (Berger *et al.*, 2010).

Attribution theory might explain consumers' possible reaction to NP (Dean, 2004; Song *et al.*, 2016). The theory is concerned with how consumers assign causality to events and focuses on how consumers form or alter their attitudes, as an outcome of assessing objects and behavior (Folkes, 1984). According to the theory, there are two types of causes related to an event: *individual-related causes* and *external causes*. Reaction to NP does not occur in a vacuum (Monga and John, 2008). It seems that consumers consider contextual factors when thinking about the cause of a negative incident (Folkes, 1984; Folkes and Kotsos, 1986). In addition, they also sometimes attribute blame to sources related to the brand (Klein and Dawar, 2004). Hence, the theory addresses consumers' judgment of product performance, which attributes success or failure to either the brand or the store that offered the branded product. In the current case, in which PLBs are basically exclusively sold by the retailers that own them, attribution theory suggests interdependency between a retailer's overall store image and PLB image; the better the "match" between the two, the higher the interdependency. Consequently, the consumer might attribute success or failure in product performance to either the PLB or the retailer's store.

The potential negative affect toward the retailer's PLB and the retailer's store image can be further explained by the *spillover effect* literature (Hansen and Onozaka, 2011; Rea *et al.*, 2014; Cleeren, 2015; Mackalski and Belisle, 2015). *Spillover effect* refers to the extent to which information provided in a message alters consumers' beliefs about attributes that are not mentioned in that message (Ahluwalia *et al.*, 2001). Respectively, Olbrich *et al.* (2016) indicate that consumers tend to see PLB products as a homogenous group; thus, a negative experience may lead them to avoid all PLBs. This approach suggests that the negative information consumers receive about a specific PLB product can "spillover" to the retailer's overall PLB products and the associated retailer's store.

Taking the above discussion into account, it is likely that NP toward one of the PLB products will damage the general image of the retailer's PLB and, as a side-effect of the reciprocal effect, will also damage the image of the retailer's store. Therefore, the following hypotheses are proposed:

- H1. NP toward one of the PLB products will damage the perceived general image of the retailer's PLB.
- H2. There is a relationship between the perceived general image of the retailer's PLB and the perceived image of the retailer's store.
- H3. NP toward one of the PLB products will damage the perceived image of the retailer's store.

Researchers have recognized key antecedents in store brand buying processes (Richardson *et al.*, 1994, 1996). Consumers who encounter NP may retrieve previously existing brand attitudes and beliefs from their memories and, on this basis, evaluate the NP (Pullig *et al.*, 2006). Therefore, regarding PLB, this study will also examine the potential negative effect on PLB image and retailer's store image, while applying key factors in the PLB buying process. The applied factors are *frequency of shopping* in the store (Sudhir and Talukdar, 2004), *brand familiarity* and *value for money* (Richardson *et al.*, 1996).

Frequency of shopping in the store is a factor that reflects commitment and loyalty to the store (Sudhir and Talukdar, 2004; Pan and Zinkhan, 2006) and interaction with PLB purchasing (Rubio *et al.*, 2015). Sudhir and Talukdar (2004) found a positive relationship between frequency of shopping in a store and the purchasing of PLB. In their meta-analysis, Pan and Zinkhan (2006) suggest a relationship between shopping frequency and store image. Loyalty to the store relates to store image (Bloemer and De Ruyter, 1998), and because PLB is associated with the store that sells the brand, it is also affected by PLB utility (Sethuraman and Gielens, 2014). Bonfrer and Chintagunta (2004) found that store loyalty increases the tendency to buy PLB products. Ailawadi *et al.* (2008) found mutual relationships between PLB share and consumer's behavioral loyalty, reflected in three measures: share of wallet, share of items purchased and share of shopping trips. Martos-Partal and González-Benito (2011) further clarify that PLB quality image has an influence on store loyalty, as it offers retailers a means of differentiation (Corstjens and Lal, 2000).

The above-mentioned literature identifies an interrelation between PLB purchase, frequency of shopping and loyalty. Research also identifies *brand loyalty* as a moderator of the effect of negative information (Ahluwalia *et al.*, 2000). Customers with strong brand attitude are unlikely to be affected by negative brand publicity (Monga and John, 2008). Their pre-exposure positive attitudes and pro-brand sentiments may play against the NP argument and neutralize the potential impact of NP (Ahluwalia *et al.*, 2000; Monga and John, 2008; Jeon and Baeck, 2016). Therefore, it is likely to expect frequency of shopping to hinder the effect of NP. Hence, the following hypothesis is proposed:

- H4. Frequency of shopping will moderate the effect of NP toward PLB perceived image and the retailer's store image, such that the relationships will be weaker when frequency of shopping is higher.

Brand familiarity represents the consumer's direct experience with the products and was found to have decisive importance in consumers' decisions to choose store brands over national brands (Richardson *et al.*, 1996; Baltas, 1997). Familiarity

reduces reliance on external cues and perceived risk in the PLB buying process, and enhances PLB proneness (Dick *et al.*, 1995; Richardson *et al.*, 1996; Mieres *et al.*, 2006). Furthermore, consumers who are familiar with a brand tend to relevantly diagnose the brand when exposed to new information about it (Ahluwalia, 2002; Ulrich and Brunner, 2015). When confronting crises, they often perceive familiar brands as less responsible (Mowen, 1980; Rea *et al.*, 2014). Therefore, as the consumer becomes more familiar with store brands, uncertainty decreases (Kocyigit and Ringle, 2011); information about and experience with the brand might hinder the effect of NP (DeCarlo *et al.*, 2007). Hence, the following hypothesis is proposed:

H5. Brand familiarity will moderate the effect of NP toward PLB perceived image and the retailer's store image, such that the relationships will be weaker when brand familiarity is higher.

Value for money, as an assessment function of quality compared to price, is another key factor in the PLB buying process (Ailawadi *et al.*, 2001; Apelbaum *et al.*, 2003). Consumers will prefer to buy PLBs if they perceive the PLB to promise better value than national brands (Sethuraman and Gielens, 2014) because they are looking for a fair price without having to compromise on quality (Richardson *et al.*, 1996; Sethuraman and Gielens, 2014).

Quality judgment is based on cognitive evaluations (Hansen and Onozaka, 2011). As the consumers invest cognitive efforts while evaluating product information, the NP related to the PLB product will cause the consumer to re-evaluate the relative quality of the PLB brand (Ahluwalia *et al.*, 2000). Thus, assuming there is no price change, the perceived PLB's value for money is anticipated to be negatively affected by NP and to mediate the NP effect. Therefore, we propose the following hypotheses:

H6a. NP toward one of the PLB products will decrease the perceived PLB's value for money.

H6b. Value for money will mediate the effect of NP toward PLB perceived image and the retailer's store image.

Following the above discussion, Figure 1 shows the conceptual framework of this study.

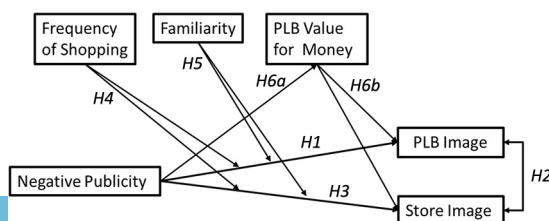
Study 1

Methodology

The study procedure

A convenience sample based on mature graduate students was conducted (Rea *et al.*, 2014). The reason for choosing

Figure 1 A proposed conceptual framework



this sample is that these graduate students all have a relatively high level of shopping experience, similar to that of the general public. The study's experiment was run in groups of between 15 and 20 students, recruited from different graduate courses. They voluntarily participated in what they were told was an academic study. The participants were randomly assigned to one of two groups. Approximately half of the participants were exposed to moderate NP of a retailer's PLB products, while the other half was not exposed to such publicity (*treatment* and *control* groups). The publicity was about a PLB product performance-related failure (Dawar and Pillutla, 2000; Pullig *et al.*, 2006) and was presented to the treatment group as a written vignette describing (Wason *et al.*, 2002) an event recently published in a popular newspaper (see Appendix 1). An existing and familiar utilitarian store retailer with standard positioning, and the sole proprietor of a popular PLB, was selected. The selected retailer highly promotes the PLB; invests a lot in media advertising; and the PLB name is easily identified as the store's PLB. The failure and NP were directed at the PLB product category – functional products – one of the selected retailer's most popular PLB categories.

To prevent the influence of newspaper credibility on respondents' reactions, the NP was attributed to an anonymous newspaper and the news source was ascribed to an objective and trustworthy source. Participants in the treatment group were requested to carefully read a news report. After initial exposure to the event, each participant was then asked to complete a booklet and respond to a series of questionnaires concerning items pertaining to PLB image, store image and the related antecedents (Ahluwalia *et al.*, 2000).

Measurements

The survey instrument consisted of multiple items designed to measure the study's variables (see Appendix 3). Respondents were asked to indicate their level of agreement with different statements. A seven-point Likert scale was used, ranging from 1 = strongly disagree to 7 = strongly agree (see Table I for factor loadings and reliability). PLB image items, relating to quality and buying intention dimensions (Vahie and Paswan, 2006; Beneke and

Table I Variables' reliability and factor loadings

Variables	No. of items	Factor loadings ^a	Cronbach's alphas
PLB image factors			
Buying intention	3	0.808-0.877	0.837
Quality	3	0.840-0.876	0.864
Store image factors			
Service	3 ^b	0.724-0.870	0.842
Product quality	3	0.777-0.861	0.876
Product variety	3	0.518-0.865	0.780
Prices image	3	0.713-0.897	0.814
Convenience	3 ^b	0.445-0.665	0.794

Notes: ^aPLB image factors: total variance explained = 75.5%; store image factors: total variance explained = 74.3%; ^bboth factors were united in the factor analysis and were separated by confirmatory factor analysis



Zimmerman, 2014) were taken from Richardson *et al.* (1994, 1996). Store image scale items were taken from Chowdhury *et al.* (1998) and Vahie and Paswan (2006), measuring five store image dimensions: service, quality, variety, price and convenience (Beneke and Zimmerman, 2014). These dimensions were also interrelated in Pan and Zinkhan's (2006) meta-analysis. The scales' items were modified to suit the retail PLB story. To assure that PLB-gearred NP impacts the dependent variables, even when the above-mentioned key factors are accounted for, additional measures were included. One item was added for store chain frequency of shopping (the item read as follows: "Please indicate the frequency of your shopping trips in '____' store"; and the optional answers were as follows: Regularly; In most cases; Sometimes; Rarely; and Not at all. Two other items were added – one for value for money of PLB ("Store brand '____' product items offer great value for the money") and one for PLB familiarity ("I am highly familiar with the '____' store brand") (Richardson *et al.*, 1994, 1996). Here also, respondents were asked to indicate their level of agreement with the statements on a seven-point Likert scale. Demographic variables were also gathered.

Sample

Overall, 158 participants completed the questionnaire and their responses were used in this study; 78 were exposed to NP and 80 were not exposed to NP. Fifty-two per cent of the respondents were male and 48 per cent were female; the average age (77 per cent) ranged between 26 and 55 years; average income or above (82 per cent); and approximately all subjects reported participating in family shopping trips (99 per cent). The majority (82 per cent) said they did most of the family shopping, or at least equal to that of their partners. Respectively, 95 per cent said they had engaged in some sort of shopping behavior in the chosen chain, while 59 per cent indicated being highly familiar with the chain's PLB. No significant differences regarding their observed traits were found between the two populations.

Results

Validity and reliability: Items were subjected to two exploratory factor analyses with Varimax rotation, one for chain image dimensions and one for PLB dimensions; and factors with eigenvalues greater than 1 were retained. Five factors were produced for chain image, explaining 74 per cent of the cumulative variance. Two factors were produced for PLB image, explaining 76 per cent (see Table I) of the cumulative variance. Following Podsakoff *et al.* (2003), Harman's one-factor test was used to ensure that no common method variance bias was present. Results show that the single factor accounted for 28.08 of the total variance. The items loaded onto thematic factors. This procedure indicates that common method variance bias may not be a severe problem. All items demonstrated high internal validity (acceptable loading); the internal consistency was examined using Cronbach's alpha. The coefficients' range was 0.78–0.88, displaying acceptable reliability of the measurements. Means were then calculated and examined for each factor. Table I illustrates the items' loading ranges and Cronbach's alphas for the variables.

For PLB, each dimension (factors) was checked separately, but the dimensions were not combined because no correlation was found between them. However, for store image, each dimension was checked separately, as well as the overall image as a combined variable because of a high correlation between the dimensions. Confirmatory factor analysis was conducted to confirm this latent construct of store image (χ^2 value = 2.61(2), $p = 0.271$; comparative fit index [CFI] = 0.997; normed fit index [NFI] = 0.988; root mean square error of approximation [RMSEA] = 0.044). The beta-coefficients of all dimensions were also above 0.5, showing an acceptable and good fit for all measures (for the current study's sample sizes, the recommended indicators of goodness-of-fit are as follows: χ^2/df ratio of 2 or less, CFI > 0.95, GFI > 0.9, RMSEA < 0.08 and beta-coefficients above 0.5; Hair *et al.*, 2010). An examination of confirmatory factor analysis on the overall sample shows that scale items loaded satisfactorily on the relevant latent variables. Convergent validity, discriminant validity and internal consistency were further examined using average variance extracted (AVE), average shared squared variance (ASV) and composite reliability (CR), displaying acceptable validity and reliability of the measurements (Appendix 3 shows validity and reliability measures of the variables on the study's overall sample). Comparing the square of the correlation estimate between any pair of these constructs with the AVE values reveal greater values for AVE in all cases, which further verifies the discriminant validity of the constructs (Appendix 4 shows the correlations pattern between variables and the maximum shared squared variance [MSV]).

Hypotheses testing: the study objectives were conducted in two steps.

In the first step, the research hypotheses were addressed by examining mean differences between images' rate without NP, and images' rate with NP (independent samples t -tests were used). Table II presents the differing rates of the total measures according to publicity.

The results indicate (Table II) that for PLB dimensions, mean differences are significant ($p < 0.05$) and buying intention rate with NP ($M = 2.21$) is significantly lower (t -test = -2.73 , $p < 0.01$) than without NP ($M = 2.72$). The same result is found for PLB quality image ($M = 4.05$ and $M = 4.63$ accordingly, t -test = -2.58 , $p < 0.05$). Next, regression tests were conducted on these PLB dimensions, while adding PLB familiarity and shopping at the retail chain as control variables. The results indicate the negative effect on buying intention ($t = -2.47$, $p < 0.05$) and PLB quality image ($t = -2.58$, $p < 0.05$). Following these results, $H1$ is accepted.

As regards store image, the measures (Table II) reveal no significant differences for overall store image. However, regarding the dimensions' measures, different results were found. Only the store product quality dimension shows a significantly lower rate for the treatment group exposed to the NP (t -test = -2.46 , $p < 0.05$). However, contrary to the study's expectation, the store product variety dimension shows a significantly higher rate in the case of NP (t -test = 2.90 , $p < 0.01$). With regard to all the other measures, there are no significant differences. Therefore, $H3$ is generally rejected, despite the fact that it was confirmed in regard to one dimension.

Table II Variables' mean differences—with and without NP

Variables	Without NP		With NP		t-test	p (2-tailed)
	Means	SD	Means	SD		
PLB buying intention	2.72	1.259	2.21	1.039	-2.73	0.007
PLB quality	4.63	1.413	4.05	1.376	-2.58	0.011
Overall store image	4.53	0.823	4.59	0.656	0.518	0.605
Store service	4.64	1.052	4.63	0.916	0.085	0.932
Store product quality	4.76	1.042	4.36	1.012	-2.46	0.015
Store product variety	4.48	1.101	4.96	0.945	2.90	0.004
Store prices image	3.62	1.118	3.80	0.962	1.09	0.273
Store convenience	5.11	1.014	5.18	1.007	0.446	0.656

In the second step, a path analysis was conducted to check the effects of NP on PLB image dimensions and for overall store image (using AMOS 19 and structural equation modeling [SEM]).

Analysis of the data distribution showed that only some variables were non-normally distributed and extreme non-normality was not found in the data (Cortina et al., 2001; Schermelleh-Engel et al., 2003). Additionally, the graphical figures (the histograms, normal Q-Q plots and box plots) visually indicate that the data do not significantly differ from normality in most cases; hence, one can assume that the data are approximately normally distributed in terms of skewness and kurtosis. Therefore, the maximum likelihood method is appropriate and was applied to estimate the parameters.

Additional variables – value for money, PLB familiarity and shopping frequency in the chain – were added to further check H4, H5, H6a and H6b. A three-step procedure (Cortina et al., 2001) was followed to standardize the relevant independent variables and create interaction variables for the moderation check.

The path analysis results show that the overall fit statistics (goodness of fit measures) exhibit an acceptable level of fit (χ^2 value 16.77 (14), $\chi^2/df = 1.198$, $p > 0.05$; CFI = 0.993; NFI = 0.961; RMSEA = 0.036), indicating that the path model is valid. The path model, regression standardized coefficients and their significance are illustrated in Figure 2. The model demonstrates the relationships between the

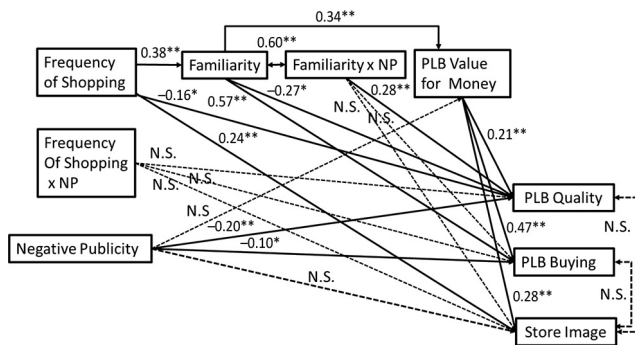
variables. Table III shows the variables' direct and indirect relationships and the statistical measures.

Figure 2 indicates that there are negative and direct relationships between NP and PLB image dimensions ($\beta = -0.20$ for quality and $\beta = -0.10$ for buying intention). On the other hand, there is no significant relationship between NP and total store image and between NP and value for money. Though value for money was found to share a positive and direct relationship with PLB quality ($\beta = 0.21$), the absence of a relationship with NP prevents possible mediation. Moreover, no significant relationships were found between total store image and PLB image dimensions (quality and buying intention). Hence, up to this point, H1 is accepted, while H2, H3, H6a and H6b are rejected.

Additionally, value for money has a direct relationship with buying intention ($\beta = 0.47$), as well as store image ($\beta = 0.28$). Familiarity was found to share positive direct relationships with buying intention ($\beta = 0.57$) and value for money ($\beta = 0.34$), while sharing a negative direct relationship with quality ($\beta = -0.27$). Frequency of shopping has direct relationships with store image ($\beta = 0.24$) and familiarity ($\beta = 0.38$), but a negative relationship with quality ($\beta = -0.16$).

The regression results also show a moderation effect, but only in a specific case. The NP and familiarity interaction variable has a positive relationship with PLB quality ($\beta = 0.28$). This indicates that familiarity dampens the negative relationship between NP and PLB quality, which means that NP has a significantly stronger negative effect on PLB image when familiarity is lower. Considering the above results, H4 and H5 were rejected.

Figure 2 PLB image, retailer's store image and key antecedents – Study 1: path analysis model^a



Notes: ^aParameters are standardized parameter estimates and only significant paths are displayed. Dotted lines represent non-significant paths; * $p < 0.05$; ** $p < 0.01$

Discussion

The results of Study 1 confirm that product-related NP causes a reduction in consumers' brand image perception (Ahluwalia et al., 2000; Pullig et al., 2006). PLB image dimensions, buying intention and quality image were damaged by the NP event. However, it seems that, in general, this type of NP did not seriously harm the marketing company's image (Dawar and Pillutla, 2000), literally speaking – the retailer's store image. It seems that the NP, in this case, brought out consumers' hidden perceptions about the store (DeCarlo et al., 2007), largely blocking out the negative effect. Apparently, consumers differentiate between store- and product-related image dimensions. This can be explained by similarity theory, which stipulates that spillovers are more



Table III Variables' direct and indirect significant relationships

Relationships	Standardized effect			Regression weights (direct)		
	Total	Direct	Indirect	Estimate	CR	p
NP → PLB Quality image	-0.202	-0.202	0.000	-0.575	-2.720	<0.01
NP → PLB Buying intention	-0.099	-0.099	0.000	-0.213	-2.435	<0.05
NP × Familiarity → PLB Quality image	0.281	0.281	0.000	0.587	2.736	<0.01
Frequency of shopping → Total store image	0.272	0.236	0.036	0.145	3.158	<0.01
Frequency of shopping → PLB Quality image	-0.236	-0.161	-0.075	-0.196	1,994	<0.05
Frequency of shopping → PLB Buying intention	0.281	0.000	0.281			<0.000
Frequency of shopping → Value for money	0.131	0.000	0.131			<0.000
Frequency of shopping → Familiarity	0.382	0.382	0.000	0.542	5.160	<0.000
Value for money → Total store image	0.277	0.277	0.000	0.141	3.721	<0.000
Value for money → PLB Quality image	0.212	0.212	0.000	0.213	2.690	<0.01
Value for money → PLB Buying intention	0.468	0.468	0.000	0.356	10.842	<0.000
Familiarity → PLB Buying intention	0.735	0.574	0.161	0.373	13.305	<0.000
Familiarity → PLB Quality image	-0.198	-0.271	0.073	-0.232	-2.498	<0.05
Familiarity → Total store image	0.095	0.000	0.095			<0.000
Familiarity → Value for money	0.344	0.344	0.000	0.294	4.572	<0.000

likely to occur among similar brands, and least likely among brands that are perceived as different (Mackalski and Belisle, 2015). The external attribution of the cause decreases the impact of the NP (Klein and Dawar, 2004). On the one hand, no effect was found on store-related image dimensions: service, fair prices and convenience. On the other hand, considering product-related image dimensions, NP significantly decreases the store's product quality dimension and increases the store's product variety dimension. The effect of moderate NP spills over and influences the store's product quality dimension (Ahluwalia *et al.*, 2001), while increasing the awareness of the store's product variety and positively affecting this store's dimension (Berger *et al.*, 2010). Perception of one of many brands could be the association in this case (Gázquez-Abad and Martínez-López, 2014). Consumers perceive PLB products as part of the store's variety of brands; thus, NP affects PLB image, as well as the overall store's product quality image (Jacoby and Mazursky, 1984; Pettijohn *et al.*, 1992; Porter and Claycomb, 1997). Furthermore, following this line of thought, NP served to intensify the perception of diversified brands placed in the retailer's store.

The fairness theory perspective provides an explanation for this outcome (Dean, 2004). According to the theory, one should ask whether the negative event was persuasively perceived as being under the retailer's control (Rea *et al.*, 2014). The assumption here is that the consumer who encountered the event (NP) did not perceive the retailer as being responsible for the failure in the PLB product; thus, the NP effect was limited to the product-related image context and did not include the store-related image.

Contrary to previous research (Semeijn *et al.*, 2004; Vahie and Paswan, 2006), path analysis shows no direct relationship between PLB image and retailer's general store image. PLB value for money shares a direct relationship with retailer's general store image. Thus, it seems that the relationship between PLB image and retailer's general store image is indirect and exists only through the perceived structural connection between PLB quality dimension and its perceived

price value. However, frequency of shopping in the store shares a direct relationship with retailer's general store image (Bloemer and De Ruyter, 1998). Interestingly, familiarity has a negative direct relationship with PLB quality as well as an indirect relationship ($\beta = 0.07$) through the mediation of value for money (bootstrap with 95 per cent confidence interval [CI]: 0.02-0.13, $p < 0.05$). Thus, it seems that familiarity with PLB will negatively affect PLB quality perception if the consumer does not perceive PLB's value for money. Finally, the two-way interaction effect indicates that familiarity with PLB can hinder the effect of NP, while the negative effect is expected to be stronger among unfamiliar consumers.

Key antecedents act on PLB image, as expected and documented in previous studies. PLB familiarity and PLB value for money affect buying intention (Richardson *et al.*, 1996; Ailawadi *et al.*, 2001). In addition, PLB quality evaluation, as an element in value for money, indirectly affects buying intention. Frequency of shopping in the store as a loyalty factor (Sudhir and Talukdar, 2004) affects PLB familiarity and shares an indirect relationship with PLB buying intention through the mediating effects of familiarity and, subsequently, value for money (Sudhir and Talukdar, 2004; Bonfrer and Chintagunta, 2004).

Although the first study shows only a limited effect, it is conceivable that the event was not strong enough (Monga and John, 2008; Jeon and Baeck, 2016) or specific enough (Laczniak *et al.*, 2001) to attribute complete responsibility to the retailer. The arousal theory posits that the effect of publicity on consumers depends on the level of arousal it induces (Ray and Wilkie, 1970; Henthorne *et al.*, 1993). *Level of arousal* is a key factor when dealing with publicity that invokes fear, especially fear that relates to health, as manifested in the current study. A low level of fear does not induce any reaction, but once a certain level has been reached, the higher the threat, the greater its consequences on the consumer. According to the theory, there is a positive relationship between the levels of emotional arousal created by a published event and the degree of attitude and

behavior change (Higbee, 1969). Following this perspective, the negative event arousal was not strong enough to attribute blame to the retailer, apart from the PLB or product-related image. Accordingly, Study 2 is applied, which measures the effect of a more serious event.

Study 2

Methodology

Study procedure and measurements

Study 2's procedure, product and measurements are identical to those of Study 1, and the same retailer and PLB were used as subjects. The publicity was presented using the same phrase, except in this case, the event was much more extreme (see Appendix 2). The seriousness between the two events was confirmed in two procedures (Wason *et al.*, 2002). First, it was examined and confirmed by teams of three communication experts. Next, the events' level of seriousness was re-examined by students ($N = 30$). Each subject saw two events; however, the presentation order of the two events was counterbalanced. Following a careful explanation of the events, subjects were asked to rate their agreement with statements about the degree of the events' seriousness, using a seven-point scale (1 = not at all, 7 = very much). A one-item scale was used for each event (Lee and Mason, 1999). Though both events were rated as severe cases, a paired sample test showed significant differences between the events ($M = 5.07$, $SD = 1.60$ for the moderate case and $M = 6.20$, $SD = 1.15$ for the more extreme case, $t = -5.19$, $p < 0.01$), and confirmed the treatment conditions.

Sample

Overall, 194 participants completed the questionnaire and their responses were used in this study; 95 were exposed to extreme NP, while 99 were not. Forty per cent of the respondents were male and 60 per cent female; the average age (75 per cent) ranged between 26 and 55 years; average income or above (80 per cent); and approximately all subjects reported participating in family shopping trips (99 per cent). The majority (86 per cent) said they do most of the family shopping or at least as much as their partners do. Respectively, 95 per cent reported doing some amount of shopping in the chosen chain, and 60 per cent said they were highly familiar with the chain's PLB. No significant differences regarding their observed traits were found between the two populations.

Comparing the two study samples reveals no significant differences regarding most of the subjects' traits, besides gender and shopping in the chain. The second study included more women, and slightly more frequent shoppers in the chain.

Results

Validity and reliability

The same procedure as in the first study was used. In each study, items were subjected to two exploratory factor analyses with Varimax rotation and factors with eigenvalues greater than 1 were retained. Five factors were produced for chain image, explaining 87 per cent of the cumulative variance. Two factors were produced for PLB image, explaining 77 per cent of the cumulative variance. Harman's one-factor test (Podsakoff *et al.*, 2003) shows that the single factor accounted

for 40.83 of the total variance. This procedure indicates that CMB may not be a severe problem. All items demonstrated high internal validity (acceptable loading); the internal consistency was examined using Cronbach's alpha. The coefficients' range was 0.81–0.93, displaying acceptable reliability of the measurements. Means were then calculated and examined for each factor. Table IV illustrates the items' loading range and Cronbach's alphas for the variables.

Hypotheses testing

In Study 2, similar to Study 1, the study objectives were conducted in two steps.

In the first step, the same research hypotheses are addressed by examining mean differences between images' rate without NP, and images' rate with NP. Table V presents the differing rates of the total measures according to publicity.

For PLB, each dimension (factors) is examined separately, but the dimensions were not combined because no correlation was found to exist between them. However, for store image, each dimension was checked separately, as well as the overall image as a combined variable because of the high correlation between the dimensions. Here also, a confirmatory factor analysis was conducted to confirm this latent construct of store image (χ^2 value = 1.47(1), $p = 0.225$; CFI = 0.999; NFI = 0.997; RMSEA = 0.049). The beta-coefficients of all dimensions were also above 0.5, showing an acceptable and good fit for all measures.

The results indicate (Table V) that for PLB dimensions, mean differences are significant ($p < 0.05$); buying intention rate with NP ($M = 2.44$) is significantly lower (t -test = -3.73 , $p < 0.00$) than without NP ($M = 3.09$). The same result is found for PLB quality image ($M = 4.41$ and $M = 4.80$ accordingly, t -test = -2.45 , $p < 0.05$). The regression tests (after adding PLB familiarity and shopping at the retail chain as control variables) indicate the negative effects on buying intention ($t = -3.52$, $p < 0.01$) and PLB quality image ($t = -2.42$, $p < 0.05$). Therefore, in Study 2, $H1$ is also accepted.

With regard to store image, the combined measure (Table V) reveals a significant difference between the groups and an effect for overall store image (without NP $M = 4.89$ and with NP $M = 4.33$, t -test = -4.11 , $p < 0.01$). A regression test, after adding PLB familiarity and shopping at the retail chain as control variables, also indicates the negative effect ($t = -4.03$, $p < 0.01$). Additionally, regarding the

Table IV Variables' reliability and factor loadings

Variables	No. of items	Factor loadings ^a	Cronbach's alphas
PLB image factors			
Buying intention	3	0.872-0.913	0.874
Quality	3	0.831-0.884	0.815
Store image factors			
Service	3	0.640-0.868	0.929
Products quality	3	0.640-0.815	0.912
Products variety	3	0.775-0.781	0.837
Prices image	3	0.651-0.832	0.812
Convenience	3	0.744-0.818	0.858

Notes: ^aPLB image factors: total variance explained = 76.7%; store image factors: total variance explained = 86.7%

Table V Variables' mean differences—with and without NP

Variables	Without NP		With NP		t-test	p (2-tailed)
	Means	SD	Means	SD		
PLB buying intention	3.09	1.249	2.44	1.210	-3.730	0.000
PLB quality	4.80	1.008	4.41	1.211	-2.447	0.015
Store total image	4.89	0.956	4.33	0.929	-4.115	0.000
Store service	4.95	1.248	4.30	1.186	-3.723	0.000
Store products quality	5.05	1.247	4.29	1.116	-4.396	0.000
Store products variety	4.95	1.229	4.67	1.167	-1.666	0.096
Store prices image	4.11	1.093	3.67	1.112	-2.763	0.006
Store convenience	5.40	1.045	4.74	1.042	-4.405	0.000

dimensions' measures, a significant negative effect of NP was found for most of the measures, except for the products' variety dimension, where the effect is quite marginal (t -test = -1.67 ; $p < 0.10$). Therefore, $H3$ is generally accepted, despite the fact that it was only marginal in regard to one of the dimensions.

In the second step, a path analysis was conducted to check the effect of NP on PLB image dimensions and for overall store image (using AMOS 19 and SEM). Additional variables – value for money, PLB familiarity and shopping frequency – were added in the chain. The three-step procedure for the moderation check was used as in Study 1.

A similar analysis (as in Study 1) of the distribution of data showed that the data do not differ significantly from normality in most cases. Therefore, the maximum likelihood method is appropriate and was applied to estimate the parameters. The path analysis results show that the overall fit statistics (goodness of fit measures) exhibit an acceptable level of fit (χ^2 value 18.07 (13), $\chi^2/df = 1.39$, $p > 0.05$); CFI = 0.988; NFI = 0.960; RMSEA = 0.045), indicating that the path model is valid. The path model, regression standardized coefficients and their significance are illustrated in Figure 3. The model demonstrates the relationships between the variables. Table VI shows the variables' direct and indirect relationships and the statistical measures.

Figure 3 indicates that there are negative and direct relationships between NP and PLB image dimensions ($\beta =$

-0.19 for quality and $\beta = -0.16$ for buying intention). Likewise, there is a significant negative and direct relationship between NP and store image ($\beta = -0.22$). Store image has a significant negative and direct relationship with PLB quality ($\beta = -0.26$), but no relationship with PLB buying intention. Therefore, $H1$ and $H3$ are accepted, while $H2$ is generally rejected.

A negative relationship is also found between NP and value for money ($\beta = -0.18$). The results further show significant positive and direct relationships between value for money and the dependent variables – store image ($\beta = 0.26$), PLB quality ($\beta = 0.24$) and PLB buying intention ($\beta = 0.20$). These paths indicate partial mediation of value for money on store image (bootstrap with 95 per cent CI: -0.18 to -0.04 , $p < 0.01$) and PLB buying intention (bootstrap with 95 per cent CI: -0.22 to -0.02 , $p < 0.01$), but not on PLB quality (bootstrap with 95 per cent CI: -0.08 to 0.20 , $p > 0.05$). Therefore, $H6a$ is accepted, while $H6b$ is only partially accepted.

The regression results show a moderation effect only in a specific case. The NP and frequency of shopping interaction variable has a negative relationship with PLB buying intention ($\beta = -0.23$). This indicates that frequency of shopping in the chain strengthens the negative relationship between NP and PLB buying intention, which means that NP has a significantly stronger negative effect on PLB buying intention when frequency of shopping is higher.

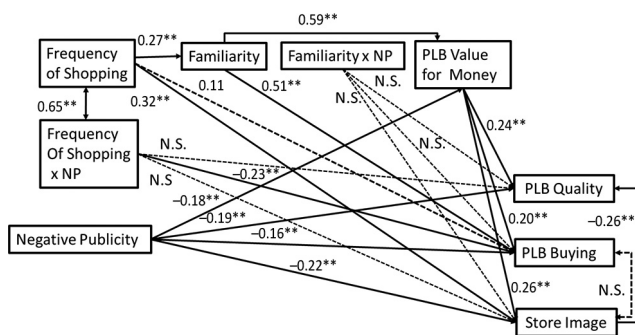
Additionally, familiarity shares direct relationships with PLB buying intention ($\beta = 0.51$) and value for money ($\beta = 0.59$). Frequency of shopping shares direct relationships with store image ($\beta = 0.32$) and familiarity ($\beta = 0.27$), but an insignificant relationship with PLB buying intention ($\beta = 0.11$). Considering the above results, $H4$ and $H5$ were rejected.

Discussion

The results of Study 2 reveal that when NP is extreme, the effect on PLB image exceeds that of retailer's store image. The effect is reflected in the general construct of retailer's store image and also in its distinct dimensions.

The path analysis model's findings are partially consistent with those observed in Study 1, with some exceptions. There is a direct and negative path from NP to general store image, and a direct and negative path from general store image to PLB quality image. These last two findings are very interesting. First, a serious enough NP event has a strong

Figure 3 PLB image, Retailer's store image and key antecedents – Study 2: path analysis model^a



Notes: ^aParameters are standardized parameter estimates and only significant paths are displayed. Dotted lines represent non-significant paths; * $p < 0.05$; ** $p < 0.01$



Table VI Variables' direct and indirect significant relationships

Relationships	Standardized effect			Regression weights (direct)		
	Total	Direct	Indirect	Estimate	C.R.	p
NP → Total store image	-0.264	-0.216	-0.048	-0.422	-0.3441	<0.000
NP → PLB quality image	-0.164	-0.190	0.026	-0.426	-2.685	<0.01
NP → PLB buying intention	-0.196	-0.160	-0.036	-0.401	-2.989	<0.01
NP → Value for money	-0.181	-0.181	0.000	-0.565	-3.185	<0.01
NP*Frequency of shopping → PLB Buying intention	-0.229	-0.229	0.000	-0.440	-3.322	<0.000
Total store image → PLB Quality image	-0.262	-0.262	0.000	-0.301	-3.521	<0.000
Frequency of shopping → Total store image	0.360	0.318	0.042	0.261	5.084	<0.000
Frequency of shopping → PLB Buying intention	0.275	0.107	0.168	0.113	1.521	N.S.
Frequency of shopping → Value for money	0.158	0.000	0.158			<0.000
Frequency of shopping → Familiarity	0.268	0.268	0.000	0.391	3.864	<0.000
Value for money → Total store image	0.264	0.264	0.000	0.164	4.146	<0.000
Value for money → PLB Quality image	0.172	0.241	-0.069	0.173	3.301	<0.000
Value for money → PLB Buying intention	0.197	0.197	0.000	0.158	2.971	<0.01
Familiarity → Total store image	0.155	0.000	0.155			<0.01
Familiarity → PLB Buying intention	0.626	0.510	0.116	0.368	7.626	<0.000
Familiarity → PLB Quality image	0.101	0.000	0.101			<0.05
Familiarity → Value for money	0.589	0.589	0.000	0.531	10.380	<0.000

influence on retailer's store image. Second, in an extreme case of NP, the retailer's store image negatively affects PLB quality image. It seems that people differentiate between images when attributing a cause to an event. People who have high store image perceptions tend to attribute blame to the PLB, while those who have low store image perceptions, and buy in the store only because of low prices or PLB, tend to attribute blame to the store. In these circumstances, value for money partially serves as a mediator. Consumers assess PLB quality compared to price (Ailawadi *et al.*, 2001) and national brands (Sethuraman and Gielens, 2014). NP may cause them to re-evaluate their PLB buying process, which may lead them to avoid buying PLB products, and penalize the PLB hosting chain.

Finally and surprisingly, the two-way interaction effect indicates that under extreme NP, frequency of shopping in the chain strengthens the negative relationship between NP and PLB buying intention. This indicates that steady and loyal chain consumers are highly insulted by NP, and this may cause them to stop buying the PLB products.

In the case of a negative, highly severe event, participants attribute the blame to the retailer. Can the same results be expected for all of the varied product categories? Research indicates that *product category* could be a moderator of consumer behavior in the case of PLB (Lee and Hyman, 2008; Koschate-Fischer *et al.*, 2014). An appropriate step for the current study is to make a distinction between functional and hedonic products. The significant effect of NP in the earlier studies could be explained as a function of the congruity between store type – a functional store – and product type – a functional product (Lee and Hyman, 2008). PLB products are typically purchased on the basis of price, reflecting a more cognitive decision process characterizing functional products (Koschate-Fischer *et al.*, 2014). In regard to hedonic products, on the other hand, consumers go through a more holistic process. Consumers may be expected to react differently to NP in the case of PLB (Koschate-Fischer *et al.*,

2014). Therefore, for further generalization, Study 3 is applied to measure the effect of the events in relation to the hedonic product category.

Study 3

Methodology

Study procedure and measurements

Study 3's procedure and measurements are identical to those of Studies 1 and 2. The same retailer and PLB were used as subjects. The written vignettes of the two studies were replicated, except the product category was changed (see Appendices 1 and 2). The product category in the two earlier studies was cleaning products and detergents, which are functional products (Lee and Hyman, 2008). In the current study, a hedonic product – cosmetic products – was chosen as the NP-related product category. The events' seriousness was then re-examined by students ($N = 44$). The procedure was identical to that of Study 2. A paired sample test showed significant differences between the events ($M = 4.24$, $SD = 1.45$ for the moderate case; and $M = 6.20$, $SD = 1.00$ for the more extreme case, $t = -11.658$, $p < 0.000$), and confirmed the treatment conditions.

Sample

Overall, 244 participants completed the questionnaire and their responses were used in this study; 83 were not exposed to NP, 82 were exposed to moderate NP, while 79 were exposed to extreme NP. Forty-six per cent of the respondents were male and 54 per cent were female; the average age (71 per cent) ranged between 26 and 55 years; average income or above (74 per cent); and approximately all subjects reported participating in family shopping trips (97 per cent). The majority (81 per cent) said they do most of the family shopping or at least as much as their partners do. Respectively, 93 per cent reported doing some amount of shopping in the chosen chain, and 58 per cent said they were highly familiar with the chain's PLB. Comparing the

samples of the current study reveals that regarding their observed traits, no significant differences were found among the three populations. Moreover, comparing Study 3 to the previous studies (Studies 1 and 2) yielded no significant difference in these traits.

Results

Validity and reliability: the same procedure as in the first and second studies was used. Four factors were produced for chain image, explaining 73 per cent of the cumulative variance. The items of variety and convenience were loaded onto the same factor and separated by confirmatory factor analysis. Two factors were produced for PLB image, explaining 71 per cent of the cumulative variance. All items demonstrated acceptable loading. Harman’s one-factor test (Podsakoff *et al.*, 2003) shows that the single factor accounted for 34.59 of the total variance. This procedure indicates that CMB may not be a severe problem. The internal consistency was examined using Cronbach’s alpha, coefficients’ range was 0.69–0.90, displaying acceptable reliability of the measurements. Means were then calculated and examined for each factor. Table VII illustrates the items’ loading range and Cronbach’s alphas for the variables.

Hypotheses testing: Similar to Studies 1 and 2, the study objectives were conducted in two steps. In the first step, the same research hypotheses were addressed by examining mean differences between images’ rate without NP, and images’ rate with two levels of NP. Table VIII presents the

Table VII Variables’ reliability and factor loadings

Variables	No. of items	Factor loadings ^a	Cronbach’s alphas
PLB image factors			
Buying intention	3	0.876-0.887	0.864
Quality	3	0.751-0.818	0.690
Store image factors			
Service	3	0.807-0.886	0.896
Products quality	3	0.638-0.878	0.870
Products variety	3 ^b	0.561-0.853	0.738
Prices image	3	0.763-0.854	0.810
Convenience	3 ^b	0.462-0.772	0.853

Notes: ^aPLB image factors: total variance explained = 70.8%; store image factors: total variance explained = 73.1%; ^bboth factors were united in the factor analysis and were separated by confirmatory factor analysis

Table VIII Variables’ mean differences – with and without NP

Variables	Without NP		With NP		With extreme NP		F-test	p
	Means	SD	Means	SD	Means	SD		
PLB buying intention	3.10	1.35	2.38	1.11	2.44	1.28	8.266	0.000
PLB quality	4.65	1.03	4.12	1.02	4.11	0.95	7.927	0.000
Overall store image	4.50	1.00	4.34	0.80	4.49	0.77	0.825	0.440
Store service	4.58	1.23	4.42	1.10	4.37	1.08	0.755	0.471
Store product quality	4.50	1.19	4.07	1.23	4.39	1.04	3.133	0.045
Store product variety	4.83	1.20	4.70	0.96	4.89	0.93	0.704	0.496
Store prices image	3.71	1.24	3.63	0.92	3.78	0.97	0.431	0.650
Store convenience	4.91	1.23	4.90	1.09	5.02	1.05	0.287	0.751

differing rates of the total measures according to publicity. As in previous studies, for PLB image, each dimension (factors) was examined separately. For store image, each dimension was checked separately, as well as the overall image as a combined variable. Confirmatory factor analysis was conducted to confirm this general latent construct of store image (χ^2 value = 8.02(5), $p = 0.156$; CFI = 0.993; NFI = 0.983; RMSEA = 0.050). The beta-coefficients of all dimensions were above 0.5, showing an acceptable and good fit for all measures.

The results show (Table VIII) that for PLB buying intention, there are significant mean differences (F -test = 8.27, $p < 0.001$) between the rate with no NP ($M = 3.10$) and the rate with NP events ($M = 2.38$ for a medium event, $t = 3.33$, $p < 0.01$; $M = 2.44$ for an extreme event, $t = 3.18$, $p < 0.01$). The same results are found for PLB quality image ($M = 4.65$; $M = 4.12$, $t = 3.71$, $p < 0.01$; and $M = 4.11$, $t = 3.50$, $p < 0.01$, respectively; F -test = 7.93, $p < 0.001$). The regression tests (after adding PLB familiarity and shopping at the retail chain as control variables) indicate the negative effects on buying intention ($t = -3.22$, $p < 0.01$) and PLB quality image ($t = -2.78$, $p < 0.05$). Therefore, in Study 3 (hedonic products), $H1$ is also accepted.

With regard to store image, the combined measure (Table VIII) reveals no significant difference between the groups, and no effect for overall store image (without NP $M = 4.50$, with a medium level of NP $M = 4.34$, and with an extreme level of NP $M = 4.49$; F -test = 0.825, $p > 0.10$). Therefore, in Study 3 (hedonic products), $H3$ is rejected.

In the second step, a path analysis was conducted to check the effect of NP on PLB image dimensions and for overall store image. As there were no significant differences in the results between the treatment groups (medium and extreme events), the groups were combined into one treatment category and compared in the analysis to the control group. As in the previous measures, additional variables were added – value for money, familiarity and frequency of shopping in the chain and the three-step procedure for the moderation check was used as in Study 1. A similar analysis (as in Study 1) of the distribution of data showed that the data do not differ significantly from normality in most cases. Therefore, the maximum likelihood method is appropriate and was applied to estimate the parameters. The path analysis results show that the overall fit statistics (goodness of fit measures) exhibit an acceptable level of fit (χ^2 value 11.33 (11), $\chi^2/df = 1.133$, $p > 0.05$); CFI = 0.995; NFI = 0.964; RMSEA = 0.023),



indicating that the path model is valid. The path model, regression standardized coefficients and their significance are illustrated in Figure 4. The model demonstrates the relationships between the variables. Table IX shows the variables' direct and indirect relationships and the statistical measures.

Figure 4 indicates that there are negative and direct relationships between NP and PLB image dimensions ($\beta = -0.25$ for quality and $\beta = -0.17$ for buying intention). However, there is no significant negative and direct relationship between NP and store image. Thus, H1 is accepted, while H3 is rejected.

Store image has a significant negative and direct relationship with PLB quality ($\beta = -0.28$), but no relationship with PLB buying intention. Therefore, H2 is generally rejected.

The results further show significant positive and direct relationships between value for money and the dependent variables – store image ($\beta = 0.35$), PLB quality ($\beta = 0.13$) and PLB buying intention ($\beta = 0.19$). However, no significant negative relationship is found between NP and value for

money, indicating that there is no mediation of value for money. Therefore, H6a and H6b are rejected.

The results further show that familiarity has direct relationships with buying intention ($\beta = 0.43$) and value for money ($\beta = 0.51$). Frequency of shopping shares direct relationships with store image ($\beta = 0.29$) and familiarity ($\beta = 0.27$). However, no moderation effects of familiarity and frequency of shopping in the chain are found. Therefore, H4 and H5 are rejected.

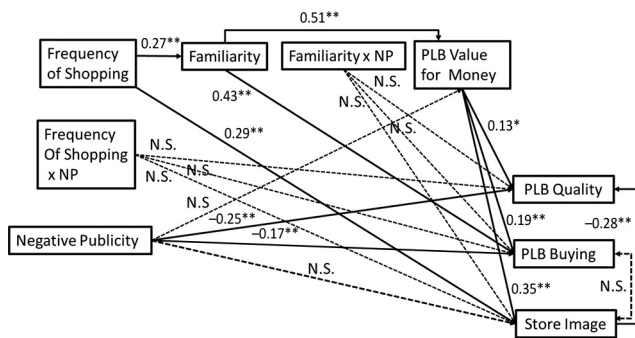
Discussion

The results of Study 3 reveal that NP, in the case of a hedonic product category, influences PLB image, while the effect on PLB image did not exceed that of the retailer's store image in either the moderate event or the extreme event. It seems that in the case of a hedonic product category, the consumer's judgment is more holistic than cognitive (Koschate-Fischer et al., 2014), and thus is less susceptible to the effects of NP (Monga and John, 2008). PLB grocery store products are more functional than hedonic (Lee and Hyman, 2008). As the NP events were related to incongruent, hedonic PLB products, further judgment toward the retailer was curbed. The negative effect was directed solely toward the PLB and the consumer did not attribute the fault to the retailer. Regarding the antecedents, the path analysis model's findings reveal neither mediation nor moderation.

General discussion and implications

In the current era of online discussions, brands cannot avoid negative consumer reviews (Ullrich and Brunner, 2015), and NP regarding products and companies has become a widespread phenomenon (Cleeren, 2015). The main goal of the current study was to explore the effects of NP in the PLB sphere. With respect to previous studies that found interdependency between store image and PLB image, the intention was to empirically test this interdependency in the case of NP. The issue was approached by testing the effect of PLB-related NP on a

Figure 4 PLB Image, retailer's store image and key antecedents – Study 3: path analysis model^a



Notes: ^aParameters are standardized parameter estimates and only significant paths are displayed. Dotted lines represent non-significant paths; * $p < 0.05$; ** $p < 0.01$

Table IX Variables' direct and indirect significant relationships

Relationships	Total	Standardized effect		Regression weights (direct)		
		Direct	Indirect	Estimate	CR	p
NP → PLB Quality image	-0.249	-0.249	0.000	-0.539	-4.141	<0.000
NP → PLB Buying intention	-0.171	-0.171	0.000	-0.465	-3.295	<0.000
Total store image → PLB Quality image	-0.280	-0.280	0.000	-0.334	-4.307	<0.000
Frequency of shopping → Total store image	0.338	0.289	0.049	0.208	5.004	<0.000
Frequency of shopping → PLB Buying intention	0.143	0.000	0.143			<0.000
Frequency of shopping → PLB Quality image	-0.076	0.000	-0.076			<0.01
Frequency of shopping → Familiarity	0.271	0.271	0.000	0.370	4.379	<0.000
Frequency of shopping → Value for money	0.139	0.000	0.139			<0.000
Value for money → Total store image	0.350	0.350	0.000	0.208	6.158	<0.000
Value for money → PLB Quality image	0.036	0.134	-0.098	0.095	2.049	<0.05
Value for money → PLB Buying intention	0.192	0.192	0.000	0.171	3.233	<0.01
Familiarity → Total store image	0.179	0.000	0.179			<0.000
Familiarity → PLB Buying intention	0.529	0.431	0.098	0.340	7.171	<0.000
Familiarity → Value for money	0.512	0.512	0.000	0.454	9.285	<0.000

private label's brand image and the store chain image it is connected to.

As expected, NP toward the PLB product damaged the PLB's general image, regardless of the NP's level of severity or the type of PLB category. However, concerning retailer store image, it was found that a serious effect on the retailer's store image should only be expected in the case of a very extreme, negative event, together with PLB product-store type congruence. The findings reveal partial interdependency between store image and PLB image. In the case of congruity and moderate NP, people differentiate between the two entities and perceive PLB as one of many brands to be found in the store because PLB products are part of a variety of brands available in the retailer store. Therefore, NP directed toward PLB products primarily affects PLB image, but also extends to retailer's store product-related image dimensions. However, an extreme negative event reflects retailer negligence and, consequently, blame and dilution of the retailer's general store image. In the case of incongruity, people do not associate PLB with the store, even in an extreme NP event; thus, there is no spillover and no blame to the store.

This study provides both theoretical and practical contributions. From the theoretical perspective, the findings of the three studies advocate the impact of NP on PLB general image and signify a halo effect (Boatwright *et al.*, 2008). Consumers associate one image with PLB; therefore, the negativity often spreads, encompassing the entire PLB product range. Second, it seems that there is not necessarily an interrelation between PLB image and store image. The interrelation exists when there is congruence between the retailer's store category and the PLB product category. Third, the findings partially reinforce arousal theory by showing that, when dealing with publicity, a certain level of arousal must exist to change a consumer's level of attitude and behavior (Higbee, 1969). However, this is only applicable in the case of congruity between entities. This means that for PLB-related NP to spill over and have an impact on the retailer's store, two conditions must first exist: a certain level of arousal and a certain level of congruency between the PLB product category and the store category. Fourth, allocating responsibility for the negative event, in the three studies, supports the fairness theory perspective (Dean, 2004). Consumers' pre-existing store impressions influence their evaluation process. When consumers perceived the negative event as being under the retailer's control, they held the retailer responsible and changed their attitude. However, when they did not think the retailer was responsible, the publicity effect was limited to the product-related image context and did not include store-related image. Fifth, some researchers argue that NP may have some positive effects, such as increasing consumers' product awareness or accessibility (Berger *et al.*, 2010). This suggestion has been repudiated in the current study, because of participants' familiarity with the relevant PLB.

The literature clearly emphasizes the difficulty of overcoming the impact of NP (Monga and John, 2008; Berger *et al.*, 2010); denials and direct refutations are mostly ineffective (Monga and John, 2008). Recent studies suggest

mitigating the damage with sincere apologies (Yuan *et al.*, 2016) and self-disclosure of crises (Claeys *et al.*, 2016). Yet, the current study offers several possible courses of action from a practical and managerial perspective. First, because of the proposition of a "spillover" effect from a specific PLB product to the entire range of PLB product categories, the retailer should immediately remove the "infected" product from the shelves. At the same time, the retailer should publicly expose some of the best value-perceived PLB products through a heavy advertising campaign, using creative consumer testimonies. Regarding the removed PLB product, the retailer should examine possible improvement within reasonable cost margins; however, this reintroduction should take place only after some time has elapsed, when the NP has almost been forgotten, and preferably accompanied by experts' recommendations. Second, study findings indicate that customers perceive PLB as one of the brands available to them in the store, and differentiate between PLB and the retailer. On the other hand, in the case of congruency between PLB products and store type, severe defects do have an influence on store image, as they reflect the retailer's negligence regarding proper inspection and selection of the various brands available in the store. PLB carries a proprietary element, indicating the exclusiveness of the defects to the retailer's store, which might have more serious impacts on the store. Thus, the selection of the PLB manufacturer or supplier is highly important – just as important as the selection of the various national brands available in the store. This indicates that retailers should avoid extreme NP, despite the difficulties, through strictness and caution when selecting manufacturers or suppliers for their products, and particularly in the case where there is congruence between product category and store type, because of the spillover potential. Retailers cannot entirely avoid negligent or inadequate suppliers; however, they can reduce these types of mistakes by frequent, strict inspections. Third, a more promising course of action is the building of a long-term strategy to create strong PLB perceptions, which encourage consumers to focus on pro-brand sentiments, supportive counterarguments against NP (Ahluwalia *et al.*, 2000; Dawar and Pillutla, 2000; Pullig *et al.*, 2006), and further reducing of NP salience. This strong PLB image may be developed through advertising and consistent quality (Sethuraman and Gielens, 2014). Research indicates that consumers with strong brand attitudes are unlikely to be affected by NP (Monga and John, 2008; Jeon and Baeck, 2016). Another way to moderate or prevent potential damage resulting from events related to PLB products is to constantly engage in public relations through corporate social responsibility programs, sponsorships (Rea *et al.*, 2014; Elg and Hultman, 2016) and donations (Xie and Keh, 2016). Retailers usually emphasize the chain or the store in these activities. It is recommended to divert some of the public relations to the PLB as an alternative way to create pro-brand sentiments and promote a process that encourages positive attitudes toward the PLB, which also supports counterarguments and places less weight on potential NP (Monga and John, 2008; Jeon and Baeck, 2016). Fourth, familiarity with PLB and value for money are notable factors that strengthen both PLB and

store image. Retailers should encourage customers' experience with PLB products. Good and lasting experience leads to positive familiarity, which reduces reliance on external cues (Mieres *et al.*, 2006), prevents brand responsibility in case of crises and enhances PLB buying proneness (Khan and Rahman, 2016). Experience can be encouraged through in-store sales promotion (Levy and Gendel-Guterman, 2012). Last but not the least, managers only have a short time in which to react to NP. Thus, from the beginning of operations, crisis management strategies should be chosen and used immediately by retailers in the case of NP, according to the specific situation.

The current study has limitations that should be considered, and some directions for future research. First, the three studies were conducted at different points in time. Future studies should try to conduct the cases of NP at the same time. Second, to prevent the influence of newspaper credibility on respondent reaction, the NP events were attributed to an anonymous newspaper and the news sources were ascribed to an objective and trustworthy source. Future studies should check the effects of NP, while manipulating newspaper credibility. Third, the study focused on an existing and very familiar retailer; no attempt was made to control for the potential effect of previous negative experience with the retailer (Wason *et al.*, 2002). A new study, focused on a fictional retailer, could serve to strengthen the study's findings. Fourth, the current study treated PLB as the sole representative of the retailer's brand. In reality, retailers sometimes offer consumers several PLBs and several product qualities within the same store. Future studies should examine the interdependency issue when several PLBs exist at the same time. Fifth, the current study focused on PLB-related NP; future studies would be wise to focus on another direction and examine store-related NP (Sierra *et al.*, 2010) and its potential effect on PLB image. Sixth, the PLB image perspective of the current study follows previous studies that treat image through quality and buying intention facets (Hansen and Onozaka, 2011). Yet, there are other studies that favor attitude over buying intention (Vahie and Paswan, 2006). Nevertheless, the current study's perspective conveys some attitudinal components. *Quality perception* represents the brand's cognitions or beliefs, acquired by personal experience or information gathered from various sources, and expresses a cognitive component of attitude. *Buying intention* is a behavioral tendency that expresses a conative component of attitude (Schiffman *et al.*, 2008). Finally, this study was conducted under laboratory settings and used a sample composed of graduate students. While this is a legitimate experimental approach (Spangenberg *et al.*, 2006), it also limits the generalization of the findings. Future research can apply a field study under more natural settings.

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Appendix 1

Negative publicity content – a moderate case

A popular newspaper with high circulation has recently published an inquiry about the results of laboratory testing carried out by the National Consumer Council (Consumer Reports). Test findings reveal that the active ingredients in cleaning products and detergents/cosmetic products sold under the name of PLB XXX may be harmful to the health of product users. The National Consumer Council states that situations which endanger the health of the general public should be of concern to consumers.

Appendix 2

Negative publicity content – a more extreme case

A popular newspaper with high circulation has recently published news about eight people who were hospitalized this week after exposure in their home to cleaning products and detergents/cosmetic products sold under the name of PLB XXX. The active ingredients of the products caused severe allergy and asthma attacks that resulted in users' hospitalization. The Ministry of Health has published a warning to the public not to buy these products until further notice. The National Consumer Council (Consumer Reports) states that situations which endanger the health of the general public should be of concern to consumers.

Appendix 3

Table AI CFA-items' factor loading and variables' reliability and validity measures

Factor items	Standard coefficient	AVE	ASV	CR	Cronbach's alpha
<i>PLB image factors</i>					
Perceived quality		0.56	0.01	0.79	0.78
There is a great difference in overall quality between national brands and store brand "____'s" product items (R)	0.83*				
There is a great difference in ingredients' value between national brands and store brand "____'s" product items (R)	0.76*				
There is a great difference in quality between varied products of the "____" store brand (R)	0.64*				
Buying intention		0.68	0.04	0.86	0.86
I usually choose store brand "____'s" product items	0.79*				
I usually buy store brand "____'s" product items, if available	0.86*				
I buy various types of store brand "____" of product items	0.82*				
<i>Store image factors</i>					
Service		0.70	0.20	0.87	0.90
The employees at "____" store are very friendly	0.71*				
The service at "____" store is excellent	0.85*				
I am pleased with the service I receive at "____" store	0.93*				
Quality		0.66	0.21	0.86	0.89
"____" store sells only high-quality products	0.75*				
I can count on the excellence of the products I buy at "____" store	0.80*				
I like the quality of the products at "____" store	0.89*				
Variety		0.49	0.21	0.74	0.79
"____" store has a large variety of products	0.69*				
"____" store carries many types of product brands	0.73*				
Every type of product I need is available at "____" store	0.67*				
Price		0.58	0.15	0.80	0.81
I obtain value for my money at "____" store	0.91*				
The prices at "____" store are fair	0.80*				
I can purchase products for less at "____" store	0.52*				
Convenience		0.59	0.22	0.81	0.84
Shopping at "____" store is a pleasant experience	0.76*				
"____" store is a nice place to do shopping	0.84*				
The appearance of "____" store is clean and pleasant	0.69*				

Notes: *Standardized coefficients, $p < 0.01$; (R) Reverse coded; AVE = average variance extracted; ASV = average shared squared variance; CR = composite reliability; ** $N = 596$ (three samples); constructs fit [χ^2 value (161) = 474.1, $p < 0.05$ (χ^2/df , less than 3); CFI = 0.956; NFI = 0.936; and RMSEA = 0.057]

Appendix 4

Table All Correlations^a between variables and the MSV

Variable	1	2	3	4	5	6	7
1. PLB Image	1	0.017	0.003	0.002	0.026	0.017	0.001
2. PLB Purchase	0.13*	1	0.040	0.058	0.020	0.073	0.023
3. SI Service	-0.05	0.20*	1	0.325	0.260	0.160	0.384
4. SI Quality	-0.04	0.24*	0.57*	1	0.292	0.240	0.336
5. SI Variety	-0.16*	0.14*	0.51*	0.54*	1	0.250	0.410
6. SI Price	-0.13*	0.27*	0.40*	0.49*	0.50*	1	0.160
7. SI Convenience	-0.03	0.15*	0.62*	0.58*	0.64*	0.40*	1

Notes: * $p < 0.01$; ^aCorrelations are in the lower left side, while the MSV are in the upper right side; SI = store image

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