



LUND UNIVERSITY
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TOWARDS UNDERSTANDING CONSUMER REACTIONS IN OUT-OF-STOCK SITUATIONS

A comparison of price promoted versus
regular-priced items in grocery retail

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ABSTRACT

Temporarily unavailable products in the grocery retail environment cause problems for multiple parties, resulting in possible sales losses for retailers and high dissatisfaction among consumers. With price promoted products being twice as often out-of-stock (OOS) as regular-priced items, the need for a further understanding of reactions to price promoted products is evident. The purpose of this thesis is therefore to examine the differences between regular-priced and price promoted out-of-stock consumer responses based on the specific product category coffee. The development of a response model which tailored previously researched OOS responses towards price promoted products served as a foundation to approach the problem. Using an experimental survey design, the results of the experimental group (price promoted OOS) were compared against the results of the control group (regular-priced OOS), finding that consumers react differently in some instances. In both situations, consumers were most likely to switch to another product of the same brand followed by postponing the purchase until the product is available again. A great difference in behaviour was detected in relation to switching to another store to buy the intended product, being far more popular in regular-priced stock-out situations than in case of a price promoted OOS. The overall response patterns indicate that consumers faced with a stock-out of a price promoted product only react slightly different to stock-outs of regular-priced products, in both instances, however, guided by a remarkably strong brand loyalty according to the studied responses.

Keywords: *Out-of-Stock, Stock-out, Promotion, Price promotion, Consumer decision-making, Consumer behaviour, Grocery retail*

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1 INTRODUCTION

“In retailing, the biggest single customer-service complaint is not having the item. [...] it’s like inviting someone into your house and not offering him a seat.”

(Faircloth 1998, as cited in Taylor & Fawcett, 2001, p.74)

Stock-outs are considered an eminent problem of retailers in different industries. According to ECR Europe’s (2003) survey on Europe’s shelf availability of products it was found that retailers face an average out-of-stock (OOS) level of 8%. Several researchers studying OOS situations furthermore found that price promoted products are about twice as often out-of-stock as regular-priced products (e.g. Diels & Wiebach, 2011; ECR Europe, 2003; Ettouzani, Yates & Mena, 2012). The list below emphasizes the six most common grocery customer complaints, with two out of them specifically considering OOS situations (Sloot, 2006).

1. *“Long waiting time at the check-out line*
2. *Items not available due to assortment reductions*
3. *Restocking shelves when the store is open*
4. *Out-of-stocks of regular items*
5. *No good opportunity to pack products when the check-out is passed*
6. *Out-of-stocks of promotional items (CBL, 2005, as cited in Sloot, 2006, p. 11)”*

It can therefore be concluded that product unavailability possibly leads to high dissatisfaction levels among grocery shoppers. Research into consumer reactions to stock-outs is therefore of importance to limit the negative effects for both the retailers and manufacturers.

Within literature, OOS situations have been studied frequently, mostly focussing on either the logistical field of retail OOS situations, in order to prevent or limit stock-out situations (e.g. Corsten & Gruen, 2003; Fernie & Grant, 2008; Gruen, Corsten & Bharadwaj, 2002; McKinnon, Mendes & Nababteh, 2007), or on consumer behavioural responses and the antecedents shaping them (e.g. Campo, Gijbrecchts & Nisol, 2000; Emmelhainz, Emmelhainz & Stock, 1991b; Verhoef & Sloot, 2005). The most prevalent consumer reactions to OOS situations were found to be substitution of the product in form of switching to the same product of another brand or switching to another item within the same brand, purchase postponement or switching to another store (Sloot, Verhoef & Franses, 2005). These behaviours in their turn can affect both the retailer and

manufacturers negatively. Short-term damages include cannibalisation of product ranges and a loss of sales due to consumers switching stores and buying other brands. Furthermore, permanent damage to a customer's brand or store loyalty could arise when substitution the product or store and developing a relation with the new brand (Campo, Gijsbrechts & Nisol, 2000; Diels & Wiebach, 2011). To prevent retailers from these damages deeper insights were gained by numerous researchers identifying different antecedents affecting the consumer's decision, with brand and store loyalty being the most studied influencers (Campo, Gijsbrechts & Nisol, 2000; Emmelhainz, Emmelhainz & Stock, 1991b; Verhoef & Sloot, 2005).

However, the effects on consumer behaviour when confronted with a stock-out of a promoted product have barely been studied. Studies on consumer decision-making towards price promotions however, show significant influences of promotions on a consumer's choice (Alford & Biswas, 2000; De Oliveira Santini, Ladeira, Hoffman Sampaio & Araújo Falcão, 2015; Gönül & Srinivasan, 1996; Majeed, 2007; Walters, 1991). This implies that consumers can be expected to be highly discontented in the case of a promoted item being unavailable. Nonetheless, only a few studies were dedicated to consumer behaviour in OOS situations of promoted products. Diels and Wiebach (2011) mostly focussed on the relation between phantom theory and promotional OOS behaviour, where they examined the shift in preferences due to a reduced choice set. They moreover introduced the response option branch switch which refers to consumers switching to another outlet of the same retailer to purchase the promoted product. Furthermore, Peinkofer, Esper, Smith and Williams (2015) measured the effect of price promotions on consumer responses in online stock-out situations and particularly related their study to consumer expectations during promotional periods. While differences in consumer behaviour can be expected when comparing the two mentioned stock-out situations, prior research lacks a distinct differentiation of responses to regular-priced and price promoted OOS. By applying existing theories on stock-out behaviour to the under researched phenomenon of price promoted OOS and comparing it to regular-priced OOS responses, possible differences would lead to a deeper understanding of consumer behaviour in OOS situations.

This research gap has therefore lead to the purpose of this study. Within this thesis the consumer behavioural responses in case of an OOS situation of a price promoted product will be examined and compared to the responses to OOS situations of regular-priced items using an experimental survey design.

In order to fulfil this research purpose, the following question will serve as a guiding principle throughout this study:

How do consumers respond differently when confronted with an OOS situation of a regular-priced item compared to an OOS of a price promoted item in the retail grocery sector?

The answers to this question will contribute to literature by providing a comparison between two different stock-out situations and their respective consumer behavioural traits. Both within the field of marketing as well as retailing literature this research has the possibility to lead to new insights and starting points for further studies on consumer behaviour. By building on the four most frequent behaviours as stated by Sloot, Verhoef and Franses (2005) and implementing the recently developed behavioural trait branch switch by Diels & Wiebach (2011), this thesis contributes to existing literature by expanding possible reactions related to price promoted OOS situations. Within the practical field, retailers as well as manufacturers operating in the grocery market are able to benefit from the findings of this study by implementing the new insights in their planning strategies by anticipating on possible consumer behavioural reactions in stock-out situations of both regular-priced and price promoted items. The findings will lead to practical recommendations for retailers and manufacturers considering these planning strategies.

With the data being collected in a town in the South of Sweden and the relatively small sample size, both due to time and budget limitations, the researchers are aware of the limited generalisability of the study. However, it is believed that the findings provide a foundation for future research and contribute in both theoretical and practical fields.

The thesis in hand starts with *chapter one* functioning as a rationale for the research discussing the research gap, the purpose of the study and the potential theoretical and practical contributions. *Chapter two* includes an extensive literature review divided into different topics. First a short theoretical background on OOS studies is provided, followed by a thorough overview of the different research streams within OOS literature mostly focussing on the demand side and ending with a presentation of related studies. Furthermore, the influences of price promotions on consumer decision-making are presented considering the antecedents and the consumer's awareness as biggest influencers. The chapter closes with a conceptual research model showing and explaining the hypotheses created based on the literature findings. The *third chapter* explains the methodology of this study. The research philosophy and experimental survey design are explained first and function as a foundation for all further methodological decisions. Then the specific research setting, concerning the Swedish grocery market and the choice for

coffee as a research object are introduced and argued for. Additionally, the data collection process considering the survey design, operationalisation, pre-test and sample selection are discussed. The data analysis process including the statistical tests used is outlined and, finally, a critical methodological evaluation is provided together with a reflection on the credibility of the research findings. *Chapter four* presents the results found using statistical tests as well as the testing of the developed hypotheses which results in a rejection or support of each hypothesis. *Chapter five* focusses on the analysis and discussion of the statistical findings related to researched literature and theory and interprets the results. The final chapter, *chapter six* provides a conclusion of the thesis in hand as well as an overview on the theoretical- and practical implications, the limitations and future research opportunities.

2 LITERATURE REVIEW

The following chapter lays the theoretical foundation of this study by providing a discussion and reflective evaluation of existing literature related to the studied topic. The first section of the literature review discusses the development of OOS research with an emphasis on literature related to consumer reactions to OOS situations as well as the antecedents shaping these responses. The second section focuses on promotional decision-making from a consumer perspective with special attention to price promotions in the retail environment. The chapter concludes by developing a conceptual research model and hypotheses based on the reviewed areas which provide a foundation for further analyses and discussion of the researched topic.

2.1 THEORETICAL BACKGROUND ON OOS

Across literature the phenomenon of temporarily unavailable products is being referred to as OOS (out-of-stock) or stock-out. To ensure a common understanding of the term out-of-stock, a definition is provided. OOS refers to the temporary unavailability of an item that is intended to be for sale in a retail store. An OOS situation occurs when the saleable item is not physically present on the store shelf and ends with the replenishment of the affected sales unit (Gruen & Corsten, 2008). ECR Europe (2003) takes the understanding further by defining OOS as “a product not found in the desired form, flavour or size, not found in saleable condition, or not shelved in the expected location – from the perspective of the consumer (ECR, 2003, p. 8).” This definition implies that the desired item may be physically available, but not in a condition or location that is expected by the customer. Due to this definition taking up a more comprehensive perspective of OOS, the researchers will use it as the common understanding of the studied phenomenon. Further, OOS needs to be distinguished from the concepts de-listing and PAR (Permanent Assortment Reduction) in which an item is completely removed from the shelves with no intention to be available again. Consumer reactions are expected to differ in these two categories as OOS situations are unexpected and the customer needs to react in this very situation while PAR might already be expected by the consumer and lead to different responses (Campo, Gijsbrechts & Nisol, 2004; Verhoef & Sloot, 2005) Another concept related to the (un)availability of products is OSA which refers to on-shelf-availability and describes the saleable item to be available on the shelf when the customer’s purchase intention arises (Chopra & Meindl, 2007). Even though these two concepts are highly correlated by definition, the study in hand emphasizes on OOS situations and OSA will therefore not be elaborated on further.

OOS situations in the retail environment and their implications for the retailer and consumer have received much attention in literature. While earlier research focussed on the initial definition and measurement of consumer OOS reactions as well as potential cost and revenue losses due to product stock-outs (Emmelhainz, Emmelhainz & Stock, 1991a; Peckham, 1963; Walter & Grabner, 1975), later studies determined their research to the consumer and the behavioural patterns linked to this kind of phenomenon (Campo, Gijbrecchts & Nisol, 2000; Emmelhainz, Emmelhainz & Stock, 1991b; Schary & Christopher, 1979; Verbeke, Farris & Thurik, 1998).

A number of researchers argue that two studies marked the beginning of OOS research. One of the first studies to be conducted in the field of OOS was published by Peckham (1963) in cooperation with the A.C. Nielsen company on stock-outs in the grocery environment and their potential to cause a loss of business to the retailer as well as the manufacturer. His study focussed on providing first insights into the issue of retail stock-outs and described consumer reactions in an explorative way. Conducting a quasi-experiment in grocery stores Peckham found that consumers react to OOS of their preferred brand by either purchasing another brand, another package size or colour of the same brand or do not purchase the desired product at all.

The most influential study to further dictate OOS research was conducted in 1968 by Progressive Grocer together with the National Association of Food Chains and The A.C. Nielsen Company. As opposed to prior studies in which the cost of OOS was mainly estimated by unsold inventory, this study aimed to understand consumer behaviour. Not only did the paper distinguish between shelf and store unavailability, referring to the product being available for purchase in the store backroom but not on the designated shelf, it also considered factors such as different product categories, days of the week and levels of brand loyalty to understand consumer behaviour (Zinn & Liu, 2011).

2.2 RESEARCH STREAMS WITHIN OOS LITERATURE

Aastrup and Kotzab (2010) argue that based on the Progressive Grocer study, two research streams developed that shaped the understanding of OOS situations from a consumer as well as supplier perspective, here referred to as OOS research focussing on the demand and supply side. The thesis will follow Aastrup and Kotzab's (2010) organization of OOS literature and introduce relevant research of both research streams.

2.2.1 OOS RESEARCH FOCUSING ON THE DEMAND SIDE

Within OOS research focussing on the demand side, Aastrup and Kotzab (2010) found that OOS research can be divided into two different periods, with the earlier one focussing on the classification of OOS responses and the latter one on understanding the factors shaping OOS behaviour. Relevant literature will be presented in a chronological order, referring to 'Phase 1' and 'Phase 2' of literature related to the demand side of OOS.

Phase 1: Classifying and quantifying consumer responses to OOS

Early studies within research on the demand side focussed on identifying and classifying different consumer responses to gain an initial understanding of the phenomenon (Emmelhainz, Emmelhainz & Stock, 1991a; Walter & Grabner, 1975). The researchers primarily transformed their results on OOS reactions into consumer decision trees or decision typologies, aiming to provide a comprehensive approach to understanding consumer reactions to stock-outs (Aastrup & Kotzab, 2010). A review of the most relevant researchers will be presented.

Walter and Grabner (1975) were the first researchers to introduce a comprehensive model on specific consumer reactions by examining stock-outs in a liquor store. The possible alternatives introduced include brand substitution for the same, a higher or lower price, substitution of the product with an item of the same brand but another package size, a delay of purchase or a switch of store. Even though the authors categorized the responses with the aim to calculate potential losses and optimize planning rather than understanding consumer behaviour, their detailed classification of possible consumer reactions in OOS situations highly contributed to research and greatly influenced subsequent studies within consumer response to OOS from a demand and behavioural point of view.

Emmelhainz, Emmelhainz and Stock (1991a) analysed the impact of product and situational characteristics influencing OOS behaviour, choosing a more authentic approach. While researchers before tested stock-out situations through hypothetical surveys or quasi-experiments, Emmelhainz, Emmelhainz and Stock (1991a) conducted a field experiment by intentionally removing five different high frequency sales units from shelves of a discount store for a limited period of time. Their results reflected similar patterns as identified by previous research, however, the researchers were able to categorize the responses into fifteen different decision typologies, presenting the most detailed model until that point in time. In contrast to Emmelhainz, Emmelhainz and Stock (1991a) and Zinn and Liu (2001) shortened their framework to provide a more comprehensive model and introduced the acronym SDL, referring to Substitute, Delay or Leave as possible OOS responses.

While a number of researchers developed different classifications of reactions to OOS situations, related to different products and other factors, Sloot, Verhoef and Franses' (2005) distinction summarizes the most frequent and important responses as shown in *Figure 1*. To provide a more inclusive overview, the responses by Sloot, Verhoef and Franses (2005) are further divided into the categories 'substitution' and 'non-substitution' as it was found that consumers first make a decision between these two options and then make a detailed choice within the chosen category (Emmelhainz, Emmelhainz & Stock, 1991b; Verhoef & Sloot, 2005).

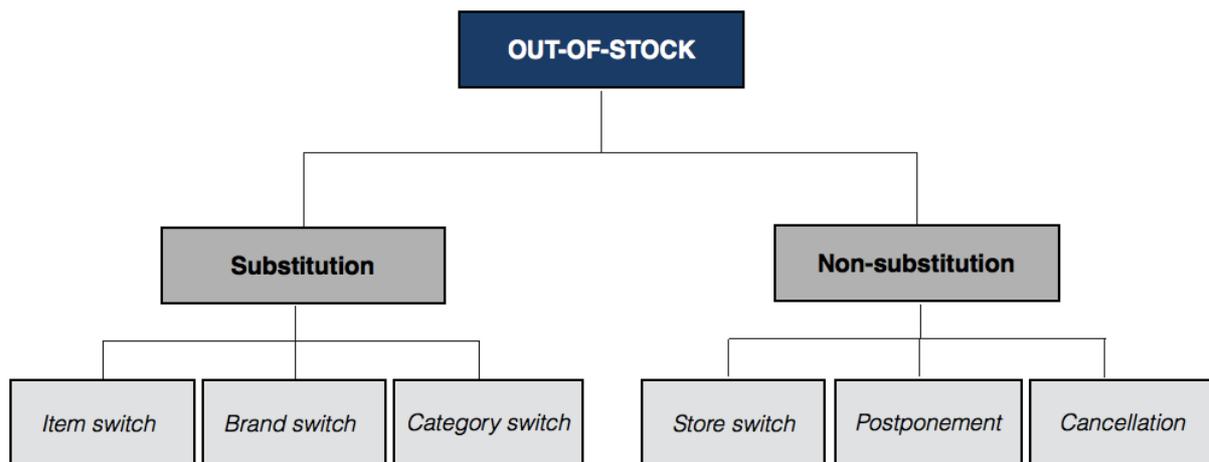


Figure 1. OOS responses

Adapted from Sloot, Verhoef and Franses (2005)

Substitution

1. *Item switch*: the consumer switches to another format or variety of the same brand
2. *Brand switch*: the consumer switches to another brand within the same product category
3. *Category switch*: the consumer buys a substitute product from another product category

Non-substitution

4. *Store switch*: the consumer switches store to purchase the item during the same shopping trip
5. *Postponement*: the consumer postpones the intended purchase until the next shopping trip
6. *Cancellation*: the consumer cancels the intended purchase completely
(Sloot, Verhoef and Franses, 2005)

Even though some researchers limited their study to only a few of the options mentioned while others extended their use of options, it is believed that the summary by the mentioned authors provides the most comprehensive framework of consumer OOS responses. It should further be mentioned that due to researchers within OOS literature taking different methodological approaches as well as examining different product categories, a presentation of a general set of results attributed to each OOS reaction is difficult to attain.

A global study conducted by Gruen, Corsten and Bharadwaj (2002) found that store switch followed by brand substitution are the most popular options when confronted with an OOS. Taking a closer look, the researchers found significant differences between US and European consumers, with European consumers preferring brand switch before store switch. ECR Europe (2003), examining European OOS situations, complements these findings as the study found that brand switch is the most popular response followed by store switch and purchase postponement. Item switch was only considered as a possible OOS response in Gruen, Corsten and Bharadwaj's (2002) research in which it was ranked third. Category switch did not receive attention in any of the two presented studies. Both studies however showed that purchase cancellation is the least preferred option for consumers confronted with an OOS.

Due to prior studies showing that the frequency for *category switch* as well as *cancellation* are rather low, these two options receive less attention within the OOS literature review of this thesis while emphasis will be put on the most dominant choices *store switch*, *brand switch*, *item switch* and *postponement* (Gruen, Corsten & Bharadwaj, 2002; ECR Europe, 2003; Sloot, Verhoef & Franses, 2005).

While different product categories were examined in prior research, the specific results for each category were not always reported in a way that enables the authors to present a comparative summary of OOS responses across categories. However, Gruen, Corsten and Bharadwaj (2002) dedicated parts of their global study to comparing consumer responses across categories and found significant differences between different groups of products. The study looked at non-food products such as cosmetics, diapers, feminine hygiene products, laundry detergent, toilet tissue, and paper towels as well as food-products such as salted snacks and coffee. While laundry detergent, toilet tissue, paper towels and salted snacks account for very high substitution patterns, cosmetics, feminine hygiene and diapers showed a high willingness to switch to another store. Coffee, however, did not show a clear pattern with substitution being only slightly more favourable than switching stores. Furthermore, the product category of perishable products, as studied by Van Woensel, Van Donselaar, Broekmeulen and Fransoo (2007) faces increased substitution behaviour as compared to the non-perishable products

studied by Gruen, Corsten and Bharadwaj (2002). While a difference can be explained between perishable and non-perishable products, no clear pattern can be attributed to non-food or food products.

Phase 2: Understanding the antecedents shaping consumer responses to OOS

After intense classification and quantification of OOS reactions, early studies by Schary and Christopher (1979) as well as Emmelhainz, Emmelhainz and Stock (1991b) marked a shift in OOS consumer behaviour research as the conditions and antecedents that lead to certain consumer reactions became more relevant than merely classifying and quantifying stock-out responses (Aastrup & Kotzab, 2010).

Schary and Christopher's (1979) study was the first one to attempt to explain consumer behaviour patterns when confronted with an OOS using a more comprehensive approach and relating it to external factors. The researchers took into account demographic variables, the impact of the store and product related characteristics which resulted in them finding a significant effect of brand and store loyalty on OOS reactions (Schary & Christopher, 1979).

Complementing the examined antecedents of brand and store loyalty, Emmelhainz, Emmelhainz and Stock (1991b) found additional situational as well as product-related characteristics that have the possibility to influence a consumer's decision whether to substitute an OOS product or not. Urgency of need highly dictated whether consumers would substitute the product or switch stores, resulting in a higher number of consumer substituting a product. At the same time, a high perceived product risk when buying another than the desired brand reduced the number of brand switches. Regarding product usage, it was examined that regular items were more likely to be switched in an OOS situation than items intended for special occasions.

Various research methods applied by previous authors, such as survey designs examining hypothetical as opposed to true stock-outs, underwent some criticism as to whether they truly represent consumer behaviour and possibly limit external validity. Verbeke, Farris and Thurik (1998) therefore conducted a true OOS experiment in a Dutch grocery chain, in which not only one SKU, such as previous researchers used (e.g. Emmelhainz, Emmelhainz & Stock, 1991) but whole product lines of five leading brands were removed from the shelves. Hence, the researchers eliminated the frequent reaction of switching item within the same brand. The authors dedicated their study to examining the under researched influencing factors such as the intensity of retail competition, the differences in effects of a permanent change in assortment to an OOS experience, store loyalty, the money spent and the amount of products bought during a shopping trip (Verbeke, Farris & Thurik, 1998).

Researchers until 1998 considered different combinations of product-, store-, consumer- or situation-related variables to affect OOS response, however, Campo, Gijsbrechts and Nisol (2000) were the first ones to consider all four characteristics in their study as relevant antecedents to shape consumer OOS response (Helm, Hegenbart & Endres, 2012). The researchers criticized existing literature to not be accurate enough as to how the consumer response is shaped as only a limited set of explanatory variables had been applied. Their findings, however, confirm prior research in some instances such as brand and store loyalty decreasing the likelihood of item and store switching, respectively. In accordance with Verbeke, Farris and Thurik (1998), the study found that shopping habits such as the product quantity needed as well as the time available for the shopping trip influence substitution decisions. Furthermore, the researchers added to Schary and Christopher's (1979) research by studying brand products in comparison with private label products (Campo, Gijsbrecht & Nisol, 2000).

While researchers across OOS literature considered different characteristics in their studies, it is apparent that brand loyalty, followed by store loyalty seem to be very important antecedents to shape consumer OOS responses. Similar to the classification of OOS reactions, the comparability of results is limited as researchers' approaches to research designs highly differ, primarily including method choice and studied product categories. However, the factor loyalty in regard to brand and store type gained the most attention in OOS literature.

To gain a better understanding of the antecedents shaping OOS consumer behaviour, the researchers will provide a comprehensive overview of the four dominant variables shaping consumer OOS responses as defined in prior literature (Sloot, Verhoef & Franses, 2005; Zinn & Liu, 2001).

2.2.2 ANTECEDENTS SHAPING OOS CONSUMER REACTIONS

To develop a better understanding of the antecedents shaping OOS consumer behaviour, the four dominant variables that shape consumer OOS responses as applied and studied across OOS literature will be presented (Campo, Gijsbrechts & Nisol, 2000; Schary & Christopher, 1979; Sloot, Verhoef & Franses, 2005; Verbeke, Farris & Thurik, 1998; Zinn & Liu, 2001). Verhoef and Sloot (2006) extended their model by adding the fifth dimension 'brand-related variables', however, the researchers of this paper decided to not further distinguish brand-related variables but to include them in the product-related category.

Table 1 provides an overview of the four dominant antecedents that shape consumer OOS responses and how they affect the four most common OOS responses (Campo, Gijsbrechts & Nisol, 2000; Emmelhainz, Emmelhainz & Stock, 1991; Gruen, Corsten & Bharadwaj, 2002; Schary & Christopher, 1979; Sloot, Verhoef & Franses, 2005; Verbeke, Farris & Thurik, 1998; Zinn & Liu, 2001).

As the aim of this study is to examine distinct differences and similarities of price promoted and regular-priced products, the antecedents will not only serve as a means to gain a deeper understanding of the researched topic but also as a guideline for the interpretation of results.

Table 1. OOS responses and the antecedents shaping them

Adapted from Sloot, Verhoef and Franses (2005)

		ANTECEDENTS			
		Product-related variables	Store-related variables	Situation-related variables	Consumer-related variables
OOS RESPONSES	Item switch	Availability of acceptable alternatives (+) Stockpiling (-) Utilitarian brand/product type (+) Perishable product (+)	Store loyalty (+) Low store prices (+)	Purchase quantity (+,-) Available shopping time (+,-) Time pressure (+) Time of the week (+,-) Product usage (+,-)	Positive shopping attitude (-) Higher age (-)
	Brand switch	Availability of acceptable alternatives (+) Perceived risk of switching to alternatives (-) Brand loyalty (-) Stockpiling (-) Utilitarian brand/product type (+) Perishable product (+)	Store loyalty (+) Low store prices (+)	Purchase quantity (+,-) Available shopping time (+,-) Time pressure (+) Time of the week (+,-) Product usage (+,-)	Positive shopping attitude (-) Quality conscious (-) Higher age (-)
	Postponement	Availability of acceptable alternatives (-) Stockpiling (+) Perishable product (-) Brand loyalty (+)	Store loyalty (+) Low store prices (+)	Large purchase quantity (-) Urgency of need (-) Available shopping time (+,-) Time pressure (+,-) Time of the week (+,-) Pre-visit agenda (-) Impulse buying (+)	Positive shopping attitude (+,-)
	Store switch	Availability of acceptable alternatives (-) Perceived risk of switching to alternatives (-) Brand loyalty (+) Stockpiling (-) Hedonic brand/product type (+)	Store loyalty (-) Availability of alternative stores (+,-) Low store prices (-)	Purchase quantity (+,-) Available shopping time (+,-) Time pressure (+,-) Urgency of need (-) Time of the week (+,-) Pre-visit agenda (+) Impulse buying (-)	Positive shopping attitude (+) Price conscious (-) Higher age (+)

Negative effects are indicated by (-) and positive effects by (+).

Product-related variables

Product-related variables are characteristics related to the specific product or brand in which the customer experiences a stock-out (Sloot, Verhoef & Franses, 2005). One of the most researched aspects within product-related characteristics is *brand loyalty*. A number of studies show that brand loyalty negatively affects brand substitution, but positively relates to store switch (Campo, Gijsbrechts & Nisol, 2000; Sloot, Verhoef & Franses, 2005), indicating that loyal brand buyers are more likely to put additional effort into the acquisition of the intended brand. Campo, Gijsbrechts and Nisol (2000) studied that the *availability of acceptable alternatives* increases consumers' willingness to substitute the desired product and is therefore negatively related to store switching. However, when Emmelhainz, Emmelhainz and Stock (1991b) studied the customer's *perceived risk of switching to an alternative*, they found that a significant number of people perceived the risk to be rather high and therefore are less likely to substitute, indicating that the availability of alternatives alone is not a sole indicator of increased substitution. As outlined before, *brand type* can have an effect on the OOS reaction. Schary and Christopher (1979) found that national brand buyers are more likely to switch stores to purchase their preferred brand, while private label buyers were said to have a lower tendency to do so. This can be attributed to the fact that national brands are better distributed than private label brands, making it more inconvenient for private label brand buyers to obtain the product (Sloot, Verhoef & Franses, 2005). Sloot, Verhoef and Franses (2005) further examined hedonic and utilitarian brand types to have a different effect on consumer OOS reactions. While products that provide the consumer with a hedonic benefit such as fun, pleasure and excitement have a positive effect on store switching, utilitarian products, which are primarily functional and instrumental, are more likely to be substituted. Van Woensel et al. (2007) contributed to existing literature by being the first to study OOS reactions to the *product type* of perishable products and found that customers have a very high willingness to substitute due to the products' short lead-times. Sloot, Verhoef and Franses (2005) furthermore found that the possibility of product *stockpiling* has a positive effect on purchase postponement while it has a negative effect on product substitution.

Store-related variables

Store-related variables are characteristics related to the store or retail chain in which a consumer experiences an OOS situation (Sloot, Verhoef & Franses, 2005). A number of studies are concerned with the factor *store loyalty* and its effect on OOS responses. Most studies report a positive effect on substitution of the missing product by item or brand switch or postponement or cancellation of purchase while store switch is the least likely OOS response of store loyal customers (Campo, Gijsbrechts & Nisol, 2000; Emmelhainz,

Emmelhainz & Stock, 1991b). Verbeke, Farris and Thurik (1998) studied the impact of *retail competition* on OOS reactions and found that a competitive landscape with stores carrying a similar assortment nearby did not positively affect store switch. Two years later, Campo, Gijsbrechts and Nisol (2000) complemented previous researching by finding no significant effect of store distance on OOS reactions. Sloot, Verhoef and Franses (2005), however, studied that the number of *alternative stores in the vicinity* positively affects store switch and negatively affects postponement, indicating the opposite of both prior studies. Zinn and Liu (2001) found that lower *store prices* associated with higher value compared to competition have a positive effect on substitution and purchase delay and a negative effect on consumers leaving the store. This finding indicates that the perception of low store prices is an important factor for the customer to decide whether to switch stores or not.

Situation-related variables

Situational characteristics are concerned with the conditions that apply for the specific shopping trip the consumer experiences an OOS situation in (Sloot, Verhoef & Franses, 2005). Multiple studies stated that *urgency of need* has a high impact on a consumer's OOS decision-making. Due to time constraints, a high urgency of need positively affects a customer's decision to substitute the product rather than to switch store (Campo, Gijsbrechts & Nisol, 2000; Emmelhainz, Emmelhainz & Stock, 1991a; Zinn & Liu, 2001). Campo, Gijsbrechts and Nisol (2000) further found that *time pressure* and the *time available for shopping* influence OOS reactions. Little time available and strong pressure are more likely to lead to the substitution of the item or brand as opposed to store switch or cancellation and postponement. Helm, Hegenbart and Endres (2012) and Sloot, Verhoef and Franses (2005) found that the *time of the week* in which the purchase is made, has an effect on OOS reactions. While Helm, Hegenbart and Endres (2012) studied that purchases towards the end of the week are more likely to be substituted, postponed or even cancelled, Sloot, Verhoef and Franses (2005) found that consumers are more likely to postpone the purchase during the first part of the week. Sloot, Verhoef and Franses (2005) findings complement a global study conducted by the Grocery Manufacturers of America, that examined that the chance of the occurrence of an OOS increases by the end of the week with the highest stock-out percentages being detected on Sundays and Mondays (Gruen, Corsten & Bharadwaj, 2002). Furthermore, the overall *purchase quantity* of the shopping trip impacts OOS response by making it less favourable for the consumer to postpone the purchase the larger the quantity gets (Campo, Gijsbrechts & Nisol, 2000). Literature also considered a consumer's *pre-visit agenda*, indicating that the purchases were planned in detail in advance, as possible situational influencers of OOS responses. Planned purchases are less likely to be postponed and more likely to result in switching stores. The likelihood of substitution did not receive any attention (Helm,

Hegenbart & Endres, 2012; Zinn & Liu, 2001). When looking at the related phenomenon of *impulse buying*, Sloot, Verhoef and Franses (2005) found similar indicators as their results stated that unplanned purchases are more likely to be postponed or cancelled and unlikely to lead to a store switch. However, purchase planning is likely to be related to the intended *product usage*, which has proven to lead to different OOS responses. Emmelhainz, Emmelhainz and Stock (1991b) differentiated between products intended for regular use and products intended to be purchased for a special occasion. Their study found that the majority of customers responded by substituting the product if it was for regular use, while less than half of the respondents chose to substitute the product if it was for a special occasion.

Consumer-related variables

This category refers to characteristics related to the consumer who experiences an OOS situation (Sloot, Verhoef & Franses, 2005). Campo, Gijsbrechts and Nisol (2000) state that consumers with a more positive overall *shopping attitude* have a higher tendency to switch stores when confronted with an OOS as they value the shopping experience. Considering *demographics*, Peckham (1963) states that age has a negative effect towards substitute buying which can be attributed to the fact that older people have less time constraints when visiting another store. Sloot, Verhoef and Franses (2005) later support this view by finding the same results. However, other studies show that demographics have no significant effect on consumer OOS reactions (Zinn & Liu, 2001). Researchers further found that *price consciousness* is negatively related to store switching when faced with an OOS, possibly indicating that the perceived cost of store switch is higher than of substitution. On the other hand, being *quality conscious* has a negative relation towards brand switching (Sloot, Verhoef & Franses, 2005).

2.2.3 OOS RESEARCH FOCUSSED ON THE SUPPLY SIDE

As argued by Aastrup and Kotzab (2010) the second stream of OOS research is focussed on supply side issues that measure the risks, costs, as well as causes of OOS situations from a logistical and supply chain point of view. Alike the demand side phase that focussed on consumer reactions, this stream also emerged from the Progressive Grocer study from 1968 which showed that store-related issues such as space allocation, ordering routines and lack of experienced personnel were the root causes of OOS situations (Aastrup and Kotzab, 2010). Gruen, Corsten and Bharadwaj (2002) then further contributed to OOS supply research by conducting a worldwide examination of OOS. This comprehensive study was valuable to OOS research of the supply side by including indicators of root causes as well as risks and possible losses of OOS to the retailer as well as manufacturer.

To provide an outline of findings within OOS research focussing on the supply side, root causes of OOS as well risks related to OOS responses will be introduced in this chapter.

Root causes of OOS: In-store vs. upstream

A study done by Corsten and Gruen (2003) found that between 60-75% of OOS can be attributed to in-store causes while 25-30% are due to upstream (distribution centre, wholesale, retail HQ, supplier) causes. Aastrup and Kotzab (2009) take the percentage of in-store causes even higher, accounting it for 98% of OOS origins. Corsten and Gruen (2003) state that the most relevant in-store causes for OOS are inaccurate forecasting, ordering and shelf-replenishment. Within forecasting and ordering, a number of researchers (Corsten & Gruen, 2003; Fernie & Grant, 2008; Gruen, Corsten & Bharadwaj, 2002; McKinnon, Mendes & Nababteh, 2007) argue that promotions tend to be one of the major origins of product unavailability. As stated before, promotional items are on average twice as often OOS than regular-priced items (ECR Europe, 2003; Ettouzani, Yates & Mena, 2012), which Gruen, Corsten and Bharadwaj (2002) primarily attribute to inefficiencies within marketing departments of retailers. Poor planning of advertising activities often restrict the supply chain to accurately match promotional demand and potentially leads to OOS situations. Upstream causes, on the other hand, are usually attributed to distribution centres or retail headquarters and manufacturers, however, as mentioned before, only make up a small portion of OOS root causes (Gruen, Corsten & Bharadwaj, 2002).

Risks related to OOS responses

Corsten and Gruen (2003) provide, based on the possible consumer OOS reactions, an overview of possible risks related to a stock-out for the retailer as well as the manufacturer. While most other studies primarily concentrate on the retailer's sales loss alone, these authors provide a more detailed framework. Gruen, Corsten and Bharadwaj (2002) differentiate if the accumulated loss directly affects the retailer or the manufacturer, which will be taken into consideration when providing the overview in *Table 2*, based on the four most common consumer responses.

Table 2. Risks faced by retailers and manufacturers in OOS situations

OOS reaction	<i>Risk for retailer and manufacturer</i>
Store switch	Store switch bears a direct loss to the retailer (Gruen, Corsten & Bharadwaj, 2002). Consumers switching to stores with a perceived lower level of OOS could possibly lead to a loss of shoppers for the affected retailer (Corsten & Gruen, 2003).
Postponement	The postponement of a purchase neither directly affects the retailer nor the manufacturer as the purchase is still intended to be made. However, delay of purchase negatively affects cashflow for the retailer as well as the manufacturer (Gruen, Corsten & Bharadwaj, 2002).
Item switch	The retailer as well as the manufacturer face a direct sales loss in case the consumer chooses a lower priced item within the same brand (Corsten & Gruen, 2003; Gruen, Corsten & Bharadwaj, 2002).
Brand switch	While brand switch entails possible negative effects for the retailer if the chosen brand is of smaller size and/or cheaper, it bears the most problematic impact for the manufacturer as it leads to a direct loss of sale for the specific brand (Corsten & Gruen, 2003; Gruen, Corsten & Bharadwaj, 2002).

While the review of prior literature of the demand side is more comprehensive and broad, the theoretical background of the supply side is less extensive for a reason. As the aim of this thesis is to contribute to OOS literature within the field of consumer behaviour and study reactions directly from the consumer perspective, the supply side should merely provide a full picture of OOS literature rather than providing insights to generate a conceptual framework and hypotheses.

2.3 OOS RESEARCH ON PROMOTIONAL ITEMS

Even though the need for further research on consumer response particularly to promotional OOS has been underlined by previous researchers (e.g. Sloat, Verhoef & Franses, 2005), only a small number of publications can be found on this issue. Diels and Wiebach (2011) aimed to fill this research gap and dedicated their discussion paper to examine substitution behaviour in promotional OOS situations by applying context and phantom theory. While their research primarily focussed on providing a theoretical framework regarding the shift in preferences due to the reduced choice sets, their findings greatly contributed to existing knowledge. Not only did they detect increased postponement behaviour in promotional OOS situations, they also introduced the consumer response option 'branch switch'. Their assumptions lead them to test if

switching to another outlet of the same retail chain to make use of a promotional offer is a valuable consumer response in an OOS, which will be of great interest within this research as well.

The most recent study applied findings from OOS literature of physical stores to the online environment. Peinkofer et al. (2015) measured the effect of price promotions on consumer responses in online stock-out situations and particularly related their study to consumer expectations in promotion situations. The assessment of OOS behaviour in the online environment is of particular interest as the costs of switching are rather low compared to the traditional offline retail setting. Interestingly, their findings suggest that consumers in the online shopping environment develop lower expectations for promoted products to be available, possibly due to negative prior experiences. Overall, their findings point out that the dissatisfaction level when faced with an online OOS situation is rather low linking it to a low expectation on product availability.

While a small number of researchers have already dedicated their work to examining promotion effects on OOS situations, existing literature primarily focuses on providing a theoretical framework related to various fields of consumer behaviour such as phantom theory (Diels & Wiebach, 2011) and expectation-dissatisfaction-theory (Peinkofer et al., 2015) within the context of promotional OOS. The researchers of the thesis in hand however focus on providing insights to promotional OOS reactions by directly comparing them to regular-priced stock-outs within the specific product category coffee, using an experimental design on the yet under researched geographical market of Sweden.

2.4 CONSUMER DECISION-MAKING INFLUENCED BY PRICE PROMOTIONS

In order to understand customers' responses to OOS situations of price promoted items in grocery retail, a closer look will be taken upon the concepts of consumer decision-making and price promotions. Consumers' decisions are based upon multiple questions: "what to buy, why to buy, when to buy, where to buy, how often to buy, how frequently to use it, how it is evaluated after the purchase and the impact of such evaluations on future purchases (Chaharsoughi & Yasory, 2012, p. 99)." Watson, Wood and Fernie (2015) state that one of the key influencers on these consumer decisions is the price of a product. Complementing to the important role of a product's price for the consumers, Kucuk (2014) points out that customers frequently consider a product's price as an indication for its quality, especially in situations when other sources of information and stimulus are lacking e.g., similar packaging layout.

Walker and Knox (1997) refer to the famous model of Howard (1983, as cited in Walker & Knox, 1997, p. 35) arguing that models of cognitive consumer behaviour are categorised by causal sequences (“information -> attitude -> intention -> purchase”). They state the importance of the information gathering stage via pre-purchase research, advertisements, sales promotions, etc. shaping one’s attitude towards and desire for the product before these mental processes are translated into an actual purchase (Walker & Knox, 1997). The following sub-chapters will therefore focus on the antecedents to consumer decision-making on price promoted purchases and the consumers’ awareness of promotions as a situational influencer.

2.4.1 ANTECEDENTS TO DECISIONS ON PRICE PROMOTIONS

Apart from the customer’s weekly inventory check, the attractiveness of the promotion is what leads to the customer’s decision to buy or not to buy the promoted product (De Oliviera et al., 2015; Diamond & Sanyal, 1990; Gönül & Srinivasan, 1996; Grewal, Krishnan, Baker & Borin, 1998; Majeed, 2007; Rothschild & Gaidis, 1981; Schindler, 1992). However, what exactly makes a promotion attractive to the consumer cannot easily be said as different researchers found different factors of attractiveness. Schindler (1992) nevertheless created three overall categories of attractive promotion characteristics; monetary/non-monetary rewards, promotional price perception and the promotional deal.

Monetary vs non-monetary reward

In the current grocery retail sector an important division in sales promotion techniques was made between monetary and non-monetary rewards (De Oliviera Santini et al., 2015; Schindler, 1992). In either way consumer demand is provoked, but with different sales promotion techniques. Monetary sales promotions such as discounts, bonus packs and coupons were found to be the best technique to increase short-term sales volumes. According to De Oliviera Santini et al. (2015) these campaigns are successful due to the immediate rewards received, in the form of money being saved, and the utilitarian benefits gained. However, Pauwels, Silva-Risso, Srinivasan and Hanssens (2004) as well as De Oliviera Santini et al. (2015), note that although the short-term sales of these monetary rewards are most effective, they may also negatively influence the brand and product image as it decreases the customer’s reference price on the long run. Non-monetary promotions on the other hand, e.g. premiums and free samples, have mostly been related to medium- to long-term effects considering raising and creating brand loyalty (De Oliviera Santini et al., 2015). Diamond and Sanyal (1990, p. 488) found the greatest distinction between the two types of rewards to be the customer’s feeling of “losing less than usual” in the case of monetary rewards, contrasting to “gaining something extra” with non-monetary promotions. Even though both types of rewards are

considered to be important to the attractiveness of a promotion, monetary promotions have shown to be preferred by consumers and are therefore most frequently used by retailers (De Oliviera Santini et al., 2015; Majeed, 2007). Therefore, this study's focus will be on monetary sales promotions, also referred to as price promotions.

Price promotions often affect consumer behaviour rather positively from a retailer's perspective. Walters (1991) and Kumar and Leone (1988) for example, consider the advantage of promoted item purchases leading to a sales stimulation of non-promoted complementary products. With, for example, a certain popular pasta sauce on sale, the chances are rather high that the non-promoted pasta packages and parmesan cheese are as well being bought more frequently during that period. Furthermore, the promotion of relatively high priced products (e.g. cheese, coffee, alcoholic beverages, diapers) could cause the consumer to intentionally switch stores and purchase those items at the substitute retailer (Kumar & Leone, 1988). Next to store substitution promotions were recognised to function as switching cues in the substitution of a product by several researchers (Kucuk, 2004; Kumar & Leone, 1988; Walters, 1992). Depending on the intensity of brand loyalty, customers may decide to purchase a different brand than their regular one, once the competing brand is on sale. The intensity of this relation between sales promotion and brand substitution however was found to be rather low (Walters, 1992).

Promotional price perception

In order for customers to be able to evaluate the discount given on a certain product, they place this promotional price on their internal reference price range (Alford & Biswas, 2000; Grewal et al., 1998; Schindler, 1992). This internal reference price, also referred to as expected-, fair-, or appropriate price, is often based on the consumer's perception of the regular market price or a range of prices the product is being sold for. According to Schindler (1992) several researchers have proven that once a product is temporarily priced below the internal reference price range the sales increase will be larger than when a product is on sale but is still priced within the internal reference price range. This statement was confirmed and complemented by Grewal et al. (1998) stating that it is all about the consumer's perception of the discount offer to be below the internal reference price which could be reached by using semantic phrases and indications of sales which will increase the effectiveness of the deal.

However, pricing a product below the internal reference price range cannot be done without risks. First, it could lead to consumers lowering their internal reference price which makes it more difficult to create successful price promotions next time as the difference between the discount price and the reference price will be less (Grewal et al.,

1998). Furthermore, when products are frequently promoted in the form of trade-incentives, in-store- or price promotions, consumers start taking these promotions for granted and therefore become unwilling to pay the regular price for this certain product (Kalwani & Yim, 1992). Moreover, with product prices often being seen as quality indicators and price promotions below the internal reference price range, consumers may assume there is something wrong with the product which may harm the product or brand image (De Oliviera Santini et al., 2015; Grewal et al., 1998; Hardesty & Bearden, 2003; Kalwani & Yim, 1992; Pauwels et al., 2004). Finally, Pride and Ferrell (2014) argue for their concern of price promotions creating artificial needs and so manipulate consumers into buying the product which is considered unethical.

It is therefore of high importance that managers are fully aware of the reference ranges of their consumers in order to be able to create effective price promotions (Grewal et al., 1998). An important finding of Grewal et al.'s (1998) study concludes that "carefully managed price discounts will positively influence perceived value without any adverse effect on brand's perceived quality, thus enabling retailers and manufacturers to successfully deliver high value (p. 348)."

Promotional deal

Next to the monetary versus non-monetary price promotions and the internal reference price there are certain other factors related to a consumer's decision-making on price promotions. Firstly, Schindler (1992) mentions the moment of decision-making to affect a consumer's response to promotions. Customers who already made their decision before entering the store, e.g. based on flyers or newspapers, are less likely to be seduced by the availability of alternatives. It can therefore be assumed that when customers were confronted with appealing price promotions before entering the store, they are more likely to buy that advertised product than a competing product that was only promoted through point-of-purchase displays (Schindler, 1992).

Another factor considered to be of great importance to a customer's decision-making is the way a promotion is presented to the consumer. Sayer and Dickson (1984, as cited in Diamond & Sanyal, 1990) state that if consumers would purely evaluate sales promotion deals by the factors of multi-attribute attitude models, they would solely focus on the values instead of the presentation and details of the deal. However, Diamond and Sanyal (1990) argue that in the case of promotional deals consumers make decisions on presentational factors, formats and the information presented. Meaning that even if two ads would offer the exact same deal but are presented in a different way, consumers will find one deal more appealing than the other.

Furthermore, the consumer's expectations on future discounts are taken into consideration as Gönül and Srinivasan (1996) found this factor to be highly influential on current consumer decision-making. Generally, consumers assume that once a product is currently on sale it probably will not be any time again soon, creating an intrinsic urge to make use of the deal and purchase the promoted item while the deal lasts. Krishna (1990, as cited in Gönül & Srinivasan, 1996) states that even if these predictions on future discount deals may be inaccurate, they lead to an increased purchase behaviour. Krishna, Currim & Shoemaker (1991) on the other hand studied consumers' perception on deal frequency and deal price and found that people are often very knowledgeable about promotion frequency as well as price discounts for different product categories. These consumers are therefore often aware of the next occurrence of a deal and might be affected differently by sales promotions.

Price promotions have shown to have a significant effect on consumers stockpiling the promoted product (Diels & Wiebach, 2011; Sloot, Verhoef & Franses, 2005; van Heerde, Gupta & Wittink, 2003). Consumers are likely to compare the inventory costs with the product price and consequently decide on buying more and earlier than they would necessarily need at that moment due to the promotion. However, Sloot, Verhoef and Franses (2005) emphasize that this is naturally only applicable to non-perishable products as perishable products such as milk or bread would go bad too soon and are therefore unlikely to be stockpiled.

The extent to which a promotion creates involvement is considered to be another influencing factor on a customer's decision-making (Schindler, 1992). Two well-known, evidential but extreme examples of these involvements consider the 'coupon queens,' who have mastered the competency of paying as little as necessary while buying as much as possible, and the 'mileage maniacs,' frequent flyers who study and take extra flights just to increase their mileage on frequent-flyer programmes. This involvement only accounts for a certain type of promotions that require the consumer to do something in order to profit from the deal (Schindler, 1992).

However, even though some customers must be triggered by these types of sales promotions being convinced they can out-smart the retailer and other customers, most clients prefer promotions that are delivered to them on a silver platter (De Oliviera Santini et al., 2015; Majeed, 2007; Rothschild & Gaidis, 1981). Deals are preferred to be delivered right upon purchase, may this be a direct monetary discount (Majeed, 2007) or a premium that comes with the product (De Oliviera Santini et al., 2015). Rothschild and Gaidis (1981) even extent to this preference of easy deals by stating that customers even prefer to have a lower discount as long as the efforts are minimal.

2.4.2 AWARENESS OF SALES PROMOTIONS

Cobb and Hoyer (1986) distinguished three consumer groups in grocery retail; planners, partial planners and impulse purchasers. Their study showed that planners mostly decide on both the product category and specific brand before entering the store, while partial planners often only considered the product category and impulse purchasers did not plan anything at all before entering the store (Cobb & Hoyer, 1986). Additionally, the researchers were able to examine the different in-store behavioural processes of the three groups. Planners, the largest segment in their study, were mostly concerned with the product image, brand image and product performance of the products they bought, leaving little to no influence to the retailer on their decision. Partial planners on the other hand were found to be most easily influenced due to their intensive searches in-store, high price sensitivity and likeliness to respond to in-store promotions (Cobb & Hoyer, 1986). Finally, impulse purchasers were considered to be highly sensitive to in-store stimuli concerning promotional deals as immediate triggers (Cobb & Hoyer, 1986; Xu & Huang, 2014).

With these three groups of customers borne in mind, different situations of price promoted purchases can be considered. Planners, the biggest group of grocery customers, already knowing exactly what products of which brands they want to buy before entering the store, could already be aware of the deal before entering the store due to their pre-purchase research in for example television ads, supermarket flyers, newspaper ads, direct marketing, etc. However, planners might not be aware of the promotion beforehand and are only confronted in-store with these promotions. Nevertheless, Schindler (1992) mentions, as stated before, that once consumers have already made up their decision at home on the certain products they will buy, chances are much less they will be seduced by other attractive alternatives.

Partial planners, being the most easily influenced consumer group, are assumed to be highly responsive to promotions due to their high price sensitivity. No matter if the consumers were already aware of the price promotion before their store visit or being confronted in-store, this consumer group is assumed to be dragged along in the efforts of the marketers.

Finally, impulsive purchasers, are considered to be a difficult group to count on due to their unexpected behaviour and unpredicted purchases. Nevertheless, this group is highly sensitive to stimuli and could be convinced as long as the promotions offer such a great deal that they cannot be ignored or the consumers are unwittingly convinced of an immediate strong intrinsic desire to purchase the product (Khorrami & Esfidani, 2015; Xu & Huang, 2014).

2.5 CONCEPTUAL RESEARCH MODEL & HYPOTHESES

Based on the theoretical findings concerning OOS research and consumer behaviour towards price promotions, a research model and hypotheses were developed. This model, as presented in *Figure 2*, aims to serve as a basis for the empirical research in which the hypotheses will be tested.

Price promotions are the most popular type of promotion among consumers (Majeed, 2007) and are therefore considered to be the origin of this research model. While there are several antecedents influencing a consumer's promotional decision-making, antecedents regarding a consumer's behavioural response to a promoted item being out-of-stock were not established in previous studies. It was therefore chosen not to include the potential antecedents, based on regular OOS situations and consumer decision-making towards price promotions, in this study. These antecedents were however taken into account when developing hypotheses for OOS reactions.

To be able to compare reactions on OOS situations of promotional versus regular-priced items, Sloot, Verhoef and Franses' (2005) classification of consumer reactions on regular-priced stock-outs functioned as a basis. However, as category switch and cancellation are very rare responses in prior research (Sloot, Verhoef & Franses, 2005) it was decided to not include these two elements in the research model and focus on the most common OOS responses. In addition to this, with this study introducing the concept of consumer reactions on OOS situations of promoted items, two additional possible responses were introduced. First, due to the high importance of price as a factor for consumers (e.g. De Oliviera Santini et al., 2015; Diels & Wiebach, 2011; Walters, 1991), it was assumed that customers are likely to switch to another store of the same retail chain in case of a stock-out to still benefit from the price promotion, further referred to as branch switching. The second response added concerns consumers postponing their purchase until the next time the product is on sale again. This behavioural response was added due to this study's focus on price promoted OOS situations, opening up for two different postponement possibilities.

Furthermore, it was chosen to focus on planned purchases where customers are aware of the promotion before their shopping trip as it is assumed that the stock-out situation in this case will have the highest effects. Moreover, this study will focus on the last day of promotion of one specific product instead of a whole product category or brand line to rule out additional influences on substitution behaviour.

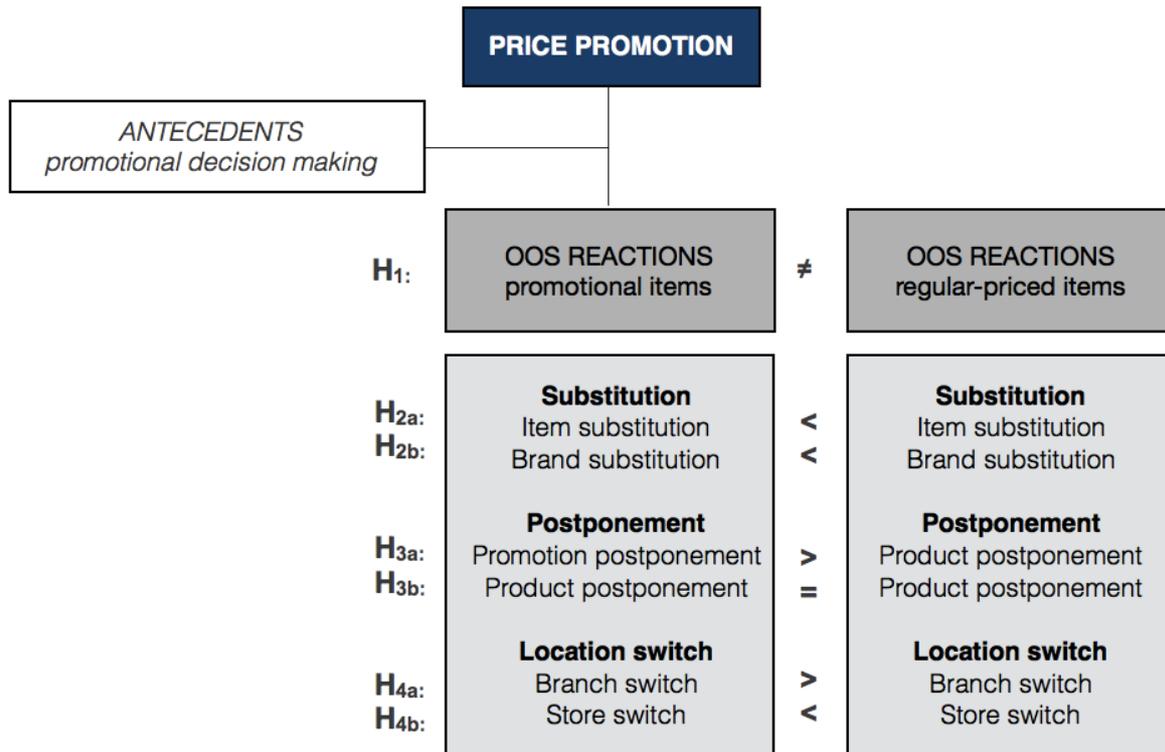


Figure 2. Conceptual research model

Studies within consumer decision-making show that price promotions can have a significant effect on a consumer's choice, leading many consumers to adapt their shopping behaviour accordingly (Alford & Biswas, 2000; de Oliveira Santini et al., 2015; Gönül & Srinivasan, 1996; Majeed, 2007; Walters, 1991). It is due to price promotions being very powerful in influencing a customer's choice, that the researchers expect consumers to also react differently in OOS situations of a price promoted item as compared to an OOS of a regular-priced item. Furthermore, is it not only assumed that the reactions themselves differ, but also the intensity of each reaction, resulting in a different rank order of possible reactions. This indicates that the most and least preferred option may be different for promotional and regular OOS.

H₁: *The intensity of promotional OOS reactions is different from regular-priced OOS reactions.*

Substitution

With regards to the literature on OOS behaviour, it can be concluded that the substitution options brand- and item switching were always considered to be significant responses, despite the purpose or research design of the study (e.g. Aastrup & Kotzab, 2010; Emmelhainz, Emmelhainz & Stock, 1991; Sloot, Verhoef & Franses, 2005). Moreover, Diels and Wiebach (2011) state that consumers experiencing a stock-out of a regular-priced item are most likely to substitute their product in-store instead of switching stores due to convenience. Considering promotional out-of-stock behaviour without any further antecedents as e.g. brand loyalty, it is assumed that the two response types will be fairly similar due to the absence of the promotional deal and therefore lower than in OOS situations of regular-priced items.

H_{2a}: The likelihood of consumers switching to another product of the same brand is lower for promotional items than for regular-priced items in an OOS situation.

H_{2b}: The likelihood of consumers switching to another brand is lower for promotional items than for regular-priced items in an OOS situation.

Postponement

Postponing the purchase as a consumer behavioural option in an OOS situation, was initially defined by Sloot, Verhoef and Franses (2005, p. 19) as “postponing the intended buy until the next regular trip to the supermarket.” However, in a situation of price promoted stock-outs the postponement could become more complex. It is assumed that customers might postpone their purchase for two different reasons; their desire for the specific product or their intention to buy that product for the promotional price.

In case of the latter, consumers often perceive promotions as an infrequent offer and feel the urge to make use of this offer as long as it lasts (Gönül & Srinivasan, 1996). Krishna, Currim and Shoemaker (1991), however, studied that some consumers are very knowledgeable about the deal frequency of certain products, indicating that if a promotional offer runs out, consumers are aware of and expect the promotion to be offered again. This statement was complemented by Kalwani and Yim (1992) who found that customers might start taking frequently promoted products for granted making them unwilling to pay the regular price for this certain product. Furthermore, price promotions have shown a significant link to consumers stockpiling the promoted product (Diels & Wiebach, 2011; van Heerde, Gupta & Wittink, 2003). This relation can be explained by the fact that stockpiling does not inevitably happen at the same time as the consumer’s

consumption, leading to consumers buying large quantities of the product at the most beneficial moment. Based on these findings, it is considered to be very likely for customers who experience an OOS of a promotional item to postpone the purchase until the same product is promoted again.

***H_{3a}:** The likelihood of consumers postponing their purchase is higher for promotional items than for regular-priced items in an OOS situation where consumers are mostly motivated by the promoted price.*

However, concerning the other reason behind a consumer's postponement regarding their desire for the specific product, it is assumed that the behavioural responses will be equal in both OOS situations. This, due to the promotional price being less of a motivational factor than the product itself.

***H_{3b}:** The likelihood of consumers postponing their purchase is equal for promotional items than for regular-priced items in an OOS situation where consumers are mostly motivated by the specific product.*

Change location

As consumers see price as a key factor when making purchasing decisions and often switch between different retail stores to make use of the best promotional deals (Walters, 1991), the option to go to another branch of the same retailer is considered to be of high importance within the context of a promotional OOS. As promotions are usually not limited to one specific retail outlet but are offered in the whole retail chain it is assumed that consumers are very likely to leave the affected store and visit another store of the same retail chain to benefit from the promotion.

***H_{4a}:** The likelihood of consumers switching to another branch is higher for promotional items than for regular-priced items in an OOS situation.*

While store switch, in prior literature, is listed among the most common reactions to OOS situations (Sloot, Verhoef & Franses, 2005) it is believed that the likelihood of consumers going to another store to purchase the intended product is higher for regular-priced than for promotional items. This is due to the fact that the promotional item is directly linked to a specific retail chain, making it less attractive for consumers to switch to a different store where the benefits of the promotion will not be present.

***H_{4b}:** The likelihood of consumers switching to another store is lower for promotional items than for regular-priced items in an OOS situation.*

Based on the assumptions concerning OOS for price promoted products, the researchers adapted the overview of responses and developed the three categories *Substitution*, *Postponement* and *Location switch*. The structure of *Figure 3* below will further on be used throughout this thesis.

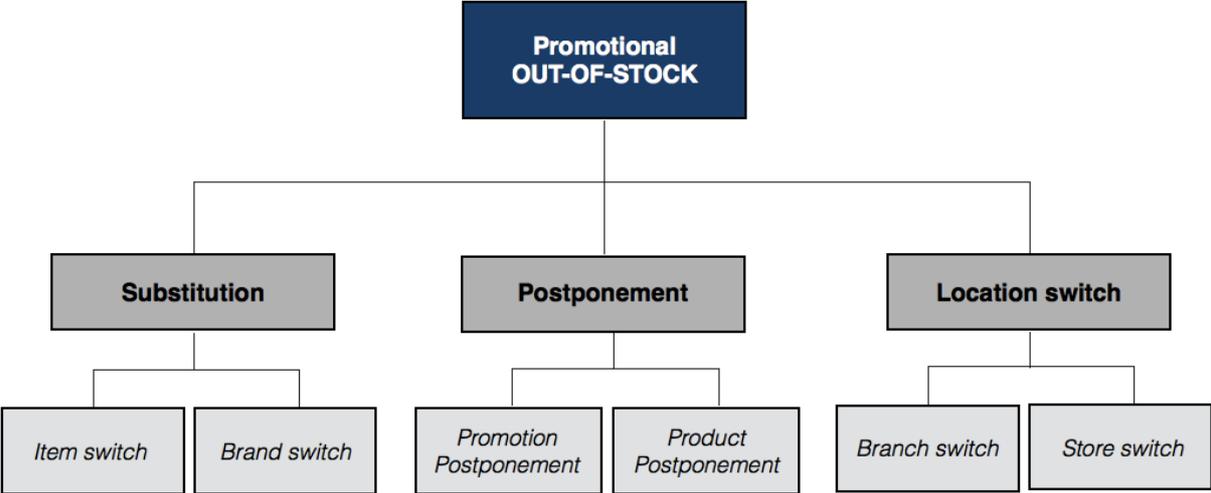


Figure 3. Promotional OOS responses

3 METHODOLOGY

The following chapter illustrates the methodological approach used for this research as well as the motivation behind it. Research philosophy, approach, strategy and design as well as data collection methods and sampling techniques are outlined in this chapter. Furthermore, an argumentation for the research context and object are provided. A reflection on possible limitations as well as a critical methodological evaluation of the research design are presented at the end of this section.

3.1 METHODOLOGICAL APPROACH

This section elaborates on the chosen research philosophy, strategy, approach and design of which the combination presents an argumentation for the choices made that ultimately justify the selected research method. This method aims to fulfil the research purpose and answer the research question in the best possible way.

3.1.1 RESEARCH PHILOSOPHY

According to Easterby-Smith, Thorpe and Jackson (2012) it is of high importance for the researchers to be aware of the research philosophy as it rationalizes and justifies a suitable research design. The research philosophy argues for the type of knowledge needed, how these findings could answer the posed research question and prevents the researcher from heading in the wrong direction when choosing an appropriate research design. Being aware of one's philosophical stand points does not only enhance the quality of the conducted research but can remarkably contribute to the researchers' creativity and their consideration of different research methods (Easterby-Smith, Thorpe & Jackson, 2012).

From an ontological point of view, the study in hand is based on the grounds of objectivism. The researchers believe that consumer reactions to promotional stock-out situations are independent of external social actors and that an objective reality towards this issue exists (Bryman & Bell, 2015). It is believed that consumers respond to the temporary unavailability of a promoted product uninfluenced by external realities. Within this research the main focus lays on one's own behaviour and decisions in case of a promotional stock-out instead of the societal pressure on one's behaviour. Therefore, the ontological orientation of this research is based on an external, objective reality (Bryman and Bell, 2015). Research philosophy is further concerned with researchers taking an epistemological stance. Epistemology concerns the issue of what should be viewed as acceptable knowledge in a certain discipline and in which ways the nature of

the world can be inquired (Easterby-Smith, Thorpe & Jackson, 2012). As the intention of this research is to test theoretical concepts that have previously been developed on a more specific phenomenon, the researchers take a clear positivistic standpoint. Positivism supports the view that the role of research is to use theory as a starting point to generate and test hypotheses to explain and develop common laws (Bryman & Bell, 2015). The intention of the researchers to follow this positivistic philosophical stance derives from its emphasis on quantifiable data and statistical analysis (Saunders, Lewis & Thornhill, 2009).

3.1.2 RESEARCH APPROACH

The chosen approach for the studied matter follows a conclusive approach. While the opposite, exploratory research designs, focus on providing new insights and are therefore rather unstructured in nature, conclusive research tests more specific hypotheses based on previous research (Malhotra, 2010). As the subject of consumer response towards stock-outs in the grocery environment has already received much attention in previous studies, the conclusive approach aims to generalise these findings for the specific situation of promotional stock-outs. This approach is the result of following a deductive process in which existing theory and research, such as consumer response models, are used to test new hypotheses (Bryman & Bell, 2015). The developed hypotheses are based on previous studies and theoretical frameworks within OOS literature as well as on factors shaping promotional decision-making. An extensive literature study is needed in order to create a conceptual framework leading to several hypotheses. The confirmation or rejection of the hypothesis in the end of the research process will lead to the revision or verification of previous findings (Bryman & Bell, 2015). The deductive approach, in which hypotheses are created “[.] on the basis of what is known about a particular domain and of theoretical considerations in relation to that domain [.]” (Bryman & Bell, 2011, p.23), is therefore justifiable.

3.1.3 RESEARCH STRATEGY

In accordance with the objectivistic and positivistic research philosophy and the deductive research approach, the chosen research strategy is of quantitative nature. The coherence of these combinations is underlined by Bryman and Bell (2015, p. 37) stating that quantitative research “[.] entails a deductive approach to the relationship between theory and research, in which the accent is placed on the testing of theories [.]” As stated above, the researchers aim to test existing OOS theories on a specific phenomenon within this field, namely promotional stock-out situations in comparison to regular-priced OOS. Furthermore, Easterby-Smith, Thorpe and Jackson (2012) argue that there are two types of data sources that can be used within quantitative studies; primary and secondary data.

Keeping the research philosophy and approach as well as the aim of this study in mind, primary data will serve as the source to test and revise theory on the basis of quantifiable, highly relevant data. Additionally, the research purpose is of descripto-explanatory nature. This indicates that the design entails elements of descriptive as well as explanatory kind. While the classification of promotional OOS responses is rather descriptive and seen as a means to an end rather than an end in itself and possibly as a precursor to explanation, the comparison of promotional to regular-priced items aims to provide further explanation and understanding of the phenomenon (Saunders, Lewis & Thornhill, 2009).

3.1.4 RESEARCH DESIGN

While the decision to conduct quantitative research has been established, it is necessary to be specific about the direction of one's research design. A design gives structure to the research and aims to provide a framework for further data collection methods and analysis (Bryman & Bell, 2015). The design that complements the purpose of this research the most is an experimental design. A classical experimental design involves two randomly assigned groups that are equal in all aspects relevant to the research, of which one group is exposed to a planned manipulation in order to assess its effect on a variable. While one group, the experimental group receives a certain treatment, the other group, the control group, does not, which enables the researchers to detect the effect of the manipulated variable (Bryman & Bell, 2015; Easterby-Smith, Thorpe & Jackson, 2012; Saunders, Lewis & Thornhill, 2009). Easterby-Smith, Thorpe and Jackson (2012) point out, that the choice of an experimental design complements the applied positivist research philosophy by developing hypotheses to confirm or disconfirm assumptions of the world. As pointed out by Bryman and Bell (2015), comparison acts as a tool to examine experiments, which leads to a better understanding of the studied issue as it is compared with something similar. As the aim of this study is to detect and compare differences and similarities between regular-priced and promotional OOS consumer reactions, an experimental design therefore served as the most appropriate way to do so. The exposure of the experimental group to a promotional stock-out while the control group is exposed to a regular stock-out situation enabled the researchers to accurately test the developed hypotheses and compare consumer reactions.

Moreover, a classical experimental approach often entails a pre- and post-test of the experimental as well as the control group to compute the differences between each groups' scores and establish whether the manipulation had an impact (Bryman & Bell, 2015). However, for the study in hand a post-test only control group research design was chosen. Following this approach, the experimental as well as the control group are only tested after the treatment and not before. This does not only entail saving of valuable

resources such as time and money, but prevents a possible interaction effect that is likely to occur when being exposed to a pre-test. A criticized disadvantage of experiment pre-testing is the possibility for participants to get sensitized to the experiment if they have been pre-tested, which may result in different outcomes (Bryman & Bell, 2015; Malhotra, 2010).

In accordance with the research design, a research method is chosen which highly depends on, or even more, is a logical consequence of a researcher's standpoints within ontology and epistemology as well as the taken research approach, strategy and design (Bryman & Bell, 2015; Saunders, Lewis & Thornhill, 2009). The method chosen to be most applicable for the realization of the experimental research design are structured interviews, also referred to as standardized interviews or social surveys. This type of data collection method involves conducting interviews in which every respondent is provided with the same stimulus and order of questions as other respondents. Usually, social surveys are administered to a large number of respondents in order to quantify the data and extract generalisable patterns (Bryman & Bell, 2015). A large benefit of this method is the standardisation of both the questions asked and the recording of the answers. This allows the researcher to assume that, when properly executed, the variation between the respondents can be attributed to true variation and not due to interview errors, of which the latter are a frequent threat when using semi- or unstructured interviews (Bryman & Bell, 2015). Furthermore, the interviewer variability and bias within structured interviews compared to any other type of data collection is fairly low. Due to the limited choice of possible answers, the risk of the interviewers misinterpreting the answer or not reporting the full answer of the respondent is limited (Bryman & Bell, 2015).

3.2 RESEARCH SETTING

In order to be able to compare the results of both surveys it was decided that a specific research setting is needed. This decision is furthermore based on the aim of quantitative research to get large quantities of data on a very specific subject (Bryman & Bell, 2015). To provide a clear understanding of the chosen research context and the reasoning behind the research object, further clarifications are given in this chapter.

3.2.1 RESEARCH CONTEXT

As the authors of the thesis in hand live in Sweden it was, due to means of accessibility, decided to concentrate the research on the Swedish market. However, this decision is not only based on reasons of convenience. While numerous researchers have already looked at OOS reactions in different geographical locations, such as the Netherlands (Sloot,

Verhoef & Franses, 2005; Van Woensel et al., 2007), the United States (Peckham, 1963; Walter & Grabner, 1975) and the United Kingdom (Schary & Christopher, 1979), so far, no authors have dedicated their study to the Swedish market. Furthermore, to be able to complement prior research, the authors decided to focus on the grocery retail sector only.

The Swedish retail sector increased its sales every year from 2000 to 2012, with total sales in 2012 of SEK 276 billion (€31.7 billion) (Chamber Trade Sweden, 2013). It should be borne in mind that these numbers are excluding alcoholic beverages since these are only sold in stores owned by the state. The country contains around 6,000 grocery stores varying in different sizes of which about half are the small convenience stores and the other half consists of large stores as supermarkets, hypermarkets and discount stores (Chamber Trade Sweden, 2013). These discount stores have recently started to grow in the Swedish grocery sector to a market share of approximately 12%. This rise is due to the two large discount chains Netto, from Denmark, and Lidl, from Germany, opening their stores in Sweden in the beginning of the 2000s (Löf, 2011).

The Swedish grocery retail sector is dominated by three main chains, the biggest one being ICA with 36% market share, followed by Coop with 21,5% and Axfood with 20% (Axfood, n.d.; Coop, n.d.; ICA Gruppen, n.d.). These three groups account for more than 75% of the total retail market in Sweden and all incorporated retail and wholesale activities (Chamber Trade Sweden, 2013).

The ICA Group is an obvious market leader within Sweden and furthermore operates with high market shares in Norway and the Baltic countries (Chamber Trade Sweden, 2013). All 1,300 ICA stores are based on a franchise formula being owned and operated by independent ICA retailers, but cooperating on aspects as wholesale activities, logistics, IT and market communications (ICA Gruppen, n.d.; Löf, 2011). Within the ICA Group there are four different sizes of retail stores; ICA Maxi, ICA Kvantum, ICA Supermarket and ICA Nära, ranging from hypermarkets to minimarkets. The division of these stores are portrait in *Figure 4*.

ICA SWEDEN RETAIL STATISTICS 2012

Sales consist mainly of food and other daily commodities, including a small assortment of non-food articles. Sales figures incl. VAT (value added tax).

PROFILE	TYPE OF STORES	NUMBER OF STORES	TOTAL SALES SEK MILLION	SALES PER UNIT SEK
ICA Maxi	hypermarkets	75	33 300	444
ICA Kvantum	large superstores	121	27 300	226
ICA Supermarket	supermarkets	430	36 000	84
ICA Nära	minimarkets	700	17 400	25
• Total		1 326	114 000	86

Sources: DLF, Company information, Fox Research

Figure 4. Types of ICA retail stores (Chamber Trade Sweden, 2013)

As shown in *Figure 4* ICA's minimarkets belong to the largest group of stores. However, considering the purpose of this study, this type of grocery retail is not very relevant as it often only offers a small assortment of each product category. Measuring consumer's behaviour considering item and brand substitution would therefore be biased. The second largest group concerns the ICA supermarkets, which, considering the total sales, also is the largest player of all ICA store types. Based on these numbers it is chosen to execute the research in an ICA Supermarket in Lund, Sweden. This city is selected due to accessibility reasons for the researchers and the large availability of both different types of ICA stores and other retail chains as Coop and Axfood stores. The ICA store selected is located in the Northern part of the city, closely located to family and student housing areas. This choice is based on the store-related variables by Sloat, Verhoef and Franses (2005), considering store loyalty and the availability of acceptable alternative stores in the neighbourhood.

3.2.2 RESEARCH OBJECT

The studies discussed in the literature review researched a wide variety of product categories. Based on these established criteria, several features are considered for this study in order to choose a product category applicable to OOS situations of both regular-priced and price promoted products. With this study being conducted in Sweden, coffee was chosen as the research object. According to Kjelgaard and Ostberg (2007), Scandinavian countries have the world's highest annual coffee consumption per capita which is about 2.5 times as much as the Italians, often considered the coffee nation of the world. Statistics of 2014 even show that Sweden is the number two country in the world with an average of 1,211 coffee cups consumed per day, coming right after Finland (Statista, 2016). Next to its high consumption rate, coffee also has a high household penetration rate and purchase frequency in Swedish supermarkets even though 25% of the population visits a café at least once a week (Chamber Trade Sweden, 2010; European Coffee Symposium, 2015).

Furthermore, the availability of different alternatives concerning brands and product sizes in Swedish grocery retail is fairly high. These wide product ranges are considered to be interesting concerning the high substitution possibilities in case of an OOS situation (Campo & Nisol, 2004; Emmelhainz & Stock, 1991b; Sloat, Verhoef, Franses, 2005; Verbeke, Farris, Thurik, 1998). However, coffee consumers appear to be very loyal to their preferred brand and package size (Peckham, 1963; van Heerde, Gupta & Wittink, 2003).

Kumar and Leone (1988) argue for the relatively high effect of price promotions on coffee considering it to be a fairly high priced product which is purchased frequently. This was confirmed by Kalwani and Yim's study (1992) proving a significant relationship between

the promotion, internal reference price and coffee. Even though Swedish consumers are known to be consuming a high proportion of the relatively more expensive Arabica coffee, the Swedish retail prices for coffee are around €5,71 per kilogram which is among the lowest prices in Europe (Chamber Trade Sweden, 2010). This can be declared by the fierce competition in the Swedish coffee market in grocery retail, which leads to frequent price promotions on these products (Chamber Trade Sweden, 2010). Cohen, Leung, Panchamgam, Perakis and Smith (2014) followed the promotional planning of coffee and found that a particular coffee brand is on sale for 23% of the time, which basically means once every four weeks.

With coffee being frequently researched in OOS studies (Cohen et al., 2014; Kalwani & Yim, 1992; Kumar & Leone, 1988; Peckham, 1963; van Heerde, Gupta & Wittink, 2003; van Woensel et al., 2007), it is assumed to be a relevant product category for the purpose of this research as well. These frequent stock-outs will help the consumer in their ability to imagine a stock-out situation at the moment of the experiment (Rani & Velayudhan, 2008).

A final important factor considers the stockpiling possibility of coffee. As found in literature and incorporated in the hypotheses, a consumer's stock is of influence on their behaviour, especially in the case of price promotions as it may lead to larger quantities purchased (Diels & Wiebach, 2011; Sloot, Verhoef & Franses, 2005).

3.3 DATA COLLECTION

This chapter explains the data collection process including specifics of the administered survey, the method of operationalisation, the conduction of a pilot study as well as the used sampling technique.

3.3.1 SURVEY DESIGN

In accordance with the choice of applying an experimental survey design, two different surveys were created (Appendix 8.1.1 & 8.1.2). While the Experimental Group (EG) received a certain treatment which the Control Group (CG) did not receive, the surveys themselves followed a similar outline to ensure comparability. The EG was treated with the factor price promotion, while the survey of the CG faced regular-priced items. However, the questions themselves were created with the aim to examine the same kind of behaviour which is why the question wording followed the same pattern with the only difference being the impact of a price promotion in the EG. Both questionnaires contained a short introduction that aimed to set the respondents in the right mind-set before

answering the questions. While the CG was asked to imagine their favourite coffee to not be available in the store, the EG was asked to imagine their favourite, price promoted coffee to not be available.

Within the context of survey design, the practice of operationalising studied concepts needed to be considered. Operationalisation is the process of defining concepts into measurable variables in order to test developed hypotheses quantitatively (Bryman & Bell, 2015; Easterby-Smith, Thorpe & Jackson, 2012). *Table 3* therefore aims to provide an overview of the operationalised concepts by indicating the types and number of questions used to observe the respective concept for each group.

Table 3. Operationalisation of concepts

CONCEPT	HYPOTHESIS	MEASURE	CG	EG
Item switch	H2 _a	5 point Likert scale	Q1	Q1
		Rank order question	Q6	Q7
Brand switch	H2 _b	5 point Likert Scale	Q2	Q2
		Rank order question	Q6	Q7
Promotion postponement*	H3 _a	5 point Likert Scale	-	Q3
		Rank order question	-	Q7
Product postponement	H3 _b	5 point Likert Scale	Q3	Q4
		Rank order question	Q6	Q7
Branch switch	H4 _a	5 point Likert Scale	Q4	Q5
		Rank order question	Q6	Q7
Store switch	H4 _b	5 point Likert Scale	Q5	Q6
		Rank order question	Q6	Q7

**While the respondents of both surveys faced the same kind of questions, the question concerning H3_a was only asked to the EG as the special influence of the factor 'price' was not applicable to the CG. This is due to the concept of postponement being divided into two questions for the EG (see chapter 2.5).*

The surveys furthermore included four general questions, two control (C1, C2_a/C2_b) and two demographic (D1, D2) questions as presented in *Table 4*. The control questions

functioned as a control factor to justify the chosen research object coffee in relation to price promotions. The demographic questions D1 and D2 were developed to ensure and regulate the exact same composition of the EG and CG which will further be explained in *subchapter 3.3.3.*

Table 4. *General questions*

CONCEPT	MEASURE	CG	EG
C1: Attraction to coffee promotion	5 point Likert scale	Q7	Q8
C2a: Experience of coffee OOS	Closed question, single choice	Q8	-
C2b: Experience of promoted coffee OOS	Closed question, single choice	-	Q9
D1: Age (Age group)	Closed question, single choice	Q9	Q10
D2: Gender	Dichotomous question	Q10	Q11

As indicated in *Table 3* and *Table 4*, 5 point Likert scales were used as the main measure to test the respondents' likelihood of choosing the suggested reaction to an OOS situation. A 5 point Likert scale enabled the respondent to indicate how strongly he or she agreed with a statement or question asked, while agreeing reflects a positive attitude towards the issue and disagreeing a negative tendency (Easterby-Smith, Thorpe & Jackson, 2012; Saunders, Lewis & Thornhill, 2011). For the context of this thesis the scale was adapted to a 5-point scale ranging from 'highly unlikely', 'unlikely', 'neutral' and 'likely' to 'highly likely', including a neutral option for respondents that did not have an opinion about the posed issue.

3.3.2 PILOT STUDY

According to Bryman and Bell (2015) it is suggested to conduct a pilot study or a pre-test before conducting a survey to ensure that the research instruments and the questions are suitable for the study. To prevent misinterpretations during the process of data collection, a pilot study was conducted for both questionnaires. Each questionnaire was tested by ten previously selected members of the population who were asked to communicate any difficulties or unclarities they faced while answering the questions. The received feedback was then taken into consideration and the questionnaires adjusted accordingly.

3.3.3 SAMPLING

In general, the objective of most research is to gain knowledge about a population. However, as a population refers to a whole set of people, such as frequent coffee shoppers within the Swedish grocery retail sector, defining a sample is of key importance to facilitate research, especially when conducting a quantitative study (Easterby-Smith, Thorpe & Jackson, 2012). A sample refers to a segment of the population selected for participation (Malhotra, 2010) and aims to make a statement about the population as a whole (Easterby-Smith, Thorpe & Jackson, 2012). The importance of reasoned sampling is therefore apparent.

To ensure an accurate and justifiable sample, the researchers first defined the population the study would be tested on. While it is decided to conduct the study on the Swedish market due to reasons of accessibility, it is further noted that male and female inhabitants of the Swedish municipality Lund in Southern Sweden, aged 20-69 years old and frequent coffee buyers are taken into account for this study. As mentioned before, accessibility in reference to time and financial constraints are a guiding principle when defining the population.

As emphasized beforehand, a highly important factor within the classical experimental design was the random assignment of groups and group members. Random, or probability sampling uses chance in the selection process, referring to each unit in the population to having the same chance of being selected. The random assignment within experimental designs aims to reduce threats to the internal validity of the study by assuring that changes to the dependent variable can only be attributed to the intended manipulation by the researchers and not to the different composition of the two groups (Bryman & Bell, 2015).

However, due to the non-availability of a sampling frame that would include the whole population from which a random sample could be taken, it was decided to approach the population in the best possible manner by conducting surveys directly at the point of sale, just outside of the selected ICA store. While this type of sampling would usually indicate non-probability sampling, more specifically convenience sampling in which respondents are chosen based on the judgment of the interviewer, a clear system was implemented to ensure an unbiased selection of interviewees. The interviewers implemented a counting system in which every third person that left the store was approached to fill out the survey and was asked if he or she was a frequent coffee buyer and willing to participate in the study. This way, judgmental choice of respondents was ruled out as a possible interviewer bias. Only in the very end of the sampling process some judgmental sampling occurred where judgements were based on the estimated age of the potential respondent. Even

though this sampling technique can by definition not be attributed to being a complete random sampling approach but rather a form of systematic probability sampling, it was believed that this technique was executed to the best possible extent and provided the researchers with a valuable sample.

To ensure an equal composition of the experimental and control group, two sample groups were developed based on the following factors: age (further classified into four age groups: 20-29 years, 30-39 years, 40-49 years, 50-59 years, 60-69 years) and gender (male, female). With both groups consisting of a sample size of 50 each, a detailed grouping was conducted based on population statistics of the municipality Lund that would ensure the same composition of both groups (Appendix 8.2). Furthermore, it was established that a minimum of 30 respondents in each group would be needed to effectively test the developed hypotheses using an experimental survey design.

3.3.4 DATA COLLECTION PROCESS

The surveys were designed as self-completion questionnaires in paper-format to be filled out in front of a chosen ICA supermarket. While the researchers were present and approached the participants to take part in the survey, the questionnaires were filled out by the respondents themselves. To ensure a valuable sample the respondents were first asked if they were frequent coffee buyers and only in case of a positive response, were therefore asked to fill out the survey. Although the research took place on the Swedish market, the questionnaires were only provided in English. As, according to the EF English Proficiency Index 2015 (EF, 2015), Sweden scored number one with a very high proficiency level of the English language, this was not considered as a possible bias in the sampling process. Aiming for the most truthful responses the surveys were filled out anonymously, preventing any social desirability bias. After completion of the questionnaire every respondent received a small incentive in the form of candy to thank them for their participation. The data itself was collected over a period of four full days with both of the researchers being involved.

3.4 DATA ANALYSIS

The following subchapter elaborates on the process of data preparation, the final composition of the survey groups as well as the statistical tests that are required to test the presented hypotheses and detect differences between regular-priced and price promoted OOS responses.

3.4.1 DATA PREPARATION

After the data was collected using self-completion questionnaires in paper format, the gathered information was computed into SPSS which served as the primary tool of statistical analysis for this thesis. Overall, 107 respondents participated in the study of which 53 completed the experimental survey and 54 the control survey. Invalid and incomplete surveys were deleted from the dataset and in case of a surplus of respondents within a group, randomized deletion ensured an equal composition of groups, resulting in 50 valid respondents in each group. A detailed overview of the composition of the sample groups is presented in Appendix 8.3.

Additional datasets

Throughout the process of data clearance, it was decided that different datasets were needed to effectively test the developed hypotheses and discover differences between groups. The initial, complete dataset, further referred to as Dataset O, included every single variable presented in the questionnaires. However, as the survey of the EG comprised one more question (Q3; H_{3a} promotion postponement) the dataset was not suitable to conduct certain statistical tests as missing values of the CG would have distorted the results. Hypotheses H_{3a} therefore required special attention as it compares the postponement dimension *price* within the EG to the postponement dimension *product* within the CG which lead to the setup of two additional datasets.

Dataset A was designed to only compare the factor tested in H_{3b} *product postponement* by deleting the variable *promotion postponement* within the EG. Dataset B, used to test H_{3a}, followed a reverse argumentation, deleting the variable *product postponement* within the EG. This way, no missing values occurred and an unvarnished comparison of the two groups was ensured. However, as the mere deletion of a variable would alter the ranking concept (Q7) in the EG, both datasets underwent a ranking adjustment for the EG, according to the deleted variable.

Index construction: Transforming variable scores

In unison with the creation of additional datasets, the variables underwent a transformation. The surveys consisted of individual questions on a 5-point-Likert scale as well as an additional ranking question encompassing the same items. It was assumed that, due to the behavioural questions being asked on an individual level while the ranking question confronted the respondent with a direct comparison and therefore a more holistic view, respondents were likely to react differently for the two different type of questions. However, as both types of questions were considered to be equally important

to provide insights to the studied matter, the merging of the variables was required to effectively test the overall tendency of the concepts.

In a first step, the variables were recoded into new scale items whereas each variable that was previously given a value ranging from 1-5, depending on the response of the Likert scale and ranking, was then given a new index score that weighed the particular response, as shown in *Table 5*. In the next step the individual and ranking variables were transformed into a new variable by computing the sum of the scores of each item. The scores then ranked from 0-100, which enabled the researchers to look at the concepts from a more comprehensive perspective and facilitated further analyses.

Table 5. Index construction

Index construction	
5-point-Likert scale	Ranking question
Very unlikely = 0	Least preferred = 0
Unlikely = 12,5	4th choice = 12,5
Neutral = 25	3rd choice = 25
Likely = 37,5	2nd choice = 37,5
Very likely = 50	Most preferred = 50

Grouping variable

As the survey did not include a single variable that was treated as an independent variable but rather included the treatment of price promotion within all questions of the EG, a grouping variable was created in SPSS and assigned to the two different groups. The grouping variable ensured that differences between the two groups could be observed and was treated as an independent variable and factor throughout all tests.

3.4.2 RESPONDENTS

The importance of an equal composition of the control and experimental group based on the Lund population was outlined in previous chapters and put great emphasis on throughout the data collection process. After clearing the dataset, both sample groups consisted of 50 respondents, equally distributed among the defined groups based on age and gender as outlined in *Table 6* below.

Table 6. *Composition of sample groups*

	Control Group (N=50)		Experimental Group (N=50)	
<i>Age groups</i>	Male	Female	Male	Female
20-29	8	8	8	8
30-39	5	5	5	5
40-49	5	4	5	4
50-59	4	4	4	4
60-69	3	4	3	4

The composition of the two sample groups accurately followed the previously defined grouping based on the population of Lund (Appendix 8.2) and therefore fulfilled the criteria of an experiment in which the control as well as the experimental group need to be equal.

Testing differences in behavioural responses between EG and CG

ANOVA

The One-Way ANOVA served as the primary statistical analysis to capture differences among the survey groups. This type of test is used to identify differences in the mean values of two groups possibly caused by an applied factor or treatment. The factor in the context of this thesis was the experimental treatment of being exposed to a price promoted product. The ANOVA tests if the null hypothesis, which refers to all means being equal, is true and therefore detects if the experimental treatment had an effect (Malhotra, 2010). While typically, within statistical tests a significance level of $p \leq 0.05$ explains a difference between two groups, the tests used reported a significance level at $p \leq 0.1$. Furthermore, the ANOVA test requires the dependent variables to be of metric nature, referring to interval or ratio scale variables (Malhotra, 2010). While the behavioural questions were computed into ordinal variables in which case an ANOVA test would not be an appropriate statistic, the process of index construction transformed the variables into metric variables which ensured the ANOVA test to be of value.

Qualitative comparison of results per item

While a One-Way ANOVA gave an initial understanding of significant differences between the two groups, a further look into the mean values and statistical crosstabulations of each variable was taken in order to effectively test the developed hypotheses. A direct comparison of the means served as the primary statistic to reject or support a hypothesis in which a mean difference of 5.0 points (on an indexed scale from 0-100) was considered a considerable difference. Crosstabulations for each item served as an additional indicator of response tendency.

3.5 CRITICAL METHODOLOGICAL EVALUATION

In the following subchapter the quality of the chosen research design is assessed. Firstly, the study's reliability, validity and replicability are critically evaluated and tested for, using the statistical reliability scale of Cronbach's Alpha. In the second half the critiques towards an experimental survey design and the limitations of the data collection process are provided and justified.

3.5.1 RELIABILITY, VALIDITY AND REPLICABILITY

According to Bryman & Bell (2011), the three most important evaluation criteria are reliability, validity and replicability, of which the latter is not as common as the first two. Reliability concerns the repeatability of the results, questioning if the measurements of a concept produce consistent results even when executed another time or by another researcher. With this research being conducted via self-completion questionnaires, it was assumed that the inter-researcher reliability of the study was reached. However, there might have been minor influences of the researchers in the sampling process and therewith on the outcomes of the study (*Chapter 3.5.2*). The internal reliability, concerning the coherency of the questions asked about a concept, was measured by the calculation of Cronbach's Alpha coefficient.

Cronbach's Alpha measures the reliability of a number of item scales that are expected to measure one concept (Field, 2013). This reliability test is especially important when several Likert scales are used all related to one concept. Within this study each concept was only measured by two questions, the specific behavioural response question and the ranking question. The acceptable value for Cronbach's Alpha is a never ending discussion between several researchers. Field (2013) argues that all values above 0.7 clearly indicate a reliable scale, even though sometimes values above 0.5 are already sufficient. According to Malhotra (2010), acceptable values for Cronbach's Alpha are 0.6 and higher. With the latter being a common used indicator and Field's (2013) values ranging from 0.5 to 0.7 it

was decided to take 0.6 as the acceptable value for this study. *Table 7* below shows the results of a reliability analysis that was executed for each concept individually using Dataset 0 (Appendix 8.4).

Table 7. *Cronbach's Alpha*

Concept	Number of Items	Cronbach's Alpha (α)
Item switch	2	0.566
Brand switch	2	0.689
Promotion postponement	2	0.744
Product postponement	2	0.706
Branch switch	2	0.744
Store switch	2	0.785

The table shows that *brand switch*, $\alpha = 0.689$, *promotion postponement*, $\alpha = 0.744$, *product postponement*, $\alpha = 0.706$, *branch switch*, $\alpha = 0.744$ and *store switch*, $\alpha = 0.785$ all have acceptable internal reliability scores. *Item switch* only had a Cronbach's Alpha score of $\alpha = 0.566$ which, according to the minimum set before, would not have accounted for a reliable scale on the concept of item switching. However, the questions used to test item switching were exactly the same as the ones for all other concepts, meaning that the internal reliability of one scale cannot be that different from another one. Field (2013) also argues that concepts only measured by two items often have lower internal reliability values and that therefore sometimes the minimal scores should be stretched a little. Concerning this latter statement, the Cronbach's Alpha scores of this research can be considered rather high as all of them are only measured by two items per concept.

The second evaluation criteria considered replicability. For various different reasons researchers may decide to replicate the results of others instead of using one's own. In order for this to be possible the other study must be replicable by having described all procedures of the study in great detail. This makes replicability closely related to reliability, as in both cases a study must be able to be redone, may that be for real or in case of replication. With this thesis' method chapter describing every detail of the research process and the SPSS outputs provided in the appendices, this study can be considered very replicable. Ironically, even though a study must be replicable, findings are almost never replicated by other authors as this is often seen as weak within business research (Bryman & Bell, 2011).

Validity, the third evaluation concept, is focussed on the integrity of the conclusions drawn from a study, defining if the study measured what it was supposed to measure (Bryman & Bell, 2011; Field, 2013). Within quantitative experimental research there are four main types of validity that are important to be assured; measurement validity, internal validity, external validity and ecological validity (Bryman & Bell, 2011). The first, measurement validity, concerns if the measurements used actually measure the concepts. With the concepts of this study being fairly straightforward as they concern behavioural responses instead of emotional responses, the establishment of appropriate measurements was easily ensured. To establish internal validity when using an experimental research design, the two most important aspects are the use of a control group and an equal composition of these two groups. The need for a control group arises from the threats of not being able to compare the results of and effects on the experimental group which would then make it questionable if these results occurred naturally or due to the experiment (Bryman & Bell, 2011). While internal validity was ensured to the highest level by accurate and equal composition of the two groups, external validity, testing a study's generalisability, of the experimental design was flawed for various reasons. First, a hypothetical as opposed to a true experiment beard the issue of not establishing generalisability due to the research not being in a natural setting (Saunders, Lewis & Thornhill, 2011). Furthermore, the study overtly surveying respondents may have caused the respondents to answer differently than they would when not being aware of their participation in the study. Other generalisability constrains concern the research focus on Lund's population, which made the results only applicable for this population. However, it may be that the same results would appear in other parts of Sweden or even other geographical locations when the study would be executed somewhere else. Finally, ecological validity is a point of concern within experimental survey designs. Ecological validity "is concerned with the question of whether or not social scientific findings are applicable to people's everyday, natural social settings (Bryman & Bell, 2011, p.43)." While the study was conducted providing the respondents with a hypothetical setting before answering the questions, the authors tried to ensure ecological validity in the best possible way by sampling respondents in front of the supermarket, assuring them to already be in a grocery shopping mind-set.

3.5.2 METHODOLOGICAL LIMITATIONS

Even though an experimental survey design was found to be the most appropriate method to analyse the differences in consumer responses in the two stock-out situations, there are several limitations coming with it that should be borne in mind. The most well-known comment to experimental survey designs in which the experiment takes place in a scientific setting concerns the poor ecological and external validity as described in *chapter 3.5.1*. Furthermore, the lacking attention to the respondents as individuals all having their

own reasoning for their behaviour is another critique towards the quantitative nature of the study (Bryman & Bell, 2011).

The survey element of the research design also brought some limitations to the table. First of all, with the researchers being present while the respondents filled out the interviews, the potential for social desirability bias occurred. This bias refers to the respondents answering the questions differently due to their image of the most socially desirable answer (Bryman & Bell, 2011). Although this type of bias is always present in research, it was believed that due to the low degree of sensitivity of the topic and the anonymity of the respondents this did not significantly affect the results. A further cause of concern regarding the presence of the researchers was their ability to probe and prompt during the structured interview. In the case of respondents not fully understanding the question due to language barriers or difficult wording they sometimes asked for further clarifications. Even though this might have violated the rules of structured interviewing where every respondent should be provided with the exact same interview stimulus as any other, it was decided to respond to the asked questions as this prevented the data from missing values or biased responses due to misunderstandings. The interviewer variability was however kept to a minimum by having the same explanation for each question. Furthermore, as the researchers chose a structured interview design with the questions to be closed and pre-coded, the possibility arose that respondents were unable to precisely express their thoughts. Closed questions make it difficult to be exhaustive and include all possible answers, instead they suggest certain kinds of answers to the interviewees, which may not be catered for every respondent. (Bryman & Bell, 2015) However, by pre-testing the surveys and using mostly Likert scale response sets the researchers aimed to reduce this problem to a minimum. Further, the hypothetical situation provided to the respondents in the beginning of the EG survey mentioned it to be the last day of the promotional deal, limiting the generalisability of the results. This was however chosen to eliminate external factors as the time of re-stocking or the consumer being able to re-visit the store another time during the same promotion period. Finally, the concern of the research being conducted only in Lund in the South of Sweden raised questions of generalisability. It could be argued that, in the North of Sweden, consumers are affected differently by stock-outs of their preferred coffee brand as there are for example less options to go to a different supermarket as compared to the South of Sweden due to its lower population density (Nations Encyclopedia, 2016). However, with the majority of Sweden's population living in the South and the coastal areas according to Nations Encyclopedia (2016), and the limited budget and timeframe not allowing the researchers to travel throughout the country, it was chosen to only collect data in the Southern region.

One final limitation regards the sampling procedure used in this study. Due to the non-availability of a sampling frame a complete random sampling was not attainable. It was therefore decided to use the next best option, a systematic probability sampling. By only approaching every third person leaving the supermarket judgemental decisions were tried to be avoided. It should however be mentioned that when some pre-defined age groups were almost filled, some sort of judgemental sampling was used by approaching potentially suitable respondents based on their estimated age. Even though this way of sampling cannot be considered as a complete random sampling technique, it did provide the researchers with a valuable sample. Moreover, the perfectly equal group divisions based on the percentages of Lund's population for both variables gender and age, improved the representativeness of the selected sample. Nonetheless, the researchers are aware of the consequences of the used procedure regarding the lost possibility of generalising the results to the population.

4 RESULTS

This chapter presents the results of the statistical tests conducted in SPSS. While a One-Way ANOVA gives an initial understanding of the differences between groups and acts as a starting point for further interpretation, an individual comparison of the relevant variables aims to test the developed hypotheses. Finally, the control variables of the survey are analysed in order to justify the chosen research object.

4.1 ANALYSIS OF VARIANCE (ANOVA)

To gain an initial understanding of possible differences between the two groups, a One-Way analysis of variance (ANOVA) was conducted. The ANOVA test identified whether the mean values of each item of the two groups significantly differed from each other. The primary test results used to interpret the analysis were significance level and effect size, as presented in *Table 8* below.

A significant difference between the means of the two groups was detected at a significance level of $p \leq 0.1$. When a significant difference between two groups can be detected, the strength of the effect of the factor *price promotion* on the affected dependent variable is of interest. The effect size was measured using the statistic eta squared (η^2) where its value varies between 0 and 1, while 0.10 accounts for a small effect (explaining 10% of the total variance) while 0.50 accounts for a large effect size (explaining 50% of the total variance) of the factor on the variable (Field, 2013; Malhotra, 2010).

The ANOVA test was conducted using dataset A (Appendix 8.5.1), while extended with the respective values for *price promotion*, taken from dataset B (Appendix 8.5.2). The dependent variables were analysed against the grouping variable *Group* that served as an independent variable and factor throughout all conducted tests. Significance was reported for *promotion postponement* ($p = 0,051$; $\eta^2 = 3.8\%$) and *store switch* ($p = 0.074$; $\eta^2 = 3.2\%$) indicating that promotion postponement explained 3.8% and store switch 3.2% of the total variance between groups, both accounting for a rather small effect (Appendix 8.5.3). As presented in the table, no significant effects (n.s.) were detected for the remaining four variables *item switch*, *brand switch*, *product postponement* and *branch switch*.

Table 8. ANOVA results

Scale items	Mean value CG	Mean value EG	F-Ratio	Significance value (p)	Effect size (η^2)
Item switch	69.00	66.00	0.337	0.563	n.s.
Brand switch	39.50	38.00	0.066	0.798	n.s.
Promotion postponement*	54.75	42.75	3.907	0.051	0.038
Product postponement	54.75	47.25	1.688	0.197	n.s.
Branch switch	27.00	34.75	2.347	0.129	n.s.
Store switch	40.50	29.75	3.265	0.074	0.032

**The results for promotion postponement were taken from the ANOVA test conducted in dataset B in which promotion postponement in the EG was directly compared to product postponement in the CG.*

While the ANOVA test indicated that the majority of variables did not explain a significant difference between the two groups, the items were further looked at from an individual perspective by directly comparing the mean values in order to test the hypotheses, as presented in the following chapter.

4.2 QUALITATIVE COMPARISON OF THE RESULTS PER ITEM

The main purpose of this thesis was to compare the behavioural responses of consumers in two different stock-out situations. As the One-Way ANOVA test, as described before, did not deliver significant differences for all variables between the control- and experimental group, it was decided to execute a qualitative comparison between the mean scores of each variable separately. This analysis of the means was based on the dataset A as this dataset includes the responses of both the ranking- and the variable specific questions. With these variables being used, the possible mean scores lie between 0 and 100 of which the first indicates that absolutely no one considers this option and the latter represents a full willingness of every respondent to behave that way.

Next to a comparison of mean scores per individual behavioural response, statistical crosstabulations of each variable were created. These outcomes provided the researchers with more in-depth insights into the range of responses given to each question, which could have gone lost when only comparing averages. In order to get even more specific data, the percentages of both the item specific questions and the ranking questions were collected and compared.

In the subtopics below each variable is discussed separately, leading to the decision of the hypothesis being supported or rejected. This decision was based on a minimal mean difference of 5.0 between the control- and experimental group. It should however be borne in mind that the One-Way ANOVA results were only significant for *promotion postponement* and *store switching* on a level of $p \leq 0.1$. This means that even if the mean scores showed a difference of 5%, the standard deviations of these results were too high to result in significant differences, making the supported hypothesis less strong. It is however assumed that these standard deviations would be lower with a larger sample size, resulting in significant results on the ANOVA test. Further interpretations on the supported or rejected hypotheses are provided in *chapter 5*.

4.2.1 SUBSTITUTION

Item switch

The first behavioural response variable concerns item switching (Appendix 8.6.1 & 8.6.2). When looking into the responses given to the item switch-related questions it was found that 66% of the CG respondents considered themselves to be likely or highly likely to switch items. Within the EG respondents were not as convinced of the option as 36% of the respondents answered likely and 34% unlikely. However, when analysing the results of the ranking question both groups picked item switch as their most preferred option with a score of 50% in the CG and even 54% in the EG.

Only a slight difference in means was found by comparing the CG ($\bar{X} = 69.0$, $SD = 27.34$) against the EG ($\bar{X} = 66.0$, $SD = 24.23$). Even though this difference of 3.0 in means indicates the same direction as hypothesis 2_a predicted, it cannot be supported as the difference is considered to be too small.

HYPOTHESIS 2_a (Rejected): *The likelihood of consumers switching to another product of the same brand is lower for promotional items than for regular-priced items in an OOS situation.*

Brand switch

Brand switching is the second behavioural response variable considered (Appendix 8.6.1 & 8.6.3). The answering percentages of the respondents concerning brand switching within both groups show that the respondents were not very likely to switch to another coffee brand in case of a stock-out situation. It is however considered to be quite remarkable that brand switching had the highest percentages of 'Neutral' answered of all variables with 22% in the CG and 16% in the EG. This is also reflected in the range of answers in the ranking question as within the CG 34% chose brand switch as their least preferred choice, while 36% chose it as their 2nd choice. Within the EG 32% of the respondents had brand switching as their last choice while 40% had it as their 2nd choice.

Also in this variable there was only a minor difference found between both mean scores of which the CG ($\bar{X} = 39.5$, $SD = 31.07$) is just 1.5 points higher than the EG ($\bar{X} = 38.0$, $SD = 27.19$). These scores show that the likelihood of consumers switching to another brand of the same product category was lower for promotional items than for regular-priced items in an OOS situation. However, the difference in mean scores is too small to consider the hypothesis to be supported.

HYPOTHESIS 2_b (Rejected): *The likelihood of consumers switching to another brand is lower for promotional items than for regular-priced items in an OOS situation.*

4.2.2 POSTPONEMENT

Promotion postponement

Promotion postponement, considering the consumers of the EG to wait with their purchase until the next time it is on sale again, also revealed a different outcome than what was anticipated (Appendix 8.6.1 & 8.6.4). Within promotion postponement the CG showed that 30% of the respondents were likely to postpone, while 26% were unlikely to wait. The EG within promotion postponement was a lot less likely to wait with 38% being highly unlikely and 32% unlikely. Nevertheless, comparing the ranking question, only 20% of the EG had promotion postponement as their least preferred option, 30% as their 3rd option and even 28% as their most preferred choice, an almost equal division compared to the CG.

Contrasting the hypothesis, the mean score of the EG ($\bar{X} = 42.75$, $SD = 32.35$) turned out to be lower than in the CG ($\bar{X} = 54.75$, $SD = 28.22$), where regular-priced item postponement was measured.

HYPOTHESIS 3_a (Rejected): *The likelihood of consumers postponing their purchase is higher for promotional items than for regular-priced items in an OOS situation where consumers are mostly motivated by the promoted price.*

Product postponement

Within the variable of product postponement, in which it was measured how willing consumers are to wait with their purchase until the product is available again, the division within the answers of both groups were quite different (Appendix 8.6.1 & 8.6.5). Within the CG 30% answered to be likely to postpone their purchase until the next time the product is available again and 26% responded to be unlikely to wait. The EG only had 14% of the respondents to be likely to postpone, while 42% answered to be unlikely to wait. These clear differences were less visible in the ranking question, where 40% of the CG respondents and 38% of the EG respondents chose product postponement as their 3rd choice and even 26% in both groups as their first choice. However, 22% of the EG had product postponement as their least preferred option while in the CG this was only 8%.

This clear division was also reflected when comparing the means. The respondents of the CG ($\bar{X} = 54.75$, $SD = 28.22$) were evidently more likely to postpone their purchase than the respondents of the EG ($\bar{X} = 47.25$, $SD = 29.48$). This difference was unexpected as the researchers anticipated there to be no difference due to the lack of the influence of the price promoted product, which leads to hypothesis 3b to be rejected.

HYPOTHESIS 3_b (Rejected): *The likelihood of consumers postponing their purchase is equal for promotional items than for regular-priced items in an OOS situation where consumers are mostly motivated by the specific product.*

4.2.3 CHANGE LOCATION

Branch switch

Branch switching, a behavioural response that was especially added considering the influence of price promoted OOS situations, appeared however, to be a very unpopular choice within both groups (Appendix 8.6.1 & 8.6.6). 73% Of the CG and 74% of the EG mentioned branch switch to be an unlikely or highly unlikely option. Within the ranking question however, it appeared that the EG is more likely to consider branch switching than the CG, even though both groups show the highest percentages for this option in the 4th choice (42% CG – 38% EG).

The mean scores of both groups show these clear differences as portrait in the ranking question as well. As expected, the CG ($\bar{X} = 27.0$, $SD = 22.64$) had a significantly lower mean score than the EG ($\bar{X} = 34.75$, $SD = 27.70$), indicating that consumers are more likely to

switch to another supermarket of the same branch in case of a price promoted OOS situation than in the case of a stock-out of a regular-priced item.

HYPOTHESIS 4_a (Supported): *The likelihood of consumers switching to another branch is higher for promotional items than for regular-priced items in an OOS situation.*

Store switch

The final behavioural response tested, considered customers switching to any other store in order to still purchase the desired product (Appendix 8.6.1 & 8.6.7). Respondents in both groups were not very likely to switch stores in case of a stock-out situation. The EG appeared to be even more negative towards this option with 68% of the respondents choosing unlikely or highly unlikely, while only 54% of the CG chose these answers and 34% of this group claimed to be likely or highly likely to switch stores. This contrast is also clearly visible in the answers of the ranking question with a quite equal division of all positions within the CG and a large tendency to be the least preferred option in the EG (4th choice 36% and last choice 32%).

This variable showed quite some differences in mean scores between the two groups in which the CG (\bar{X} =40.5, SD =32.30) scored much higher than the EG (\bar{X} =29.75, SD =26.95). These scores show that the consumers not influenced by the price promotion were more likely to switch stores than the consumers that were considering the price promoted product. This being found, together with the significant results of the One-Way ANOVA test as described before, the hypothesis concerning store switching was found supported.

HYPOTHESIS 4_b (Supported): *The likelihood of consumers switching to another store is lower for promotional items than for regular-priced items in an OOS situation.*

4.2.4 INTENSITY DIFFERENCES

Even though not all hypotheses were supported by the results of this study, the mean scores between the groups have shown fairly interesting results (*Table 9*). The table shows that only within item switch and brand switch, the two substitution variables, there are hardly any differences in mean scores between the groups. Within the non-substitution variables however, there are some clearly visible differences of at least 7.75 points on a scale of 1-100.

Table 9. Mean scores per variable

Scale items	Mean value CG	Mean value EG
Item switch	69.00	66.00
Brand switch	39.50	38.00
Promotion postponement*	54.75	42.75
Product postponement	54.75	47.25
Branch switch	27.00	34.75
Store switch	40.50	29.75

*The results for promotion postponement were taken from the ANOVA test conducted in dataset B in which promotion postponement in the EG was directly compared to product postponement in the CG.

Based on the mean scores, that combined both the outcomes of the specific behavioural response questions and the ranking question, a ranking for both groups was created where number 1 represents the most preferred option (*Table 10*). Both rankings are, despite the differences in means, quite similar. However, it is remarkable that store switch moved from the 3rd position in the CG, to the last position in the EG. Furthermore, it could be stated to be interesting that promotion postponement has ended up quite high on the ranking of the EG, but underneath product postponement. Interpretations and elaborations on these results are provided in the next chapter.

Table 10. Intensity of responses

Control Group	Experimental Group
1 = Item switch	1 = Item switch
2 = Product postponement	2 = Product postponement
3 = Store switch	3 = Promotion postponement
4 = Brand switch	4 = Brand switch
5 = Branch switch	5 = Branch switch
	6 = Store switch

The main inspiration for this research concerned the expected difference in OOS reactions in the different OOS situations. This hypothesis was overall, despite some of the rejected hypotheses, supported by the results mentioned above.

HYPOTHESIS 1 (Supported): *The intensity of promotional OOS reactions is different from regular-priced OOS reactions.*

4.2.5 OVERVIEW OF SUPPORTED AND REJECTED HYPOTHESES

Table 11 provides an overview of the tested hypotheses. Even though only three out of seven hypotheses were supported by the collected data, the minor differences between the mean scores for item- and brand switch showed a possible tendency in the direction of the hypothesis. These differences were however not large enough to support the related hypotheses.

Table 11. *Overview of hypotheses*

Hypothesis	Concept	Supported/Rejected
1	Intensity differences between groups	Supported
2 _a	Item switch	Rejected
2 _b	Brand switch	Rejected
3 _a	Promotion postponement	Rejected
3 _b	Product postponement	Rejected
4 _a	Branch switch	Supported
4 _b	Store switch	Supported

4.3 CONTROL VARIABLES

The questions *Attraction to coffee promotions* (C1), *Experience of coffee OOS* (C2_a) and *Experience of promoted coffee OOS* (C2_b) functioned as control factors to justify the chosen research object coffee in relation to price promotions.

Overall, 57% of the respondents were attracted or very attracted to coffee promotions, while only 16% indicated that they are not attracted or not at all attracted to this type of promotion. 27% of the respondents remained neutral in their response (Appendix 8.7.1).

Concerning question C2_a regarding the consumer's experience with their favourite coffee being OOS, no clear tendency could be indicated for the CG. While 40% stated that they had never experienced their favourite coffee to be OOS, 40% responded that they had

experienced this situation. 10% Indicated that they do not remember if they had ever faced this situation (Appendix 8.7.2). The results for question C2_b look slightly different. 24% Of the respondents of the EG state that they had experienced a promoted coffee to be OOS, while 34% state that this situation had not occurred to them. However, 42% of the respondents did not remember a situation like this (Appendix 8.7.3).

The overall tendency of the population to be attracted to price promotions signalizes that the choice for coffee as a research object relation to price promotions was justifiable.

5 DISCUSSION OF RESULTS

Within this chapter the results of the primary research are compared to the findings of the literature review. Possible reasons for the consumer responses in OOS situations are based on the antecedents and findings of the literature review. First an overview of the differences in responses between groups is provided and discussed, later on the sub-categories substitution, postponement and location switch are individually analysed.

5.1 OVERALL RESPONSES

Comparing the results of both groups in customer responses it shows that there were no major differences between the CG and the EG (*Table 10*). However, there are a few interesting findings to both rankings. Most clearly visible is the change in position of the response store switch from the 3rd position in the CG, being least preferred in the EG. This could possibly be explained by the price promotion effect being present in the EG on the responses regarding switching to another outlet of the same retailer to make use of the promotional offer and postponing the purchase until the product is on sale again in the future. When changing location in the CG, customers were not influenced by any price promotions, leading to switching to another outlet of the same retailer often being less popular than switching to any other store. This may have resulted from *convenience reasons*, whereby other retailers may have been more practical to visit for the customer (Campo, Gijsbrechts & Nisol, 2000; Sloot, Verhoef & Franses 2005), than especially going to another ICA store (in this case). Promotion postponement on the other hand was only introduced in the EG and appeared to be affected by the factor of price promotion. Respondents showed to be more likely to postpone their purchase until the next time the product is on sale again, instead of visiting a different store to buy the desired product.

Furthermore, it was found quite remarkable that even though several studies have presented the large effects of price promotions on customer decision-making (e.g. De Oliviera Santini et al., 2015; Majeed, 2007), in case of a stock-out customers preferred to switch to a different item of the same brand instead of postponing their purchase or changing location. This may imply that the price promotion factor is not as strong as was expected by the researchers. Other antecedents, such as *brand loyalty* and *urgency of need* may have a larger effect on consumer behavioural responses in an OOS situation.

Moreover, the postponement type of response was found to be more likely to occur than customers changing location to buy the product elsewhere. This may have had to do with the *perceived costs* of going to another store to buy the product being higher than the 'costs' of not having the product until the next shopping trip (Sloot, Verhoef & Franses, 2005). Furthermore, with coffee being a non-perishable product, customers may have

stockpiled the product before, lowering the *urgency of need* of an immediate purchase (Diels & Wiebach, 2011; Sloot, Verhoef & Franses, 2005).

A final remark concerns the results of a global study on regular-priced products in OOS situations by Gruen, Corsten and Bharadwaj (2002) that showed a different ranking than the outcomes of the thesis in hand. Coffee was one of the numerous products their research was based on, enabling a reasonable comparison with the study in hand. However, their results showed that going to another store to buy the same product was ranked the highest, followed by purchasing a different coffee brand. These two variables ended respectively on the third and fourth place in the ranking of promotional OOS responses of this study, preceded by choosing another item from the same brand and postponing the purchase. The significant differences between the studies could possibly be attributed to the geographical location of the studies, where this study focussed on a city in southern Sweden while Gruen, Corsten and Bharadwaj (2002) examined the United States and several countries in Europe without Sweden. As the Swedish coffee culture is a heavily established phenomenon according to Kjelgaard and Ostberg (2007) and indicates the highest coffee consumption per capita in the world (Statista, 2016) the country can be considered a special case regarding the product category coffee. It should also be borne in mind that when focussing on a different category the outcomes of this study could have shown different results. This is assumed due to the high brand loyalty to coffee in general and especially by Swedish consumers (Kjelgaard and Ostberg, 2007; Peckham, 1963; van Heerde, Gupta & Wittink, 2003) making item switch and product postponement the most popular consumer responses.

5.2 SUBSTITUTION

The consumer behavioural OOS responses item switch and brand switch both concern the customer purchasing a substitute product instead of the intended product without changing location. The results of the statistical tests for both responses showed no significant differences between the CG and the EG. However, when comparing the answers of both groups within each type of response, minor differences were found. Both variables showed that the CG had a slightly higher tendency to substitute the product by either switching to another item of the same brand, or by changing brands, than in the EG. These differences were however not strong enough to be considered as significant differences, resulting in both hypotheses being rejected.

As found in the literature study, according to Campo, Grijsbrechts and Nisol (2000), a high *availability of acceptable alternatives* increases the likelihood of customers substituting the unavailable product instead of buying the product elsewhere. With the studied object

of this study being coffee, the availability of different alternatives concerning brands and product sizes in Swedish grocery retail was rather high, and therefore facilitated the easy option of substitution. However, a significant number of consumers appeared to *perceive a high risk in switching to an alternative* which may decrease their preference for substituting their desired product with a different coffee brand (Emmelhainz, Emmelhainz & Stock, 1991b). The same research however also found that the *intention of use* influences the likelihood of substitution, whereby products intended for regular use are more likely to be substituted (Emmelhainz, Emmelhainz & Stock, 1991b). With coffee being used and bought on a high frequency basis in Sweden, this may have influenced the higher tendencies for substitution in OOS situations than it would have with other types of products.

Remarkable are the big differences between the two substitution possibilities, in which switching to another item of the same brand was chosen to be most preferred in both groups while switching to another brand ended up as a fourth choice in both groups. These major differences are expected to have resulted from a high *brand loyalty* for the product tested within this research. As found in the literature study, Sweden has a very high household penetration rate of coffee, in which most people are very loyal to their specific brand and flavour (Chamber Trade Sweden, 2010; Peckham, 1963; van Heerde, Gupta & Wittink, 2003). This high brand loyalty may have had a negative effect on brand switching. Furthermore, it may be assumed that brand loyal customers would perceive a higher risk in switching to an alternative brand, than to an alternative product of the same brand, confirming the findings of Emmelhainz, Emmelhainz and Stock (1991b). Therefore, the high popularity of switching within the same brand can be explained by the high level of convenience for the shopper by not having to leave the store or having to wait until the next availability, while not having to switch to another brand.

Finally, the minor differences between the CG and the EG have led the researchers to reject their hypotheses. The findings of this study showed that in case of an OOS situation, customers were very willing to substitute the product, most likely by choosing a different item of the same brand, despite the potential loss of the price promotion benefit. These results could have been influenced by the consumer's *urgency of need* for coffee (Emmelhainz, Emmelhainz & Stock, 1991a; Zinn & Liu, 2001) or the *available time for shopping* (Campo, Gijsbrechts & Nisol, 2000) the customer had in order to be able to wait with the purchase or to leave and purchase the desired coffee elsewhere.

5.3 POSTPONEMENT

Looking at the overall rank order obtained from the statistical tests it is evident that purchase postponement until the product is available again held a strong position for regular-priced as well as price promoted OOS, being ranked number two in both groups. As product postponement and switching to another product within the same brand lead both rankings, it could be argued that consumers were highly affected by *brand loyalty* in their choice of OOS response in both situations. As found by Campo, Gijbrecht and Nisol (2000) as well as Sloot, Verhoef and Franses (2005), brand loyalty is a strong influencer of purchase postponement, which seems to also hold true for price promoted products.

Moreover, according to the overall rank order of responses, purchase postponement for the promotional price was ranked below purchase postponement for the product within the EG, indicating that consumers were more willing to wait for the specific product to be available again for the regular price than postponing their purchase until a future promotional offer occurs again. As found by Krishna, Currim and Shoemaker (1991), consumers are often aware of the *frequency of promotions* which lead the researchers to assume that this knowledge will most likely lead consumers to postpone their purchase until the next promotional deal. While the statistical tests discovered a significant difference of promotion postponement within the EG compared to product postponement within the CG, the outcome was different than expected and the hypothesis had to be rejected. While it was assumed that purchase postponement until the product is on sale again for promotional products would be higher than purchase postponement for regular-priced products, the results showed a reverse outcome. As opposed to Krishna, Currim and Shoemaker's research as mentioned above, it can be argued that the study by Gönül and Srinivasan (1996) explains this effect. Customers seem to assume that once a product is on promotion, it might *not be offered for a cheaper price again any time soon*, which may have lead the respondents to consider the option of promotion postponement to a lesser extent.

Moreover, the fact that purchase postponement in the EG was chosen over other possibilities in which the price could have been considered a major influencer (postponement until the next promotional offer, switching to another outlet of the same retailer) indicates that consumers did not necessarily react to promotional OOS with only the cost factor in mind. This counters Kalwani and Yim's (1992) finding in which it is assumed that promotions often lead consumers to become unwilling to pay the regular price, which does not hold true in this case.

5.4 LOCATION SWITCH

Changing location for both types of OOS did not receive very much attraction. However, the differences between the groups showed interesting data to be interpreted. The results showed that consumers were significantly less likely to switch to another store in the case of a price promoted OOS than for regular-priced items. Looking at the overall rank order of choices for both groups, store switch was ranked third (out of five) within the CG and sixth (out of six) in the EG, which indicates that store switch was the overall least preferred option in case of a price promoted OOS. While for regular-priced items, store switch still holds a fairly important position which supports prior literature (Sloot, Verhoef & Franses, 2005), it can be argued that the absence of the *price benefit* in another store seems to have been a strong influencer of this reaction in the EG as it did not motivate the consumer to make any additional effort of switching stores. Switching to another outlet of the same retailer, on the other hand, was a more attractive option in case of a price promoted OOS than compared to a regular-priced item.

While Sloot, Verhoef and Franses (2005) found that price consciousness has a negative effect on store switch as the perceived cost of store switching is possibly higher than the cost of product substitution or postponement, it can be argued that in this case *price consciousness* positively affected switching to another branch of the same retailer. While, as argued before, store switch was the least preferred option in case of a price promoted OOS because the benefit of the price promotion was lost, branch switch enabled the consumer to still purchase the product for a cheaper price. It can therefore be indicated that price conscious consumers are more likely to switch to another branch when faced with a price promoted OOS. However, branch switch for regular-priced items is the least preferred option and ranked below store switch, which can be argued by the *availability of alternative stores* (Campo, Gijsbrechts & Nisol, 2000; Sloot, Verhoef & Franses 2005).

For regular-priced items consumers seem to be more willing to switch to any other store, possibly due to shorter store distances, than switching to the same retail outlet that might be further away. This option only seemed to be interesting in case of price promotion. Another factor that could have influenced this decision is *store loyalty*. Store switch in general is reported to be the least likely option for store loyal customers (Campo, Gijsbrechts & Nisol, 2000; Emmelhainz, Emmelhainz & Stock, 1991b) which can be argued to have a reverse effect on branch switch. Store or retailer loyal customers are likely to be more willing to put additional effort in their purchases by switching to another branch of the same retailer. The overall low attraction to changing location in both OOS situations can be attributed to factors such as *time pressure*, *available shopping time* and *urgency of need*, which results in an overall negative effect on location switching.

6 CONCLUSION

The final chapter provides a conclusion of the researched topic as well as an outline of the theoretical- and managerial implications of this thesis, an elaboration on limitations of this research and possibilities for future research.

While out-of-stock (OOS) reactions have been studied from different perspectives in previous literature, the purpose of the thesis in hand was to examine the yet under-researched differences and similarities of consumer reactions regarding price promoted and regular-priced OOS situations. Guided by the research question: “*How do consumers respond differently when confronted with an OOS situation of a regular-priced item compared to an OOS of a price promoted item in the retail grocery sector?*” the researchers based their study on existing OOS responses and extended them in regard to promotional OOS. Whereas the main four OOS reactions deducted from prior research were product substitution within the same brand, substitution within a different brand, purchase postponement and switching to another store, this thesis extended the possible responses. Considering the influence of price promotions three behavioural response categories were created; *substitution*, including product substitution within the same or a different brand, *postponement*, including postponement for the specific product or for the promoted price, and *location switch*, referring to store and branch switch, of which the latter indicates going to another outlet of the same retailer.

Using an experimental survey design that was based on the product category coffee and conducted in a southern Swedish town, the comparison of the two OOS situations resulted in only minor differences. However, the statistical tests as well as a more qualitative comparison of each response showed that consumers react differently in some instances, even though not to a significant extent. One of the most apparent findings was the small likelihood of people to switch stores in case of a price promoted OOS situation as compared to a relatively high likelihood to do so for regular-priced products. Switching to another store of the same retailer, on the other hand, did not prove to be an interesting option in case of regular-priced items and only slightly more relevant for price promoted products. While the newly introduced option promotion postponement was expected to show a significantly higher response for price promoted products, it did not seem to be a very popular option when compared to the results of regular-priced items. Postponing the purchase of the product once it is available again, however, seemed to be a popular option for both OOS situations, while appreciated more for regular-priced items. Both substitution options did not show a significant difference between the two situations. The decision consumers were most likely to make in both groups however, was switching to another item within the same brand. Switching to another brand, on the contrary, was

ranked relatively low in both groups. Overall, the responses for both groups seemed to be guided by a strong brand loyalty to coffee, as the most preferred options for regular-priced as well as price promoted products are related to the purchase of either the specific product or a product of the same brand.

6.1 THEORETICAL CONTRIBUTION

This thesis contributes to OOS literature within marketing and retailing from a consumer perspective. While OOS responses to different product and store types have already been studied, researchers primarily focussed on regular-priced products of which the responses were found to not be sufficient for promotional OOS. This study therefore contributes to overall OOS literature through examining and introducing the concept of price promoted OOS by applying existing OOS responses to the phenomenon of price promoted stock-outs, which had only received minor attention until this point in time (Diels & Wiebach, 2011; Peinkofer, 2015). With the further examination of the response *branch switch*, this thesis confirms Diels and Wiebach's (2011) introduction of this reaction as a possible response for price promoted OOS situations. Furthermore, the introduction of the concept *promotion postponement* proved to be a relevant response to price promoted OOS and therefore adds a new dimension to possible OOS reactions. The introduction of additional OOS responses lead the researchers to develop an OOS response model (*Figure 3*) comprising the four dominant OOS responses based on prior literature and the two additional responses tailored to price promoted OOS, put into newly developed categories. The development of the model does not only provide more structure to the interplay between regular-priced and price promoted OOS responses, it furthermore offers a basis to close the mentioned research gap within OOS literature.

As the study found that substituting the missing product within the same brand and postponing the purchase were the most prevalent responses for regular-priced as well as for price promoted coffee OOS, it rejects Gruen, Corsten and Bharadwaj's global study on OOS (2002). Their specified findings for the product category coffee showed that switching to another store is the most dominant option, followed by substitution for a different brand and purchase postponement. The most popular response found in the thesis in hand, switching to another item within the same brand, was presented only with a small likelihood. It is assumed that the differences in responses can be attributed to the cultural differences towards coffee consumption between the studied countries. Sweden, which was not included in the global study by Gruen, Corsten and Bharadwaj (2002), shows one of the highest coffee consumption patterns in the world (Statista, 2016) and therefore deserves special attention in regard to the studied product category.

This study therefore further contributes to global OOS literature by researching a yet under researched market with a strong consumer culture towards the studied product. In relation to this, the thesis furthermore has potential to contribute to literature within Swedish consumer culture by anticipating a strong brand loyalty towards coffee products based on the preferred OOS responses found in this study.

The thesis further contributes to existing literature by directly comparing reactions of promotional OOS to regular-priced OOS using an experimental survey design. While experimental designs served as a frequent research method within OOS literature, a direct comparison of two different OOS situations has not received much attention yet. While prior studies aimed to compare existing results of different researchers (e.g. ECR Europe, 2003) to draw general conclusions on OOS, the ambiguous research objects and research settings applied in literature restrict a valuable comparison. Even though the findings of this thesis are, due to an intentionally small population and sample size, not generalizable to a wide extent, they further contribute to OOS literature by providing a solid foundation for further research.

6.2 MANAGERIAL IMPLICATIONS

Managerial implications are derived from the intensity of the individual consumer responses. With switching to another item of the same brand being the most preferred option in both cases, the consumer was generally more likely to continue their purchase in the same store which does not cause a direct sales loss to neither the retailer nor the manufacturer as the switch occurs within the same brand. Therefore, offering a wide range of products within one brand provides the consumer with a bigger choice of alternatives in case of a regular-priced as well as a price promoted OOS. Relating these findings to promotional planning, it can therefore be advised to not only ensure the promoted product to be available to the greatest possible extent, but also to re-stock products of the same brand.

As product postponement was the second most preferred option in both OOS situations, the retailer may not be directly faced with a sales loss if the customer is store loyal and plans his or her next shopping trip at the same store. This therefore indicates that a quick replenishment of the product is advised. With postponing the purchase until the next promotional deal being the third most preferred option for price promoted products the retailer regains the chance of selling the promoted product to the customer. However, depending on a customer's store loyalty, he or she might also be inclined to be attracted to the next offer from a different retailer instead. While store switch did not seem to be an attractive option for promoted products, it received more attraction for regular-priced

products. Store switch does not only indicate rather low store loyalty, it also poses the risk of losing sales, and even more, losing a customer if another retailer proves to be more efficient in terms of on-shelf-availability.

Overall it can therefore be stated that OOS should be avoided in the best possible manner. However, with item switch and product postponement being the most preferred options by consumers in regard to the product category coffee, retailers still face the possibility of making profit on the intended purchase as customers are less likely to leave the store.

6.3 LIMITATIONS & FUTURE RESEARCH

Chapter 3.5. already touched upon the limitations of this study by critically evaluating the choice for an experimental survey design and the data collection method. The most pivotal methodological limitation concerns the low external validity implying there to be no basis for generalising the results. This was caused by several factors: a hypothetical setting instead of a natural environment, systematic non-probability sampling, a considerably low sample size, the research setting only considering one retail store and one specific product in one area of Sweden.

The object of the study deals with a specific situation that is likely to occur on the real market, which would, in the researcher's point of view, make an experimental design a suitable choice. The general purpose of an experiment is to study connections between variables, which would serve as an appropriate way to test consumer reactions to out-of-stock situations in a laboratory or field environment (Saunders, Lewis & Thornhill, 2009). However, even though it was preferred by the researchers to include a true experiment as a data collection method to test one's actual behaviour, it was chosen not to be incorporated due to experiments being very complex in nature and the limited budget of the study. Verbeke, Farris and Thurik (1998) explain that out-of-stock experiments have been a relatively rare phenomenon considering the perceived risks of losing loyal customers and the costs of the experiment itself for the retailers. This led to the decision of using an experimental survey design in which the respondents would be provided with a hypothetical situation to assure the right mind-set for each group.

The study's sample could also raise several questions. First of all, the sample size of each group only considering 50 respondents might have affected the significant levels of the One-Way ANOVA test in *chapter 4.1*. By using a larger sample size, it is believed that the differences between the groups could lead to an increased significance in results, which could therefore lead to different outcomes concerning the hypotheses. However, with an

advised minimum of 30 respondents per group in experimental research, this study already provided additional insights by testing the outcomes of 50 respondents per group. Furthermore, the sample being created by systematic probability sampling also limits the generalisability of the study. Due to the non-availability of a sampling frame a complete random sampling was not attainable. It was therefore decided to use the best possible option, a systematic probability sampling.

Finally, the research setting being one store in one Swedish town focussing on one specific product also contributes to the limited generalisability of this study. However, according to Sloot (2006), most studies on OOS behaviour only considered one single retail chain as this prevents the results from being biased by different store influences. Moreover, due to time constraints it was chosen to only focus on coffee as a research object, which in this research setting was very applicable (*Chapter 3.2.2.*).

Future studies could possibly take the above mentioned limitations into account while further investigating the differences in consumer behaviour in the two stock-out situations. By collecting data from a larger sample which was randomly selected, the findings could be generalised to the complete sample population. Furthermore, it is of interest to research additional product groups in relation to promotional OOS behaviour as stock-outs in different product categories could lead to different consumer responses (Gruen, Corsten and Bharadwaj, 2002; Van Woensel et al., 2007). Additionally, an examination of other geographical markets is expected to provide different results due to Sweden's strong coffee culture. Finally, it is suggested to establish the antecedents for price promotion OOS behaviour using a qualitative study. This could be beneficial for both creating a better understanding of OOS consumer responses, as well as providing a basis for further quantitative research on consumer behaviour when confronted with a stock-out of a price promoted product.

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8 APPENDICES

8.1 SURVEY TEMPLATES

8.1.1 CONTROL GROUP

Hello and thank you for your participation in this study!

As we are currently writing our master thesis at Lund University we are looking into consumer behaviour regarding unavailability of products in the supermarket. Answering the following questions will approximately take 5 minutes and your responses will remain anonymous.

We want to point out that this survey is conducted without involvement of ICA or any other retail chain.

Behavioural questions

For the purpose of this study we would like to put you in the following mind-set:

Imagine you put your favourite coffee on your shopping list for today. However, once getting to the coffee section you realise that the product is not on the shelf.

Please answer the following questions keeping this situation in mind.

- 1) How likely are you to choose an alternative coffee from the **same brand** as your favourite coffee?

Highly unlikely

Unlikely

Neutral

Likely

Highly likely

- 2) How likely are you to choose an alternative coffee from a **different brand** than your favourite coffee?

Highly unlikely

Unlikely

Neutral

Likely

Highly likely

- 3) How likely are you to **wait with your purchase** until your next shopping trip?

Highly unlikely

Unlikely

Neutral

Likely

Highly likely

- 4) How likely are you to go to **another ICA store** to still buy the coffee?

Highly unlikely

Unlikely

Neutral

Likely

Highly likely

- 5) How likely are you to go to **any other supermarket** to still buy the coffee?

Highly unlikely

Unlikely

Neutral

Likely

Highly likely

- 6) Based on the questions you answered above, please rank all the following options in the order of your preferred choice from (1) most preferred to (5) least preferred.
Each number (1,2,3,4,5) can only be chosen once!

<input type="text"/>	Choose an alternative coffee from the <u>same brand</u>
<input type="text"/>	Choose an alternative coffee from a <u>different brand</u>
<input type="text"/>	<u>Wait with the purchase</u> until your next shopping trip
<input type="text"/>	Go to <u>another ICA store</u> to buy the coffee
<input type="text"/>	Go to <u>any other supermarket</u> to buy the coffee

General questions

- 7) How attracted are you to price promotions on coffee?

<input type="checkbox"/>				
Not at all attracted	Not attracted	Neutral	Attracted	Very attracted

- 8) Have you ever experienced your favourite coffee to be unavailable in any store?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yes	No	I don't remember

Demographic questions

- 9) Please state which age group you belong to:

<input type="checkbox"/>				
20-29 years old	30-39 years old	40-49 years old	50-59 years old	60-69 years old

- 10) Please state your gender:

<input type="checkbox"/>	<input type="checkbox"/>
Male	Female

Thank you very much for your participation,

Christina and Susan

8.1.2 EXPERIMENTAL GROUP

Hello and thank you for your participation in this study!

As we are currently writing our master thesis at Lund University we are looking into consumer behaviour regarding unavailability of products in the supermarket. Answering the following questions will approximately take 5 minutes and your responses will remain anonymous.

We want to point out that this survey is conducted without involvement of ICA or any other retail chain.

Behavioural questions

For the purpose of this study we would like to put you in the following mind-set:

Imagine you have heard or read about your favourite coffee currently being on sale at ICA and today is the last day of promotion. To not miss out on the price discount you put this specific coffee on your shopping list. However, once you get to the coffee section you realise that the product is not on the shelf.

Please answer the following questions keeping this situation in mind.

- 1) How likely are you to choose an alternative non-promoted coffee from the **same brand** as your favourite coffee?

Highly unlikely Unlikely Neutral Likely Highly likely

- 2) How likely are you to choose an alternative non-promoted coffee from a **different brand** than your favourite coffee?

Highly unlikely Unlikely Neutral Likely Highly likely

- 3) Keeping in mind that today is the last day of the price promotion. How likely are you to **wait with your purchase** until the coffee is available again as a **promotional offer**?

Highly unlikely Unlikely Neutral Likely Highly likely

- 4) How likely are you to **wait with your purchase** until your next shopping trip, even if the coffee is not on promotion but available **for the regular price**?

Highly unlikely Unlikely Neutral Likely Highly likely

- 5) How likely are you to go to **another ICA store** to still buy the promoted coffee?

Highly unlikely Unlikely Neutral Likely Highly likely

6) How likely are you to go to **any other supermarket** to still buy the (possibly non-promoted) coffee?

Highly unlikely

Unlikely

Neutral

Likely

Highly likely

7) Based on the questions you answered above, please rank all the following options in the order of your preferred choice from **(1) most preferred to (6) least preferred**. Each number (1,2,3,4,5,6) can only be chosen once!

Choose an alternative non-promoted coffee from the same brand

Choose an alternative non-promoted coffee from a different brand

Wait with the purchase until the product is available again as a promotional offer

Wait with the purchase until your next shopping trip when the product is available again for the regular price

Go to another ICA store to buy the promoted coffee

Go to any other supermarket to buy the (possibly non-promoted) coffee

General questions

8) How attracted are you to price promotions on coffee?

Not at all attracted

Not attracted

Neutral

Attracted

Very attracted

9) Have you ever experienced a promoted coffee to be unavailable in any store?

Yes

No

I don't remember

Demographic questions

10) Please state which age group you belong to:

20-29 years old

30-39 years old

40-49 years old

50-59 years old

60-69 years old

11) Please state your gender:

Male

Female

Thank you very much for your participation, Christina and Susan

8.2 SAMPLE DIVISION PER GROUP BASED ON LUND'S POPULATION

	Population totals	Population distribution in %	Sample distribution per group based on N=50
Group 1: 20-29			
Total	24 809	30,6%	16
Men	12 722	51,3%	8
Women	12 087	48,7%	8
Group 2: 30-39			
Total	15 185	18,7%	10
Men	7 806	51,4%	5
Women	7 379	48,6%	5
Group 3: 40-49			
Total	14 151	17,5%	9
Men	7 123	50,3%	5
Women	7 028	49,7%	4
Group 4: 50-59			
Total	12 446	15,4%	8
Men	6 042	48,5%	4
Women	6 404	51,5%	4
Group 5: 60-69			
Total	11 826	14,6%	7
Men	5 632	47,6%	3
Women	6 194	52,4%	4

8.3 SAMPLE DIVISION OF RESPONDENTS PER GROUP

Gender * Age group * Group Crosstabulation

Count			Age group					Total
Group	Gender		20-29	30-39	40-49	50-59	60-69	
Control group	Gender	Male	8	5	5	4	3	25
		Female	8	5	4	4	4	25
	Total		16	10	9	8	7	50
Experimental group	Gender	Male	8	5	5	4	3	25
		Female	8	5	4	4	4	25
	Total		16	10	9	8	7	50
Total	Gender	Male	16	10	10	8	6	50
		Female	16	10	8	8	8	50
	Total		32	20	18	16	14	100

8.4 CRONBACH'S ALPHA SPSS OUTPUT

Item Switch

Reliability Statistics

Cronbach's Alpha	N of Items
,566	2

Brand Switch

Reliability Statistics

Cronbach's Alpha	N of Items
,689	2

Promotion postponement

Reliability Statistics

Cronbach's Alpha	N of Items
,744	2

Product Postponement

Reliability Statistics

Cronbach's Alpha	N of Items
,706	2

Branch Switch

Reliability Statistics

Cronbach's Alpha	N of Items
,744	2

Store Switch

Reliability Statistics

Cronbach's Alpha	N of Items
,785	2

8.5 ONE-WAY ANOVA

The OOS response promotion postponement is being referred to as price postponement in all SPSS outputs.

8.5.1 ANOVA SPSS OUTPUT DATASET A

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Item switch	Between Groups	225,000	1	225,000	,337	,563
	Within Groups	65400,000	98	667,347		
	Total	65625,000	99			
Brand switch	Between Groups	56,250	1	56,250	,066	,798
	Within Groups	83537,500	98	852,423		
	Total	83593,750	99			
Product postponement	Between Groups	1406,250	1	1406,250	1,688	,197
	Within Groups	81618,750	98	832,844		
	Total	83025,000	99			
Branch switch	Between Groups	1501,563	1	1501,563	2,347	,129
	Within Groups	62703,125	98	639,828		
	Total	64204,688	99			
Store switch	Between Groups	2889,063	1	2889,063	3,265	,074
	Within Groups	86703,125	98	884,726		
	Total	89592,188	99			

8.5.2 ANOVA SPSS OUTPUT DATASET B

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Item switch	Between Groups	264,063	1	264,063	,392	,533
	Within Groups	65953,125	98	672,991		
	Total	66217,187	99			
Brand switch	Between Groups	25,000	1	25,000	,029	,865
	Within Groups	83812,500	98	855,230		
	Total	83837,500	99			
Price postponement	Between Groups	3600,000	1	3600,000	3,907	,051
	Within Groups	90306,250	98	921,492		
	Total	93906,250	99			
Branch switch	Between Groups	1225,000	1	1225,000	1,986	,162
	Within Groups	60437,500	98	616,709		
	Total	61662,500	99			
Store switch	Between Groups	2756,250	1	2756,250	3,103	,081
	Within Groups	87050,000	98	888,265		
	Total	89806,250	99			

8.5.3 EFFECT SIZE CALCULATIONS

Effect size Store Switch:

$$\eta^2 = SS \text{ between groups } (2889.063) / SS \text{ total } (89592.188) = 0.0322 = 3.2\%$$

Effect size Promotion postponement:

$$\eta^2 = SS \text{ between groups } (3600) / SS \text{ total } (93906.25) = 0.03833 = 3.8\%$$

8.6 QUALITATIVE COMPARISON OF RESULTS PER ITEM

The OOS response promotion postponement is being referred to as price postponement in all SPSS outputs.

8.6.1 MEANS PER ITEM PER GROUP

Report

Group		Item switch	Brand switch	Product postponement	Branch switch	Store switch	Price postponement
Control group	Mean	69,0000	39,5000	54,7500	27,0000	40,5000	
	N	50	50	50	50	50	
	Std. Deviation	27,34418	31,06938	28,22220	22,63846	32,29725	
Experimental group	Mean	66,0000	38,0000	47,2500	34,7500	29,7500	42,7500
	N	50	50	50	50	50	50
	Std. Deviation	24,22787	27,19450	29,48214	27,69757	26,95068	32,34953
Total	Mean	67,5000	38,7500	51,0000	30,8750	35,1250	42,7500
	N	100	100	100	100	100	50
	Std. Deviation	25,74643	29,05824	28,95922	25,46630	30,08275	32,34953

8.6.2 CROSSTABLATIONS ITEM SWITCH

Item switch * Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Item switch	Highly unlikely	Count	5	3	8
		% within Item switch	62,5%	37,5%	100,0%
		% within Group	10,0%	6,0%	8,0%
	Unlikely	Count	6	17	23
		% within Item switch	26,1%	73,9%	100,0%
		% within Group	12,0%	34,0%	23,0%
	Neutral	Count	6	7	13
		% within Item switch	46,2%	53,8%	100,0%
		% within Group	12,0%	14,0%	13,0%
Likely	Count	22	18	40	
	% within Item switch	55,0%	45,0%	100,0%	
	% within Group	44,0%	36,0%	40,0%	
Highly likely	Count	11	5	16	
	% within Item switch	68,8%	31,2%	100,0%	
	% within Group	22,0%	10,0%	16,0%	
Total	Count	50	50	100	
	% within Item switch	50,0%	50,0%	100,0%	
	% within Group	100,0%	100,0%	100,0%	

Rank Item switch ^ Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Rank Item switch	least preferred	Count	2	0	2
		% within Rank Item switch	100,0%	0,0%	100,0%
		% within Group	4,0%	0,0%	2,0%
	4th choice	Count	8	7	15
		% within Rank Item switch	53,3%	46,7%	100,0%
		% within Group	16,0%	14,0%	15,0%
	3rd choice	Count	5	4	9
		% within Rank Item switch	55,6%	44,4%	100,0%
		% within Group	10,0%	8,0%	9,0%
	2nd choice	Count	10	12	22
		% within Rank Item switch	45,5%	54,5%	100,0%
		% within Group	20,0%	24,0%	22,0%
	most preferred	Count	25	27	52
		% within Rank Item switch	48,1%	51,9%	100,0%
		% within Group	50,0%	54,0%	52,0%
Total	Count	50	50	100	
	% within Rank Item switch	50,0%	50,0%	100,0%	
	% within Group	100,0%	100,0%	100,0%	

8.6.3 CROSSTABLATIONS BRAND SWITCH

Brand switch ^ Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Brand switch	Highly unlikely	Count	15	16	31
		% within Brand switch	48,4%	51,6%	100,0%
		% within Group	30,0%	32,0%	31,0%
	Unlikely	Count	14	16	30
		% within Brand switch	46,7%	53,3%	100,0%
		% within Group	28,0%	32,0%	30,0%
	Neutral	Count	11	8	19
		% within Brand switch	57,9%	42,1%	100,0%
		% within Group	22,0%	16,0%	19,0%
	Likely	Count	8	9	17
		% within Brand switch	47,1%	52,9%	100,0%
		% within Group	16,0%	18,0%	17,0%
	Highly likely	Count	2	1	3
		% within Brand switch	66,7%	33,3%	100,0%
		% within Group	4,0%	2,0%	3,0%
Total	Count	50	50	100	
	% within Brand switch	50,0%	50,0%	100,0%	
	% within Group	100,0%	100,0%	100,0%	

Rank Brand switch ^ Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Rank Brand switch	least preferred	Count	17	16	33
		% within Rank Brand switch	51,5%	48,5%	100,0%
		% within Group	34,0%	32,0%	33,0%
	4th choice	Count	6	3	9
		% within Rank Brand switch	66,7%	33,3%	100,0%
		% within Group	12,0%	6,0%	9,0%
	3rd choice	Count	3	9	12
		% within Rank Brand switch	25,0%	75,0%	100,0%
		% within Group	6,0%	18,0%	12,0%
	2nd choice	Count	18	20	38
		% within Rank Brand switch	47,4%	52,6%	100,0%
		% within Group	36,0%	40,0%	38,0%
	most preferred	Count	6	2	8
		% within Rank Brand switch	75,0%	25,0%	100,0%
		% within Group	12,0%	4,0%	8,0%
Total	Count	50	50	100	
	% within Rank Brand switch	50,0%	50,0%	100,0%	
	% within Group	100,0%	100,0%	100,0%	

8.6.4 CROSSTABLATIONS PROMOTION POSTPONEMENT

Price Postponement * Group Crosstabulation

			Group		Total
			Control Group	Experimental Group	
Price Postponement	Highly unlikely	Count	8	19	27
		% within Price Postponement	29,6%	70,4%	100,0%
		% within Group	16,0%	38,0%	27,0%
	Unlikely	Count	13	16	29
		% within Price Postponement	44,8%	55,2%	100,0%
		% within Group	26,0%	32,0%	29,0%
	Neutral	Count	7	2	9
		% within Price Postponement	77,8%	22,2%	100,0%
		% within Group	14,0%	4,0%	9,0%
	Likely	Count	15	7	22
		% within Price Postponement	68,2%	31,8%	100,0%
		% within Group	30,0%	14,0%	22,0%
	Highly likely	Count	7	6	13
		% within Price Postponement	53,8%	46,2%	100,0%
		% within Group	14,0%	12,0%	13,0%
	Total	Count	50	50	100
		% within Price Postponement	50,0%	50,0%	100,0%
		% within Group	100,0%	100,0%	100,0%

Rank Price postponement * Group Crosstabulation

			Group		Total
			Control Group	Experimental Group	
Rank Price postponement	least preferred	Count	4	10	14
		% within Rank Price postponement	28,6%	71,4%	100,0%
		% within Group	8,0%	20,0%	14,0%
	4th choice	Count	6	5	11
		% within Rank Price postponement	54,5%	45,5%	100,0%
		% within Group	12,0%	10,0%	11,0%
	3rd choice	Count	20	18	38
		% within Rank Price postponement	52,6%	47,4%	100,0%
		% within Group	40,0%	36,0%	38,0%
	2nd choice	Count	7	3	10
		% within Rank Price postponement	70,0%	30,0%	100,0%
		% within Group	14,0%	6,0%	10,0%
	most preferred	Count	13	14	27
		% within Rank Price postponement	48,1%	51,9%	100,0%
		% within Group	26,0%	28,0%	27,0%
	Total	Count	50	50	100
		% within Rank Price postponement	50,0%	50,0%	100,0%
		% within Group	100,0%	100,0%	100,0%

8.6.5 CROSSTABLATIONS PRODUCT POSTPONEMENT

Product postponement * Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Product postponement	Highly unlikely	Count	8	7	15
		% within Product postponement	53,3%	46,7%	100,0%
		% within Group	16,0%	14,0%	15,0%
	Unlikely	Count	13	21	34
		% within Product postponement	38,2%	61,8%	100,0%
		% within Group	26,0%	42,0%	34,0%
	Neutral	Count	7	9	16
		% within Product postponement	43,8%	56,2%	100,0%
		% within Group	14,0%	18,0%	16,0%
	Likely	Count	15	7	22
		% within Product postponement	68,2%	31,8%	100,0%
		% within Group	30,0%	14,0%	22,0%
	Highly likely	Count	7	6	13
		% within Product postponement	53,8%	46,2%	100,0%
		% within Group	14,0%	12,0%	13,0%
Total	Count	50	50	100	
	% within Product postponement	50,0%	50,0%	100,0%	
	% within Group	100,0%	100,0%	100,0%	

Rank Product postponement * Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Rank Product postponement	least preferred	Count	4	11	15
		% within Rank Product postponement	26,7%	73,3%	100,0%
		% within Group	8,0%	22,0%	15,0%
	4th choice	Count	6	3	9
		% within Rank Product postponement	66,7%	33,3%	100,0%
		% within Group	12,0%	6,0%	9,0%
	3rd choice	Count	20	19	39
		% within Rank Product postponement	51,3%	48,7%	100,0%
		% within Group	40,0%	38,0%	39,0%
	2nd choice	Count	7	4	11
		% within Rank Product postponement	63,6%	36,4%	100,0%
		% within Group	14,0%	8,0%	11,0%
	most preferred	Count	13	13	26
		% within Rank Product postponement	50,0%	50,0%	100,0%
		% within Group	26,0%	26,0%	26,0%
Total	Count	50	50	100	
	% within Rank Product postponement	50,0%	50,0%	100,0%	
	% within Group	100,0%	100,0%	100,0%	

8.6.6 CROSSTABLATIONS BRANCH SWITCH

Branch switch * Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Branch switch	Highly unlikely	Count	20	21	41
		% within Branch switch	48,8%	51,2%	100,0%
		% within Group	40,0%	42,0%	41,0%
	Unlikely	Count	17	16	33
		% within Branch switch	51,5%	48,5%	100,0%
		% within Group	34,0%	32,0%	33,0%
	Neutral	Count	7	5	12
		% within Branch switch	58,3%	41,7%	100,0%
		% within Group	14,0%	10,0%	12,0%
	Likely	Count	5	7	12
		% within Branch switch	41,7%	58,3%	100,0%
		% within Group	10,0%	14,0%	12,0%
	Highly likely	Count	1	1	2
		% within Branch switch	50,0%	50,0%	100,0%
		% within Group	2,0%	2,0%	2,0%
Total		Count	50	50	100
		% within Branch switch	50,0%	50,0%	100,0%
		% within Group	100,0%	100,0%	100,0%

Rank Branch switch * Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Rank Branch switch	least preferred	Count	13	7	20
		% within Rank Branch switch	65,0%	35,0%	100,0%
		% within Group	26,0%	14,0%	20,0%
	4th choice	Count	21	19	40
		% within Rank Branch switch	52,5%	47,5%	100,0%
		% within Group	42,0%	38,0%	40,0%
	3rd choice	Count	12	9	21
		% within Rank Branch switch	57,1%	42,9%	100,0%
		% within Group	24,0%	18,0%	21,0%
	2nd choice	Count	3	9	12
		% within Rank Branch switch	25,0%	75,0%	100,0%
		% within Group	6,0%	18,0%	12,0%
	most preferred	Count	1	6	7
		% within Rank Branch switch	14,3%	85,7%	100,0%
		% within Group	2,0%	12,0%	7,0%
Total		Count	50	50	100
		% within Rank Branch switch	50,0%	50,0%	100,0%
		% within Group	100,0%	100,0%	100,0%

8.6.7 CROSSTABLATIONS STORE SWITCH

Store switch ^ Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Store switch	Highly unlikely	Count	15	20	35
		% within Store switch	42,9%	57,1%	100,0%
		% within Group	30,0%	40,0%	35,0%
	Unlikely	Count	12	14	26
		% within Store switch	46,2%	53,8%	100,0%
		% within Group	24,0%	28,0%	26,0%
	Neutral	Count	6	6	12
		% within Store switch	50,0%	50,0%	100,0%
		% within Group	12,0%	12,0%	12,0%
	Likely	Count	10	6	16
		% within Store switch	62,5%	37,5%	100,0%
		% within Group	20,0%	12,0%	16,0%
	Highly likely	Count	7	4	11
		% within Store switch	63,6%	36,4%	100,0%
		% within Group	14,0%	8,0%	11,0%
Total	Count	50	50	100	
	% within Store switch	50,0%	50,0%	100,0%	
	% within Group	100,0%	100,0%	100,0%	

Rank Store switch ^ Group Crosstabulation

			Group		Total
			Control group	Experimental group	
Rank Store switch	least preferred	Count	14	16	30
		% within Rank Store switch	46,7%	53,3%	100,0%
		% within Group	28,0%	32,0%	30,0%
	4th choice	Count	11	18	29
		% within Rank Store switch	37,9%	62,1%	100,0%
		% within Group	22,0%	36,0%	29,0%
	3rd choice	Count	10	9	19
		% within Rank Store switch	52,6%	47,4%	100,0%
		% within Group	20,0%	18,0%	19,0%
	2nd choice	Count	11	5	16
		% within Rank Store switch	68,8%	31,2%	100,0%
		% within Group	22,0%	10,0%	16,0%
	most preferred	Count	4	2	6
		% within Rank Store switch	66,7%	33,3%	100,0%
		% within Group	8,0%	4,0%	6,0%
	Total	Count	50	50	100
		% within Rank Store switch	50,0%	50,0%	100,0%
		% within Group	100,0%	100,0%	100,0%

8.7 CONTROL VARIABLES

8.7.1 ATTRACTION TO COFFEE

Attraction to coffee promotion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all attracted	7	7,0	7,0	7,0
	Not attracted	9	9,0	9,0	16,0
	Neutral	27	27,0	27,0	43,0
	Attracted	37	37,0	37,0	80,0
	Very attracted	20	20,0	20,0	100,0
	Total	100	100,0	100,0	

8.7.2 EXPERIENCE OOS CONTROL GROUP

Experience of OOS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	20,0	40,0	40,0
	No	20	20,0	40,0	80,0
	I don't remember	10	10,0	20,0	100,0
	Total	50	50,0	100,0	
Missing	System	50	50,0		
Total		100	100,0		

8.7.3 EXPERIENCE OOS EXPERIMENTAL GROUP

Experience of promotion OOS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	12,0	24,0	24,0
	No	17	17,0	34,0	58,0
	I don't remember	21	21,0	42,0	100,0
	Total	50	50,0	100,0	
Missing	System	50	50,0		
Total		100	100,0		