The moderating influence of supermarket satisfaction

on out-of-stock store switching behaviour

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Abstract

Consumer store switching behaviour – going to another store to buy an item that is out-of-stock – is often considered to be associated with high brand loyalty in combination with low store loyalty, making a study of the causes for such behaviour highly important to both store and brand managers. Based on a survey of 631 grocery consumers, this study investigates the moderating influence of preferred supermarket satisfaction on relations between quality consciousness, price consciousness, pre-planning propensity and out-of-stock store switching, and also examines the direct influence of these variables on out-of-stock store switching. The results indicate that whereas preferred supermarket satisfaction negatively moderates the relation between quality consciousness and out-of-stock store switching, preferred supermarket satisfaction positively moderates the relation between price consciousness and out-of-stock store switching. In addition, it is demonstrated that quality consciousness, price consciousness, and pre-planning propensity positively influence consumer out-of-stock store switching behaviour.

1. Introduction

Every consumer experiences from time to time that a required product is not in-store. Consumer reactions to an out-of-stock situation include store switching, item switching, postponement, purchase cancelling, category switching, and brand switching (Sloot, Verhoef & Franses, 2005; Corsten & Gruen, 2004; Verbeke, Farris & Thurik, 1998). Store switching behaviour – going to another store to buy the item that is out-of-stock – is often considered to be the reaction associated with the relatively highest brand loyalty in combination with the relatively lowest store loyalty (Sloot, Verhoef, & Franses, 2005), making a study of the causes for such behaviour highly important to both store and brand managers. Moreover, if a consumer decides to switch stores because the preferred brand is out-of-stock, this might result in a loss of sales in other categories as well. There is little agreement in the literature on the frequency with which consumers react to a stock-out situation by store switching, item switching, postponement, purchase cancelling, category switching, and/or brand switching (Zinn & Liu, 2001). For instance, comparing the few studies in this area Dadzie and Winston (2007) found a range of 22.2% (Schary & Christopher, 1979) to 83.4% (Walter & Grabner, 1975) of times consumers buy a substitute. Yet instead of assessing frequencies of substituting a preferred brand, determining the antecedents and moderators of brand vs. store switching behaviour (BvSSB) is more relevant because they can be influenced by managerial efforts. Previous research has suggested a number of antecedents of consumer out-of-stock behaviour including both product-related variables such as attractiveness and availability of alternatives (Campo, Gijsbrechts, & Nisol, 2000), perceived risk of switching to an alternative (Emmelhainz, Stock, & Emmelhainz, 1991), brand equity (Sloot, Verhoef, & Franses, 2005), the hedonic level of the product (Sloot, Verhoef, & Franses, 2005) and brand loyalty (Campo, Gijsbrechts, & Nisol, 2000; Sloot, Verhoef, & Franses, 2005); store-related variables such as store loyalty (Emmelhainz, Stock, & Emmelhainz, 1991; Campo, Gijsbrechts, & Nisol, 2000; Sloot, Verhoef, & Franses, 2005), and percentage of shopping trips at

survey store (Campo, Gijsbrechts, & Nisol, 2000); situation-related variables such as urgency (Zinn & Liu, 2001) and size of shopping trip (Sloot, Verhoef, & Franses, 2005; Campo, Gijsbrechts, & Nisol, 2000); and consumer-related variables such as complexity of decision-making process set (Fitzsimons, 2000), amount of purchase (Verbeke, Farris & Thurik, 1998), price consciousness, and quality consciousness (Sloot, Verhoef, & Franses, 2005).

Despite some research on out-of-stock reactions, only one study (Sloot, Verhoef, & Franses, 2005) has considered the influences of consumers' quality consciousness and price consciousness on BvSSB. While Sloot et al. considered the direct effects of quality consciousness and price consciousness on BvSSB among other out-of-stock consequences, no research has examined whether consumers' preferred supermarket satisfaction may moderate these relations. This is an important shortcoming since moderating effects suggest that price and quality consciousness may influence BvSSB differently depending upon the level of satisfaction with the preferred supermarket. This research seeks to address this shortcoming in the literature on BvSSB. An increased understanding of the influence of quality consciousness and price consciousness on BvSSB, and how supermarket satisfaction may moderate these effects, is also important since past research indicates that consumer brand preferences are derived from underlying general preferences (Jonsson, 1996). Moreover, investigating how interactions between consumer price and quality consciousness, respectively, and preferred supermarket satisfaction influence BvSSB may provide useful insights for retail managers seeking to segment supermarket customers. It is well-known that consumers' brand preferences may vary considerably over time (Franke, Keinz, & Steger, 2009), whereas consumers' general preferences are more stable. In addition, we also examine whether consumers' pre-planning propensity influences BvSSB, and whether consumers' preferred supermarket satisfaction may moderate the influence of consumers' pre-planning propensity on BvSSB. The specification of these effects owes inspiration to the two-state model proposed by Bucklin and Lattin (1991).

The remainder of the paper is organized as follows. First, the theoretical framework and hypotheses are introduced followed by a review of the methodology used to test the hypotheses. Next, the results are presented. Finally, the implications of the findings are discussed and suggestions for future research are provided.

2. Theoretical framework and research hypotheses

Our framework is based on cognitive effort theory (Payne, 1982; Cooper-Martin 1994; Garbarino & Edell 1997), cognitive consistency theory (Festinger, 1957; Heider, 1946, 1958, 1979; Osgood & Tannenbaum, 1955; Newcomb, 1953), the two-state model of purchase incidence and brand choice proposed by Bucklin and Lattin (1991), and attribution theory (Weiner, 1985, 1986; Fiske & Taylor, 1991; Tomlinson & Mayer, 2009). The proposed model of the antecedents and moderators of BvSSB is shown in Figure 1.

Insert Figure 1 about here

Cognitive consistency theory (Festinger, 1957; Heider, 1946, 1958, 1979; Osgood & Tannenbaum, 1955; Newcomb, 1953) provides a framework that is relevant to the quality and price consciousness hypotheses that we develop in this study. The theory suggests that a consumer faced with a decision problem (like buying a food product in a supermarket) seeks to

balance her/his knowledge, attitudes, goals, feelings or desires in order to serve her/his self-interest and to avoid a state of cognitive dissonance (Todd & Gigerenzer 2003). The notion that consumers will seek to establish mental justification in relation to their decision-making has been widely verified as an important determinant on consumers' propensity to act. For example, past research suggests that people will be less likely to consume hedonistic goods when the situation makes it difficult for them to justify it (Okada, 2005). On a similar note, Chernev (2005) found that consumers are likely to seek attribute-combinations that are easiest to justify. According to the comparison standards (CS) paradigm (Phillips & Baumgartner, 2002; Mick & Fournier, 1999; Maute & Forrester, 1993; Churchill & Suprenant, 1982; Oliver & DeSarbo, 1988), consumers can easily gain mental justification when their preferences are served (confirmed) in the marketplace and may experience a mental imbalance when preferences are negatively disconfirmed. The CS paradigm posits that consumers hold preconsumption preferences, observe product performance, compare performance with their standards, form confirmation or disconfirmation perceptions, combine these perceptions with standards levels, and then form summary satisfaction judgments (cf. Mick & Fournier, 1999). However, since consumers' processing capacity is limited they do not necessarily try to create justification for all decisions (Todd & Gigerenzer 2003); rather they primarily seek to justify decisions they are motivated to make and/or which are important to them (Kunda, 1990). Consistent with these notions we propose that consumers attaching high general weights to either low price (i.e., price consciousness) and/or high quality (i.e., quality consciousness) when shopping for groceries will presumably experience a significant mental imbalance if their preferences are not met, for instance when their preferred brand is out-of-stock, which in turn may encourage them to switch store in order to acquire the preferred brand. In contrast, consumers attaching more moderate general weights to either low price and/or high quality will presumably experience a less significant mental imbalance if their brand preference is not met. Most likely, these consumers will therefore be less inclined to switch store in order to acquire the preferred brand. This leads us to suggest the following hypotheses:

H1: Quality consciousness will positively influence out-of-stock store switching.
H2: Price consciousness will positively influence out-of-stock store switching.

Because research hypotheses must be specified unequivocally we use the term 'out-of-stock store switching' instead of the term 'BvSSB' in the specification of hypotheses H1-H7. Our operationalization of BvSSB (refer to 'Measurements' section) means that brand vs. store switching are inverse of each other such that a positive influence of variable *X* on out-of-stock store switching corresponds to a negative influence of variable *X* on out-of-stock brand switching, and vice versa.

The two-state model proposed by Bucklin and Lattin (1991) distinguishes between two modes of shopping behaviour according to whether consumers have planned their purchasing before entering the store. It suggests that consumers who have not planned their purchasing are more likely to process in-store information than consumers who have planned their purchasing. The two-state model is grounded in consumer information processing theory, which proposes that consumers are more likely to search for external information, and are also more likely influenced by point-of-purchase promotions, when decisions are constructed on the spot (i.e., in-store decisions) than when consumers have already made up their minds prior to arrival at the decision

environment (i.e., out-of-store decisions) (Bettman, Luce, & Payne 1998). Based on such notions, we expect consumers who have planned their purchase to be less willing to substitute the out-of-stock product with another brand. We hypothesize as follows:

H3: Pre-planning-propensity will positively influence out-of-stock store switching.

In this study we propose that supermarket satisfaction moderates the relations specified above between quality consciousness, price consciousness, pre-planning propensity, and out-of-stock store switching (see hypotheses H5-H7 below). In addition hereto, we suggest that supermarket satisfaction may have a direct influence on out-of-stock store switching. It has been shown that satisfaction with the preferred store positively influences store loyalty (Macintosh & Lockshin 1997; Olsen 2002). Moreover, recent research suggests that preferred supermarket satisfaction lessens potential anticipated benefits of extra search in competing stores (Baltas, Argouslidis, & Skarmeas, 2010). Satisfaction may be conceptualized as a facet (attribute-specific) or as an overall (aggregate) characteristic. Also, the characteristic can be viewed as transaction-specific (encounter satisfaction) or as cumulative (satisfaction over time). Similar to Dimitriades (2006) and Levesque and McDougall (1996), satisfaction is in the present study conceptualized as an overall, cumulative consumer evaluation towards a supermarket. The following hypothesis covers our reasoning:

H4: Preferred supermarket satisfaction will negatively influence out-of-stock store switching.

When consumers' preferred brand is out-of-stock consumers have to decide between brand switching and store switching (or other reactions such as postponement of purchase or purchase cancelling). That is, consumers must solve the cognitive conflict of whether to be faithful to their preferences (or their planned intentions) or to the store patronaged. In this regard, assimilation-contrast theory posits that consumers form judgments of stimuli by determining a standard of comparison to evaluate the target. When the evaluation of an alternative product brand is moving away from the point of reference (i.e., the preferred brand), a contrast effect is occurring. On the other hand, when the evaluation of an alternative product brand tends to move toward the point of reference (i.e., the preferred brand), the phenomenon is known as assimilation (Levin, 2002). On a similar note, research on cognitive conflicts suggests that the task of choosing between alternatives orients the consumers to look for reasons to choose, which also requires a relative attractiveness judgment (Ganzach 1995; Nagpal & Krishnamurthy, 2008). Evidence indicates that the perceived level of similarity influences whether new context information instigates assimilative interpretation or contrastive comparison processes (Stapel & Koomen, 1998). More specifically, when an unambiguous comparison standard (such as price) is available it more readily invites to contrasts effects than when consumers are judging ambiguous product characteristics (e.g., the interpretation of the quality of alternative brands), which more likely will produce assimilation effects. Hence, when confronted with an out-of-stock situation, quality conscious consumers are expected to be more likely than price conscious consumers to show an assimilation effect, whereas price conscious consumers are more likely than quality conscious consumers to show a contrast effect.

Although cognitive consistency theory proposes that humans are motivated by the pursuit of internal consistency, numerous empirical studies also suggest that consumers' aim for internal

consistency is susceptible to contextual influence. Consumers sometimes neglect, or even alter, their preferences as a consequence of contextual influences such as consumers' emotional state at the time of choice (Nygren, Isen, Taylor, & Dulin, 1996) and the way in which choices are framed (Kahneman & Tversky, 1984; Tversky & Kahneman, 1986). The influence of such factors may even lead consumers to reverse their initially stated preferences or intentions (Hsee, 1996, 1999) or to create illusions of preference consistency (Wells & Iyengar, 2005). In a similar vein, Abelson and Rosenberg's theory of Symbolic Psycho-Logic (Abelson & Rosenberg, 1958; Rosenberg & Abelson, 1960) posits that a person experiencing mental imbalance will try to redress the cognitive state by altering the relations, modifying the elements, or avoiding the issue altogether. In incidents where the consumer is generally satisfied with the patronaged supermarket it provides a reason to stay (Nygren, Isen, Taylor, & Dulin, 1996) and the consumer may neglect that her/his preferences are not fully met or that cognitive effort and time has been expended in planning the shopping, in order to achieve cognitive consistency. Such a scenario is especially likely to occur when assimilation effects take place since assimilation means that unfulfilled preferences are more easily accepted. The following hypothesis is therefore proposed:

> H5: The influence of quality consciousness on out-of-stock store switching is negatively moderated by preferred supermarket satisfaction, such that quality consciousness has a greater positive effect on out-of-stock store switching when preferred supermarket satisfaction is low compared to high.

Contrasts effects are associated with a large mental imbalance since switching to another brand do not match important preferences. Attribution theory (Weiner, 1985, 1986; Fiske & Taylor, 1991; Tomlinson & Mayer, 2009) posits that in such situations consumers are especially motivated to understand failures in terms of locus of causality in order to deal with their mental imbalance. Locus of causality relates to the location attributed to the cause of an outcome. It could be an internal position (the cause is located in the consumer her-/himself or in one of her/his decisions), external (located in the supermarket that offers the service), or situational (located in environmental effects) (Oliver, 1993; Ryu, Park, & Feick, 2006). Attribution theory predicts that consumers are more likely to evaluate a supplier negatively when they make higher external attributions and lower situational (or internal) attributions towards a negative experience (Weiner, 1986). This is because the supplier is viewed as more responsible for the negative experience when external attributions are made, whereas the supplier is perceived to be less responsible for the negative experience when situational (or internal) attributions are made. Most likely, consumers with high preferred supermarket satisfaction would feel more negatively disconfirmed (i.e., out-of-stock is expected to be unlikely) than consumers with low preferred supermarket satisfaction (i.e., out-of-stock is not expected to be unlikely) when confronted with an out-of-stock situation. Therefore, the following hypothesis is proposed:

> H6: The influence of price consciousness on out-of-stock store switching is positively moderated by preferred supermarket satisfaction, such that price consciousness has a greater positive effect on out-of-stock store switching when preferred supermarket satisfaction is high compared to low.

Switching to another brand, or going to another supermarket, may involve switching costs. Switching costs are the one time costs facing the buyer of switching from one product brand to another, or from one supplier to another (Porter, 1980). Thus, high switching costs may act as an exit barrier (Gronhaug & Gilly, 1991). Switching costs include time, monetary and psychological costs (Gwinner, Gremler & Bitner, 1998; Bell, Auh & Smalley, 2005). Planning one's purchase before entering the supermarket requires time and cognitive effort. Marketing researchers have long recognized that consumer cognitive effort is central to understanding consumer behaviour (Alba & Marmorstein, 1987; Park, Mothersbaugh, & Feick, 1994). Specifically, cognitive effort and the quality of consumer actions are inherent in the effort–accuracy framework of cognition proposed by Payne (1982). According to this framework the primary objectives of a decision maker are to maximize the quality of her/his actions and to minimize cognitive effort. Cognitive effort is the amount of cognitive resources - including perception, memory, and judgment - devoted to a particular cognitive process or activity and is believed to vary with individual characteristics (knowledge, practices) and task demands (complexity of the task) (Cooper-Martin, 1994; Garbarino & Edell, 1997). Past research suggests that consumers have limited cognitive resources and allocate them judiciously (Payne, 1982; Garbarino & Edell, 1997). This is consistent with household production theory (Becker 1965, 1993), which suggests that consumers allocate effort in utility-producing activities. Within this allocation process leisure and various decision-making activities compete for the limited effort, which is constrained by available time. Thus, while cognitive effort is beneficial as it may lead to a successful resolution and reduction of choice uncertainty it is also costly and high cognitive effort may even lead to negative affect, especially if used in vain (Gabarino & Edell, 1997). If the preferred brand is out-of-stock, high pre-planning propensity means that more cognitive resources have been used in vain if the consumer chooses a substituting brand. In such incidents attribution theory suggests that the consumer would look for background causes of this negative experience. If the consumer feels that s/he is unexpectedly let down by the supermarket, staying in the supermarket may be incompatible with cognitive consistency (Nagpal & Krishnamurthy, 2008). In summary, we propose the following moderating effect involving pre-planning propensity and preferred supermarket satisfaction:

> H7: The influence of pre-planning propensity on out-of-stock store switching is positively moderated by preferred supermarket satisfaction, such that pre-planning propensity has a greater positive effect on out-of-stock store switching when preferred supermarket satisfaction is high compared to low.

3. Methodology

3.1. Data collection

The input for this research is provided by data from a survey of grocery shopping conducted in the greater Copenhagen metropolitan area. In this area, supermarket store density is very high, making it a reasonable option for consumers to switch to another store in response to an out-of-stock situation. The questionnaires were distributed to 1500 Danish households using the "drop-off-call-back" method. The target population consisted of households, and in order to draw a balanced proportion of respondents we applied stratified sampling. As stratification variables we used household income and dwelling type. 631 respondents constituted our final

sample. Respondents were those household members who were most often responsible for grocery shopping, resulting in an overweight of female respondents (65.7%) in the survey. The questionnaire was designed to measure the behavioural response of grocery shoppers to a stock-out situation of five different product categories.

3.2. Measurements

All constructs in our study are treated as latent unobservable variables. Thus, in order to obtain accurate measures the constructs were measured by multiple-item scales based on prior research. The final items for each construct are summarized in the appendix. Price and quality consciousness were each measured by three items derived from Sloot, Verhoef, and Franses (2005). A sample item from the scale measuring price consciousness is 'In general, how important are low prices to you when you are shopping for groceries'? (1=unimportant; 7=very important). A sample item from the scale measuring quality consciousness is 'In general, how important are high quality to you when you are shopping for groceries? (1=not important; 7=very important).' A three-item scale based on Arora (1985) measured consumer preferred supermarket satisfaction. Five items measured BvSSB with each item measuring consumers' propensity to switch to another supermarket if their preferred brand of product X is sold out. The five products included were shampoo, breakfast cereal, marinated herrings, meat pie, and detergent. A sample item for this scale is 'When shopping in your preferred supermarket, how likely is it that you would switch to another supermarket if your preferred brand of shampoo is out-of-stock (1=very unlikely; 7=very likely)'. Pre-planning propensity was measured by three items derived from Bucklin and Lattin (1991). A sample item from this scale is 'When shopping for groceries I write down beforehand what to buy (1=never; 5=always)'.

4. Results

4.1. Validation of measurements

We conducted confirmatory factor analysis (CFA) on the five latent factors, with each indicator specified to load on its hypothesized latent factor. Raw data was used as input for the maximum likelihood estimation procedure (Gerbing & Anderson, 1988). Table 1 summarizes the CFA results.

Insert Table 1 about here

The measurement model yields a chi-square of 162.77 (d.f.=109, p=.001). However, the Hoelter(0.05) (Hoelter, 1983) estimate (n=226) suggests that the lack of absolute fit can be explained by sample size. Thus, since the chi-square test is highly sensitive to sample size (MacCallum & Austin, 2000), other fit measures are given greater prominence in evaluating model fit (Ye, Marinova, & Singh, 2007). The root mean square error of approximation (RMSEA=.043), the comparative fit index (CFI=.98) and the normed fit index (NFI=.93) show a reasonable fit of the measurement model (Bagozzi & Yi, 1988). Composite reliability, which represents the shared variance among observed items measuring an underlying construct, (Workman, Homburg, & Jensen, 2003) was examined. All reliabilities exceeded .70 in our data, indicating good reliability of measured constructs (Bagozzi & Yi, 1988). Finally, extracted variance was greater than .5 for all latent constructs. In order to investigate discriminant validity the method proposed by Fornell and Larcker (1981) was applied, which requires that the

extracted variance for each individual construct should be greater than the squared correlation (i.e., shared variance) between constructs. An examination of Table 2 shows that the non-diagonal entries do not exceed the diagonals of the specific constructs and thus no single violation of the conditions for discriminant validity can be detected.

Insert Table 2 about here

These considerations indicate that the constructs do exist and that they are tapped by the measures used. For further testing of discriminant validity, we also compared the baseline measurement model to alternative models where covariances between pairs of constructs were constrained to unity (Anderson & Gerbing, 1988). In every case, the restricted model had a significant (p<.05) poorer fit than the unrestricted model suggesting sufficient discriminant validity. We used a CFA approach to Harmon's one-factor test as a diagnostic technique for assessing the extent to which common method bias may pose a serious threat to the analysis and interpretation of the data (Kandemir, Yaprak, & Cavusgil, 2006; Ramani & Kumar, 2008). The single latent factor accounting for all the manifest variables yielded a chi-square value of 1474.02 (d.f.=119, p<.01). A chi-square difference test between the chi-square values of the two models suggested that the fit of the one-factor model was significantly worse than the fit of the five-factor model ($\Delta\chi^2$=1311.25, Δd.f.=10, p<.01) indicating that the measurement model was robust to common method variance.

4.2. Hypotheses testing

We used a structural equation modeling (SEM) approach to test our hypotheses. Table 3 displays the results from estimating the hypothesized model of Figure 1.

Insert Table 3 about here

The hypothesized direct and moderating effects were estimated simultaneously. The moderating effects were formed using the residual-centered, two-step procedure recommended by Little, Bovaird, and Widaman (2006). First, for each of the specified interactions each of the possible product indicator terms was regressed onto the first-order effect indicators of the two constructs under consideration. Second, for each of these regressions, the residuals were saved and used as indicators of the interaction construct. This method is regarded superior to more common path models because it incorporates measurement error. Accounting for measurement error is beneficial because measurement error in exogenous and endogenous variables can attenuate regression coefficients and induce biased standard errors, respectively (Kaplan, 2009). The chi-square statistic was 2453.52 (d.f.=532, p<.01) indicating that the model fails to fit in an absolute sense. However, since the χ^2-test is very powerful when n is large, even a good fitting model (i.e., a model with just small discrepancies between observed and predicted covariances) could be rejected. The more robust fit indexes (CFI=.89; NFI=.90; RMSEA=.075) indicated an acceptable model fit.

Five of the seven hypothesized relations were supported in the study. Consistent with hypothesis 1, quality consciousness had a positive effect on out-of-stock store switching with β=.11, p=.04. Price consciousness had a positive influence on out-of-stock store switching β=.20, p<.01, which confirms hypothesis 2. Hypothesis 3 posited that pre-planning-propensity had a

positive influence on out-of-stock store switching. This hypothesis was supported with β=.12, *p*=.02. In contrast to our expectation, preferred supermarket satisfaction showed no direct influence on out-of-stock store switching β=-.06, *p*<.17, although the coefficient was in the expected direction. Hypothesis 4 was therefore not supported. As suggested, preferred supermarket satisfaction *negatively* moderated the relation between quality consciousness and out-of-stock store switching (β=-.09, *p*=.05). Hence, hypothesis 5 was accepted. Consistent with our expectation, preferred supermarket satisfaction *positively* moderated the relation between price consciousness and out-of-stock store switching (β=.10, *p*=.02); confirming hypothesis 6. Preferred supermarket satisfaction did not moderate the relation between pre-planning propensity and out-of-stock store switching, although the coefficient was in the expected direction (β=.04, *p*=.44). Thus, hypothesis 7 was not supported.

5. Discussion of results and implications

It was expected that satisfaction with preferred supermarket would increase the probability of store loyalty in stock-out situations, while price and quality consciousness, respectively, and pre-planning propensity would increase the probability of brand loyalty, i.e., in out-of-stock situations consumers would switch to another store to buy their preferred brand. While the latter was confirmed, the results show that satisfaction with the preferred supermarket has no direct statistically significant influence on out-of-stock store switching. This finding suggests that preferred supermarket satisfaction has its limits as an overriding antecedent of out-of-stock switching behaviour. Although this result was unexpected, similar results concerning the satisfaction-loyalty relationship has been evidenced in previous research, which often fails to show a strong association of satisfaction and loyalty (Oliver, 1999; Jones & Sasser, 1995; Nijssen, Singh, Sirdeshmukh, & Holzmüeller, 2003; Neal, 1999). By taking into account the moderating effect of preferred supermarket satisfaction, the present study contributes to the explanation and understanding of relations between price consciousness, quality consciousness, pre-planning propensity, and out-of-stock switching behaviour. As expected, the results indicate that preferred supermarket satisfaction negatively moderates the relation between quality consciousness and out-of-stock store switching. The results also confirmed that preferred supermarket satisfaction has a positive moderating influence on the relation between price consciousness and out-of-stock store switching. These findings have important implications for supermarket managers. While managers should be concerned that a low level of preferred supermarket satisfaction may have a negative influence on out-of-stock store loyalty for quality conscious consumers, they should also be concerned when preferred supermarket satisfaction is high since this may negatively influence out-of-stock store loyalty for price conscious consumers. It is well known that some consumers may emphasise price over quality, while others, in turn, may emphasise quality more than price (Zeithaml, 1988). Thus, some consumers may prefer a value package combining high quality and high price, while others may prefer a value package consisting of the combination of lower quality and reduced price. The perception of consumers that not many supermarkets offer high quality at low prices (Hansen & Solgaard, 2004), seems to suggest that supermarkets are either oriented at attracting quality conscious or price conscious consumers. In both incidents, the results of this study offer practical guidance to both supermarket and brand managers.

As regards the finding concerning quality consciousness, it seems that consumers have a certain trust in that their preferred supermarket is capable of offering brands of similar perceived

quality, otherwise they would switch store in an out-of-stock situation. This suggestion needs to be investigated further and is, again, very important for store managers to assess. As a more direct managerial implication, and consistent with the proposed assimilation effect, supermarket managers should very carefully select the brands offered within the same category when targeting quality conscious consumers. Product managers of quality brands, on the other hand, would highly benefit from developing procedures aimed at reducing the likelihood that their brand is out-of-stock in supermarkets.

Although supermarket satisfaction is normally associated with positive consequences for supermarkets, our results imply that high supermarket satisfaction can also backfire by negatively disconfirming price conscious consumers, which ultimately increases out-of-stock store switching propensity. Hence, the simple – but important – guidance to supermarkets seeking to attract, and hold on to, price conscious consumers is that they should prioritize never to be out-of-stock of any brand. However, since out-of-stock situations may take place due to failures in the marketplace over which supermarkets managers may have only little, or no, control, future research may wish to investigate whether satisfied price conscious consumers could be prevented from switching to other supermarkets if they are properly compensated – for instance by being offered price-reductions on alternative brands. Product managers of low priced brands should especially concentrate on developing strong consumer preferences for low prices, thereby inducing that consumers may show a contrast effect towards other alternative brands. In case their brand is out-of-stock in a certain supermarket contrast effects may act as safeguards in the marketplace since consumers would most likely hesitate from choosing alternative brands.

In our study, preferred supermarket satisfaction did not moderate the relation between pre-planning propensity and out-of-stock store switching, although the moderating effect was in the predicted (positive) direction. A fruitful avenue for future research would certainly be to explore alternative suggestions regarding this moderating effect. Additional consumer behaviour characteristics could be investigated to improve the understanding of the pre-planning propensity–out-of-stock switching relationship. For instance, pre-planning propensity is related to habitual shopping behaviour, which in turn is very often grounded in brand equity (i.e., the value of a given brand for a given consumer), and therefore may be more difficult to be moderated by preferred supermarket satisfaction.

Table 1

Confirmatory factor analysis results

Construct/indicator	Standardized factor loading[a]	Critical ratio	Composite reliability	Extracted variance
Quality consciousness			.78	.56
X1	.55	-		
X2	.80	8.35		
X3	.85	8.26		
Price consciousness			.83	.54
X4	.58	-		
X5	.89	9.51		
X6	.85	9.68		
Pre-planning propensity			.76	.53
X7	.51	-		
X8	.85	7.43		
X9	.78	7.67		
Preferred supermarket satisfaction			.89	.73
X10	.73	-		
X11	.89	14.69		
X12	.93	14.87		
Out-of-stock store switching			.89	.61
X13	.82	-		
X14	.85	15.84		
X15	.78	14.22		
X16	.79	14.30		
X17	.66	11.49		

Notes.

[a] One item for each construct was set to 1.
Model fit: χ^2 =162.77 (d.f.=109, *p*=.001); CFI=.98; NFI=.93; RMSEA=.043; Hoelter(.05)=226.

Table 2

Discriminant validity of constructs

Construct	1	2	3	4	5
1. Quality consciousness	.54				
2. Price consciousness	.01	.56			
3. Pre-planning propensity	.08	<.01	.53		
4. Preferred supermarket satisfaction	.05	.01	.01	.73	
5. Out-of-stock store switching	.04	.05	.02	.01	.61

Notes.

Diagonals represent average amount of extracted variance for each construct.
Non-diagonals represent the shared variance between constructs (calculated as the squares of correlations between constructs).

Table 3

Estimated Model Standardized Coefficients

	Dependent Construct	
	Out-of-stock store switching	
Independent Constructs	β(SE)	*t*-Value
Direct Effects		
Quality consciousness (QC)	.11(.09)	2.05[b]
Price consciousness (PC)	.20(.08)	4.19[a]
Pre-planning propensity (PPP)	.12(.16)	2.33[b]
Preferred supermarket satisfaction (PSS)	-.06(.10)	-1.38
Moderating Effects		
QC x PSS	-.09(.08)	1.98[b]
PC x PSS	.10(.05)	2.28[b]
PPP x PSS	.04(.12)	.77

Notes.

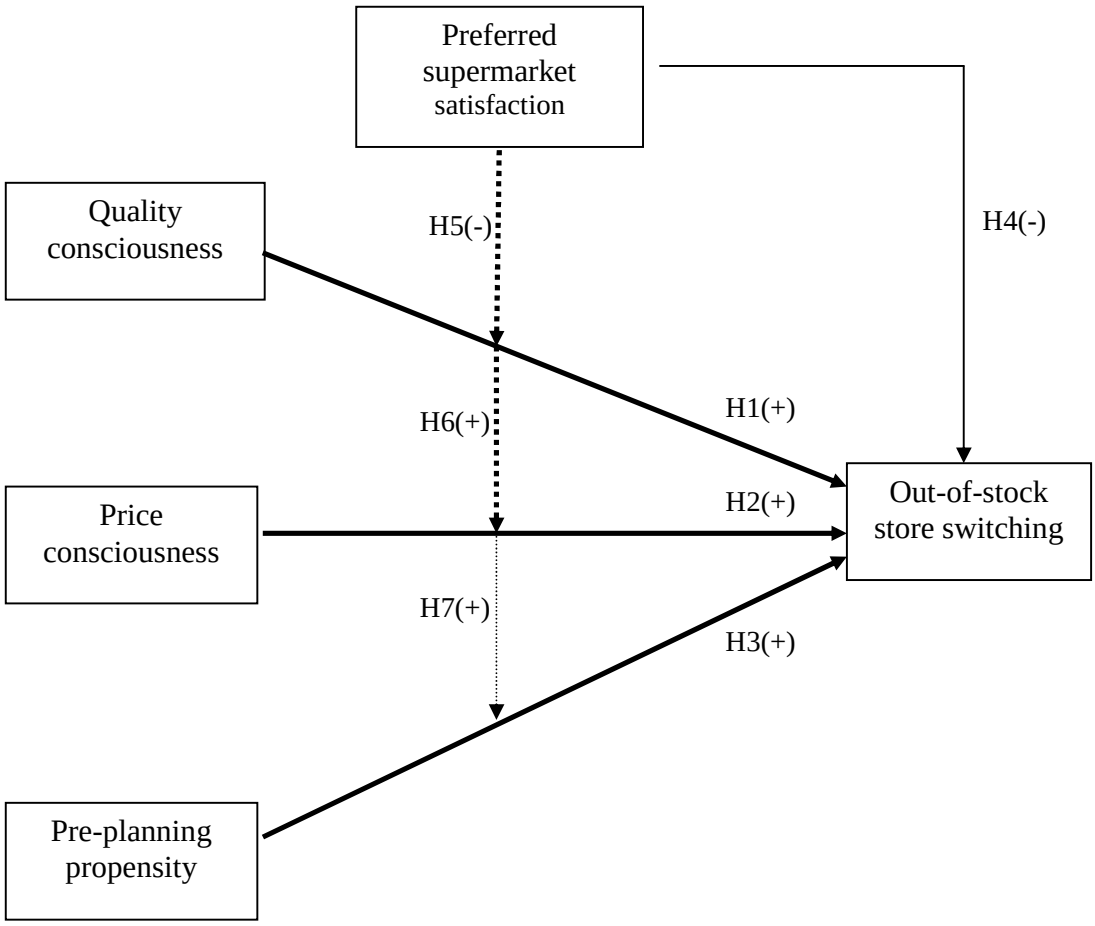
[a]Significant at the 1% level; [b]significant at the 5% level.

Model fit: χ^2=2453.52 (d.f.=532, p<.01); CFI=.89; NFI=.90; RMSEA=.075.

Figure 1

Conceptual Framework used to Investigate Direct and Moderating Effects

on Out-of-Stock Store Switching



Bold: Statistically significant confirmation of the respective hypothesis.

APPENDIX

Items used to measure the constructs in study

QUALITY CONSCIOUSNESS
- High quality products [1=unimportant; 7=very important]
- Fresh products [1=unimportant; 7=very important
- High quality specialties [1=unimportant; 7=very important]

PRICE CONSCIOUSNESS
- Low prices [1=unimportant; 7=very important]
- Good offers [1=unimportant; 7=very important]
- Good offers in retail circulars [1=unimportant; 7=very important]

PRE-PLANNING PROPENSITY
- I write down beforehand what to buy [1=never; 5=always]
- I have considered what products I will buy [1=never; 5=always]
- I have considered what brands I will buy [1=never; 5=always]

OUT-OF-STOCK STORE SWITCHING

Consumers' propensity to switch to another supermarket if their preferred brand of product […] is out-of-stock in their preferred supermarket
- Shampoo [1=very unlikely; 7=very likely]
- Breakfast cereal [1=very unlikely; 7=very likely]
- Herrings [1=very unlikely; 7=very likely]
- Meat pie [1=very unlikely; 7=very likely]
- Detergent [1=very unlikely; 7=very likely]

SATISFACTION WITH PREFERRED SUPERMARKET
- Satisfaction (previous experiences) [1=unsatisfied; 7=very satisfied]
- Post-purchase satisfaction [1=unsatisfied; 7=very satisfied]
- Overall satisfaction (when thinking at the supermarket in question) [1=unsatisfied; 7=very satisfied]

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