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Effect of category price promotions on store price image

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EXECUTIVE SUMMARY

The main objective of this research is to give a conclusive answer to the question how retail price promotions influence the store price image of the Dutch supermarkets chains seen from a consumers' perspective. Changing the store price image is one of the main focus points of supermarket managers in the competitive Dutch retail market. In September 2013, market leader Albert Heijn aimed to change their store price image and lowered the prices of 1,000 products. In contradiction to their intentions, this action has led to higher consumers' price sensitiveness and lower revenues. With our research we want to give supermarket managers guidelines for their store price image strategies to prevent them from future mistakes. We aim to show supermarket managers which product categories are most useful for their price promotion strategies in order to change their store price image.

We conducted a questionnaire with 134 co-operating respondents in order to investigate our hypotheses. We asked them how they evaluated the store expensiveness of the three biggest supermarkets in the Netherlands. The supermarkets that were included in the questionnaire were the Albert Heijn, C1000 and Jumbo, which all have more or less the same price and service level. The questionnaire entailed questions about the respondents' use of price promotions, their attitude towards the other store attributes: ambience, assortment, clientele, location and service and their store choice.

We used for our analyses a regression approach. In the first part of our study the dependent variable entailed store price image and the independent variables entailed the store attributes. Our research showed evidence that the use of price promotions is an effective way to improve the store price image. Furthermore, our model showed that the other store attributes have in general no significant impact on the store price image.

In the second part of our study we examined which product categories have the most impact on the store price image. We defined four category types: lighthouse-, subsidization-, avoid- and unattractive categories, based on our literature review. The category types are based on the following two dimensions: monetary value and informativeness. The monetary value is the share of wallet. This means the contribution of a product category in a consumers' shopping basket. The level of informativeness explains

to what extend consumers are able to process the price information. Lighthouse categories are product categories that have a low monetary value, which results in a low impact on the stores' revenues, but they have a high informativeness level. Consumers will notice price promotions in those categories and this will influence their perception of the store price image. Our research showed evidence that price promotions in lighthouse categories will have impact on the store price image and therefore we advise supermarket managers to focus on those categories with their price promotion strategies.

The third study entailed the influence of the store price image on the store choice. We used a logistic regression analysis to test the impact. We found no significant results on the effect of the store price image on store choice. The other store attributes: ambience, assortment, clientele, location and service have also no significant impact on store choice.

If supermarket managers' main objective is to change their store price image, we conclude that price promotions are an effective way to improve their store price image. Our research implies that price promotions on lighthouse categories have a significant negative impact on the store price image. This means that consumers will change their perception and think of the store price image as less expensive. Therefore we advise supermarket managers to focus on those categories with their price promotion strategies.

In our questionnaire we made use of single-item scales which reduced the reliability of our research. Furthermore, we used a nonprobability sampling method, which resulted in a non-representative sample. Future researchers can test our findings with a more representative sample and optional more different product categories.

KEY TERMS: Store price image, category price promotions and store choice

ACKNOWLEDGEMENTS

"It always seems impossible until it's done" – Nelson Mandela

This thesis stands for the end of my student years. Looking at it makes me think about all the things that I have experienced in the past six years. In these experiences marketing has been the common theme, from my internships at Marlies Dekkers and Heineken to teaching the first year Economics and Business students the marketing course. Marketing has been one of my greatest interests and therefore I chose to apply for this master. The passionate professors with a very enthusiastic approach motivated me to finish the programme and they made me very ambitious to follow my dreams and find a challenging job. I am looking forward to the future and I am very proud of what I have accomplished so far.

First I want to thank my supervisor Dr. F. Adiguzel for all her fast and honest reviews. She thought me to be critical and encouraged me to set deadlines. She helped me a lot with her professional insights and experience. I really appreciated working with her because she was efficient and straightforward. Furthermore, I want to thank my parents, especially my father, for their support and love and also my boyfriend for his patience and understanding during the past year. At last I would like to thank Anouk Dohmen for her help and the great time we had during our master.

TABLE OF CONTENTS

1. INTRODUCTION 6

1.1 IMPORTANCE OF PRICE 8
1.2 RESEARCH OBJECTIVES 9
1.3 SCIENTIFIC RELEVANCE 10
1.4 MANAGERIAL RELEVANCE 11
1.5 OUTLINE 12

2. THEORETICAL FRAMEWORK 13

2.1 LITERATURE REVIEW 13
2.1.1 DIFFERENT SORTS OF PRICES 13
2.1.2 PRICE PROMOTIONS 13
2.1.3 PRICE WAR 2003 14
2.1.4 ROLE OF PRICE PROMOTIONS IN FORMING SPI 15
2.1.5 CATEGORY MANAGEMENT 17
2.2 MODEL 18
2.2.1 CONCEPTUAL FRAMEWORK 18
2.2.2 HYPOTHESES 20

3. METHODOLOGY 25

3.1 QUESTIONNAIRE 25
3.2 TESTING HYPOTHESES 28

4. ANALYSES AND RESULTS 31

4.1 ANALYSES OF HYPOTHESES 32
4.1.1 FORMING SPI 33
4.1.2 EFFECT OF PRICE PROMOTIONS ON STORE PRICE IMAGE 34
4.1.3 EFFECT OF CATEGORY PRICE PROMOTIONS ON SPI 38
4.1.4 IMPACT OF REFERENCE PRICE PER CATEGORY ON SPI 39
4.1.5 EFFECT OF STORE PRICE IMAGE ON STORE CHOICE 39
4.2 RESULTS 40

5. CONCLUSION 42

5.1 OVERVIEW 42
5.2 IMPLICATIONS 44
5.3 LIMITATIONS 45
5.4 FUTURE RESEARCH 46

BIBLIOGRAPHY 48

APPENDIX 1: ACTUAL PRICES OF TOTAL BASKETS OF DIFFERENT SUPERMARKET CHAINS 50

APPENDIX 2: QUESTIONNAIRE 54

APPENDIX 3: SPSS OUTCOME 66

1. INTRODUCTION

Recently, on Monday 9 September 2013, the Dutch supermarket leader Albert Heijn (AH) (table 1) announced that they are dropping the prices of 1,000 articles in their stores (Redactie NRC, 2013). According to the newspapers, this is possibly the beginning of a price war (Redactie AD, 2013). After this action of AH, Jumbo is already following with dropping their prices and some say there is no turning back (Boon, 2013). Albert Heijn has a high-end reputation and their spokesman says that the main reason for this action is to eliminate their high-priced image. In this research we want to investigate the impact of price promotions on the store price reputation. The main research objective is to understand which price cuts related to different product categories will contribute the most to the store price image (SPI) in case of heavy price competition.

At this moment, in the Netherlands we can only speak of heavy price competition. The supermarkets follow each other in lowering their prices, but they are not repeating the price cuts over and over again. Whithin a price war, competing firms cut their prices in response to each other over a longer period of time. Urbany and Dickson (1991) define a price war as the downward price pressure that drives competitors to follow the initial move. Contrary to typical price promotions or even intense price competition, the competitive price at the end of a price war is not sustainable in the long run. One of many reasons for this unsustainability is that the too low margins make it impossible for all the companies to survive (Schunk, 1999). The relatively small effect of a price war is illustrated in figure 1. After the start of the price war in 2003, overall the trends in the separate market shares are the same as before the start of the price war.

Some argue that the predicted price war will push the small local supermarkets out of the market and therefore they are watching the competing steps closely (Stolk, 2013). Moreover, this campaign of AH is meant to change the customer price perception, but because of the already competitive prices, it has only a negative effect on the total market (ANP, 2013). Hence, the prices of the major competing supermarkets Albert Heijn, C1000 and Jumbo are not significantly different from each other (appendix 1). On top of that, Brown & Oxenfeldt (1972) show that even the discounters, who have an overall lower price level, do also price 35 per cent of their products above average. Despite this truth, the price reputation of some

supermarkets is in the eyes of many consumers still higher than others; this could be because consumers find it hard to recall the actual prices of products (Allen, Harrell, & Hutt, 1976).

	2007	2008	2009	2010	2011	2012
ALBERT HEIJN	29.5 %	31.3 %	32.8 %	33.6 %	33.5 %	33.7 %
C1000	14.3 %	13.2 %	11.7 %	11.5 %	12.1 %	12.0 %
SUPER DE BOER	7.3 %	6.8 %	6.5 %	5.5 %	2.4 %	0.1 %
JUMBO	4.4 %	4.8 %	4.9 %	5.5 %	7.4 %	9.6 %
SUPERUNIE (TOTAAL)	30.0 %	30.7 %	29.6 %	29.6 %	29.2 %	29.0 %
- COOP	2.4 %	2.5 %	2.4 %	2.5 %	2.6 %	2.7 %
- DEEN	1.9 %	1.9 %	1.9 %	2.0 %	2.0 %	2.0 %
- DETAILRESULT	-	-	-	-	5.8 %	5.6 %
- SLIGRO FOODRETAIL (EM-TE)	2.3 %	2.6 %	2.9 %	2.8 %	2.7 %	2.7 %
- HOOGVLIET	1.9 %	1.9 %	1.9 %	2.0 %	2.0 %	2.1 %
- JAN LINDERS	1.0 %	1.0 %	1.0 %	1.0 %	1.0 %	1.0 %
- PLUS	6.0 %	6.1 %	6.0 %	6.0 %	5.9 %	5.8 %
- POIESZ	0.9 %	0.9 %	0.9 %	1.0 %	1.0 %	1.0 %
- SPAR	1.9 %	2.2 %	2.3 %	2.2 %	2.1 %	1.9 %
- VOMAR	-	1.6 %	1.7 %	1.7 %	1.6 %	1.6 %
ALDI	8.9 %	8.5 %	8.3 %	7.9 %	7.9 %	7.6 %
LIDL	4.0 %	4.8 %	5.4 %	5.6 %	6.7 %	7.5 %
OVERIG	1.5 %	0.7 %	0.8 %	0.8 %	0.8 %	0.6 %

TABLE 1: MARKETSHARES OF DUTCH SUPERMARKET CHAINS (Distrifood, 2013)

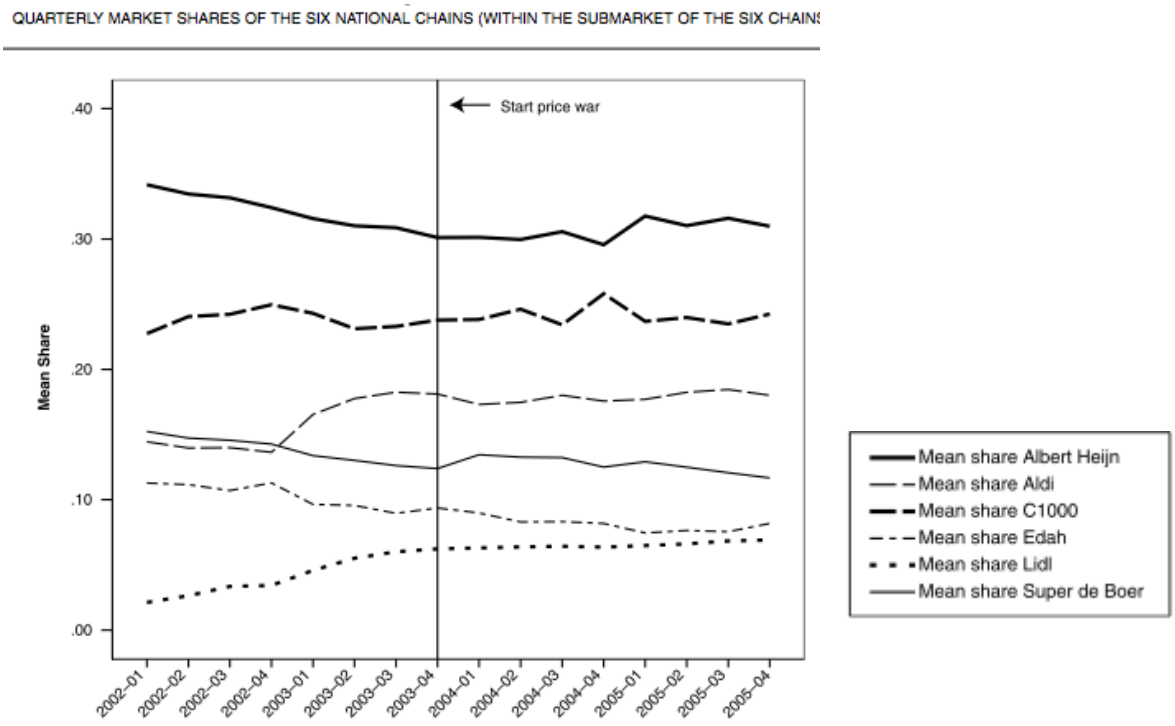

FIGURE 1: MARKETSHARES OF SUPERMARKET CHAINS DURING A PREVIOUS PRICE WAR (van Heere, Gijsbrechts, & Pauwels, 2008)

1.1 IMPORTANCE OF PRICE

In the research of Deloitte in 2012 (Op Heij, 2013), the authors discover that 54 per cent of the consumers find price the most important aspect of a supermarket chain. 75 Per cent of the consumers are comparing retail prices, for the greater part by using the weekly discount folders. In 2012, eleven per cent of the consumers changed their primary supermarket mainly because of their price perception (Op Heij, 2013). This research and many other studies have shown that consumers find price the most influencing factor in choosing a primary supermarket (Balderston, 1956). However, the actual price is something different than the perceived price. The perceived price can be described as a holistic summary of a stores' overall expensiveness and this is defined by Laurenco (2010) as the store price image (SPI). Both the actual prices as the perceived prices are getting more and more important. Therefore, retail chains use their lower prices as the number one advertising cue to consumers. In all the advertising attributes, the supermarkets have moved from highlighting the high quality to emphasis on their low prices and their price promotions (Lal & Miguel Villas-Boas, 1998).

Not only the aspects that influence the store price image have been investigated. There are many studies on the impact of price promotions. For example there are studies on the relationship between price promotions and brand loyalty (Agrawal, 1996). Furthermore, the effect of price promotions on store traffic is investigated (Mulhern & Padgett, 1995). However, the role of price promotions influencing the SPI is contradictory. Some studies show that price promotions blur the actual prices and only confuse the consumers. Therefore, consumers are unable to formulate a store price image per retailer (D'Andrea, Martin, & Lunardini, 2006). Others conclude that price reductions lead to an improvement of store price perceptions (Laurenco, 2010).

In summary, the end-consumer tends to become more and more price sensitive (Lal & Miguel Villas-Boas, 1998) and there is no clear direction in which price promotions influence the price perception (Dickson & Sawyer, 1990). Furthermore, when price promotions are used as a tool to affect the price perception, we want to investigate which categories have the most effect in order to give supermarket managers new insights for their price promotions strategies. This will also lead us to the main research question and the addition to the current literature.

1.2 RESEARCH OBJECTIVES

When we go back to the situation of AH in September, one month later GfK investigated the impact of the price battle AH started (Novum, 2013). Comparing the store traffic of 2012 with the store traffic in 2013, they saw that dropping the prices of 1,000 products did not attract more customers to Albert Heijns' stores. They conclude that the price battle only affected the awareness and, in fact, gave the attacked competitor, in this case Lidl, more customers and publicity. There is again no evidence that the price promotions affected the store price image and this action only negatively influenced the margins of AH (Novum, 2013). Therefore, with retail margins becoming increasingly tight, supermarkets must be careful with their price promotions strategies. So, randomly dropping the prices of 1,000 products is not an efficient way to change the store price image (Meijsen, 2013). To help manage supermarkets price promotions, our research investigates which categories are affecting the SPI the most.

Every supermarket chain is competing with its weekly price promotions. But with the increasing importance of category management for supermarkets, our research wonders which categories are most attractive to focus on in the weekly price promotions. Knowing that customers are comparing the weekly price promotions, the research is sparse on which categories really effect the price perception of the consumer. We want to question whether the customers are focussed on expensive or on daily products. Do price promotions of different categories significant change the price perception? And what really makes a supermarket chain cheap or expensive when you compare different category price promotions? In the next block the main objectives are outlined to get a clear overview.

RESEARCH OBJECTIVES:

"HOW DO RETAIL CATEGORY PRICE PROMOTIONS INFLUENCE THE STORE PRICE IMAGE OF THE SUPERMARKET CHAIN FROM A CONSUMER PERSPECTIVE?"

A. What is the influence of price promotions on store price image?
B. How do other store attributes influence the store price image?
C. What types of categories are more attractive for supermarket chains to promote?
D. Which categories have the most influence on the store price image?
E. What is the influence of store price image on store choice?

1.3 SCIENTIFIC RELEVANCE

The importance of price is investigated many times over the years. Many studies examine how price plays an important role in judging the performance (Jiang & Rosenbloom, 2005). Also, price can be an indication for customers, which measures the level of quality a product has (Zeithaml, 1988). Furthermore, price promotions have been the subject of many studies. Nevertheless, there is little research done about the difference in effect of different product categories in supermarket price promotions. Despite the managerial importance, the main focus of previous research lays in the effect of price promotions in general. For example, the conclusion that price promotions blur the ability to identify the overall retailers' price (D'Andrea et al., 2006). Their research focussed on the effect of price promotions; in general, on the consumers' price perception of retailers. They did not compare different categories for that matter. Furthermore, D'Andrea et al. (2006) say that price promotions only influence the store price image for eight per cent. In contradiction to this finding, Laurenco (2010) finds that price promotions have the most effect on forming a store price image. The conflicting results made us wanting to check the effect once again. One finds that Laurenco (2010) defines four category types that effect the SPI differenlty and can be used as a guidline for retailers. However, we want to get a closer overview of the different categories. Laurenco (2010) defines that lighthouse categories (figure 3) are most attractive for retailers, but the question remains: do these categories also have the most impact in the SPI according to the customers? The answer to this question will be obtained through the questionnaire in our research. In the following table an overview of the previous literarture and the contribution of this study is clarified.

AUTHOR(S)	YEAR	OBJECTIVE	METHOD	DEPENDENT VARIABLE	INDEPENDENT VARIABLE	FINDINGS
Cox and Cox	1990	To examine how price advertisements influence store price image	Survey (n=193)	Store price image	Retail item-price ads	The authors find that when prices are shown as reductions from previous prices in advertisements, the store price image becomes lower
Baker, Grewal and Perasuraman	1994	To examine how specific elements in retail store environment influence store image	Survey (n=297)	Store image	I.e. ambient, design and social factors	A comparison between prestige and discount image elements show that managers need to identify what they want to radiate, in order to get the right store image
Desai and Talukdar	2003	To examine how product category consumption span and unit price influence store price image	Survey (n=117)	Store price image	I.e. unit price, item consumption span, basket size	Products categories with a short consumption span, but a high unit price, influence the store price image the most

AUTHOR(S)	YEAR	OBJECTIVE	METHOD	DEPENDENT VARIABLE	INDEPENDENT VARIABLE	FINDINGS
Thanga and Tan	2003	To show which image attributes a store must strongly posses, to get a higher store preference	Survey (n=278)	Store preference	Store image attributes	Supermarkets that work on the image attributes merchandising, accessibility, reputation, in-store service, store atmosphere and promotions will get a higher store preference
D'Andrea, Schleider and Lunardini	2006	To understand the role of price promotions among other key drivers at determining consumers' store price image	Survey (n=2,818) and Nielsen data	Store price image	I.e. reference price, range architecture	Price and assortment are accounting for 25 per cent of the price perception. Promotions have a minor role in forming store price image.
Amirani and Gates	2007	To give a clear overview which store attributes influence store image	Survey (n=160)	Store image	I.e. merchandise quality, merchandise selection, store appearance	An attribute-anchored conjoint operationalization of store image is feasible and appropriate. The different independent variables give a good impression of the store image
Laurenco	2010	To give a new model on store price image formation	Survey (n=497) and Nielsen data	Store price image	I.e. promotion frequency, promotion depth	Promotions have a high impact on forming a store price image. Furthermore, categories that have a low monetary value, but high informativeness are most attractive to use for promotions
THIS RESEARCH	2014	To find an answer to the question: to which extend price promotions influence store price image. And to test which product categories have the most effect on store price image	Survey (n=134)	Store price image	I.e. lighthouse, subsidization, avoid an unattractive category price promotions	Results of this thesis

TABLE 2: OVERVIEW RELEVANT PREVIOUS LITERATURE ON STORE IMAGE AND STORE PRICE IMAGE

1.4 MANAGERIAL RELEVANCE

Because there is sparse literature that combines category price promotions with the effect on store price image, retailers get little guidance to set their price promotions and price image strategies. In this competitive market the retail margins are becoming increasingly tight, so a fair question for retail managers is which categories are more important in getting a better store price image (Grewal & Levy, 2007). Managers often translate the trade deals in price promotions and focus on setting prices in a product category to maximize total category profit (Chintagunta, 2002). But with the increasing price transparency for customers, it is becoming more and more important to have the SPI as a number one focus point. Retailers can use this research as a guideline for managing their weekly price promotions and they are given more insights in the customers' minds. According to supermarket chains' websites they always put the customers perspective at first (Ahold, 2013). Therefore, getting one step closer to knowing

how customers form the SPI in their minds, is one step closer to knowing the customers' perspective. Also, knowing how different categories influence the SPI can give managers a significant argument in trades and negotiations.

1.5 OUTLINE

In the next chapter the background of this research is outlined. First to understand the importance of price, the different types of prices will be discussed. To emphasize why this research is relevant, the effects of the previous price war are agued, as is the difference between a price war and competitive heavy price promotions. In order to understand the SPI formation different models are explained.

Next, we will elaborate on the method of this research. This includes the hypothesis, the methodology, the questionnaire and the analysis. In the fourth chapter we will discuss the results and in the last chapter we will present the reader a clear conclusion and the limitations of this research.

2. THEORETICAL FRAMEWORK

To understand the different SPI formation models, the basic terminology is outlined throughout the literature review in the first sector. In the next sector the conceptual framework will be presented and the hypotheses will be explained.

2.1 LITERATURE REVIEW

In this literature review we will give further insights in the previous price war and the SPI formation models will be explained.

2.1.1 DIFFERENT SORTS OF PRICES

As mentioned in the previous chapter there are different types of prices. First of all, the actual or objective price can be defined as what is given up or sacrificed to obtain a product (Zeithaml , 1988). This is the price that is alcually written on the price tag. However, Becker (1965) explains that what he calls the monetary price is not only the money that is payed for a certain product, but also the time costs and search costs have to be taken into account. By all means, this last price differs a lot from the percieved price (Janiszewski & Lichtenstein, 1999). While the actual price is difficult for customers to recall, customers encode the price in ways that are meaningful to them (Dickson & Sawyer, 1985). The reference price is in the consumers' mind the norm. This price serves as a neutral reference for comparison, which makes lower than the norm prices seem inexpensive, and higher than the norm prices seem expensive (Mazumdar, Raj, & Sinha, 2005).

2.1.2 PRICE PROMOTIONS

Price promotions are short-term price discounts offered by retailers. Retailers often do this to attract shoppers to stores and encourage them to purchase regular merchandise (Mulhern & Padgett, 1995). Nijs, Dekimpe, Steenkamps, & Hanssens (2001) study the effects of price promotions and saw that price promotions increase the category demand for ten weeks on average. However, after these ten weeks the impact of the promotion is gone. Only when introducing a new product in the market, the impact of the price promotions can be permanent. Dekimpe, Hanssens, & Silva-Risso (1999) agree with this statement and they find that for national brands the promotional effects are more intense, but also here after a

period of time the promotions do not make a significant difference in the demand. Other studies find evidence that price promotions do not increase the brand loyalty (Ehrenberg, Hammond, & Goodhardt, 1994). Furthermore, the extra short-term buyers who were attracted by the promotions often had bought the promoted product before. Almost no new customers were being attracted by the price promotions (Ehrenberg, Hammond, & Goodhardt, 1994). So, price promotions are not an effective way to increase the demand in the long run.

Even though price promotions have mainly short-term effects, retailers find this attribute an efficient way to boost store traffic and consequently store sales. And in a competitive market, where customers compare prices between supermarkets every week, supermarkets have to compete with price promotions (Op Heij, 2013). Looking at the trends of 2013, all the supermarkets compete with price promotions, price promotions which are becoming heavier, more frequent and more profound every year (ABN-Amro, 2013).

2.1.3 PRICE WAR 2003

Heavy price competition between supermarkets is something different than an actual price war. Heil & Helsen (2001) studied the nature of a price war and determined the following conditions: the focus of the actions lays with the competitor instead of the customer, the whole pricing interaction is not favourable for the supermarkets, no one intended to ignite a price war, the competitive interaction is not in line with the industry norms, the pricing interaction happens more frequent than normal, the price direction is downward and, most important, the prices are not sustainable in the long run. Van Heere et al. (2008) conclude that the Dutch supermarket price war in 2003 met most of these conditions.

To underline the importance from a managerial point of view, the negative effects of the previous price war will be outlined. Although price-cutting is a fast and easy way to get ahead of the competition, in the long run there are many reasons why retailers should not initiate a price war (van Heere et al., 2008). The previous price war did not only cost the Dutch retailing industry €900 million in one year, also more than 30.000 employees in this industry lost their jobs (van Heere et al., 2008). Moreover, although the price cuts aim to increase store traffic and spending, in the long run the war made customers only more sensitive to weekly store prices and SPI. Customer behaviour changed and they now tend to shop around more and look for discounts. These negative effects specifically have a significant impact on the mid-range supermarkets. Learned from the previous price war, the high-end supermarkets can positively change their

SPI and while customers becoming more price sensitive, discounters can benefit from their already low price reputation. However, with the margins becoming even tighter, the manufacturers and employees are the victims of the price cuts. Mid-range and smaller supermarkets have no resources to survive a war. Therefore, dropping the prices of 1,000 products by market leader Albert Heijn was a huge treat for the total market. Changing their SPI is a comprehensible goal of the supermarket chain, but this drastic measure may not be an effective way to achieve this objective. In the following section we discuss different models how store price image can be formatted instead of randomly dropping prices like Albert Heijn did.

2.1.4 ROLE OF PRICE PROMOTIONS IN FORMING SPI

Desai and Talukdar (2003) describe the overall store price image as "a belief that consumers hold about the overall (or general) price image of a store, based on their perceptions of individual product prices at that store". An older description is from Martineau (1958) when he states that the store price image is a global representation of the relative level of price.

We want to emphasize that store image and store price image are two different things. However, store image does influence the store price image and in reverse. Hence, the store price image is known as an integral part of the store image and many studies have investigated store image as a whole. But we can find scarce literature on formatting the store price image in particular (Büyükkurt, 1986).

There are three studies that describe a model of store price image formation. D'Andrea et al. (2006) explain with empirical evidence that the store price image is for fifty per cent influenced by reference prices (figure 2). This subscribes the statement of Alba, Broniarczyk, Shimp, & Urbany (1994) that judgements about prices are often based on a comparison to a reference point. The authors imply that it is important for retailers to determine which items are familiar to the consumer or bought most often by the consumer. That is because customers base their price perception on a short number of items. This is also in line with the main research objective; retailers should get insights in which product categories customers memorize reference prices to form their store price perception. Hence, they may be promoting non-key products that customers usually do not consider when forming a SPI (Desai & Talukdar, 2003). D'Andrea et al. (2006) also state that price promotions only count for eight per cent of the SPI formation. One reason is the fact that high promotional activity may blur the price perception.

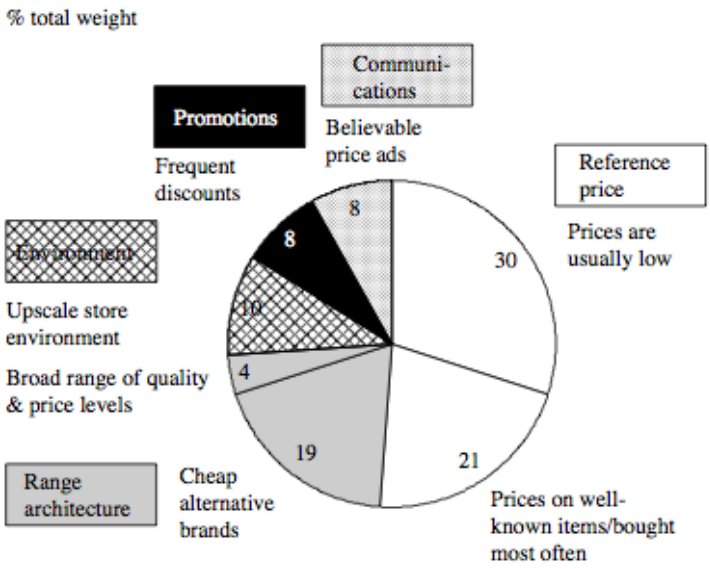

FIGURE 2: MODEL ON STORE PRICE IMAGE FORMATION (D'Andrea, Martin, & Lunardini, 2006)

In contrary to previous research, Laurenco (2010), who wrote his dissertation about store price image formation, came to another conclusion. His description of store price image is "a learning process, in which consumers become knowledgeable about the overall price level of stores, based on actual in-store prices". But more important, his conclusion on store price image formation is that promotional characteristics have the strongest impact on store price image formation. Where D'Andrea et al. (2006) state that the price promotions only account for eight per cent of the SPI formation; Laurenco (2010) shows evidence that compared to other product category characteristics, promotional activities have the strongest influence on SPI learning. The other product category characteristics he formulated were Share-of-Wallet, display activity, expensiveness, inter-purchase time, market concentration, storability, price spread, number of SKU's and brand loyalty. Hence, promotional frequency significantly decreases learning from category prices, so the prices become less easy to process, while promotional depth enhances learning (Laurenco, 2010).

Cox & Cox (1990) investigated the role of price promotion advertisements on forming a SPI. They find that when advertisements show reductions of the normal prices, customers form a lower SPI. The authors are also in line with D'Andrea et al. (2006) arguing that frequent bought poducts have more impact on forming SPI than infrequently purchased goods. Although these studies do not agree in which degree price promotions influence the SPI, they do agree in the fact that price promotions have impact on SPI

formation. In our research we will test the conclusions of the existing literature on the effect of price promotions on SPI formation, in order to give retailers clear insights for their price promotion strategies.

2.1.5 CATEGORY MANAGEMENT

Next to the impact of price promotions on the SPI, we want to give retailers insights in which categories are most attractive to use for their price promotions. Retailers state that category management is their most important issue and they are always looking for innovative ways to improve this area (Progressive Grocer, 1995). Category management is a process in which retailers manage product categories as business units and customise them on a store-by-store basis to satisfy customer needs (Nielsen, 1992). Since the eighties, the focus of retailers has changed from brand management to category management because they believe this will increase the total revenues (Dhara, Hochb, & Kumar, 2001). Johnson (1999) state that the benefits of category management are maximized when there is a purchase marketing strategy in place for the category such as price promotions. This will help satisfy both the retailers and the customer.

In the study about SPI formation, Laurenco (2010) formulates four types of categories (figure 3). Equal to this study, he aimed to identify category characteristics which show how the prices of the category influence the SPI. First he states that the monetary value of the category is important. Customers expect higher returns from being aware of prices in product categories that are more relevant to them (Urbany, Dickson, & Kalapurakal, 1996).

MONETARY VALUE (w_c)

INFORMATIVENESS ($\sigma^2_{\eta_c}$)	HIGH	LOW
HIGH	Subsidization	**LIGHTHOUSE CATEGORIES**
LOW	Avoid	Unattractive

FIGURE 3: DEFINING LIGHTHOUSE CATEGORIES IN THE CONTEXT OF SPI LEARNING (Laurenco, 2010)

The second dimension Laurencos' framework constitutes the informativeness. This dimension depends on the fact whether the category prices are in general accessible for the customer and are perceived as

diagnostic for the SPI level (Herr, Kardes, & Kim, 1991). The lighthouse categories are low in monetary value, but high in informativeness. This means that using price promotions on lighthouse categories, the customer do will notice the promotion. However, the risk for the retailer will be low because this category has a lower share of wallet so this will have a lesser impact on the stores revenue (Laurenco, 2010). The categories that have to be avoided are those who are low on customer information but high on monetary value. Using these categories in promotions will cost the retailer a lot of money while the customers do not notice the price difference. Subsidization categories, such as alcoholic drinks and paper towels, constitute higher risks for the retailer because they may have a huge impact on the category revenues, but they will a positive impact on the SPI. Unattractive categories will make no difference, so are of no strategic use for retailers.

In the next sector we will discuss the methodology used in our research. First the impact of price promotions will be tested. Secondly, the attractiveness of the formulated category types will be investigated and lastly we will aim to give retailers an answer to which categories they have to use within their price promotion strategies.

2.2 MODEL

As mentioned in the previous sector, abundant research is done about the effects of price promotions. Our research will focus on the price difference per category and how this affects the store price image. Because this type of research is all about the perception of the end consumer, the study is done with a survey. We have seen that D'Andrea et al. (2006) say that price promotions only influences the store price image for eight per cent. In contradiction to this finding, Laurenco (2010) finds that price promotions have the most effect on forming a store price image. Therefore, we want to ask the end-consumer how they feel about the influence of price promotions on store price image.

2.2.1 CONCEPTUAL FRAMEWORK

In this research we compare the influence on SPI with several variables. Lindquist (1974) formulates nine dimensions that form the store image; merchandise, service, clientele, physical facilities, convenience, promotion, store ambience, institutional factors and post transaction satisfaction. Out of these nine dimensions, six variables are chosen which compare the influence of promotions on the store price image.

The variables ambience, assortment, clientele, location, service and promotions are already tested in previous studies with questionnaires and are well known for supermarket customers (Perumal, 2005). Institutional factors and post transaction satisfaction are left out. These variables are hard to measure because no actual transaction has happened in the research. We chose for the variables of Lindquist (1974) because they examine the effect of price promotions compared to other hard retailer instruments. Although Lindquist' model tests the effect on store image instead of store price image, we expect that his formulated variables also have impact on the store price image. Furthermore, the variables ambience and assortment correspond with the model of D'Andrea et al. (2006). Another reason for using Lindquist model is that the variable location is not tested in the research of D'Andrea et al. (2006), but we have found in other literature that this factor does influence the store choice (Baltas & Papastathopoulou, 2003). We expect that location and clientele do influence the consumers price perception, therefore we have chosen to use Lindquists' model.

In order to compare the influence of the six variables, consumers have to indicate their store price perception. Therefore they are asked to grade the stores' expensiveness and we will test which of the variables are important for their store price perception. This will be an indication for the impact of price promotions on forming a store price image. The supermarkets that are compared are the three biggest supermarkets chains in the Netherlands looking at their market shares (table 1). Albert Heijn, C1000 and Jumbo also offer a comparable service level and assortment (Sloot, 2013). These three biggest supermarkets, Albert Heijn, C1000 and Jumbo are also the three supermarkets in the Netherlands that are most frequent indicated as consumers' primary supermarket (Op Heij, 2013).

The following part gives the main objective of this research. Cox & Cox (1990) say that supermarkets may create a lower SPI if promotions are presented as a reduction of previous prices. Moreover, we know that frequent bought product categories have a significant influence in SPI (Cox & Cox, 1990). Nevertheless, there is no clear evidence in which direction different categories influence SPI.

This brings us back to the research of Laurenco (2010). He studies the influence of different category types on SPI. He devides the categories in lighthouse categories, subsidization categories, avoid categories and unattractive categories. He tests the impact on SPI by using Nielsen scan data. Our research though will test the difference in categories through a customer survey. In this way the focus on the consumer perspective will be respected. Out of each by Laurenco (2010) formulated categories, two sub-categories

are chosen to investigate (figure 4). This will give the questioned respondents the chance to chose between eight product categories and makes the research relevant for managers. When we ask the respondents to answer questions about more categories, this approach will have a negative impact on their attention rate and their honesty (Helgeson, Voss, & Terpening, 2002). The chosen categories are used in Laurencos' study and are also included in the typical Dutch shopping basket of the biggest dutch supermarket price-comparison website (Cridea, 2013). We can assume that the products that are included in a typical Dutch shopping basket, are well known by customers in the Netherlands. Furthermore, the products that are chosen to test each product category are avaiable the three major supermarkets and have an insignificant price difference per supermarket (appendix 1).

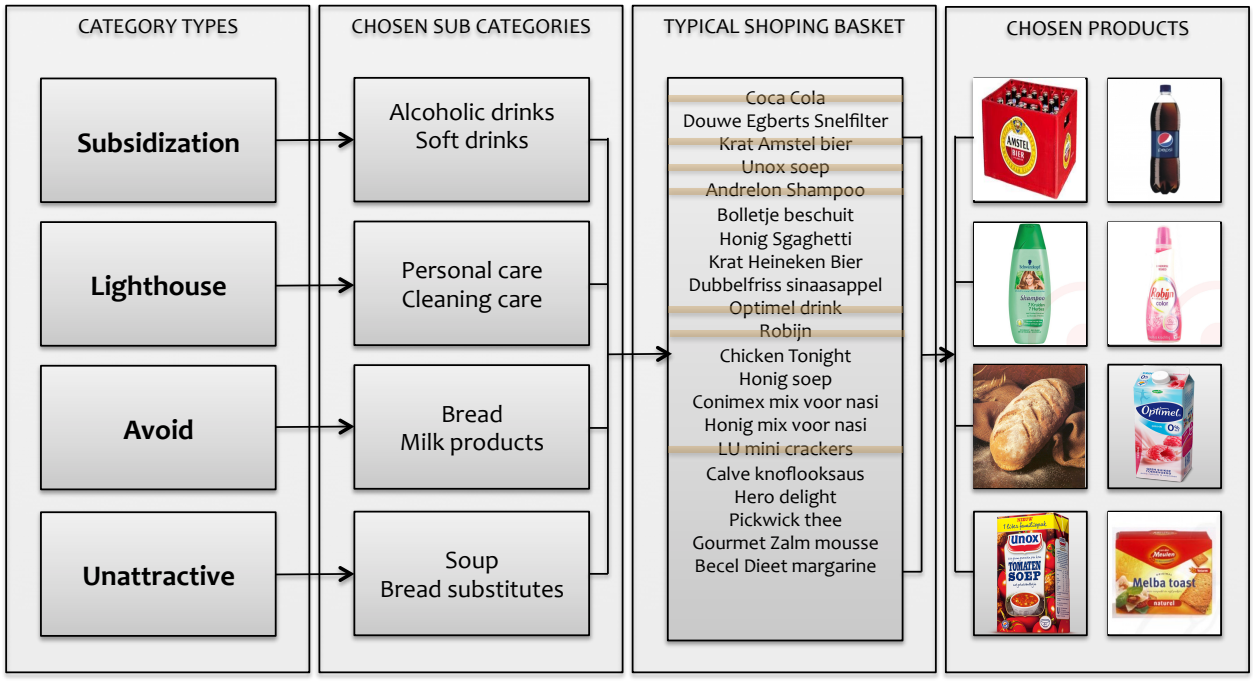

Figure 4: OVERVIEW CHOSEN PRODUCT CATEGORIES

2.2.2 HYPOTHESES

In order to answer the main objective how retail category price promotions influence the SPI, relevant hypothesis have to be formulated. First we will discuss the hypotheses regarding the effect of price promotions on SPI, and then we will discuss the hypotheses regarding the four category types of Laurenco (2010) and their influence on SPI. At last we will discuss the hypothesis and the direction of the hypothesis about the effect of store price image on the store choice. In the figure 5 the conceptual framework of our

research is visualised. For all the hypotheses apply the assumption that the more positive the store price image is, the more expensive the store is compared to others, in the eyes of the consumers.

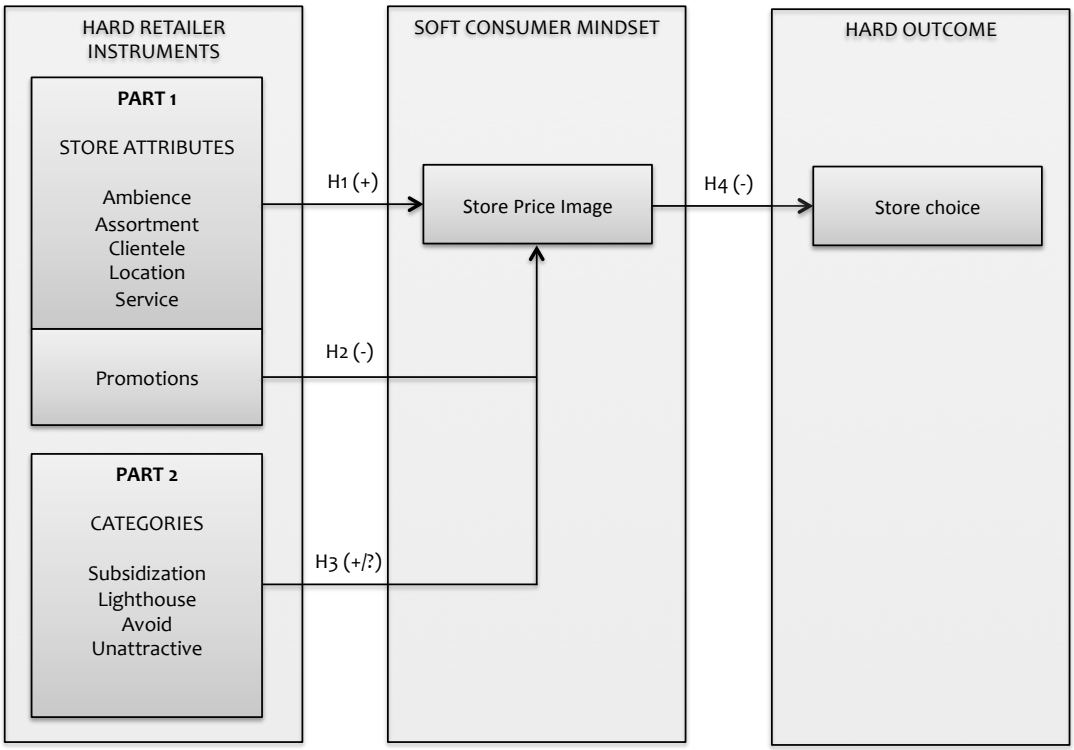

Figure 5: CONCEPTUAL FRAMEWORK

The six store attributes will be discussed separately. The variable ambience is a reflection of lightning, setting and comfort (Sinha & Banerjee, 2004). These background conditions in the environment may have a positive influence on the store image (Baker, Grewal, & Parasuraman, 1994). With logical reasoning we expect that a positive evaluated ambience will also have a positive impact on the store price image, which means that customers find the store more expensive. Because when the store looks nice and comfortable, customers can assume that the store has a lot of revenue to spend on the store environment. This will give the store a more luxury appearance and will higher the perceived value of the supermarket, and therefore customers will expect the store to be more expensive (Baker, Parasuraman , Grewal , & Voss , 2002).

H1 A:	The more positive the consumer perception of the store ambience is, the more positive the store price image is.

The variable assortment is discussed in many studies. Oppewal & Koelemeijer (2005) state that the larger the assortment, the higher the store image, and we expect that customers will evaluate the store as more high end. Because, shelf space is limited and the broader the assortment, the higher the operating costs for the retailer (Koelemeijer & Oppewal, 1999). These costs will be translated in the overall retail prices and this will influence the store price image in a positive way. Hence, customers may think that in order to pay these higher operating costs, the store must have high revenues. Furthermore, a large assortment includes many national brands and we assume that customers will expect a store to be more expensive, when the stores offers a wide assortment of national brands. We assume that consumers will associate a wide assortment with more expensive prices. When they compare the assortment of the service supermarkets, Albert Heijn, C1000 and Jumbo, to the discounters, Aldi and Lidl, the discounters offer a smaller assortment for an overall lower price. We predict that Dutch consumers have learned over the years that the bigger the assortment, the higher the product prices will be.

H1 B:	The more positive the consumer perception of the store assortment is, the more positive the store price image is.

Amirani & Gates (2007) show that the higher the social class of visiting customers is, the higher the SPI of a certain supermarket will be. This means that when the clientele of the store appears to have a high income, or is in a high social class, the general customer expect the store to be more expensive. Therefore, we say that the more positive the consumer perception of the type of store clientele is (in other words, the higher their social class or their spending capacity), the more expensive a store is percieved.

H1 C:	The higher the consumer perception of the store clientele is, the more positive the store price image will be.

The more accessible the store is to the consumer, the more positive the store image (Thanga & Tan, 2003). Furthermore, location is one of the most important factors influencing retail choice (Huff, 1964). Therefore, we expect that customers pay attention to the store location. Customers assume that when stores are centrally located, or easily accessible, the revenues of the store must be high to pay the additional housing costs. Hence, the high additional cost for a good location will be recognized by the customers and will have a positive impact on store price image. Customers will expect that those costs will

be translated into more expensive product prices. Therefore, we can assume that the better the retail location, the higher the SPI.

H1 D:	The more positive the consumer perception of the store location is, the more positive the store price image is.

Service quality is one of the key variables influencing store image (Baker, Grewal, & Parasuraman, 1994). The higher the service quality is, the higher the store image and also, the higher the price perception (Kerin, Jain, & Howard, 1992). Knowing that the service quality has a positive impact on the store image, we also assume that this will influence the store price image. Because when customers perceive a high service quality, we expect that they assume that the store has enough revenues to pay for more and better-classified personnel. We assume that the higher the perceived service quality is, the more expensive customers perceive the store.

H1 E:	The more positive the consumer perception of the store service is, the more positive the store price image is.

As discussed in the previous chapter, the variable price promotion has either has a large or a small positive effect on forming the SPI. D'Andrea et al. (2006) say that price promotions may blur the SPI, but Laurenco (2010) argues that price promotions help forming a SPI. Consequently, the more positive the consumers' perception about the price promotions is, the more negative the store price image is. Because when customers are aware of the price promotions and find them sufficient, they will perceive the store as less expensive.

H2:	The more positive the consumer perception of the price promotions is, the more negative the store price image will be.

The most important question within our research is which product category should supermarket managers focus on for their price promotions efforts to achieve the desired SPI most efficiently. Supermarket managers could assume that different product categories have an equal influence on SPI. However, Laurenco (2010) explained that lighthouse categories are the most attractive for retailers to use for their price promotions. Laurenco (2010) tested these categories on their level of informativeness and monetary value. Lighthouse and subsidization categories have a high level of informativeness, which

means that customers can remember the prices of these categories because they are more salient and easy to process. Because customers will easily notice price promotions on these categories, they create the possibility to change the store price perception. Contrary to this, the avoid- and unattractive categories have a low level of informativeness, so they will have a low signalling ability. So we can assume that the latter categories will have no impact on SPI because customers will not notice the price promotions. Based on Laurencos' research, we can assume that price promotions in the lighthouse categories and the subsidization categories will have a positive impact on the SPI. That means, consumers will think that this store in question is not expensive, since they will remember the price promotions of lighthouse and subsidization categories better. This because consumers purchase lighthouse categories frequently, even when the monetary value of these products is low. Although the monetary value of subsidization categories may be high, because they are expensive items in the regular shopping basket of consumers, price promotions within this category will be remembered better. So, the prices of these two categories can be more informative than the others to construct the store price image.

H3 A:	Lighthouse categories used in price promotions have a negative impact on the store price image
H3 B:	Subsidization categories used in price promotions have a negative impact on the store price image
H3 C:	Avoid categories used in price promotions have no impact on the store price image
H3 D:	Unattractive categories used in price promotions have no impact on the store price image

Obviously, the more positive the store price image is, the higher the general customer perceives the price level of that particular store. This gives the consumer less reason to visit this retail chain. With the consumers becoming more and more price sensitive, the SPI has a stronger influence on the store choice (Degeratu, Rangaswamy, & Wu, 2000). If customers think that a store is more expensive than competitors, they will more likely prefer the competitors' stores. Therefore, we expect that consumers prefer stores with a lower store price image.

H4:	High store price image has a negative effect on store choice.

3. METHODOLOGY

In the first part of this chapter we will discuss the questionnaire (appendix 2). After that we will explain how we test the hypotheses.

3.1 QUESTIONNAIRE

Because this research is about the perception of the end-consumer, store scanner or panel databases are not used. Furthermore, store scanner or panel databases were not available in the Netherlands to the author of the thesis. To obtain insights in the effect of category price promotions on the store price image, we conducted an online questionnaire. We used a nonprobability sampling method, specifically convenience sampling. Because we needed respondents who were able to buy alcoholic drinks, one criterion for the respondents was that they needed to be older than eighteen. We can assume that people above eighteen do regularly groceries so they are able to answer the questions in the survey.

The questionnaire is distributed via Internet using email contacts and social media such as Facebook and LinkedIn. We chose to use an online survey because then the participants are not influenced by their location. If we would have chosen to ask people in or around a specific supermarket, then the data could be biased (Amstrong & Overton, 1977). In total 185 participants started the questionnaire. A total of 134 respondents answered some or all questions about their price perceptions of different stores. Out of these 134 respondents, 102 respondents finished the questionnaire. This sample size should be sufficient to have reliable results, because we should have at least five subjects per variable in the regression analyses (Alles over marktonderzoek, 2013).

All the hypotheses are tested by the use of this questionnaire. The survey included twenty-one questions about the consumers' view on store price image and store choice and six control questions about the respondents' demographics. We used a single-item scale because we wanted our respondents to pay attention to all the questions and this way we decreased the length of the survey. Besides, we asked for the exact price per category in order to get a reference price and because this is not an abstract concept, there was no need for a multi-item scale. Furthermore, we trusted that the questions were formulated concrete and were understood by the respondents; and therefore a single-item scale was

sufficient (Rossiter, 2008). The last reason for using a single-item scale is that the dependent variable is not used in the Handbook of Marketing Scales (Bearden, Netemeyer, & Haws, 2011). For the control question about the level of price sensitiveness per respondent, we did use a multi-item scale to increase the reliability of this question. In the next two tables an overview of the questions that refer to the hypotheses is given.

HYPO-THESIS	DEPENDENT VARIABLE	Q	INDEPENDENT VARIABLE	Q	METHOD
H1 A	Store price image	2 - 10	Ambience	19 - 21	Regression
H1 B	Store price image	2 - 10	Assortment	19 - 21	Regression
H1 C	Store price image	2 - 10	Clientele	19 - 21	Regression
H1 D	Store price image	2 - 10	Location	19 - 21	Regression
H1 E	Store price image	2 - 10	Service	19 - 21	Regression
H2	Store price image	2 - 10	Price promotions	19 - 21	Regression
H3 A	Store price image	2 - 10	Lighthouse category price promotions	14, 16	Regression
H3 B	Store price image	2 - 10	Subsidization category price promotions	11, 17	Regression
H3 C	Store price image	2 - 10	Avoid category price promotions	12, 15	Regression
H3 D	Store price image	2 - 10	Unattractive category price promotions	13, 18	Regression
H4	Store choice	1	Store price image	2 - 10	Regression

Table 3: OVERVIEW OF SURVEY QUESTIONS PER HYPOTHESIS

	VARIABLE	NAME	QUESTION(S)	SCALE TYPE
DV 1	Store price image	SPI	Compared to other supermarkets, the overall store prices of the following supermarket are	10 point Likert scale (1 = not expensive – 10 = most expensive)
DV 2	Store choice	SC	Please order the following supermarket chains in frequency of visits	Ordinal scale (1 = primary supermarket – 4 = quaternary supermarket)
IV 0	References price	RPR	In the following eight questions you can indicate the prices of the products above per supermarket	Ratio scale (price in euro's per product)
IV 1	Ambience	AMB	X stores' atmosphere and decor is appealing	5 point Likert scale (1 = strongly disagree – 5 = strongly agree)
IV 2	Assortment	ASS	A good selection of products is present at X	5 point Likert scale (1 = strongly disagree – 5 = strongly agree)
IV 3	Clientele	CLI	I like the other customers who go the X	5 point Likert scale (1 = strongly disagree – 5 = strongly agree)
IV 4	Location	LOC	X stores are conveniently located	5 point Likert scale (1 = strongly disagree – 5 = strongly agree)

	VARIABLE	NAME	QUESTION(S)	SCALE TYPE
IV 5	Service	SER	X offers a good customer service	5 point Likert scale (1 = strongly disagree – 5 = strongly agree)
IV 6	Price promotions	PP	○ Xs' price promotions are attractive ○ The price promotions of the Albert Heijn are satisfying	5 point Likert scale (1 = strongly disagree – 5 = strongly agree)
IV 7	Promotions Lighthouse	LH	In the following eight questions you can indicate in what extend you make use of price cuts on the product shown per supermarket	5 point Likert scale (1 = never – 5 = always)
IV 8	Promotions Subsidization	SS	In the following eight questions you can indicate in what extend you make use of price cuts on the product shown per supermarket	5 point Likert scale (1 = never – 5 = always)
IV 9	Promotions Avoid	AV	In the following eight questions you can indicate in what extend you make use of price cuts on the product shown per supermarket	5 point Likert scale (1 = never – 5 = always)
IV 10	Promotions Unattractive	UA	In the following eight questions you can indicate in what extend you make use of price cuts on the product shown per supermarket	5 point Likert scale (1 = never – 5 = always)
C 1	Price sensitiveness (Bearden, Netemeyer, & Haws, 2011)	PSS	○ When grocery shopping, I always look at the price per ounce or price per unit information ○ I like to be aware of all possible options before buying an item ○ I always want low prices but I'm equally concerned about product quality ○ I have favourite brands, but I typically buy whatever is on sale	5 point Likert scale (1 = strongly disagree – 5 = strongly agree)
C 2	Gender	GEN	Gender	Nominal scale
C 3	Age	AGE	Age	Ratio scale
C 4	Income	INC	Income per month	Ordinal scale
C 5	Education	EDU	Highest education level	Ordinal scale

Table 4: OVERVIEW OF SURVEY QUESTIONS PER VARIABLE (DV = Dependent variable, IV = Independent variable and C = control variable)

The dependent variable store price image is formulated in question two. Here we ask the respondents to grade the three supermarkets; Albert Heijn, C1000 and Jumbo in terms of expensiveness. The mean of

these answers will give us the SPI per supermarket. This question controls for the following eight questions in the questionnaire, in which the respondents gave their reference price per product category.

In a previous part of this chapter we discussed the eight different categories. In the questionnaire the respondents are asked to indicate the price of these eight categories per supermarket. These data are transformed in the price reference per category per supermarket with a scale from one to ten. For example, the respondents had to give the price of 24 bottles of Amstel bier per supermarket. These prices could range from zero euros to fifteen euros. We divided the answers of this question with 1.5 to scale this variable from one to ten. The mean of the given prices per category per supermarket gives the dependent variable RPR per supermarket.

Now we have conducted the variable SPI per supermarket and we want to test the third hypothesis. Here we investigate in what extend the respondent makes use of the different price promotions per category. The Likert scale ranges from one, never, to five, always. The two product categories per category type are combined as shown in the regression analysis.

For the last hypothesis the respondent had to indicate their store preference. Two questions in which the participants indicated their primary, secondary en tertiary supermarket, combined with their store preference are the dependent variables for the last regression.

3.2 TESTING HYPOTHESES

To test the proposed hypotheses about the effects of price promotions with different category types, the regression analysis approach is used. We can divide the research into three studies. First, by using a regression analysis we will test the influence of the different hard retailer instruments on the SPI. We will use the following formula to test the effect:

SPI AH =	$\beta_0 + \beta_1$ ambience + β_2 assortment + β_3 clientele + β_4 location + β_5 service + β_6 price promotions + ε
SPI C1000 =	$\beta_0 + \beta_1$ ambience + β_2 assortment + β_3 clientele + β_4 location + β_5 service + β_6 price promotions + ε
SPI JUMBO =	$\beta_0 + \beta_1$ ambience + β_2 assortment + β_3 clientele + β_4 location + β_5 service + β_6 price promotions + ε

With the outcome of this linear regression the hypothesis 1A to 1E and hypothesis 2 are investigated. If the coefficients of β1 to β5 are positive and significant, we confirm H1 A to H1 E. If the coefficient of β6 is significant and negative, we confirm H2.

The next part of the study will focus on hypotheses 3A to 3D. Again the store price image is the dependent variable, but now the influences of the price promotions on different categories on store price image are tested. Since we have two sub product categories for each category, we combine the product categories per category type for generalizability reasons. The following formula are used to test the effect:

SPI AH =	β0 + β1 PP subsidization + β2 PP lighthouse + β3 PP avoid + β4 PP unattractive + ε
SPI C1000 =	β0 + β1 PP subsidization + β2 PP lighthouse + β3 PP avoid + β4 PP unattractive + ε
SPI JUMBO =	β0 + β1 PP subsidization + β2 PP lighthouse + β3 PP avoid + β4 PP unattractive + ε

Additionally, to understand how reference prices of the four categories influence store price image, we will test the following regression. RPR represents the reference price per sub product category under each category type. This way we can examine Laurencos' (2010) findings.

SPI AH =	β0 + β1 RPR subsidization + β2 RPR lighthouse + β3 RPR avoid + β4 RPR unattractive + ε
SPI C1000 =	β0 + β1 RPR subsidization + β2 RPR lighthouse + β3 RPR avoid + β4 RPR unattractive + ε
SPI JUMBO =	β0 + β1 RPR subsidization + β2 RPR lighthouse + β3 RPR avoid + β4 RPR unattractive + ε

The last part of the study will focus on the impact of SPI on store choice. This is important for our research because we want to investigate the effect of SPI on the store choice of the customer. Supermarket managers put a lot effort in finding the right categories to use for their price promotions, in order to get a lower SPI. The main goal of supermarket managers is to attract customers to their store and thus create store traffic and sales. Therefore we want to see if SPI correlates with store choice. Here store choice represents a binary variable for consumers whose preference is a specific store. That is, SC_{AH} represents one for consumers whose primary supermarket is Albert Heijn, all other consumers will be coded as zero. Since the dependent variable is binary, we will use logistic regression analysis.

We include all the store variables to order to examine the magnitude of the effect of SPI on SC. The following formula is used as a base to test this hypothesis:

SC AH =	β0 + β1 ambience + β2 assortment + β3 clientele + β4 location + β5 service + β6 price promotions + β7 SPI AH + ε
SC C1000 =	β0 + β1 ambience + β2 assortment + β3 clientele + β4 location + β5 service + β6 price promotions + β7 SPI C1000 + ε
SC JUMBO =	β0 + β1 ambience + β2 assortment + β3 clientele + β4 location + β5 service + β6 price promotions + β7 SPI JUMBO + ε

4. ANALYSES AND RESULTS

Out of the 185 respondents who started the questionnaire, 102 of them finished all the questions. The questionnaire was open from December 19 until December 31 and it took more than 50 per cent of the participants twelve minutes to finish the survey.

The majority of the respondents are between 20 and 24 years old, namely 42,6 per cent. Somewhat more than half of the respondents were female and most of the respondents have a lower than €2,000 monthly income. Almost all of the respondents, i.e. 97.1 per cent, have a high education level.

Hence, the control questions also include the level of price sensitiveness per respondent. The output of these four questions (multi-item scale) is assembled in one variable; price sensitiveness. We conducted a factor analysis to examine if the items could be clustered into one factor. The outcome of this factor analysis explains that combining the items into one variable, have an explanatory value of 46.8 per cent. To test this variable on reliability we saw that the Cronbach Alpha (0.61) is slightly lower than the cut of point 0.70. However, we did not exclude any of the propositions because none of them would higher the Cronbach Alpha. And because the Cronbach Alpha is 0.61, which is leaning towards the cut of point, we will be allowed combining the variables into one. The mean of the variable price sensitiveness is 3.14, which shows that the respondents are leaning towards price sensitiveness. However, by means of a one sample T-test in which H0 entails that the respondents are neutral (the mean is not different from 2.5) in terms of price sensitiveness, we can conclude that, because the p-value is higher than 0.05, this is true. In table 5 we show the general statistics of the respondents' demographics.

We see that the females are more price sensitive, together with the respondents of age 20 to 24 and the respondents with a lower education level. The results also show what the one respondent who earns more than €10,000 (table 5) is very price sensitive. We checked the data of this respondent and it looks like he answered all the questions veracious.

		PERCENTAGE OF RESPONDENTS	AVERAGE PRICE SENSITIVENESS
Contribution of male versus female	Male respondents:	46.1 %	3.0
	Female respondents:	53.9 %	**3.3** = highest
Age	Younger than 20:	2.0 %	3.0
	Between 20 and 24:	42.6 %	**3.6** = highest
	Between 25 and 29:	35. 4 %	3.2
	Between 30 and 34:	7.7 %	2.9
	Between 35 and 49:	4.8 %	3.4
	50 years or older:	7.6 %	3.5
Income per month	Less than €2,000:	65.7 %	3.1
	Between €2,000 and €4,000	18.6 %	3.1
	Between €4,000 and €6,000	7.8 %	3.0
	Between €6,000 and €8,000	2.0 %	3.4
	Between €8,000 and €10,000	1.0 %	2.8
	More than €10,000	1.0 %	**5.0** = highest
Education level	Mao, MBO, Havo, VWO	2.9 %	**3.2** = highest
	HBO, University	97.1 %	3.1

Table 5: GENERAL RESPONDENT STATISTICS (n = 102)

4.1 ANALYSES OF HYPOTHESES

In the following part we will analyse the answers of the questionnaires and discuss the outcome of the data. For all the analyses we used either IBM SPSS or Microsoft Excel. The outcomes of the tests in SPSS are outlined in appendix 3.

First we show an overview of the descriptive statistics. This will be helpful in understanding the analyses of the hypotheses. This table shows that the respondents who have the Jumbo as their primary supermarket are the most price sensitive. Furthermore, on average, the 102 respondents evaluated the store attributes of Albert Heijn as most positive. The other variables that are included in this table will be further discussed in other parts of the analyses.

VARIABLE		AH	C1000	JUMBO
Store price image		7.80	5.54	5.74
Store choice	Primary	74.63 %	5.22 %	7.46 %
	Secondary	8.21 %	13.43 %	39.55 %
	Tertiary	8.21 %	24.63 %	44.03 %
	Quaternary	8.96 %	56.72 %	8.96 %
Average price sensitiveness of people who has this store as their primary supermarket		3.06	2.93	**3.56**

VARIABLE		AH	C1000	JUMBO
Percentage positive attitude (% Of respondents agree or strongly agree with statement)	Ambience	**88.24 %**	10.78 %	60.78 %
	Assortment	**90.20 %**	31.37 %	74.51 %
	Clientele	**52.94 %**	3.92 %	27.45 %
	Location	**91.18 %**	4.9 %	29.41 %
	Service	**60.78 %**	19.61 %	51.96 %
	Price promotions	**68.63 %**	41.18 %	50.00 %
Average use of price promotions (The averages can lay between one: respondents never make use of price promotions and five: respondents always use price promotions)	Amstel	2.85	2.06	2.18
	Bread	3.18	2.00	2.22
	Melba	2.25	1.65	1.75
	Robijn	3.30	2.35	2.58
	Optimel	2.63	1.87	2.09
	Schwarzkopf	2.12	1.62	1.75
	Pepsi	1.96	1.53	1.59
	Unox	2.63	1.91	2.02
Average use of price promotions per category type	Lighthouse	4.36	3.16	3.46
	Subsidization	3.83	2.83	2.98
	Avoid	4.50	2.94	3.27
	Unattractive	3.57	2.61	2.76
Average reference price per category	Amstel	€ 11.41	€ 10.64	€ 10.56
	Bread	€ 2.37	€ 1.99	€ 2.04
	Melba	€ 1.38	€ 1.19	€ 1.21
	Robijn	€ 4.80	€ 4.38	€ 4.38
	Optimel	€ 1.51	€ 1.37	€ 1.38
	Schwarzkopf	€ 2.36	€ 2.18	€ 2.21
	Pepsi	€ 1.46	€ 1.35	€ 1.36
	Unox	€ 1.94	€ 1.81	€ 1.82

Table 6: DESCRIPTIVE STATISTICS

4.1.1 FORMING SPI

In the first study of our model the dependent variable entails store price image. In order to estimate this variable we asked the respondents to grade each supermarket in terms of expensiveness. Although the prices of many products in the three major supermarkets are overall not very different from each other, the store price image of the supermarkets Albert Heijn, C1000 and Jumbo do differ from each other. As expected the Albert Heijn (SPI $_{AH}$ = 7.80) was rated higher than the other two supermarkets (SPI $_{C1000}$ = 5.54 and SPI $_{JUMBO}$ = 7.74). The figures show that when the respondents graded the supermarkets in terms of expensiveness, the Albert Heijn is found on average 30 per cent more expensive than the C1000 and Jumbo. To give evidence for the difference in SPI we used a paired T-test. We anticipated that the SPI of Albert Heijn would be significantly different from the SPI of C1000 and Jumbo. The paired T-test shows us that this significant difference is true (p-value = 0.000) in both tests. We also tested if the SPI of C1000 and

the SPI of Jumbo were significantly different. With a significance level of 0.248 this was not the case. So, Albert Heijn is perceived significantly more expensive than C1000 and Jumbo but there is no significant difference in store price image between C1000 and Jumbo.

Afterwards we asked the respondents to give the product prices of eight categories per supermarket. We did this in order to get the store reference prices. To get more insights in how the SPI of the Albert Heijn is higher than the SPIs of the other stores, we compare the store reference prices with each other. We also compare them with the actual prices. In table 7 we show the means of the given reference prices and the actual prices per supermarket.

In line with the SPI of Albert Heijn, the respondents gave on average a higher reference price in each product category. The sum of the given reference prices at the Albert Heijn is 8.5 per cent higher than the sum of the reference prices of the products at C1000 of Jumbo.

	AH		C1000		JUMBO	
	MEAN RPR	ACTUAL	MEAN RPR	ACTUAL	MEAN RPR	ACTUAL
24 bottles Amstel beer	€11.41	€12.69	€10.64	€12.69	€10.56	€12.29
Luxury bread	€2.37	€2.49	€1.99	€2.19	€2.04	€2.39
Melba toast	€1.38	€0.71	€1.19	€0.75	€1.21	€0.71
Robijn detergent	€4.80	€6.04	€4.38	€6.16	€4.38	€9.15
Optimel drink	€1.51	€1.29	€1.37	€1.29	€1.38	€1.25
Schwarzkopf shampoo	€2.36	€2.02	€2.18	€1.43	€2.21	€2.15
Pepsi cola	€1.46	€1.19	€1.35	€1.19	€1.36	€1.29
Unox soup	€1.94	€2.99	€1.81	€2.99	€1.82	€3.58
TOTAL	**€27.23**	**€29.42**	**€24.91**	**€28.69**	**€24.96**	**€32.81**

Table 7: OVERVIEW REFERENCE PRICES PER CATEGORY AND ACTUAL PRICES (n = 113)

We find it interesting to see that the sum of this particular shopping basket shows that the Jumbo has higher prices than the Albert Heijn, and in contrary, the respondents think that the Albert Heijn has higher prices per shopping basket. Furthermore we see that on average the respondents indicated lower reference prices than the actual prices.

We predict that for the subsidization- and lighthouse categories the respondents will be able to recall the actual prices better than for the avoid- and unattractive categories because these categories are defined as more informative. Therefore we calculated the percentage difference per category type (table 8). In contradiction to our expectations is the difference between the reference prices and the actual prices of the avoid category the smallest. We conclude that this is because consumers buy these products very often and therefore know the exact prices better.

		AH	C1000	JUMBO	TOTAL
Subsidization	24 bottles Amstel beer	-10 %	-16 %	-14 %	40 %
	Pepsi cola	23 %	13 %	5 %	42 %
Lighthouse	Robijn detergent	-21 %	-29 %	-52 %	102 %
	Schwarzkopf shampoo	17 %	52 %	3 %	72 %
Avoid	Luxury bread	-5 %	-9 %	-15 %	**29 %**
	Optimel drink	17 %	6 %	10 %	**34 %**
Unattractive	Unox soup	-35 %	-39 %	-49 %	-124 %
	Melba toast	94 %	59 %	70 %	223 %

Table 8: OVERVIEW PERCENTAGE DIFFERENCES BETWEEN REFERENCE AND ACTUAL PRICES

4.1.2 EFFECT OF PRICE PROMOTIONS ON STORE PRICE IMAGE

The first regression analysis entails the effect of price promotions on SPI. We formulated seven questions to indicate the effect of price promotions in comparison to ambience, assortment, clientele, location and service quality. The respondents indicated per supermarket to what extend they did agree with the positive statements regarding the hard store instruments. Two questions were formulated about the customers' attitude towards price promotions. Testing this variable on reliability we found that the Cronbach Alpha was high enough to combine these two questions. For the Albert Heijn the value of the Cronbach Alpha was 0.72, for the C1000 it was 0.87 and for the Jumbo it showed a value of 0.91. Hence, we added for each store a new variable called price promotions.

As stated in the conceptual framework we want to examine to what extend price promotions do affect store price image. The motivation for this regression is to give one decisive answer to the first sub question of this research. The regression analysis entails the dependent variable SPI per supermarket.

As for the SPI of the Albert Heijn, the direction of the variables influencing the SPI AH is as expected. However, only the store location and the price promotions have a significant impact on SPI AH. With a constant of 7.31, the significance level of 0.004 and a B value of -0.803 explain that if the attitude towards price promotions increases by one, the SPI decreases with 0.803. Hence, as expected the variable location has a positive impact on SPI AH. With a significance of 0.023, the B of this variable is 0.662. If we look at the magnitude of the effects, price promotions have a higher effect on SPI than location (0.803 versus 0.662). The total model has an R square of 0.113, which indicates that the model has an explanatory value of eleven per cent regarding the dependent variable SPI AH.

For the stores C1000 and Jumbo we used the following two regression analyses. Regarding the SPI of C1000, we found that the model had an explanatory value of seven per cent. In contrary to the regression

analysis outcome of the Albert Heijn, here the variable clientele has a significant impact on the forming of the SPI C1000. Nevertheless, as expected, the positive attitude of the customer towards the clientele of the supermarket has a positive impact on SPI C1000. This value has a significance of 0.021 and a B of 0.489. In line with the previous regression analysis the price promotions have a significant (p-value = 0.034) negative impact on the SPI of the C1000 with a B of -0.292. If we look at the magnitude of the effects, price promotions have in this model a smaller effect on SPI than clientele (0.292 versus 0.489). So we can conclude that in the regression analysis of the C1000, the attitude towards the clientele has a bigger impact on the SPI than the attitude towards the price promotions.

Let we take a closer look at the SPI of Jumbo. Here we find that together with price promotions, only assortment has a significant impact on SPI JUMBO. So, the variable assortment (p-value = 0.026) has a positive (B = 0.329) impact on SPI JUMBO. Here we also see that price promotions have a negative impact on the SPI JUMBO with a significance level of 0.009 and a B value of -0.708. If we look at the magnitude of the effects, price promotions have a higher effect on SPI than assortment (0.708 versus 0.329). The R square of Jumbos' regression model explains that the independent variables have an explanatory value of ten per cent regarding the dependent variable store price image. In table 9 an overview of the findings relating to the first two hypotheses is given.

	DEPENDENT VARIABLE	INDEPENDENT VARIABLE	B	P-VALUE
H1 A	SPI AH	β1 ambience	- 0.160	0.653
	SPI C1000		- 0.059	0.849
	SPI Jumbo		0.172	0.473
H1 B	SPI AH	β2 assortment	0.045	0.859
	SPI C1000		0.278	0.341
	SPI Jumbo		0.329	**0.026** = < 0.05
H1 C	SPI AH	β3 clientele	0.121	0.592
	SPI C1000		0.489	**0.021** = < 0.05
	SPI Jumbo		- 0.035	0.910
H1 D	SPI AH	β4 location	0.662	**0.023** = < 0.05
	SPI C1000		0.092	0.707
	SPI Jumbo		- 0.207	0.265
H1 E	SPI AH	β5 service	0.132	0.560
	SPI C1000		- 0.041	0.913
	SPI Jumbo		- 0.023	0.934
H2	SPI AH	β6 price promotions	- 0.803	**0.004** = < 0.05
	SPI C1000		- 0.292	**0.034** = < 0.05
	SPI Jumbo		- 0.708	**0.009** = < 0.05

Table 9: OVERVIEW REGRESSION ANALISIS OUTCOME EFFECT PRICE PROMOTIONS (n = 102)

It is apparent that price promotions have a significant negative influence on SPI. Therefore we can accept hypothesis two. If we compare the magnitudes of the effect, we see that price promotions have the biggest effect on SPI of the Albert Heijn, then of the Jumbo and the smallest effect is on the SPI of the C1000.

In contrary to our expectations, within these models we can find no evidence that ambience of store service have a significant impact on SPI. Hence, we will reject the hypothesis 1A and 1E. Looking at the variables clientele, assortment and location, we do find some significant effects. Although not in all the regression analyses the impact of these variables is significant, we see that assortment, clientele and location have a positive impact on SPI. We hesitate if this is enough evidence for accepting H1 B, H1 C and H1 E, therefore we decided to do further research.

We want to get a general insight in the effect of price promotions on SPI. Therefore, we combined the three regression models into one. In this new regression analysis the dependent variable is SPI. The independent variables are also assembled. The pooled outcome of the new regression analysis is outlined in table 10.

	MODEL	B	P-VALUE
	β0 constant	5.149	**0.000** = < 0.05
H1 A	β1 ambience	0.146	0.685
H1 B	β2 assortment	0.423	0.201
H1 C	β3 clientele	0.189	0.588
H1 D	β4 location	0.031	0.917
H1 E	β5 service	0.325	0.331
H2	β6 price promotions	-0.790	**0.036** = < 0.05

Table 10: REGRESSION ANALYSIS WITH STORE PRICE IMAGE GRADE AS DEPENDENT VARIABLE (n = 102)

We can see that the directions of all the variables are as expected. Hypothesis one has a positive impact on SPI and hypothesis two has a negative impact on SPI. However, only the variable price promotions gives significant results. Hence, again we have evidence to accept hypothesis two. The other variables: ambience, assortment, clientele, location and service have, however, have no significant impact on SPI. Although in the previous regression analyses we found some significant impact on SPI, in general we can conclude that these variables do not affect the SPI. This model has an explanatory value of seven per cent.

4.1.3 EFFECT OF CATEGORY PRICE PROMOTIONS ON SPI

Now we have seen that price promotions do affect SPI, we want to investigate which categories have the highest impact on SPI. As described in the previous chapter, we asked the respondents to indicate their likelihood to use the price promotion of a certain product category in the Albert Heijn, C1000 and Jumbo. Again with a regression analysis we want to get insights in which product category price promotions have the most impact on SPI. First we will discuss the influence of the different category types per supermarket. Afterwards, we will use the dependent variable SPI that combines the three SPIs of the different supermarkets into one regression.

Taking a closer look at the SPI of the Albert Heijn, we see that the model has an explanatory value of three per cent. None of the category types have a significant influence on SPI AH. Hypothesis 3C and 3D makes us expect that the avoid and unattractive categories have no impact on SPI AH. This regression analysis brings us closer to accepting these hypotheses. The regression analysis of C1000, with an R square of 0.027 shows the same results.

The regression analysis of Jumbo, however, shows that the lighthouse category has a significant negative impact on SPI JUMBO. With a p-value of 0.043 and a B of -0.168 we have evidence that price promotions on lighthouse categories have a negative impact on SPI JUMBO and therefore we can assume that hypothesis 3A could be accepted.

The next step is to pool the variables into one regression analysis. In this analysis the dependent variable is SPI, in which all the SPI grades are assembled, and the independent variables are price promotions of lighthouse-, subsidization-, avoid- and unattractive categories. Here we pooled the input of the lighthouse categories, i.e. Robijn detergent and Swartzkopf shampoo, of the three stores into one. We did the same for the subsidization-, avoid- and unattractive category types. This regression model has an explanatory value of three per cent. Here we see that only the lighthouse category has a significant negative effect on SPI. Hence, we can accept hypothesis 3A. Furthermore, because the avoid- and unattractive categories have no significant impact on SPI, we are also allowed to accept H3 C and H3 D. In the following table the outcome of the regression analysis is shown.

	MODEL	B	P-VALUE
	β0 constant	6.095	**0.000** = < 0.05
H3 A	β1 lighthouse	-0.016	**0.015** = < 0.05
H3 B	β2 subsidization	0.347	0.943
H3 C	β3 avoid	-0.281	0.266
H3 D	β4 unattractive	0.097	0.718

Table 11: REGRESSION ANALYSIS WITH STORE PRICE IMAGE GRADE AS DEPENDENT VARIABLE (n = 102)

4.1.4 IMPACT OF REFERENCE PRICE PER CATEGORY ON SPI

Additional to investigating the effect of price promotions on SPI, we want to test how the reference prices per category type have impact on SPI. We used a linear regression approach and saw that only the subsidization category has a significant effect on SPI for the Albert Heijn and Jumbo (table 12). This is what we would have expected because subsidization categories have a high monetary value. The customer does not only pay attention to the prices of the subsidization product categories, but also spends a high percentage of their grocery spending on those categories. Therefore we conclude that when the reference price of those categories is high, customers also evaluate the store as expensive.

MODEL AH (R SQUARE = 0,191)	**B**	**SIG.**
(Constant)	3.28	**0.006** = < 0.05
β1 RPR lighthouse AH	-0.262	0.063
β2 RPR subsidization AH	0.937	**0.000** = < 0.05
β3 RPR avoid AH	-0.094	0.673
β4 RPR unattractive AH	0.382	0.064
MODEL C1000 (R SQUARE = 0,033)	**B**	**SIG.**
(Constant)	3.629	**0.004** = < 0.05
β1 RPR lighthouse C1000	-0.023	0.891
β2 RPR subsidization C1000	0.118	0.638
β3 RPR avoid C1000	0.388	0.127
β4 RPR unattractive C1000	0.014	0.949
MODEL JUMBO (R SQUARE = 0,116)	**B**	**SIG.**
(Constant)	1.914	0.083
β1 RPR lighthouse JUMBO	-0.121	0.429
β2 RPR subsidization JUMBO	0.535	**0.015** = < 0.05
β3 RPR avoid JUMBO	0.256	0.251
β4 RPR unattractive JUMBO	0.263	0.212

Table 12: REGRESSION ANALYSIS IMPACT REFERENCE PRICE ON SPI (n = 102)

4.1.5 EFFECT OF STORE PRICE IMAGE ON STORE CHOICE

In the beginning of the questionnaire we asked the respondents to give their store preference and their primary, secondary and tertiary store choice. We have found that 75 per cent of the respondents have

the Albert Heijn as their primary supermarket. The mean of the C1000 is the highest, which indicates that on average the respondents chose the C1000 as their last choice of supermarkets (table 13).

#	SUPERMARKET	MEAN	NUMBER OF RESPONDENTS PRIMARY SUPERMARKET	PERCENTAGE OF TOTAL
1	ALBERT HEIJN	1.51	100	74.6 %
2	JUMBO	2.5	10	7.5 %
3	OTHER	2.6	17	12.7 %
4	C1000	3.3	7	5.2 %

Table 13: OVERVIEW SUPERMARKET PREFERENCE (n = 134)

To test the hypothesis about how SPI influences the store choice, we used a binary logistic regression. Because the outcome is the nominal variable store choice, which means that respondents chose one store as their primary one, a linear regression approach was not applicable. The logistic regressions of C1000 and Jumbo are not reliable because only respectively ten and seven respondents chose these supermarkets as their primary supermarket. However, we did run the regression for all the three supermarkets with SC as dependent variable in order to get insights in the direction of the variables.

In all the three logistic regressions were no significant results. We saw that the p-value of the impact of SPI AH on SC AH is 0.235, the p-value of the impact of SPI C1000 on SC C1000 is 0.139, and the p-value of the impact of SPI JUMBO on SC JUMBO is 0.679. Also the other variables ambience, assortment, clientele, location, service and price promotions showed no significant impact on store choice.

We do see that the direction of the SPIs on SC is negative, however, we cannot accept the fourth hypothesis. Within this model, we see no evidence that the more positive the SPI of a particular store is, the more this has a negative effect on store choice. So, when consumers find the store more expensive than others, they might still chose that store as their primary supermarket.

4.2 RESULTS

To summarize the results we show an overview of the results in table 14. As discussed in the previous paragraphs, we will accept hypothesis two. We have seen that price promotions have a sufficient negative effect on forming store price image. In some regression analyses the other store attributes: assortment, clientele and location have impact on the SPI, but when we pooled the data to measure the impact of

these store attributes on SPI in general, the results became insignificant. Therefore we reject hypotheses one.

We have seen that price promotions on lighthouse categories will impact SPI with a negative coefficient. And as expected, the avoid- and unattractive categories have no impact on SPI formation. Therefore we accept hypotheses 3A, 3C and 3D. Although we predicted that the subsidization product categories would influence SPI, we have seen no significant results.

At last, the store price image has within this model no influence on store choice. Also the other store attributes did not show significant results on affecting store choice. This leads us to rejecting the fourth hypothesis.

	HYPOTHESES	GENERAL CONCLUSION	PER STORE CONCLUSION
H1 A:	The more positive the consumer perception of the store ambience is, the more positive the store price image is.	Rejected	All: Rejected
H1 B:	The more positive the consumer perception of the store assortment is, the more positive the store price image is.	Rejected	**Jumbo: Accepted**
H1 C:	The higher the consumer perception of the store clientele is, the more positive the store price image will be.	Rejected	**C1000: Accepted**
H1 D:	The more positive the consumer perception of the store location is, the more positive the store price image is.	Rejected	**AH: Accepted**
H1 E:	The more positive the consumer perception of the store service is, the more positive the store price image is.	Rejected	All: Rejected
H2:	The more positive the consumer perception of the price promotions is, the more negative the store price image will be.	**Accepted**	**All: Accepted**
H3 A:	Lighthouse categories used in price promotions have a negative impact on the store price image	**Accepted**	**Jumbo: Accepted**
H3 B:	Subsidization categories used in price promotions have a negative impact on the store price image	Rejected	All: Rejected
H3 C:	Avoid categories used in price promotions have no impact on the store price image	**Accepted**	**All: Accepted**
H3 D:	Unattractive categories used in price promotions have no impact on the store price image	**Accepted**	**All: Accepted**
H4:	High store price image has a negative effect on store choice.	Rejected	All: Rejected

Table 14: OVERVIEW SUPPORTED AND NOT SUPPORTED HYPOTHESES

5. CONCLUSION

The main objective of this research is to find an answer to the question how category price promotions influence the store price image from a consumer perspective. In this chapter we will present our findings and give a conclusive answer to this question. Furthermore, we will discuss managerial and scientific implications and we will present the limitations of this research. At last we offer suggestions for future research.

5.1 OVERVIEW

Previous literature is inconclusive about the effect of price promotions in general. Price promotions increase store traffic and category sales, however empirical results show that this impact is not permanent (Nijs, Dekimpe, Steenkamps, & Hanssens, 2001). On top of that, Ehrenberg, Hammond, & Goodhardt (1994) state that price promotions do not attract new customers. Still, supermarket chains use price promotions as their main advertising cue to consumers (Lal & Miguel Villas-Boas, 1998).

This brings us to the actuality of this research. We have seen that the media are watching the steps of the Dutch supermarket chains closely (Stolk, 2013). That is because Albert Heijn may have initiated a price war by cutting the prices of 1,000 products in September 2013. Experts predict that total market would not survive a possible price war (ANP, 2013). The main objective of AH was to change their store price image, however, the results of this action show that these price promotions did not impact the SPI (Novum, 2013). Therefore we investigated the impact of price promotions on store price image to give guidelines to supermarket managers for their price promotion strategies in the future.

Laurenco (2010) and D'Andrea, et al. (2006) investigated the impact of price promotions on SPI formation in the past. Nevertheless, their results were contradictory. D'Andrea, et al. (2006) concluded that price promotions have a small impact on the SPI while Laurenco (2010) concludes that price promotions have the biggest impact on the SPI. Therefore we tested the impact of price promotions on SPI once again.

We compared the effect of price promotions with the other store attributes: ambience, assortment, clientele, location and service (Lindquist, 1974). The results show that, in general, only price promotions

have a significant effect on SPI. The used regression analysis gave evidence that price promotions negatively influence SPI. This means that the more positive the consumers attitude is towards the store price promotions is, the less expensive they percieve the overall store price level.

We expected that the other store attributes would positively influence the SPI. We predicted that the more positive the consumers thought about the store attributes, the higher the store price image is. Consumers would associate a better ambience, assortment, clientele, location and service with higher prices. They would expect that the store has enough revenues to conduct a better image and therefore the store is able to ask higher prices. Our store-specific results confirmed some of these hypotheses. The store attribute location has a significant positive effect on the SPI of Albert Heijn, the attrubute clientele has a significant negative effect on the SPI of C1000 and the attribute assortment has a significant negative effect on the SPI of the Jumbo. However, within our general model we see no relation between the store attributes and the SPI.

We conclude that using price promotions is an effective way to decrease the store price image. The influence of price promotions has, within our general model, the only significant impact on SPI compared to the other store variables.

Laurenco (2010) also explained four types of categories in his research. He makes a difference in monetary value of product categories and their informativeness. He compared the category types from a reatailers perspective and concluded that lighthouse categories are the most attractive for retailers to use for their price promotions. That is because they have a low monetary value, which results in a small impact on the retailers' revenues, and they have a high informativeness level, which results in awareness of the consumers.

We tested how the price promotions of eight different categories would impact the SPI. We want to give evidence that some categories would impact SPI and others would not, from a consumers perspective. The results of our analysis show that price promotions on lighthouse categories have a significant impact on SPI. This means that when retailers use lighthouse product categories in their price promotions, consumers would change their believes about the stores' expensiveness. Price promotions on lighthouse categories would be noticed and remembered by consumers and they would think the store has a lower overall price level.

Desai & Talukdar (2003) state that SPI is formed by the consumer perceptions of individual product prices at a store. It is interesting to see that the price promotions of subsidization categories showed no significant results in the regression analysis, however, when we used the reference prices as independent variables in our regression analysis, then only the subsidization categories showed significant results on SPI. So, price promotions on those categories would not impact the SPI, but the reference prices of those categories would have indeed impact on SPI.

The influence of store price image on store choice showed no significant results. In contradiction to our expectations, we conclude that SPI has no impact on store choice. The analysis shows that what consumers think about the overall price level of a store, does not predict where they do their grosseries most often. Previous studies show that consumers become more and more price sensitive (Lal & Miguel Villas-Boas, 1998), but our research shows that when it comes to store choice, consumers are not affected by how they precieve the overall price level of the store. Also in our model, none of the other store attributes have a significant impact on the SPI. Therefore we can not conclude which of the variables have the most influence on the consumers' store choice.

5.2 IMPLICATIONS

By reviewing the analyses and conclusions of this research, we can formulate managerial and scientific implications. Retailers can use this research as a guideline for managing their weekly price promotions and to get further insights in the consumers' mind. When supermarket managers want to improve their store price image, the use of price promotions is very important. Within this research we have shown that price promotions have a significant impact on SPI formation. Therefore, if changing the SPI is a managers' main objective, they should focus on their price promotions instead of the other store attributes.

Lighthouse categories have the biggest significant effect on SPI formation. The other product category types are of no significant influence and therefore we suggest that supermarket managers focus on lighthouse categories. Instead of cutting the prices of 1,000 products, supermarket managers should only use price promotions in lighthouse categories. This will have lesser impact on the stores' revenues, because the number of price promotions can be decreased, but do will have impact on the SPI from the consumers perspective. If the supermarket managers' main objective is to be the number one store choice of the consumer, the store price image is of no relevance.

In summary, we advise supermarket managers to focus on lighthouse category price promotions if their goal is to change their SPI. The monetary value of those categories is low which results in no huge impact on their margins and revenues. Lighthouse categories are very informative and the results of our research show that they will have a negative impact on the SPI.

Looking at the scientific implications, we testes our hypotheses from a consumer perspective. Laurenco (2010) compared the category types from a retailer point of view, and we showed how price promotions in different categories influence SPI from a consumer point of view. We asked consumers to grade the stores' expensiveness and translated this in several regression analyses to investigate how their indicated SPIs per store were affected. In our literature review we found contradictory results in the influence of price promotions. D'Andrea, Martin, & Lunardini (2006) concludes that price promotions have a small impact on the SPI while Laurenco (2010) concludes that price promotions have the biggest influence on the SPI. We confirmed Laurencos' results and gave a conclusive answer that price promotions have the biggest influence on store price image, compared to the other store attributes. The results and conclusions of this research will help understanding the SPI formation.

5.3 LIMITATIONS

First of all, the questionnaire used for this research entailed single-item scales. We used single-item scales for simplicity issues and the fact that some questions were not abstract. However, the disadvantage for using single-item scales is that the answers are less reliable and it could lower the quality of the responses (Alexandrov, 2010). This also affected the validity of our research. Bergkvist & Rossiter (2007) state that using single-item scales also loweres the R square, this could explain why in our models the R square is always lower than 0.20. Furthermore, the questionnaire did not contain a control question asking the respondents if they do their glossaries themselves. Also we did not check in what extend the respondents bought the chosen eight products regularly. Therefore it could be that some of the respondents were not able to answer all the questions.

When taking a closer look at the sample of the questionnaire, we see that the sample is not representative for the relevant population. In the Netherlands, 38 per cent of the population has a high education level (Uitham, 2012). In our sample this was 97 per cent. Furthermore, because we used

nonprobability sampling, the sample consists mostly of students. Also, we wanted the sample to be representative for the relevant population regarding their primary choice of supermarket. We know that Albert Heijn has a market share of 34 per cent and the C1000 and Jumbo around 10 per cent (table 1). However, almost 75 per cent of our sample indicated the Albert Heijn as their primary supermarket. This is not proportional to the market shares of the supermarket chains and therefore not representative. Probably quota sampling should have been a better option to have a better representative sample. The number of respondents per store in the sample should have been based on the proportional to market shares. Our unrepresentative sample also influenced the answers. We can assume that the respondents, who chose the Albert Heijn as their primary supermarket, also make more use of the price promotions in the Albert Heijn compared to the C1000 and Jumbo.

One of the consequences of the small and unrepresentative sample is that some regression analyses were not reliable. For example the store choice of C1000 and Jumbo could not be used as evidence for the conclusions. The samples of respectively seven and ten respondents were too small to trust the regression analyses. Furthermore, all the R squares of the different models were very low. This means that the model as a low explanatory value. When we conclude that some variables have no impact on the SPI formation, this conclusion applies only for this model. We can assume that there are many other factors influencing SPI and therefore the R square is low.

5.4 FUTURE RESEARCH

In this research we aimed to provide supermarket managers guidelines for their price promotion strategies. Although this topic is investigated many times in the past, supermarkets do not know how to change their store price image. We did investigate how price promotions influence store price image and we wanted to give a conclusive answer to the question which categories have the most impact on SPI formation. Within this research we used Laurencos' (2010) category types to examine which of the chosen eight categories have the highest impact. However, it would be relevant for supermarket managers when future research includes more than eight product categories. We used two sub product categories for every category type, but future research can investigate more sub categories to give a more reliable answer.

Furthermore, future researchers can divide the conceptual model into different parts. They can use a multi-item scale for the store attributes to give a more reliable answer to the question in what extend price promotions influence the SPI. Also it could be a study by itself to investigate the impact of SPI on store choice. The research could examine the SPI with multiple measures and not only the expensiveness grade like we did in our research.

At last, it would be interesting to investigate to what extend store image influences store price image and in reverse. This possible relationship was not included in our conceptual framework because we did find any previous literature on the relationship between store image and store price image. Future researchers could use a conceptual model that includes store image (figure 6). Supermarket managers could use this research for their strategies and chose if they want to focus on their store image or their store price image.

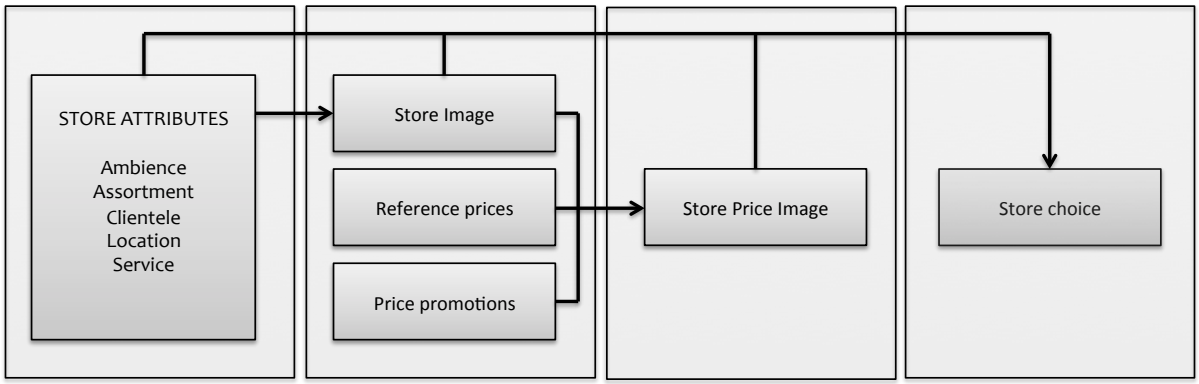

Figure 6: OPTION CONCEPTUAL FRAMEWORK FUTURE RESEARCH

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APPENDIX 1: ACTUAL PRICES OF TOTAL BASKETS OF DIFFERENT SUPERMARKET CHAINS

Basket item	Nettorama	Supercoop	C1000	Plus	Coop	Bonimarkt	Bas Dirk Digros	Dekamarkt	Hoogvliet	Jumbo	Deen	Vomar	Albert Heijn
Coca Cola 1,5 l	1.63	1.69	1.74	1.67	1.74	1.69	1.69	1.69	1.69	1.69	1.63	1.63	1.74
Douwe Egberts Roodmerk Snelfilter 500 g	4.83	4.83	4.98	4.00 A	4.98	4.50 A	4.83	4.83	4.83	4.83	4.83	4.83	4.98
Krat Amstel bier 24 x 0,3 l	8.99 A	12.29	12.69	12.69	12.69	12.29	12.29	12.29	12.29	12.29	12.29	12.25	12.69
Unox Cup-a-soup kip 3 zakjes	0.87	0.91	0.95	0.95	0.95	0.89	0.89	0.89	0.89	0.89	0.93	0.93	0.95
Andrelon ledere dag shampoo	2.35	2.45	1.78 A	2.68	2.68	2.39	2.45	2.40	2.39	2.39	2.45	2.45	2.68
Bolletje beschuit blauw 135 g	0.67	0.66	0.71	0.71	0.71	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.71
Honig Spaghetti vlugkokend (groen)	0.84	0.85	0.92	0.89	0.92	0.81	0.84	0.87	0.84	0.84	0.85	0.86	0.89
Heineken Bier 24 x 0,3 l krat	12.89	9.89 A	9.49 A	9.89 A	9.89 A	12.99	12.99	12.99	12.99	12.99	12.99	12.99	13.39
Dubbelfrisss sinaasappel mandarijn 1,5 liter	0.92	0.94	1.02	1.02	0.99	0.94	0.97	0.99	0.94	0.97	0.95	0.95	1.02
Optimel drink limoen 1 liter	1.13	1.21	0.88 A	1.29	1.29	1.19	0.89 A	1.24	1.19	1.19	1.22	1.23	1.29
Robijn Black Velvet Kk 730 ml	5.59	5.85	6.25	6.25	5.89 A	5.75	5.79	5.99	5.75	5.95	5.99	5.95	6.25
Chicken tonight kerrie	1.43	1.65	1.76	1.76	1.76	1.65	1.68	0.99 A	1.68	1.67	1.48	1.65	0.99 A
Honig Chinese tomatensoep pakje	0.95	1.04	1.04	1.04	1.04	0.96	0.98	0.98	0.98	0.98	0.98	1.09	1.04
Conimex Mix voor Babi Pangang	0.82	0.87	0.88	0.88	0.87	0.64 A	0.83	0.85	0.85	0.83	0.89	0.83	0.87
Honig mix voor nasi	0.87	0.90	0.94	0.94	0.94	0.89	0.89	0.93	0.88	0.88	0.89	0.90	0.94
LU mini crackers naturel	1.15	1.20	1.25	1.25	1.25	1.15	1.17	1.19	1.15	1.17	1.19	1.19	1.25
Calve pittige knoflooksaus 250 ml	0.87	0.97	1.04	1.04	1.04	0.85	0.97	0.99	0.97	0.97	0.97	1.01	1.04
Hero delight Aardbeien 295 gram	1.19	1.29	1.34	1.29	1.34	1.19	1.23	1.26	1.29	1.23	1.29	1.23	1.29
Pickwick thee Earl Grey 20 x 2 g	0.81	0.81	0.88	0.88	0.88	0.82	0.81	0.85	0.81	0.81	0.85	0.85	0.88
Gourmet Gold Zalm Mousse 85 gr	0.44	0.45	0.48	0.48	0.48	0.44	0.45	0.46	0.45	0.45	0.47	0.49	0.48
Becel Dieet margarine 500 gr	1.95	2.09	2.07	2.09	2.09	1.95	1.95	1.95	1.95	1.97	1.98	1.98	2.09
Totaal	51.19	52.84	53.09	53.69	54.42	54.65	55.26	55.30	55.48	55.66	55.79	55.96	57.46

Figure 8: TYPICAL SHOPING BASKET PRICES IN DECEMBER 2013
SOURCE: Cridea (2013)

CATEGORY	PRODUCT	JUMBO		C1000		AH	
		Normal price	Price promotion	Normal price	Price promotion	Normal price	Price promotion
Alcoholic drinks	Amstel krat	€ 12,29	€ 9,22	€ 12,69	€ 8,49	€ 12,69	€ 8,49
Bread	Luxury bread	€ 2,39	€ 1,99	€ 2,19	€ 1,69	€ 2,49	€ 1,99
Bread substitutes	Melba			€ 0,75	€ 0,50	€ 0,71	€ 0,50
Cleaning products	Robijn wasmiddel			€ 6,16	€ 4,00	€ 6,04	€ 3,62
Milk products	Optimel drink	€ 1,25	€ 1,00	€ 1,29	€ 0,89	€ 1,29	€ 0,97
Personal care	Swarzkopf shampoo	€ 2,15	€ 1,08	€ 1,43	€ 1,00	€ 2,02	€ 0,99
Soft drinks	Pepsi	€ 1,29	€ 0,99	€ 1,19	€ 1,00	€ 1,19	€ 1,00
Soup	Unox pak	€ 3,58	€ 1,50	€ 2,99	€ 2,00	€ 2,99	€ 2,09

Figure 7: ACTUAL PRICES OF CHOSEN CATEGORIES PER SUPERMARKET
SOURCE: Company websites (2014)

APPENDIX 2: QUESTIONNAIRE

Introduction

Dear participant,

The purpose of this survey is to gain insights in the consumer perspective of the Dutch supermarket price images.

The questionnaire is voluntary and the data collected is strictly confidential.

When you completed the questionnaire (and answered all the questions) you can leave your e-mail address to take part in the lottery to win one of the two prices of E25.

For more information regarding the questionnaire, you can always contact me at: lfdennert@gmail.com

Thank you very much in advance!

Please rank the following supermarket chains.
(1) = This is my most preferable supermarket, (4) = This is my least preferable supermarket.

	1	2	3	4
Albert Heijn	○	○	○	○
C1000	○	○	○	○
Jumbo	○	○	○	○
Other (please specify)	○	○	○	○

Please order the following supermarket chains in frequency of visits.
(1) = This has been my primary supermarket, (4) = This has been my quaternary supermarket.

	1	2	3	4
Albert Heijn	○	○	○	○
C1000	○	○	○	○
Jumbo	○	○	○	○
Other (please specify)	○	○	○	○

Overall category prices per supermarket

Compared to other supermarkets, the overall store prices of the following supermarket are:
(1) = Not expensive at all, (10) = Most expensive

	1	2	3	4	5	6	7	8	9	10
Albert Heijn	○	○	○	○	○	○	○	○	○	○
C1000	○	○	○	○	○	○	○	○	○	○
Jumbo	○	○	○	○	○	○	○	○	○	○

In the following eight questions you can indicate the prices of the products above per supermarket.

24 bottles of Amstel beer

Please indicate the price of this item at the following supermarkets.

	0	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15
Albert Heijn											
C1000											
Jumbo											

One piece of luxury bread

Please indicate the price of this item at the following supermarkets.

	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Albert Heijn											
C1000											
Jumbo											

One box of van der Muelen melba toast

Please indicate the price of this item at the following supermarkets.

	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Albert Heijn											
C1000											
Jumbo											

One bottle of Robijn detergent

Please indicate the price of this item at the following supermarkets.

	0	1	2	3	4	5	6	7	8	9	10
Albert Heijn											
C1000											
Jumbo											

One liter of Optimel drink

Please indicate the price of this item at the following supermarkets.

	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Albert Heijn											
C1000											
Jumbo											

One bottle of Schwarzkopf shampoo

Please indicate the price of this item at the following supermarkets.

	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Albert Heijn											
C1000											
Jumbo											

One liter of Pepsi

Please indicate the price of this item at the following supermarkets.

	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Albert Heijn											
C1000											
Jumbo											

One liter of Unox soup

Please indicate the price of this item at the following supermarkets.

	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Albert Heijn											
C1000											
Jumbo											

Category price promotions

In the following eight questions you can indicate in what extend you make use of price cuts on the product shown per supermarket.

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn					

	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

When the product above is on price promotion, indicate in what extend you would buy the product in the following supermarkets.

	Never	Rarely	Sometimes	Very often	Always
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

Store image variables

In the following three questions you can indicate whether or not you agree with the statements regarding the different supermarkets.

Please indicate whether or not you agree with the following statements regarding the Albert Heijn.

	Strongly				Strongly

	disagree	Disagree	Undecided	Agree	agree
Albert Heijn stores' atmosphere and decor is appealing	○	○	○	○	○
A good selection of products is present at Albert Heijn	○	○	○	○	○
I like the other customers who go the Albert Heijn	○	○	○	○	○
Albert Heijn stores are conveniently located	○	○	○	○	○
Albert Heijn offers a good customer service	○	○	○	○	○
Albert Heijns' price promotions are attractive	○	○	○	○	○
The price promotions of the Albert Heijn are satisfying	○	○	○	○	○

Please indicate whether or not you agree with the following statements regarding the C1000.

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
C1000 stores' atmosphere and decor is appealing	○	○	○	○	○
A good selection of products is present at C1000	○	○	○	○	○
I like the other customers who go the C1000	○	○	○	○	○
C1000 stores are conveniently located	○	○	○	○	○
C1000 offers a good customer service	○	○	○	○	○
C1000's price promotions are attractive	○	○	○	○	○
The price promotions of the C1000 are satisfying	○	○	○	○	○

Please indicate whether or not you agree with the following statements regarding the Jumbo.

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Jumbo stores' atmosphere and decor is appealing	○	○	○	○	○
A good selection of products is present at Jumbo	○	○	○	○	○
I like the other customers who go the Jumbo	○	○	○	○	○

Jumbo stores are conveniently located	○	○	○	○	○
Jumbo offers a good customer service	○	○	○	○	○
Jumbo's price promotions are attractive	○	○	○	○	○
The price promotions of the Jumbo are satisfying	○	○	○	○	○

Control questions

Please indicate for the following supermarkets the frequency of price promotions of products you are interested in.

	Very rarely	Rarely	Somewhat	Frequently	Very frequently
Albert Heijn	○	○	○	○	○
C1000	○	○	○	○	○
Jumbo	○	○	○	○	○

Please indicate whether or not you agree with the following statements.

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
When grocery shopping, I always look at the price per ounce or price per unit information.	○	○	○	○	○
I like to be aware of all possible options before buying an item.	○	○	○	○	○
I always want low prices but I'm equally concerned about product quality.	○	○	○	○	○
I have favorite brands, but I typically buy whatever is on sale.	○	○	○	○	○

Gender

○ Male

○ Female

Age

Income per month

Highest education level

E-mail address

APPENDIX 3: SPSS OUTCOME

FACTOR ANALYSIS: PRICE SENSITIVENESS

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	1,874	46,848	46,848
2	,893	22,321	69,170
3	,673	16,824	85,994
4	,560	14,006	100,000

Extraction Method: Principal Component Analysis.

RELIABILITY CHECK: PRICE SENSITIVENESS

Reliability Statistics

Cronbach's Alpha	N of Items
,608	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
When grocery shopping, I always look at the price per ounce or price per unit information.	9,33	5,472	,423	,509
I like to be aware of all possible options before buying an item.	9,47	5,598	,472	,475
I always want low prices but I'm equally concerned about product quality.	8,92	5,756	,426	,509
I have favorite brands, but I typically buy whatever is on sale.	9,98	6,376	,247	,601

ONE SAMPLE T-TEST: PRICE SENSITIVENESS

One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Price_Sensitiveness	1,902	101	,060	,14216	-,0061	,2904

PAIRED T-TEST: SPI DIFFERENCES

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	SPI_AH – SPI_C1000	2,254	2,084	,180	1,898	2,610	12,521	133	,000
Pair 2	SPI_AH – SPI_JUMBO	2,060	2,169	,187	1,689	2,430	10,994	133	,000
Pair 3	SPI_C1000 – SPI_JUMBO	-,194	1,937	,167	-,525	,137	-1,160	133	,248

RELIABILITY CHECK: PRICE PROMOTIONS ALBERT HEIJN

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,723	,723	2

RELIABILITY CHECK: PRICE PROMOTIONS C1000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,867	,867	2

RELIABILITY CHECK: PRICE PROMOTIONS JUMBO

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,912	,912	2

REGRESSION ANALYSIS: SPI AH – STORE ATTRIBUTES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,336[a]	,113	,057	1,850	,113	2,013	6	95	,071

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,306	1,622		4,505	,000
	Ambience_AH	-,160	,356	-,049	-,451	,653
	Assortment_AH	,045	,252	,020	,178	,859
	Clientele_AH	,121	,225	,058	,538	,592
	Location_AH	,662	,287	,248	2,311	,023
	Service_AH	,132	,226	,066	,585	,560
	Price Promotions_AH	-,803	,275	-,328	-2,924	,004

a. Dependent Variable: SPI_AH

REGRESSION ANALYSIS: SPI C1000 – STORE ATTRIBUTES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,265[a]	,070	,012	1,879	,070	1,196	6	95	,315

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,301	1,347		3,192	,002
	Ambience_C1000	-,059	,310	-,025	-,190	,849
	Assortment_C1000	,278	,291	,119	,958	,341
	Clientele_C1000	,489	,389	,173	1,257	,021
	Location_C1000	,092	,244	,039	,378	,707
	Service_C1000	-,041	,374	-,014	-,110	,913
	Price Promotions_C1000	-,292	,307	-,109	-,951	,034

a. Dependent Variable: SPI_C1000

REGRESSION ANALYSIS: SPI JUMBO – STORE ATTRIBUTES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,318[a]	,101	,044	1,813	,101	1,778	6	95	,112

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6,951	1,291		5,384	,000
	Ambience_Jumbo	,172	,239	,089	,720	,473
	Assortment_Jumbo	,329	,292	,140	1,123	,026
	Clientele_Jumbo	-,035	,310	-,013	-,114	,910
	Location_Jumbo	-,207	,185	-,119	-1,121	,265
	Service_Jumbo	-,023	,281	-,009	-,083	,934
	Price Promotions_Jumbo	-,708	,265	-,284	-2,667	,009

a. Dependent Variable: SPI_JUMBO

REGRESSION ANALYSIS: SPI – STORE ATTRIBUTES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,271[a]	,073	,015	1,40523

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,149	1,344		3,832	,000
	AMBIENCE	,146	,358	,052	,407	,685
	ASSORTMENT	,423	,329	,161	1,286	,201
	CLIENTELE	,189	,347	,066	,544	,588
	LOCATION	,031	,298	,012	,104	,917
	SERVICE	,325	,333	,117	,977	,331
	PROMOTIONS	-,790	,371	-,257	-2,128	,036

a. Dependent Variable: SPI_GRADE

REGRESSION ANALYSIS: SPI AH – CATEGORY TYPES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,189[a]	,036	-,002	1,888

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,276	,695		10,462	,000
	Lighthouse_AH	,084	,257	,043	,327	,744
	Subsidization_AH	,400	,246	,192	1,626	,107
	Avoid_AH	-,255	,245	-,129	-1,044	,299
	Unattractive_AH	,029	,262	,013	,109	,914

a. Dependent Variable: SPI_AH

REGRESSION ANALYSIS: SPI C1000 – CATEGORY TYPES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,165[a]	,027	-,011	1,873

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,425	,482		11,246	,000
	Lighthouse_C1000	,199	,286	,105	,698	,487
	Subsidization_C1000	,366	,321	,169	1,140	,257
	Avoid_C1000	-,321	,342	-,162	-,940	,349
	Unattractive_C1000	-,237	,386	-,099	-,614	,540

a. Dependent Variable: SPI_C1000

REGRESSION ANALYSIS: SPI JUMBO – CATEGORY TYPES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,161[a]	,026	-,013	1,845

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,837	,518		11,259	,000
	Lighthouse_Jumbo	-,168	,270	-,090	-,619	,043
	Subsidization_Jumbo	,430	,322	,196	1,336	,184
	Avoid_Jumbo	-,365	,314	-,190	-1,163	,248
	Unattractive_Jumbo	,096	,320	,041	,301	,764

a. Dependent Variable: SPI_JUMBO

REGRESSION ANALYSIS: SPI – CATEGORY TYPES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,160[a]	,026	-,013	1,40781

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6,095	,478		12,747	,000
	LIGHTHOUSE	-,016	,222	-,010	-,072	,015
	SUBSIDIZATION	,347	,240	,196	1,445	,943
	AVOID	-,281	,251	-,165	-1,120	,266
	UNATTRACTIVE	,097	,267	,048	,362	,718

a. Dependent Variable: SPI_GRADE

LOGISTIC REGRESSION: STORE CHOICE AH – SPI AND OTHER STORE ATTRIBUTES

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Ambience_AH	,135	,452	,090	1	,764	1,145
	Assortment_AH	,131	,316	,171	1	,679	1,140
	Clientele_AH	,148	,281	,278	1	,598	1,160
	Location_AH	,368	,370	,991	1	,319	1,445
	Service_AH	-,049	,283	,030	1	,862	,952
	Price Promotions_AH	,285	,356	,642	1	,423	1,330
	SPI_AH	-,161	,136	1,412	1	,235	,851
	Constant	-1,623	2,255	,518	1	,472	,197

LOGISTIC REGRESSION: STORE CHOICE C1000 – SPI AND OTHER STORE ATTRIBUTES

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	SPI_C1000	-,604	,408	2,184	1	,139	,547
	Ambience_C1000	1,329	1,911	,484	1	,487	3,778
	Assortment_C1000	-2,267	1,612	1,979	1	,160	,104
	Clientele_C1000	1,723	1,742	,979	1	,323	5,602
	Location_C1000	1,144	1,068	1,148	1	,284	3,140
	Service_C1000	-1,572	1,364	1,328	1	,249	,208
	Price Promotions_C1000	1,769	1,234	2,054	1	,152	5,863
	Constant	-6,723	5,891	1,303	1	,254	,001

LOGISTIC REGRESSION: STORE CHOICE JUMBO – SPI AND OTHER STORE ATTRIBUTES

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Ambience_Jumbo	-,451	,501	,809	1	,368	,637
	Assortment_Jumbo	,505	,610	,686	1	,408	1,658
	Clientele_Jumbo	-,189	,643	,086	1	,769	,828
	Location_Jumbo	,386	,363	1,130	1	,288	1,471
	Service_Jumbo	,545	,577	,892	1	,345	1,725
	Price Promotions_Jumbo	-,302	,509	,352	1	,553	,739
	SPI_JUMBO	-,079	,192	,171	1	,679	,924
	Constant	-3,828	2,928	1,710	1	,191	,022