Retailer Price Image

An Introduction and Literature Review

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3   Synopsis and Structure

This working paper aims to give an introduction to what we know about what makes up and influences the retailer's price image: **"the general belief about the overall level of prices that consumers associate with a particular retailer"** (R. Hamilton & Chernev, 2013). What have been the main themes in academic price image research? The focus is on what relevant empirical evidence has been published and what conclusions can be drawn. We also provide some illustrative new empirical data.

The paper is written as a first stop for academic researchers, students and retail practitioners interested in the area. Some important studies are therefore reported in more detail than usual.

The paper begins by discussing the **background and relevance** of the topic. We acknowledge the importance of pricing in the modern retailer's strategic toolbox, but like many price researchers before us point out the many shortcomings of relying solely on actual prices and promotion in achieving long-term objectives such as brand associations to prices and value. We also stress the importance of understanding the specific challenges of the "retailer as a brand", which we believe has an important and somewhat neglected impact on the modern management of price image.

We continue the first section by introducing a number of key theoretical concepts that are frequently used in the behavioral pricing and price image literature. We then conclude by discussing the crucial role of consumer memory and decision making biases in understanding how consumers process information about retailers, their stores and prices. These concepts and definitions are important to understand when reading the remainder of the paper.

The empirical section covers many of the issues which in different research streams have been found to be of relevance to understanding how consumers process price information and how they react to cues which retailers attempt to manage every day. These areas include:

- Store environment
- Assortment structure
- Price communication
- Price dispersion
- Pricing strategy
- Known value items
- Consumer strategies in forming price images from different cues

The consequences of choosing the strategy of engaging in a serious **price war** in order to strengthen a weak price image are discussed in a separate chapter mainly based on the Dutch price war of 2003-2005. We also devote one chapter to **discount retailers**. These have been very successful in many markets – what can we learn from the way have they managed to protect their price image and what pitfalls are they facing in a world where they are increasingly forced to adopt distributor brands and introducing new value propositions into their customer offering?

We conclude the empirical section by discussing two somewhat neglected issues in price image research. The first involves how the **retailer as a brand** can serve as leverage in or obstacle to managing price image. The second focuses on the related issue of the challenges retailers face when

attempting to **change their price image position** and how they can be met based on what we know from consumer and brand research.

We continue with a concluding section where we attempt to wrap up and visualize the research area with some proposed extensions based on framework proposed by Hamilton and Chernev (2013).

Finally we deliver some **suggestions for a relevant research agenda**. We believe that there are plenty of opportunities to increase research relevance by both updating and pushing forward in some research streams where empirical studies are outdated or scarce. There are also some exciting new research areas.

4 Introduction

4.1 Background

As long as marketplaces have existed, pricing has been recognized as one of the retailer's most critical tools in order to attract customers and remain competitive. Price plays an important part in the retail firm's long-term strategies and tactics as well as its store operations and sales. It is used as a vehicle both for increasing sales, profits, market share and customer satisfaction.

However, there is usually only a moderate correlation between the actual store price index of a basket of common items on the one hand and the customers' perception or image of the pricing in the store on the other. Proprietary research from one of Sweden's largest grocery retailers shows that a simple correlation between these two variables varies between 0.2 and 0.4 (2013). Table 1 illustrates this relationship for stores in a large supermarket chain, where three different items measuring store price image are correlated with the price index for each store relative to the national average.

There is thus a large amount of unexplained variance and as an abundance of studies have shown over the years, many consumers are severely lacking in knowledge about individual item prices or the relative price levels of their local set of stores. They still make store patronage choices and when asked often have fairly clear opinions about the cheapness or expensiveness of stores, however. This implies that the retailer needs to understand which other factors are important in governing consumer behavior in order to utilize pricing strategies more effectively (R. Hamilton & Chernev, 2013).

		Price Index for Total Assortment Basket	Value for Money ("price vs quality")	Price Level	Prices Compared to Other Stores
Price Index for Total Assortment Basket	Pearson Correlation	1	-,314[**]	-,357[**]	-,315[**]
	Sig. (2-tailed)		,009	,003	,008
	N	69	69	69	69
Value for Money ("price vs quality")	Pearson Correlation	-,314[**]	1	,856[**]	,833[**]
	Sig. (2-tailed)	,009		,000	,000
	N	69	69	69	69
Price Level	Pearson Correlation	-,357[**]	,856[**]	1	,947[**]
	Sig. (2-tailed)	,003	,000		,000
	N	69	69	69	69
Prices Compared to Other Stores	Pearson Correlation	-,315[**]	,833[**]	,947[**]	1
	Sig. (2-tailed)	,008	,000	,000	
	N	69	69	69	69

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1: Simple linear correlation between store price indices and store customers' price perceptions of a Swedish supermarket chain. Proprietary data, 2013. The stores' price indices are calculated from a 3,000-item basket, where the mean national index is 100. Lower values denote cheaper baskets and vice versa. The attitudinal items were included in the stores' local customer satisfaction surveys, and are based on 300-400 respondents in each local market.

The topic of this paper is the determinants of the price image of the store and the retailer. We define price image as **"the general belief about the overall level of prices that consumers associate with a particular retailer"** (R. Hamilton & Chernev, 2013).

In the dozens of commercial store customer satisfaction and patronage studies that this author has carried out, general assortment and fresh quality image is usually followed by some iteration of price image or staff and service quality image in their impact on customer satisfaction and measures of customer loyalty, spending and WOM. This is illustrated in Table 2. The fact that price image cannot be viewed separately, but as a function of many aspects of the retailer as a brand and its store offering is something we will return to later. Although it can be measured as a separate construct, it does not exist in isolation.

Quality factor	Impact Rank based on Beta Weights in PLS Analysis
Assortment Perception (range + quality)	1
Price Image	2
Store Ambience	3
Staff Perception	4
Inspiration in-store	5
Store Layout	6

Table 2: Different quality factors' impact on overall store customer satisfaction. National grocery retail chain. PLS analysis with total CSI as dependent variable, n = 5,354. R^2 = 0,63.

4.2 The Emergence of Price Image Research

It is apparent that significant shifts in price research focus and insight have taken place over time. Despite the increasing interest in the consumer behavioral aspect of pricing, many authors at different points complain that too little empirical research has been made into the fundamentals of price image formation and the cognitive processes behind it (Gijsbrechts, 1993; Grewal & Compeau, 2007; R. Hamilton & Chernev, 2013; Nyström, 1970).

As early as 1954 Harold Leavitt published a short but insightful essay into the meaning of price for the consumer, noting that there had been "no published research directly concerned with the consumer's interpretation of price." Leavitt challenges the accepted view that price and sales volume were so strongly negatively correlated that little else mattered. He discusses several situations and anecdotes which are still relevant today, e.g., why a price hike may increase sales, as well as that different consumer segments can exhibit quite different buying behavior when faced with the same choices and prices. In a simple but effective experiment he shows that price may be a quality cue in itself and under certain conditions actually reverse the demand curve. "Price itself may have more than one meaning to a consumer" (Leavitt, 1954).

Academic researchers in marketing and retailing became increasingly interested in gaining more insight into how consumer decision-making actually worked with regards to price. Oxenfeldt's (1968) and Brown's (1969; 1971) studies of how American housewives formed local price impressions are examples of other early modern empirical studies of what determines the link between actual and perceived store prices. Brown and Oxenfeldt (1972) summarized their observations about pricing and consumer behavior in their book "Misperceptions of Economic Phenomena" which also discusses the

consequences of consumers' inability to perceive everyday economic phenomena such as grocery prices accurately, coining the phrase "perceptual economics ".

In 1970 Swedish researcher Harry Nyström (Nyström, 1970) published his text on retail pricing, which aimed to bridge the gap between economics and psychology. He elaborated on the concept of price image and noted the complexity of the retail store already in the early 1970's due to the breadth of the assortment, and the challenge for the consumer to take in relevant price data and process it. Nyström's contemporary literature review showed that no one had attempted to propose a more systematic model of the relationship between the retail firm's strategies and consumer behavior in pricing. He also stressed the need to understand both the assortment dimension (the complexity of the assortment for the consumer), the time dimension (changes in prices over time) and the psychological dimension (both for the buyer and seller). Much of both his, Brown's and Oxenfeldt's reasoning is still applicable today.

4.3   Why is Price Image Important?

Price image influences both consumer beliefs and consumer behavior (R. Hamilton & Chernev, 2013). It will affect how consumers perceive the retailer's price level and how fair prices are. It will also affect store choice, whether the consumer makes a purchase in the store or decides to postpone it in order to check on prices and deals at other stores, as well as the size of the basket on each visit to the store.

Price image may also affect retailer strategies such as decisions whether to invest in price activities as compared to other parts of the customer offering which may have a significant effect on value perception. As a poor price image is difficult to change, it is a potentially huge problem when new competitors enter the market – not the least e-tailers and discounters. In today's world of multichannel retailing, knowing how to manage price image both on- and off-line is becoming increasingly critical.

Price image is also very much an issue that affects real-world decisions by consumers as well as institutional oversight and policies vis-à-vis retailing. If consumers become more aware of our very human failings and inertia in certain areas of decision-making, they might invest more cognitive resources and make slightly different decisions. For policymakers it may be beneficial to understand that image-based decision-making may cause people to shop based on cues and only partially based on actual price information, thus rendering legislative efforts on price transparency and shelf-based comparative pricing ineffective.

4.4   Do Today's Tools and Strategies Do the Job for Retailers' Price Image?

In retailing, price has kept its pivotal role in the minds of managers. Often, however, the focus has been on the dimensions of pricing and promotion that managers perceive can actually be influenced by themselves in the short term, that is, manipulation of actual prices in the store as well as in promotion and marketing communication (Nordfält, 2011). This stream of research is intuitively appealing because it can be based on actual consumer data and is quite easily extracted with today's databases and analytical tools. It can produce easily understandable analyses of price elasticities, effects on sales within a product group, cannibalization and profitability. And, of course, in the short run, in most cases the stimuli of price variation and promotion do in fact produce a change in consumer demand (Nordfält, 2011).

However, this research does not account for more subtle effects on the consumer's price images and store images, nor does it take into account the fact that consumers simply do not have the time or ability to process more than a handful of important prices for their household. They are also unable to accurately value the impact of far-reaching price-cuts such as those made by mainstream supermarkets in the UK during the last couple of years. Accompanied by a score of temporary campaign price-cuts it makes for a very difficult proposition even for knowledgeable households with the time and inclination to do the research. One of the main reasons for the success of discount operators in the UK is that shoppers have become tired of fluctuating hi-lo supermarket prices, where discount stores instead offer everyday low prices which are more predictable. The focus on price and deals has undoubtedly also brought price closer to top of mind for British consumers, to the detriment of mainstream retailers.

The UK is actually a good case in point, as it has been the scene of several price-comparison initiatives in recent years from, e.g., Tesco (Tesco Compare) and Morrison's (PriceChecker). However, these services have so far failed to achieve a turn-around. Merely providing consumers with more price information and price guarantee programs hence risk falling short of repositioning the retailer in the long run in the way hoped for by management.

Aggressive promotions and price cut campaigns can of course work very well in the short run, but we will see that such initiatives by themselves are no guarantees for long-term success and profitability. In fact, they risk biasing consumer behavior in a way that threatens to put the retailer in an entirely different set of circumstances, i.e., create too much emphasis on price in the market's different offerings or create an uncertainty among consumers which reduces their ability to easily assess and process the prices ahead of and during a shopping trip. Indeed they may induce uncertainty regarding the retail brand's total offering, i.e., the expected positioning and benefits of the retailer as a brand. Faced with uncertainty consumers may fall back on simpler cues on what to expect, sometimes disregarding actual prices altogether.

Leeflang and Wittink (1996) argue that manufactures and retailers often have an incomplete understanding of their customers' price-search and price image formation behavior and thus overestimate consumers' use of, e.g., comparative prices. They show that competitive overreaction is more common than underreaction for managers on the manufacturing side in retailing, and argue that this is explained by several factors. Managers may follow competitor-oriented objectives for their brands such as market-share, they usually have more information about changes in competitive activities than about their effects on consumers, they can overestimate the propensity for consumers to make price comparisons, as well as the consumers' ability to accurately judge item, category or store prices. Finally, managers are often unwilling to take the risk of losing market share due to under reaction (risk aversion).

New insights into consumers' price search and price images should thus be useful to help moderate responses to competitors' tactics and strategies on both the manufacturing and retailing side.

4.5   The Influence of the Retailer as a Brand

Of course, pricing is only one of several important components in the store offering, and they often interact (perhaps most notably price and perceived quality). As early as 1969, Brown found that various store attributes affected consumers' predictions of the store's price level. Modern retailers spend considerable resources to build master brands to use as vehicles for attracting their target

customers. One of the advantages of a strong brand as a retailer is higher price tolerance, clear brand associations and beliefs about the retailer's price/quality offering as well as emotional bonds which are resistant to change (Levy, Weitz, & Grewal, 2014).

While an important part of this brand building consists of attributes encountered at the store level, such as physical location, store atmosphere (physical design, employee service quality etc), price and promotion, and assortment strategy (Ailawadi & Keller, 2004), many brands develop – or are purposely developed into – retail personalities or brand images towards which target customers are expected to feel an affinity (Ailawadi & Keller, 2004; Beristain & Zorrilla, 2011; Burt & Davies, 2010; Fournier, 1998).

The retailer's brand image can bias consumer reactions both to initiatives such as those made by Tesco and Morrison's, as well as the price image updating process, making it a challenge to reposition a brand which does not have natural credibility in the pricing domain. Examples of the former are Whole Foods in the U.S., and Hemköp, Coop and ICA in Sweden.

The strategic branding perspective and the prospective relationship between the umbrella retailer brand and the formation and inertia of price image will be discussed as one of the potential key questions related to price image and consumer behavior. It has so far received negligible attention in terms of its influence on price image.

5   Focus of the Working Paper

This working paper endeavors to give an overview of what we know about what makes up and influences the retailer's price image: **"the general belief about the overall level of prices that consumers associate with a particular retailer"** (R. Hamilton & Chernev, 2013).

The paper takes a broad view on the overall perception of the retailer's and its stores' total price image and thus often takes a strategic or tactical view. We hope to provide some new ideas to those already familiar with the field. For those who are new to the area, the hope is that it will inspire new and innovative questions and studies.

I am indebted to the recent comprehensive literature review on store price image published in the November 2013 issue of Journal of Marketing by Ryan Hamilton and Alexander Chernev. While making it more of a challenge to find a niche in the research area, it made for an excellent starting point. I make suggestions suggestions to amend their framework in the concluding section.

5.1   Delimitations

This is not a handbook on in-store pricing and promotion. The actual prices, promotions and price communication that the consumer faces during his store visit naturally play an important role for buying behavior and have been well-researched. However, this particular text will touch upon in-store consumer behavior and marketing only as necessary in order to assess its impact on the formation of store price image.

Two excellent complements to this text are hence, e.g., Nordfält (2011) for in-store pricing and promotion and the upcoming special issue of Journal of Brand and Customer Management (2015) on price-related and non-price related cues and their impact on consumer reactions to prices.

6 Theoretical Concepts and Definitions

There are several research streams associated with pricing in retailing and store price image. It is important to have a basic understanding of some of them as they will be appearing frequently later in the text. Definitions of some concepts are also crucial in order to facilitate discussion and the understanding for new research efforts. Finally, common definitions make it easier to understand which phenomenon is being studied.

6.1 Conceptualizing Price Image

As noted above, together with contemporaries Brown and Oxenfeldt, Nyström (1970) was the first researcher to put significant effort into discussing and attempting to measure consumers' (or in his terms "buyers'") overall impression of a store's prices. He concluded that no one had given this much attention, instead most of the contemporary research had been directed at understanding reactions to changes in single product's prices, e.g, reference prices, a very long way from the complexity of decision making when facing competing retail stores' offers. The prevailing assumption was that consumers were fairly rational and consciously and unconsciously collected price information which was processed in some sort of numerical or otherwise quantifiable terms. This, of course, would not explain that without even entering the store, many consumers can have an opinion about an unknown store or retailer on some sort of continuum of what to expect pricewise (e.g.,Zielke & Toporowski, 2012).

For Nyström (1970) price image was defined as "a buyer's conception of the assortment price level of a firm [retailer]. The price image of a firm is thus a relative concept, conceived in relation to the comparable levels of one or more competing firms" (ibid., p. 121).

Nyström had a bleak but remarkably insightful and modern view of the consumer: "I do not consider it an adequate approach to try to account for differences in buyers' price images for competing firms merely as a result of making calculations of relative assortment price levels, which accurately reflect their preferences and personal purchase patterns. I believe most retail situations are characterized of highly uninformed buyers. This then, would make it virtually impossible for buyers to be rational in any strict economic sense… I have assumed psychological consistency rather than economic rationality… The experiences and expectations of buyers…are considered important determinants of behavior. The price image a buyer holds regarding the assortment price level of a firm is assumed to reflect his general expectation with regard how price-worthy, in lieu of item specific price information, he will find different items to be if he visits one of its stores" (Nyström, 1970, pp. 140-141)

6.1.1 Influencing Price Image on Different Levels

Nyström noted that price image could be created, maintained and affect behavior on several different levels of analysis and in different directions. Nyström refers to this as "the generalization from one cognitive element or structure to another" (p. 120). In his model, the retailer as a brand, roughly corresponding to what Nyström refers to as "the institutional level" could affect the price image of a store directly, at the level of the store's assortment and further also down to the item price image level. Conversely, prices at the item level could be generalized by the consumer and thus affect store price image at the assortment level and lastly impact retailer brand image.

Nyström did not discuss retailer brand image in depth, but focused instead on the interaction between item level and assortment level. In order for actual pricing to have an effect on price image bottom-up, consumers have to devote cognitive effort to evaluate prices on comparable items between stores or price changes on that item in the current store. This evaluation could be based either on actual price comparison, e.g., using promotions in weekly flyers or a price comparison app, or by applying a generalization of the competing store's price image on the assortment level. Every time such price evaluations and buying decisions are made they trigger a process in which the current price image is updated on the assortment level, however with the exception of extreme cases changes in price image is gradual, not instantaneous. Nyström noted that retailers even in the late 1960's also used price image advertising in an attempt to affect assortment level price image from the top.

6.1.2   EDLP or hi-lo?

Finally, in Nyström's framework price image had a strong connection to both the perception of the general price level and the evaluation of price changes (both permanent and promotions). These reflect the two main strategies for the retailer in pricing; everyday low price (EDLP) or promotion-intensive (hi-lo). Which of these strategies work better in influencing price image and consumer behavior such as store patronage? We will cover some empirical findings later in the paper.

6.1.3   Other Conceptualizations and Definitions of Price Image

Hamilton and Chernev (2013) discuss and summarize a number of constructs related to price image. We will also briefly cover some of these and conclude with the definition that we propose be used in future research. The appendix contains a number of examples of concrete operationalization of price image from the literature.

Like Nyström (1970) many studies define price image as **some sort of categorical impression of the aggregate price level of a store or retailer**. Operationalization of this are "high-priced store" vs "low-priced store"; "prices are much higher/much lower than other stores" or the three items used by Biswas et al (2002): "unattractive prices–attractive prices", "unreasonable prices for the value– reasonable prices for the value", and "prices much lower than other stores–prices much higher than other stores" (reverse coded).

The conceptualizations might however read somewhat differently in the studies, hence the use of labels such as "price impressions", "retailer price image", "store price image", the descriptive "overall store price image", "price perception" and "expected basket attractiveness". Hamilton and Chernev (2013) argue that the labels are conceptually very similar and can be used under the umbrella of "price image".

Desai and Talukdar (2003) used another close variation of the generic price image definition which is quite frequently used in current literature (e.g., Chang & Wang, 2014; D'Andrea, Schleicher, & Lunardini, 2006) as it is very descriptive, namely **OSPI (Overall Store Price Image)**. OSPI is defined 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." Thus this is more of a local store image measure than applicable to an entire retail chain. However, we believe that OSPI and price image as defined for the purpose of this paper complement each other, just as the retailer as a brand and store image do (see below).

A **multidimensional approach** such as that argued by Zielke (2008) and Chang and Wang (2014) can be used profitably to deconstruct price image especially in cases where the concept is used as part of a store image or customer satisfaction model, i.e., not by itself. Methodological details from these studies are reported in the Appendix.

In many customer satisfaction models in retailing a multi-dimensional approach is used. This includes comparative and non-comparative price image items coupled with for example product category-specific evaluations of the store's perceived value in different assortments (fresh, dry goods, health & beauty etc) together with ratings of other aspects of the store's offer. This approach provides more detail as to which parts of the store offer drive price perception directly and gives the retailer more analytical avenues to explore, as well as concrete operational feedback. As latent price image variables they can also still be used in conjunction with the antecedents and behavioral outcomes proposed by Hamilton and Chernev (2013) in their integrative model.

We will stick as closely as possible to Hamilton and Chernev's definition below and the generic label "price image" as much as possible. However, in order to draw up certain distinctions for the reader later in the text we will from time to time use some of the other conceptualizations.

6.1.4   Conclusion and Generic Definition

Summing up, in accordance with Hamilton and Chernev's (2013) terminology, we define price image generically as **"the general belief about the overall level of prices that consumers associate with a particular retailer"**. This "belief" is based on many retailer-driven and individual consumer variables as well as the processing of different more or less salient cues which may have no relation to actual prices at all.

6.2   Strategic Retail Branding and Price Image

One of the more interesting research streams that we believe bear on price image is branding in modern retailing.

6.2.1   Retailer Brand Management at the Chain and the Store Level

Before we proceed we need to make some important distinctions about which level of analysis we ultimately focus on in this paper and where the consumer's price image is formed and can be influenced. Earlier research has often been vague in this regard and we will see that it has been conducted on every possible level from item-specific up to the strategic management level of large retailers.

In this paper we generally use the term "the retailer" to denote the retail organization to which an individual store belongs. Usually this means the retail chain that manages the store and which is responsible for the chain's strategic brand and price management; that is, managing the "umbrella brand". Ailawadi and Keller (2004) note that just as any other brand, the modern retailer can manage its brand personality and its brand architecture to clarify what the consumer can expect from the retailer. "The store" denotes a local store belonging to that retail chain. Depending on the strictness of central brand and store management, the store also has a more or less unique brand; or store image.

Burt and Davies (2010) take a position similar to our and discuss the different levels in retail branding at length. They note that consumers generally "refer to a specific (named) company or a store… The

store is a crucial – and unique – element in retailer branding. It is the place where the customer experiences the retailer and to many the store is the retail product" (ibid., p. 869).

According to Burt and Davies and Ailawadi and Keller (2004), store image can be viewed as a proxy for "retailer [brand] image", that is, the customer's holistic associations captured in store image is reflected directly up to the strategic retail chain level. "Brand identity" on the other hand "originates from the organization and includes elements such as vision, culture, personality and relationships" (Burt and Davies, 2010, p. 869). This means that the store can be seen as the retailer's product while the company's personality creates the retailer's identity. Finally, the retailer's corporate brand can be seen as a "relational construct based upon customer relationships" as well as "relationships with… media, investors, public authorities and local communities who all contribute to reputation and perception of the brand" (ibid., p 871).

This discussion reflects the fact that the term "holistic" has taken on a whole new meaning in modern retailing. Naturally, this has implications on how price image can be viewed, how the consumer is influenced and how price image can be managed.

We believe that the store is indeed crucially important as the retailer's product and shop window. However, every retail chain consists of dozens or hundreds local and more or less unique stores. Our experience is that there can be considerable variance in how stores operating under the same retailer brand are managed and thus which impressions they convey to consumers, as is abundantly made clear in the figure below.

	Mainstream retailer, hypermarket (n = 795)	Discount retailer (n = 195)	Mainstream retailer, neighborhood store (n = 186)	Mainstream retailer, medium-sized grocery store (n = 196)
Overall customer satisfaction*	2 thru 10	2 thru 10	2 thru 10	2 thru 10
Price image**	1 thru 10	2 thru 10	1 thru 10	1 thru 10
Value for money***	1 thru 10	2 thru 10	1 thru 10	1 thru 10
Quality-focus of store***	2 thru 10	2 thru 10	2 thru 10	2 thru 10

Table 3: Range in customer perceptions of local grocery store images in Sweden. National customer satisfaction study, October-November 2013. Respondents were asked to evaluate their primary local store, which was identified by name and address. Scale range: 1 through 10.
* "How satisfied or dissatisfied are you with this store?".
** "How satisfied are you with the price level in this store?"
*** "How satisfied are you this store's prices compared to quality?"
**** "How well the store performs with regards to its focus on quality?"

Over time customers visit many of these stores and come away with different impressions from each one. These experiences are overlaid by how the retailer's corporate brand and brand personality are

perceived, how staff and corporate communications express brand identity, centrally managed marketing communications as well as input from outside sources such as social media and price comparison sites. Exposure to price information and the store offerings together with other stimuli will thus be integrated both into a local store price image and a "retailer-wide" price image.

Figure 1: Proposed conceptualization of the importance of interaction between local store images and retail chain brand images.

In conclusion then, managing price image can and must be done on several levels to be effective.

6.2.2   Store image

Store image is traditionally defined as "the way the store is perceived in the shopper's mind, partly by its functional qualities and partly by an aura of psychological attributes" (Martineau, 1958). The term "functional" refers to all relevant parts of the store which can be compared qualitatively to a competitor whereas the term "psychological" refers to "such things as a sense of belonging, the feeling of warmth or friendliness" (Lindquist, 1974) or quite possibly also feelings of alienation, distance, insecurity, coldness and hostility.

Store image has been found to affect outcome variables in retail such as outside draw (store attractiveness over distance), store patronage decisions, store loyalty and share-of-wallet (SOW) (Steenkamp & Wedel, 1991). Beristain and Zorilla (2011) find that store image impacts the store's private label quality associations, loyalty and awareness.

There are many studies in retailing incorporating store image as a concept (see, e.g. Burt & Davies, 2010, for an excellent overview). In order to illustrate the definition of store image, researchers as Lindqvist (1975), Ailawadi and Keller (2004) and Bezès (2013) show that store image is usually operationalized using directly and objectively observable parts of the store such as:

- Assortment
- Pricing and promotions
- Service/staff
- Store location/convenience
- Physical facilities or store atmosphere

The component "store atmosphere" can signify a more subtle part of the store image while "promotions" obviously are connected to pricing. Many customer satisfaction models in retailing will amount to measuring store image.

To conclude, store image is a holistic, multidimensional construct which usually integrates a pricing component. However, most consumers will take into account and weight the "other qualities" of the store when forming their price image. As we attempted to do in the earlier discussion on analysis level, we argue that both (local) store image and how the consumer views the strategically managed retailer as a brand will affect price image.

6.3 Reference Prices

Many theories of consumer price information processing hinge upon the premise that consumers encode, evaluate and integrate into memory price information (Dickson & Sawyer, 1990; Grewal & Compeau, 2007). The consumer's reference price is **the standard against which an encountered price is measured**.

The reference price is often provided directly by the retailer (external reference price, ERP), for example by stating a price on the shelf or in an advertisement that is claimed to be a valid "normal price", such as "was XX dollars, now YY dollars" or "recommended retail price XX dollars, our price YY dollars". It can also be an internal reference price (IRP) retrieved from the consumer's knowledge about earlier purchases or research about the item. In this case the reference standard is likely to be imprecise and sometimes of the nature of "feels like a good deal" or "impossibly cheap". An advertised reference price (ARP) is the promotional price communicated to consumers. The ARP can be assimilated directly into an adjustment of the IRP or in more extreme cases produce a contrast effect to the current IRP and thus create a totally new category or range of prices (e.g., high-end vs budget smartphones).

Generally, external competitive comparisons are more effective in raising the consumer's internal reference price and thus enabling a more favorable view of a particular price (Compeau & Grewal, 1998). External comparisons also contribute to creating feelings of paying a fair price (Grewal & Compeau, 2007). Employing this as a tactic is however dependent on the retailer's legal possibility to make such direct comparisons.

6.3.1 Adaptation-level Theory and Range Theory in Consumers' Price Perception

In the above reasoning with regards to IRP it is often thought to be a single anchor for price judgments consisting of a weighted or unweighted mean, a range of possible prices or some other calculation made by the consumer resulting in the IRP. This results in an adaptation level where "stimuli are judged with respect to internal norms representing the pooled effects of present and past stimulation… According to Adaptation-level theory, the past and present context of experience defines an adaptation level, or reference point, relative to which new stimuli are perceived and compared" (Kalyanaram & Winer, 1995, p. 162).

Adaptation-level theory was first proposed by Helson ((Helson, 1964). Grewal and Compeau (2007) base an important part of their model of consumer responses to price on this theoretical framework, see the section on the importance of cues in consumer judgment of prices. They underline that already adaptation-level theory should provide an understanding for that consumers do not judge prices and value based solely on actual prices, but react to a complex array of cues.

Janiszewski and Lichtenstein (1999) argued that Range Theory also can be adapted to better understand how consumers make price judgments. In range theory, a phenomenon is judged based on where in its current range it is positioned, in this case a range of prices. The key is the consumer's perceived lower and upper pricing bounds as it sets the boundaries of the range. In the case of grocery retail, a bottle of shampoo of similarly perceived quality can be thought to have a lower bound of, say, 3 Euro, and an upper bound of 5 Euro. The attractiveness of any shampoo that is new or on promotion will be judged according to where it falls within the range. The end anchors will have a disproportionate effect on price judgment and perception. Changes in the range and end points can also be used in retail pricing so as to contrast and frame different parts of an assortment

in order to help manipulate price image, see the study by Hamilton and Chernev (2010) discussed later in this report.

Janizewski and Lichstenstein (1999) concluded that if we hold the IRP constant, e.g., as a mean of previously encountered and processed prices, then manipulating the range of prices will affect the price perception of a product. Hence, this is an important complement to IRP, especially considering that consumers have been found to have quite sketchy knowledge of prices (see later section on Price Knowledge). There are however a number of situations where the range will only have a weak influence. For example, for some items there is a "going rate" with only a very narrow range of prices. Further, if the consumer perceives that there are very few alternatives to a product or brand, range will necessarily be constricted. On the other hand, if a competitor can credibly show that there are new viable alternatives the range is suddenly expanded.

6.3.1.1   *Uncertainty and Price Evaluation*
Jung et al (2014b) point out that as uncertainty about relevant prices increases, the acceptable range of prices also increases, as well as the acceptance levels for the perceived risk for losses. Conversely, as information and experience is accumulated the acceptable range of prices narrows and the IRP increases. Thus, more information and experience sensitizes consumers to changes in price.

6.3.2   Reference Prices and the Store
References prices are often researched from a single product perspective and not from a store perspective. The formation of store price image will depend on more than the evaluation of a single price at a particular point in time. However, conceptually it is linked to store price image as consumers are likely to create reference points also for an individually chosen limited portfolio of products which are then compared between possible stores.

As Mazumdar et al (2005) note, the consumer's product portfolio sampling and price retrieval are likely to be biased and imperfect "as a result of erroneous sampling caused by the relative familiarity of different product categories and retail promotional strategies." The consideration set size for each item (the number of possible brands the consumer consider substitutes for the item) and how frequent promotions are made thus are important factors in determining the certainty with which prices are recalled and then compared between different possible stores. In general, the larger the number of products used as a base-line portfolio, the more brands in the item consideration set and the more frequent the promotions, the more likely that the consumer's reference price for the store is uncertain and biased.

Following this, when price information is insufficient or uncertain, further bias may occur as consumers use non-price information to judge price levels and subsequently overestimate the relationship between this information and actual prices.

6.3.3   Individual Differences
It has been demonstrated that there can be substantial individual differences in which information is used and how it is weighted. Consumers with different levels of store experience and price and product knowledge should have different IRPs, as well as consumers with different risk levels or risk aversion.

For example, consumers who buy more frequently on promotion are more likely to depend on external information whereas consumers with fewer considered brands, buying from categories with

moderately high price levels and with more stable prices, depend more on memory-based information (internal reference price).

6.4 Price and Quality Perceptions and the Concept of "Value for money"

In the introduction we mentioned Leavitt's (1954) experiment on the price-quality relationship. Already sixty years ago he managed to indicate the complexity of the relationship. Nyström (1970) also covered this as an important buyer psychological area of research. However, he extended the concept into a broader context where consumers are hypothesized to have an overall quality image of the retail firm's assortment. He notes that consumers will tend to generalize from the general price and quality images to individual items if the buyer is inexperienced with the retailer or lacks information and experience with a certain product.

We will spend some time discussing this, as retailers often rely on rules of thumb between price and quality but have little or inconclusive supporting consumer insight for their assortment and pricing decisions. The possible contamination of the retailer's brand, whether a discount or a premium store, is still to this day only vaguely understood.

Table 4 shows that there is a substantial narrowing of the gap between retailers on price image if the reference point is value for money. The gap narrows from 20 to 10 index points between the worst (Retailer D) and best (Retailer C) price image on the Swedish grocery retail market. This is consistent with theory and highlights the importance of delivering an offer tailored to the retailer's core customer groups on both price and quality dimensions.

Retailer	Item 1: Rate this store for overall value for money (quality vs price)	Gap to Retailer C (price image leader)	Item 2: Rate this store's price level	Gap to retailer C (price image leader)	Difference item 1-Item 2
A	73	-5	67	-13	+6
B	69	-9	61	-19	+8
C	78	-	80	-	-2
D	68	-10	60	-20	+8
E	77	-1	80	+/- 0	-3

Table 4: Illustration of the importance of understanding how customers create their view of "value for money". Above are scores for "rate this store for overall value for money (quality vs price)" and "rate this store's price level". Swedish grocery retailers. Proprietary data. National customer satisfaction study, n = 200-800 per retailer. Respondents were asked to evaluate their primary local store, which was identified by name and address.

In her seminal article on perceived price, quality and value, Valarie Zeithaml (1988) defined *perceived quality* as "the consumer's judgment about a product's overall excellence or superiority." *Price perception* was defined as "the price as encoded by the consumer," e.g., expressed in terms meaningful to consumers, such as "dirt cheap."

Perceived value is an evasive concept and literally takes on meaning in the eyes of each beholder. It is formally defined by Zeithaml as "the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given." Both what is received and what is given vary across consumers, e.g., time as well as money can be perceived as something given for the product.

In Zeithaml's (1988) study it was seen as having four different consumer definitions. 1) Value is a low price, 2) value is whatever I want in a product, 3) value is the quality I want in a product and 4) value is what I get for what I give.

Zeithaml's reasoning is that value perceptions are highly contingent on the consumer's frame of reference. The product is not fully evaluated until it has gone through the entire purchase and usage cycle. For example, in the case of food the purchase price, any discounts given, ease of preparation, time for preparation, smell, packaging, taste, friends' or family's reactions and environmental friendliness may all contribute to the value equation. For other items in the same basket of groceries only the price on the shelf may be of relevance to the consumer.

Grewal and Compeau (2007) also discuss the concept of value perception which similarly to Thaler (1985) they argue is made up of two components. The first component is *perceived acquisition value* which is identical to Zeithaml, namely "consumers'…perceptions of the quality and benefits of the product…relative to their perceptions of the monetary sacrifice they have made". They postulate that there is a negative relationship between perceived monetary sacrifice and acquisition value and a negative relationship between quality perceptions and acquisition value. The definition of *transaction value* is directly derived from Thaler (1985) as "the perceived difference between the IRP and the actual price affects consumers' value perception, such that relative differences rather than absolute differences are the critical factors". Put simply, if the price to be paid is less than the internal reference price, however correct that may be in reality, it is perceived to be a good deal. Grewal and Compeau (2007) also discuss other value dimensions that may come into play during the product's life cycle; this is similar to Zeithaml's discussion about how consumers evaluate the utility of the product during entire the usage process or product life cycle.

6.4.1 Conclusion: Price vs Quality and the Store

In the case of store price image, studies seem to validate that value "in supermarket shopping is a composite of…higher level abstractions" such as time, freshness, variety, service, and facilities apart from quality and price (Zeithaml 1988). This is along the lines of what Nyström (1970) argues, although he restricts himself to the assortment. It also corresponds well with a recent qualitative study into the meaning of value to supermarket customers in Sweden (proprietary focus group report, May 2014). In Grewal and Compeau's (2007) framework, many different cues are proposed to affect quality and price perceptions as well as behaviors. They emphasize consistency as key in helping the consumers be more confident in, e.g., in their price/quality evaluations. This reasoning can reasonably also be extended to the store level where the entire store experience must give a consistent feel to core customers.

The complex and often abstract nature of value and quality perceptions give rise to a host of methodological questions and choices. These include:

- Identifying how consumers collect price information as a basis for their IRPs.
- Which cues dominate for a certain product or retail industry.
- The dynamic nature of perceptions over time (the value and utility of a product or store may change suddenly).
- Understanding how consumers encode and weight monetary and non-monetary costs for the product or store at hand.
- Understanding the value and importance of brands for the consumer. This includes both product brands and the retailer as a brand.
- Choosing one of the many possible avenues to affect the particular retailer's core segment's perceptions of value and quality.

For the retailer this translates into a very challenging picture where the different aspects of the total offer must work together to deliver the right assortment, offer relevant choices, correct level of store experience, brand building and consumer insights. The most successful retailers have mastered this and thus deliver value the way their customers see it also in the local store.

6.5 Price Image, Memory, Consumer Decision Making and Judgment

Most modern consumer researchers agree on one thing: consumer decision making and the formation of beliefs about retailers and their stores is not a neat, structured and rational affair. Price image is no exception. Puccinelli et al (2009) provide a general overview of the principal decision making buying processes affecting the retail customers; we will here focus on the problem area at hand.

6.5.1 A Biased Affair

Consumers learn about mainstream retailers from very early on growing up, being taken by their parents to stores, interacting with store staff, hearing their parents and others around them talking about the retailer as well as continuously making own judgments about product quality and value. In our experience from qualitative work with Swedish grocery retail consumers, there is sometimes even an ideological component to image formation – some retailers such as cooperative ones are by some perceived as more looking out for the ordinary consumer, having fair prices etc. Others are "known" for inadequate CSR work, suspect business practices, collusion and trying to make a profit at the expense of quality and consumer satisfaction (discounters and retail federation store owners). Older adult consumers are more prone to use existing memory schemas to process information while younger consumers tend to process the same information more thoroughly (Puccinelli et al., 2009), thus older consumers may be more set in their beliefs.

All of the above form important foundations for the image of mainstream retailers such as those operating in grocery retail. When consumers move to new local markets, travel abroad or are faced with new retailers at home, existing categories, schemas and cues for retail stores are employed to make quick sense of the new circumstances. Thus different retailers have to contend with images formed many years ago and/or having been formed based on cues which often are only marginally based on a factual evaluation of the actual store offering (Alba, Broniarczyk, Shimp, & Urbany, 1994).

Consumers with long-established retailer images and those with recent but schematically constructed images and expectations are resistant to processing new information or experiences in such a way as to challenge their established image, they are subject to confirmation bias (R. Hamilton & Chernev, 2013). Instead they tend to sift out information that fits and supports their established image. This inhibits learning which could actually be beneficial for the consumers and also counteracts retailer communication efforts (Alba, Mela, Shimp, & Urbany, 1999).

Some of the problems that ordinary consumers are faced with are actually daunting. It is not easy to be expected to continually search for, process and commit to memory all the relevant information about several retailers, their pricing, promotions, assortments and other information that might be available out there. Some consumers do spend significant amounts of time both searching for price and promotion information and visiting different stores, notably "cherry-pickers" (Fox & Hoch, 2005; Schindler, 1989). They usually express that they enjoy the feeling of making a bargain or "cheating the stores." However, such consumers often also fail to act rationally as, e.g., they spend an inordinate amount of time in their price search, time which many modern consumers put a high price-tag on, thus affecting the perceived value of any deal (Grewal and Compeau 2007).

Hence, consumers are prone to many of the biases and heuristics in the decision making literature, paradoxically regardless of the amount of price information they theoretically could make use of in a society where, e.g., there is infinitely more retail pricing and product information literally in your pocket than twenty years ago. Consumers want to minimize their cognitive effort and tend to rely on cues which are sometimes only loosely relevant to the problem at hand (Grewal and Compeau 2007). Too much information may cause cognitive stress. In risky or uncertain situations where information is scarce, hard to obtain – or overwhelming, we tend to rely on such cues and established schemas as well as images of stores and brands in order to judge an offer and reach a decision. Price, quality and store patronage are no different.

We will conclude this introductory chapter by summarizing and discussing some of the decision making concepts used in the paper and the price image literature.

6.5.2 Categorization in Retail

We evaluate any new object we encounter according to how typical it is for its class of phenomena. This is necessary for us to quickly recognize, differentiate among and understand objects. The object's perceived closeness to a specific prototype based on the observed or experienced salient attributes makes it possible for us to categorize the object. According to prototype theory any object can be graded as more or less typical, some being perceived as especially central to the category.

Figure 1 below illustrates a proposed *retail categorization process* (Ward, Bitner, & Barnes, 1992). In many real-world situations, based on its physical characteristics, consumers will tend to categorize the store according to the perceived attributes and assign it to a certain store category which has the best-matching prototype. The categorization will then prompt further inferences and expectations about the store and finally trigger behavioral consequences such as a decision to approach or avoid. The store's categorization will be re-evaluated during and after the store visit, as will the perceived shopping value at the retailer (Babin & Babin, 2001; Darden & Babin, 1994).

In general, stores which are perceived to share more attributes with the prototype and thus may be more typical tend to be more liked and preferred and facilitate patronage and purchase (Babin &

Babin, 2001; Ward et al., 1992). In certain situations however, it has been shown that consumers can experience positive emotions such as excitement or relief by atypical attributes or store environments (Babin & Babin, 2001). Verhoeven et al (2009) argue that the retailer should be careful to avoid major inconsistencies between the store environment and retailer brand positioning.
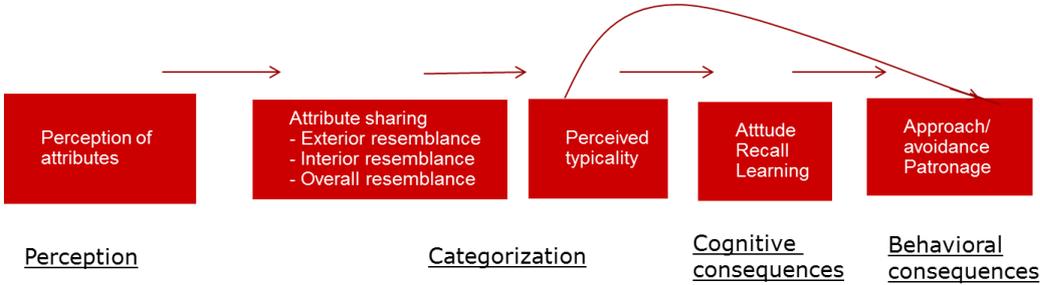
Figure 2: A retail categorization process (Ward, Bitner and Barnes 1992).

In the following figure, Babin and Babin (2001) elaborate on this cognitive process. Notably, if the salient attributes of a previously unknown retail concept match an existing category "assimilation occurs as indicated by high category typicality… Typicality then evokes a cognitive and affective reaction. Less typical designs elicit increased processing and greater specific recall" (ibid., p 90).
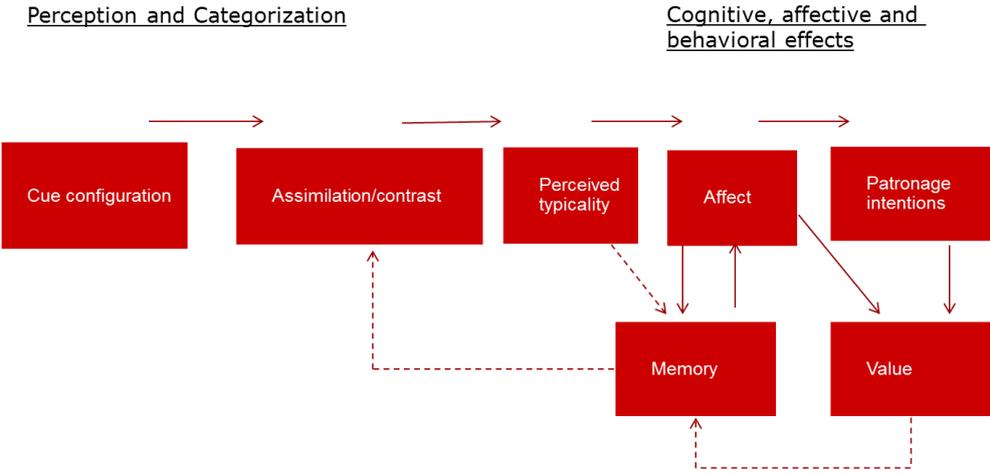
Figure 3: An expanded model of retail categorization and effects (Babin & Babin, 2001)**.**

Categorization is thus an important part of the semi-automatic processes whereby consumers classify retail stores. Based on the consumer's previous experiences, the store environment in its totality can evoke a whole set of emotions and behaviors such as quality perceptions, value perceptions and store choice. We will elaborate on store environment in the empirical section.

In the context of price image it is an important part of how the store is categorized in terms of its quality, value for money, assortment type and service level – does it exhibit the typical traits for the desired store type? Is the store offering consistent, e.g., are the cues from the exterior consistent with the interior environment, staff behavior and clothing etc? If we want to change the categorization of the store, how difficult will it be, e.g., how typical is the store of the present category? What is the risk that competitors such as hard discount begin to become categorized into a

retailer's current category? All of these components are crucial for the retailer to understand also with respect to managing price image.

6.5.3 Cues

Cues are any signal or property of the consumer's environment that can be perceived by him or her. In the retail setting there are innumerable possible cues ranging from the price on the shelf, a promotional price in a weekly flyer, price-guarantees, in-store displays, sound, lighting, staff clothing, smell, crowding, flooring, colors, music and temperature. Purohit and Srivastava (2001) make a distinction between "high-scope" and "low-scope" cues. The former are long-lasting and have developed over time, such as corporate or retailer reputation, they are also resistant to change. The latter are more transient and can take the form of the marketing and promotion tactics mentioned earlier.

As mentioned previously, Grewal and Compeau (2007) propose a model partly based on adaptation level theory in which cues form an important part in consumers' responses to price. They distinguish between three different information cues as originally laid out by Helson (1964).

- *Focal cues* are intrinsic (product attributes) or extrinsic (store name, brand name or price). Consumers are thought to infer quality based in part on these cues, where there is significant interaction between different cues. This interaction is stronger when the cues are perceived to be consistent, such as when a store which has been categorized as "premium" also has a high-end assortment, knowledgeable sales staff and prices perceived to be at the higher end of the market.
- *Contextual cues* consist of the consumer's surroundings and interactions, such as with salespeople and other consumers. The physical surroundings are also important as they will influence, e.g., quality perceptions and thus price expectations and price image.
- *Organic cues* consist of the consumer's individual characteristics and perceptions. Examples are product and price knowledge, risk style and type of affective responses to cues in the store.

Some of these cues will be examined later in the paper and also form an important part of the conceptual framework of price image based on Chernev and Hamilton (2013). Hence however you approach price and consumer behavior, cues will be an essential part of the analytical framework.

6.5.4 Schema

Schema are the ways in which people think about and organize objects and their relationships. They contain preconceived ideas about how things work in certain situations or what can be expected when encountering a categorized object. Schema are very useful in everyday life, but being a filter for new experiences and knowledge pertaining to an object, person or situation, they form one of the powerful mechanisms which make us tend to re-interpret or distort new information to fit the current schema. Contradictions to information on which current schema are based are thus easily interpreted as "exceptions."

For retail stores and brands schema are important as they will influence consumer attitudes and behavior such as store choice, quality perceptions of both the store and its products, and price image. Akther et al (1994) use schema to examine the impact of different store environments on brand beliefs of different products about which the consumer does not possess a *brand schema*; "a

set of expectations that provide a structure for interpreting and understanding incoming information about a particular brand" (ibid., p. 67). Brand schema for retail stores should also influence consumer behavior and may cause resistance to the integration of any new price or value information about the retailer.

6.5.5   Attributions

Consumers try to make sense of the world around them and they form opinions and hypotheses about different phenomena. Attributions then, are "causes customers ascribe to observed phenomena" (Zielke, 2014). For retailers, knowing about their customers' attributions to market activities can thus be important for knowing how it will affect their attitudes and emotions. If a claim about cheap meat is attributed to bad conditions for the animals, the relabeling of old meat or the lack of organized trade unions at the retailer, this may lower rather than raise the feeling of value. In contrast, the claim could also be attributed to large purchase volumes because of the retailer's size which then would have a neutral or positive effect on the consumer's feeling of value.

6.5.6   Adaptation

The consumer's price image will continuously be subject to new information and experiences which will challenge the established image. However, only if the stimulus exceeds a certain threshold will it be noticed and actually processed at some level. Hence price changes within certain limits will scarcely be attended to, nor will small changes in, say, assortment range and quality or staff service in the store (which can affect the total evaluation of retailer and store value). When the stimuli are attended to, they will lead to more intense processing and an adaptation in reference price, value perception or retail brand attitude.

One of the critical questions for this paper is exactly which stimuli are effective in rousing the consumer to the adaptation level and subsequently result in a re-evaluation of price image or parameters which indirectly affect the formation of price image.

6.5.7   Cognitive Effort, Heuristics and Elaboration Likelihood

As we already have shown here and as elaborated by the decision making literature, consumers are prone to use different kinds of heuristics to simplify decision making – usually meaning that they focus on limited aspects of a complex problem at a time. Kahneman in his review of the decision making literature (2011) labels the different information processing systems "System 1" and "System 2". System 1 is called upon in most everyday situations to make quick and automatic decisions while System 2 is engaged when there is a need for deeper or more fact-based processing. Usually people use System 1 as it minimizes cognitive effort. However, over-dependence on heuristics and System 1 can lead to systematically irrational behavior and inhibit learning.

Petty and Cacioppo's Elaboration Likelihood Model is built on the same premise, and may be useful for us when discussing how to reach, affect and persuade consumers in attempting to change a retailer's price image. In the ELM, the Central Path to Persuasion corresponds to deeper and more motivated processing according to System 2, while the Peripheral Path corresponds to System 1.

Nordfält (2011) summarizes many of the studies in in-store marketing that have shown how little consumers use System 2 or the Central Path to Persuasion for everyday decisions. Cognitive effort and heuristics thus play an important role in the formation, evaluation and repositioning of retailer price image.

6.5.8 Loss Aversion and Price Image

In their seminal article, Kahneman and Tversky (1984) showed that people perceive less positive utility with a gain of say 10 Euros than negative utility with a loss of the same amount. This general conclusion about *loss aversion* has many times over the years been shown to have a powerful impact on decisions made in diverse situations, also in retailing.

In their overview of empirical reference price research, Kalayanram and Winer (1995) found support for the notion that consumers react more strongly to price increases than decreases, denoting this "asymmetric consumer price response". Consumers are thought to interpret price variations as gains or losses relative to their internal reference price. Hence, in order to accurately assess this effect, we must first establish what the current consumer IRP is. It is not equal to changes in the actual price as the IRP can be something quite different.

For example, lowering the price of an item by one Euro does not produce the same positive emotion or feeling of gain as the negative emotion or feeling of loss when the same item's price is raised by the corresponding amount. Other heuristics and biases also easily come into play, in this example it is probable that many consumers can bring to mind the last time the price was raised, even though it may in fact be more infrequent than the price being lowered, a case of the *availability heuristic*. Similarly, consumers who run to the store to buy an item on promotion and discover that it has been sold out will experience a feeling of loss, even though no money has changed hands.

We will use loss aversion and asymmetric price response as part of the explanation as to why it may be easier for the retailer to seriously damage its price image with price hikes (whether real or perceived) than it is to strengthen price image with corresponding price cuts.

7 Empirical Findings in Price Image Research

7.1 Consumer Knowledge of Actual Prices

In March 2014, UK retailer Morrison's announced that it would cut prices on 1,200 items resulting in an estimated combined effect on pre-tax profits of 410 million pounds (Hegarty, 2014). Given that retailers routinely spend huge resources on negotiating with manufacturers, setting new prices and changing prices on the shelf and in short-term promotions, how much of this can the consumer actually perceive, process and integrate? What is the level of consumers' "hard knowledge" of prices and how does it influence their price image of retailers and their buying behavior? Answers to these common questions should be important in helping to determine the weight that price changes should be accorded in the retail firm's tactics.

7.1.1 Price Awareness and the Processing of Price Information

Price awareness has usually been defined as the **consumer's ability to remember the price last paid for an item**. This ties in with our discussion about reference prices, as the price last paid often has been assumed to be the primary point of reference when evaluating the current price for the same item.

Consumers' price knowledge for individual products has been well researched for several decades as it was one of the key assumptions in early economic models and was fairly easy to study. Widely varying methods have been employed in the literature, which has been a significant problem in advancing our understanding of this area of consumer decision making. Estelami and Hooman (2001) contributed towards overcoming this obstacle through a meta-analysis of price-recall studies and the impact of research designs.

The assumption from the beginning was that consumers had complete price information about each individual product. Already in the 1950's it was discovered that consumers had a fairly low level of exact and reproducible price knowledge, prompting a relaxation of assumptions into that consumers at least have perfect knowledge of the distribution of both the prices and quality of stores in a particular market. However, as Monroe and Lee (1999) note, this was still a severe overestimation of consumers' cognitive abilities. Consumers generally do not actively note and commit prices to long-term memory when visiting stores; instead they may form impressions about the item such as "good value for money" which can be used in later decision making.

Dickson and Sawyer (1990), in a seminal article, noted that consumer price recall in general in most studies up until that time had been considerably lower than expected. They argued that short-term recall would be much more accurate, as they hypothesized that the price information processed at the instant of selection was used to update the current internal reference price for an item. Therefore they designed their study to measure consumers' price recall immediately (thirty seconds) after putting an item into the basket in the store. In fact, 21% of 802 surveyed shoppers did not even attempt to offer a price estimate, while 55.6% gave an estimate that was within 5% of the actual price, not very different from previous studies.

232 shoppers bought an item on a special. These shoppers systematically overestimated the amount of discount they would receive, indicating that both the internal reference price and the discount

calculation made by them were quite shaky. While the shoppers who bought the item on discount said that they checked prices of similar items and prices between stores more often than those who bought at the regular price, this did not give rise to any differences in their store price image (measured as their estimate of the current store's prices as compared to other stores'). The only effect of buying on discount was on the perception of the manipulated product brand in question being low-priced.

7.1.2   Beyond Exact Price Recall

Monroe and Lee (1999) argued that using modern memory research, it could be shown that it may be enough for consumers to "know" rather than "remember" prices. I.e., if we instead of exact price recall measure deviation from an average, rank orders or recognition of prices we get a more nuanced picture. Even though a consumer may not be able to exactly reproduce an exact price (*explicit memory*), she may still be perfectly able to discern between different store's prices for an item (*implicit memory*). Certain events facilitate the non-conscious retrieval of information in implicit memory. Such events may be advertisements, other repeated exposures to the price of an item or a different stimulus only loosely connected to the item and price under investigation (e.g., a certain color or shape).

Monroe and Lee (1999) stress the relativeness of consumers' price perceptions. Prices are always considered in relation to some sort of reference price which may be an average of some range of prices or brands. It may not be updated at the time of retrieval, but may refer to an old purchase or outdated information. As noted in the chapter on reference prices there is also a zone of indifference where the contrast between prices is so small that it does not produce any change in price perception and thus no influence on behavior.

In the case of non-conscious processes the consumer may not be able to accurately reproduce an item's price, but she will still form a judgment about the value of a product in terms such as "a good buy" or "too expensive". If we measure implicit knowledge it is important for a product (or store) to have been processed correctly into a magnitude dimension such as "good value-poor value" even if exact prices have not been encoded into long-term memory.

Careful branding and product identity work may help the consumer to facilitate this encoding process, for example "the private label brand is good value." However, in this particular case the retailer has to be careful with private label tier communication as sub-brands may confuse the typicality of the private label and thus erode its signaling effect.

Vanhuele and Drèze (2002) build on the Monroe and Lee (1999) study in essentially dismissing the notion of perfect price recall as unrealistic and seriously underestimating actual consumer price knowledge. They argue that people store numerical information in long-term memory in three forms: auditory verbal code (/twenty/two/), visual Arabic code (22) and analogue magnitude code (about 22; somewhere between 20 and 25). In order to make the price knowledge measurement task as realistic as possible, all three codes should be activated. Vanhuele and Drèze measure three constructs in their survey:

1) Recallable price knowledge. Exact price recall based on the auditory verbal code.
2) Price recognition. This is aided price recognition, activated when the consumer sees a price on a product.

3) Deal spotting. This is a new concept, and involves consumers noticing whether a price is outside a normal range of prices compared to historical data stored in long-term memory. This is activated by the analogue magnitude code.

Based on an in-store survey of 400 respondents, results indicated that, as previously found, consumers find it difficult recall or recognize actual prices (less than 15% of respondents) while being significantly more able to spot a good deal, e.g., promotions (more than 85% of respondents). The authors hypothesize that consumers utilize this kind of heuristic in everyday shopping in order to both spot good prices as well as avoiding bad deals.

Frequent promotions are thought to increase price knowledge, possibly by providing the normal price alongside the promoted one and thus increasing exposure to the normal price. Consumers also have better price knowledge of more frequently bought product categories and brands. However, the more products in a category, the higher the frequency of promotions as well as the longer the price range (max-min prices in the category) the more complicated the price recall, price recognition or deal recall task as all these factors increase price uncertainty.

7.1.3 The Numbers Game
Monroe and Lee (1999) devote part of their critical review of price knowledge measurement to how consumers process numerical information. One example of how more knowledge about this might be important to the retailer is the recurring discussion about "99-" or "90-" price endings – how the price is presented affects the consumer's processing and perception of it. The "approximation mode" of a numerical encoding process is simply assigning a magnitude to the number. This is an automatic and quick process and may result in judgments such as "cold", "heavy", "expensive" or "fast". The number may also be encoded nominally, i.e., the exact value is encoded and stored in memory.

The ways of storing numbers can complement each other and may be used independently depending on the context. As mentioned earlier it is imperative to have a price magnitude encoding for faster processing. Judging differences between pairs of prices can be influenced by the choice of comparisons, because of magnitude encoding. For example a price of 72 may be perceived as a magnitude higher than 69 (not just "three units"), which may be a disadvantage for the retailer when the consumer tries to compare prices of similar products, i.e., in pricing private label items.

Some retailers, most notably discounters, consistently make use of different types of "psychological pricing" in their price communication. Despite some evidence that excessive use will drastically reduce their effect, it may be the consistency in employing different cues which signal lower prices and great value which produces the end result. And that is difficult for, e.g., premium retailers to simply copy since it will run counter to their core customer expectations.

7.1.4 Store Price Knowledge
Nyström (1970), Mägi and Julander (2005), Lourenco (2010), Hamilton and Chernev (2013) and Chang and Wang (2014) argue that in forming their price image consumers not only take decisions about individual products but also baskets of products. This increases the level of complexity for outcomes influenced by price image such as store choice and customer satisfaction. For the purpose of this paper the ability to accurately reproduce or rank the prices of some products probably does not constitute the necessary knowledge to make informed decisions about stores' overall price levels. That is unless consumers use that item knowledge as a cue to make inferences about the

stores' price levels (e.g. in line with Nyström 1970) or decide whether or not to defer purchasing a specific product.

In a different approach Mägi and Julander (2005) measured a number of stores' local price indices in a mid-sized Swedish town, where the local average of a weighted 300-item basket of groceries constituted index 100. Consumers then were asked to indicate the perceived deviation of price levels from the market average of the five main stores in the area. They did this by indicating the respective stores' price levels compared to the market average within 5% brackets, see figure below. One should note the high level of non-response of between 16-47 percent of the respondents that did not answer the questions about one or more of the stores (in line with the results in Dickson and Sawyer's 1990 study). For all stores except one, 20% of consumers gave a price level assessment that was within the correct bracket of the actual level. A second indicator was the ability to correctly rank the five stores in terms of their price levels and a third indicator of latent objective price knowledge the number of correct pairwise rankings of stores.

On average consumers that produced an answer did quite well on the rank order indicators, thus they had a fairly good grasp of relative price levels. On an important note for this paper, one store deviated from this pattern, namely Store D, a store whose local image was perceived as upscale and premium on other indicators, relegating it to being perceived as one of the most expensive stores instead of actually being cheaper than the market average. Strong local store images can hence disrupt even the ability to rank stores accurately, not to mention assessing deviations from a market average. Such disruptions may also be suspected to affect the price image component of larger chains' retail brands.

	Store A	Store B	Store C	Store D	Store E
25% lower	3	1	0	0	0
20% lower	10	2	1	0	0
15% lower	**20**	4	2	1	0
10 % lower	39	**20**	14	1	2
5% lower	17	29	**21**	**5**	7
Market average	9	26	34	24	18
5% higher	2	9	11	21	**19**
10% higher	1	7	10	27	24
15% higher	0	3	6	13	14
20% higher	0	1	1	5	9
25% higher	0	0	1	2	5
Actual deviation from market average	-14,6	-8,7	-6,1	-3,1	6,8
Average perceived deviation from market average	-10,1	-2,6	0,2	6,6	7,5
Non-response (%)	29	21	16	44	**47**

Figure 4: Swedish grocery shoppers' price awareness and accuracy (Julander and Mägi, 2005). The correct response category in bold.

We conclude as many other researchers have, that consumers' actual (or explicit) knowledge of price levels on a market – which in theory should be an important determinant of their store patronage –

is very questionable. Implicit knowledge appears to be more solid, hence rank ordering stores produces fair results. However, there are still many consumers who do not even attempt to make that ordering consciously. The importance of even cruder representations than rank ordering, such as simple magnitudes (cheap-expensive), as well as non-price cues, looms larger.

We propose that the consumer's ability to know which store has the most favorable prices for a relevant reference basket of goods could be denoted store price awareness.

7.1.5 Macro-Economic Factors and Consumer Price Knowledge and Search

In times of economic turbulence, many consumers often state in surveys that they employ various strategies to make the most of their paychecks. Such strategies can take the form of switching to private label brands, using more of the available promotions in weekly flyers and using a broader portfolio of stores to cherry-pick. Such increased involvement and cognitive effort should reasonably affect consumers' price knowledge (or price awareness) positively, thus making the recessionary consumer a more knowledgeable and picky one. It should also increase the importance of carefully managing the retailer's actual pricing and maintaining a competitive price level.

The most extensive survey of this area was made in 2001 ((H. Estelami, Lehmann, & Holden, 2001). In a meta-analytic study of 297 price knowledge studies the authors compared these to the development of several macro-economic factors such as GDP growth, interest rates, inflation and unemployment.

The results show that economic expansion as measured by GDP growth was a significant factor in decreasing consumer price knowledge, apparently making price knowledge less salient. Inflation impacted negatively on price recall accuracy through greater price uncertainty. Neither interest rates nor the unemployment rate had significant effects on price knowledge. Estelami et al (2001) hypothesize that, at least up until the early 2000's, unemployment typically only affects a small part of the population, while interest rate information is hard for ordinary consumers to process and make sense of. A reflection here may be that the impact of unemployment very well may be significant in the wake of the financial crisis of 2008 and onwards in many parts of Europe and the U.S. where large portions of society have been affected.

Hence, consumers' price search and price knowledge can be expected to be influenced by factors outside the control of retailers. Thus an important part of the retailer's analytical work should be to follow the macro-economic development and how consumer involvement in money-saving strategies fluctuates over time. Consumers in a predictable economic environment with a full wallet should be less involved and more prone to use cues other than actual price levels to form and re-evaluate their price images.

7.1.6 Reference Goods, Known Value Items and Lighthouse Categories

We have previously determined that consumers are faced with a very complex search situation in order to form reference prices, especially for entire stores or retail chains. They usually reduce this cognitive effort by heavily simplifying search and encoding of prices. We also mentioned the potentially important role of certain products or categories as being selected into the consumers' relevant basket of items and weighted more heavily than others when they attempt to create reference prices and subsequently form their price images. Hamilton and Chernev (2013) refer to this as a selective weighting model. This enables the consumer to avoid painstakingly analyzing the

household's buying patterns, creating a basket from that base, researching all relevant prices at available stores and finally computing a price index which also takes into account, e.g., any promotions. This exercise is difficult enough for retailers themselves when attempting to follow prices in their markets.

The **"most heavily weighted basket items"** are called variously lighthouse categories (Lourenco, 2010), known value items (KVIs; d'Andrea et al 2006), signpost items (Anderson & Simester, 2009), price exemplars (Mägi, 2001) or simply reference goods and reference items. A common way to determine the "weight" is to use the item's share of the consumer's basket or the frequency with which it is bought as these factors are thought to enhance the item's saliency to the consumer.

7.1.6.1   Anecdotal Evidence of KVIs

Retail managers often try to use their customers' KVIs as a tactic to affect their price image. Anecdotal evidence of this is plenty, ranging from diapers, fruit & vegetables, super-large bottles of Coca-Cola, laundry detergent, dairy, minced meat, organics and fresh meat. However, it is not often clear how retailers go about selecting which products to target as KVIs and how successful such tactics are sales wise and in managing to maintain profitability. Hamilton and Chernev (2013) mention "big-ticket items", but these will necessarily vary considerably between individual consumers. Lourenco (2010) argues that category prices have an impact on store price image formation through their monetary value as well as how "informative" the specific category's prices are about how expensive the store is.

It is not clear how using KVIs as a tactic translates strategically into a more positive price image for the retailer in the long-term. Increased sales in a category activated as a KVI are not proof positive of this connection. The two studies which do shed some light on this are van Heerde et al (2008) and Lourenco (2010), summarized later.

Consider that diapers are a classic example of a loss-leader addressing a certain consumer segment, i.e., families with small children – is it a necessary and profitable tactic for all stores to ensure loyalty from this segment? Some retailers, such as ICA and Coop in Sweden, instead give limited discounts to customers on items that they buy often, based on customer database analysis. The discounts are communicated to the consumer personally once a month and are well-known. While this gets around the difficulty in selecting only a few general products as KVIs, is it necessary to give discounts on items the customer evidently buys anyway? Lourenco (2010) studied this quandary and we will look at his results later.

The Swedish grocery retailers ICA and Coop are otherwise good cases for illustrating one way to get around having to select a limited number of KVIs for large groups of consumers. D'Andrea et al (2006) found that 74% of the South American consumers surveyed in their study claimed that they used "a few key products" to assess grocery store prices. Each individual consumer had a small set of KVIs, on average 3.8 items. However, the number of potential different items used as KVIs for over all customers at a store or a retail chain can be large leading to a high level of heterogeneity between consumers (R. Hamilton & Chernev, 2013).

Using individual household purchase data to identify key items for each household and obtaining discounts on these can thus be an effective way of managing this heterogeneity. This will also allow the retailer to calculate total margins per customer after discounts. However, some items will still be

important to broader groups of consumers and can be crucial to show as an EDLP in the store, weekly flyers and commercials. Many retailers thus try to "corner" a certain product category in order to become a "value destination store" for those kinds of items, e.g., City Gross for fresh meat in Sweden, or Trader Joe's for organics and fair trade products in the U.S. As we can see in Table 3, the small hypermarket and the hard discount store stand out on meat and fruit & vegetables, respectively, when it comes to "destination categories" that their customers mention as especially important for their price perception. In order not to weaken their price images, they should pay special attention to these categories.

Category	Hypermarket	Small hypermarket	Hard discount
Meat	*31%*	*63%*	24%
Fruit & vegetables	29%	34%	*58%*
Dairy	21%	23%	39%
Bread	16%	18%	20%
Fish	11%	24%	7%
Delicatessen	14%	18%	14%
"Basic commodities"	26%	26%	23%

Table 5: Importance of different categories for price perception based on the question "which product category is most important for your perception of the store's prices" (1-3 categories could be chosen). Percentage of respondents who chose each option. Respondents were filtered through the question "besides the store's location, why have you chosen your primary store…because it's the cheapest store". Proprietary data, Swedish national CSI-study.

The trick is still to make sure that those items are important enough to a majority of the retail chain's customers and that margin cuts are offset by larger volumes overall. Also, how the value destination store strategy translates into changes in long term price image is unclear, not having been studied academically. It may very well be linked to store image and the retailer as a brand.

7.1.6.2   KVIs and Basket Heuristics
Hamilton and Chernev (2013) mention the importance of retailers knowing whether consumers are using a "basket" or KVI heuristic. A basket heuristic means that the consumer will tend to evaluate prices at a total receipt level, rather than trying to average prices of the handful of KVIs important to them. A consumer using the basket approach will theoretically tend to evaluate an EDLP store more positively, since the total receipt amount usually would be lower than at a Hi-lo store. Consequently consumers using a KVI heuristic would tend to be biased towards Hi-lo stores (see also the section on pricing strategies). There are plenty of anecdotes from proprietary qualitative consumer research about the basket heuristic but it is not well established empirically in the literature how consumers carry it out in practice or whether the tendency for consumers with different heuristics to choose different store formats actually exists.

7.1.6.3   Empirical Studies of KVIs
D'Andrea et al (2006) claimed that KVIs were the second most important component affecting price image in their model. As mentioned earlier they also found a very limited set of KVIs in their Latin-American study, ranging between three and five items. The consumers were asked to give examples of products that they used as KVIs. Among the more prominent were sugar, rice, oil, coffee, laundry detergent, milk, toothpaste and fabric softener.

Based on memory research, Desai and Talukdar (2003), also attempted to find a relevant subset of items on which consumers elaborate and which influenced their overall store price image (OSPI). They used unit prices (high vs low) and consumption span (long vs short) as the two main parameters for classifying products as more or less salient to the consumer. They argued that these dimensions will variously force the consumer to be exposed to prices more often, become explicitly aware of prices and attend to and process information about them more often. Hence, they will be more easily retrievable from memory when faced with a need to determine overall store prices.

In the table below, we can see the basic classification matrix. "(1) the price-saliency (PS) index, which measures the unit price of a product relative to the average expenditure incurred on a grocery shopping trip, and (2) the shopping-frequency saliency (SFS) index, which measures the number of times a product is purchased relative to the average number of grocery-shopping trips made over a given time period." Input on classifications was taken from interviews with 167 American undergraduate students. Both Price-Saliency and Shopping-Frequency Indices are thought to be highest for products which have a short consumption span and higher prices (the product is attended to often and the price level makes it immediately salient), while they are thought to be lowest for products with cheaper prices and a long consumption span (product does not stand out negatively in terms of price and is seldom consumed).

Product Category				
Product saliency indices	**SH**	**SL**	**LH**	**LL**
Price-saliency (PS) index	*Highest*	Lowest	*Highest*	Lowest
Shopping-frequency saliency (SFS) index	*Highest*	*Highest*	Lowest	Lowest

Figure 5: Product- and price-saliency indices (Desai & Talukdar, 2003)**. (a) products with shorter consumption span and higher unit prices (SH), (b) products with shorter consumption span and lower unit prices (SL), (c) products with longer consumption span and higher unit prices (LH), and (d) products with longer consumption span and lower unit prices (LL).**

However, a final dimension added is that of basket size as calculated from number of items in an average basket. Basket size is thought to moderate the effect of price saliency and shopping-frequency saliency. The store price image of "large basket" shoppers will be more affected by the prices of long-span products than will that of "small basket" shoppers as they will encounter such products relatively more frequently than "small basket shoppers", i.e., the SFS index will rise with basket size.

Desai and Talukdar (2003) are careful to note that which conclusions about the effect on OSPI to draw for retailers depend on which store format you operate and who your customers are. They argue however, that there appears to be dominance of the shopping-frequency saliency index. There is also a strong effect from basket size. Thus, if you were a convenience-store or neighborhood-store operator with mainly small basket customers, you would be advised to first look at the high-frequency goods, i.e., short-span-high-price and short-span-low-price. For superstores and hypermarkets with mainly large basket customers, a mirror tactic would be long-span-high and long-

span-low price. This should also make intuitive sense to retailers – who still need to uncover their own customers' most relevant KVIs in order to make this exercise, however. Supermarkets with a mixed group of consumers (large and small basket size) are advised to focus first on short-span products and then on long-span products. Through analysis of customer data, individual customers may be assigned a specific target marketing strategy depending on their basket size.

As an illustration, the table below presents the outcome of a product classification in a pre-test. Any generalizations about specific KVIs are of course not advisable to make, but the methodology and reasoning are interesting as it may help retailers pinpoint possible KVIs for their consumers.

	SH Group:	SL Group:
Short consumption span of product group	• 6-pack beer • 14-16 oz box of cereal • 12 oz ground coffee • 15 oz bottle of shampoo • 15 oz bottle of conditioner	• 2-pack bath soap • 1 roll paper towel • 1 roll toilet paper • 6-pack soda • 11-12 oz bag potato chips
Long consumption span of product group	**LH Group:** • 100 oz laundry detergent • 40 oz fabric softener • 8-pack batteries • 10-pack shaving blades • 1 roller mop	**LL Group** • 1 toothbrush • 4-pack light bulb • 500 ml mouthwash • Box of 30-40 trash bags • Set of 10 clothes hangers

Figure 6: Results of KVI analysis from Desai and Talukdar (2003).

Lourenco (2010) built on the question of how to find and activate KVIs without undermining profitability by using "lighthouse categories", defined as "product categories that signal low prices yet constitute only a small part of the spending." In Lourenco's model the SPI (store price image) formation process takes place over time. Using longitudinal sales and image data he then attempted to find a connection between KVIs and long-term retailer price perceptions while minimizing the negative impact on retailer profitability.

More conceptually, he defined a lighthouse category as being of high "informativeness" about the store's prices while having a low share-of-wallet, see table below. Retailers would want to avoid the upper left-hand corner which would risk subsidizing high share of wallet categories, and also the lower left-hand corner which has no desirable properties at all, which also characterizes the lower right-hand corner, having low informational properties.

MONETARY VALUE/ INFORMATIVENESS	HIGH	LOW
HIGH	Subsidization	**LIGHTHOUSE CATEGORIES**
LOW	Avoid	Unattractive

Figure 7: Conceptual framework defining "lighthouse categories" (Lourenco, 2010)**.**

We will dwell on Lourenco's two defining axes of monetary value and informativeness, the latter being of interest for gaining more insight into consumer learning from grocery category purchases over time. The Store Price Image (SPI) variable in his study consisted of the development of the **store price image over time**, being measured as **a store (retailer) having a very favorable (= 1) or very unfavorable price perception (= 9).** This variable was measurable twice-yearly over a period of four years in a panel of 497 Dutch households along with weekly purchase, price, promotional and store patronage data.

Monetary value was straightforwardly operationalized as category x's share of the consumer's total grocery budget and its impact on SPI formation was hypothesized to increase with the size of the category's share of wallet.

Informativeness was argued to depend on a category's price accessibility and diagnosticity. In this regard it was hypothesized that (results reported in **bold**):

1. The *price of a category* – how much is paid and shown on the receipt – on a typical shopping trip, was thought to increase saliency and thus price recall, price awareness and information usage. This is the same reasoning as that put forward above by Desai and Talukdar (2003). Further, *price spread* within the category should also affect SPI learning. **The analytical results indicated that a larger price spread was actually positive for SPI learning.**
2. Promotions should impact SPI learning by their frequency in a category **(results showed a negative influence)**, depth/magnitude **(positive influence)** and inclusion in display activities **(positive influence)**.
3. Interpurchase times should affect SPI learning in an unclear direction **(positive impact from longer time)**.
4. Brand loyalty, i.e., if the consumer usually buys only one brand, should detract from or increase SPI learning. **The results indicate a positive effect on learning from brand loyalty.**
5. Assortment characteristics such as market concentration and the number of SKUs in a category should increase and reduce the impact of category prices respectively. **Results showed that high concentration in the category actually leads to less SPI learning and a higher number of SKUs in a category also impairs learning.**
6. Products that are easily storable, such as laundry detergent and personal care products should increase the impact on SPI formation because of a stronger inclination to monitor prices, larger potential savings and because they are usually on a shopping list (thus being a planned purchase and being processed more in depth). **The results confirm that easily stockpiled products are more informative for store price image formation.**

Characteristics that increase learning of SPI from category prices (highest 3 categories)							
Characteristics	Product category	Rank learning	Rank SoW	Characteristics	Product category	Rank learning	Rank SoW
Promotion depth	Personal care (LC)	1	41	**Interpurchase time**	Personal care (LC)	1	41
	Paper towels & toilet paper (S)	5	22		Cleaning products (LC)	5	22
	Bake & dessert (LC)	19	36		Dental care (LC)	19	36
Display activity	Soft drinks (S)	10	**8**	**Price spread**	Personal care (LC)	10	**8**
	Biscuits & cookies (S)	35	11		Paper towels & toilet paper (LC)	35	11
	Milk products (A)	34	10		Meal componet decorating (U)	34	10
Expensiveness	Alcoholic drinks (S)	3	2	**Brand loyalty**	Alcoholic drinks (S)	3	2
	Meat (S)	13	1		Meat (S)	13	1
	Cheese (A)	45	7		Cheese (A)	45	7
Characteristics that decrease learning of SPI from category prices (lowest 3 categories)							
Promotion frequency	Personal care (LC)	1	41	**No of SKUs**	Sugar (U)	42	37
	Bakery (U)	39	44		Air fresher (U)	29	43
	Dental care	12	42		Pizzas and snacks (U)	43	48
Market concentration	Cheese (A)	45	**7**				
	Cosmetics skin (LC)	**4**	25				
	Soft drinks (S)	10	**8**				

Figure 8: Results from Lourenco (2010) concerning category characteristics which affect Store Price Image learning. SoW = Share of Wallet. U = Unattractive, S = Subsidization, A = Avoid, LC = Lighthouse categories. Personal Care is seen to have a strong effect on consumer learning in spite of having a very small share of wallet.

Summing up Lourenco's results with regards to our discussion of KVIs, we find that there seems to be clear differences between categories as to how precise they are in signaling the price image of the retailer. Because of their characteristics as hypothesized above, they vary in their ability to give useful information to the consumer. Higher share of wallet categories seem to have a higher impact on SPI formation, however, the elasticity of SOW is not high compared to many of the category characteristics discussed and tested empirically. That means that it can be very worthwhile from a profitability perspective to identify categories which do not have a high SOW. In the case of this particular study it was home care and personal care.

A category such as fresh meat had a high SPI signaling ability, but was categorized as being at risk at subsidizing the consumer due to its high SOW. Hence, although activating some product categories such as meat and fruit and vegetables may be good SPI signals and indeed have been found to influence SPI (during the Dutch price war initiated by Albert Heijn; van Heerde at al 2008), they may easily erode retailer profitability. Some other categories may even lack any ability to signal to SPI and would thus be disastrous to activate (bread being one of those categories in this study).

7.1.7   Conclusion

KVIs without a doubt play an important role for consumers in their attempts to keep track of different retailers' prices and thus in forming a price image for each retailer. The general consensus from the quite scarce available empirical research is that even in a grocery retailing setting consumers rely on comparatively few key items to help them generate a price image, but there is considerable heterogeneity among consumers as to which these items are. We also know that even for those few items actual price knowledge is not exact, but rather approximately encoded as magnitudes.

Each retailer and store manager has to get to know his or her customers well enough to pinpoint some of the local KVIs and also whether they tend to use a few single KVI's or a basket heuristic (using a typical receipt as comparison). Depending on which store format you run, if you do the homework, some hypotheses can then be formulated about which items are important for that

particular shopping situation. Price relative to mean basket price was found to be one useful variable. Basket size and share of wallet also seem to be important starting-points for understanding which items influence price image.

A worthwhile approach for retailers is to employ an analytical model such as that used by Lourenco, if price-image, sales and promotional data were available at the household level over a substantial period of time. In that way the risk of subsidizing customers is less since items and categories with a large sales volume and share-of-wallet may be avoided in promotions and price cutting campaigns.

7.2   Pricing, Promotion and Price Communication

Any price change will create changes in consumer demand. However, frequent price changes will induce uncertainty as to the actual price level of the item or category in question and reduce consumers' price awareness.

Further, exaggerated use of promotions or discounts will tend to diminish their impact over time (Anderson & Simester, 2001). This was something experienced by Swedish home decoration retailer Hemtex, for many years known for its increasingly desperate and never-ending promotions. Kalayanram and Winer (1995) note that frequent promotions may cause consumers to lower their reference prices and increase price sensitivity. Further, if consumers become uncertain about the "true" price, any return to previous price levels may then be viewed as a price increase and a loss. The "numbing effect" of over-promotion is also true for other promotional tools such as in-store displays (ibid.), and 99-price endings (Macé, 2012).

7.2.1   Hi-lo vs EDLP: Price Variation and Effects of Frequent or Deep Discounts

One hotly contested research topic of great interest to retailer tactics has been the effectiveness of either deep or frequent discounts on price image.

Alba et al (1994) investigated this in a series of experiments where subjects were exposed to pricing information on 60 items from two competing stores in grocery retail chains if they had either 40 or 20 items cheaper than the other store. For the 20-items condition discounts were twice as deep as in in the 40-items condition so that the total basket price of the 60 items always was the same. Basically the 20-item condition simulated a Hi-lo price tactic and the 40-item condition an EDLP price tactic. It was found that the store with the high frequency of shallow discounts always was perceived to be cheaper, regardless of the prior price image beliefs about the retailers. This was the case in spite of the respondents being university students and being told to attend closely to the prices, or actually given an incentive for a correct price judgment.

In a second study, Alba et al (1999) extended the first study to several time periods. The experiments lead the researchers to conclude that the frequency effect does not always dominate. In cases where a product usually has a constant regular price and then suddenly enjoys a deep discount, the depth effect can cause a better price perception than frequent, smaller discounts. For the retailer and in a total store price context, the results indicate that frequent discounts that the consumer notices, either in the form of hi-lo promotions or as part of an EDLP strategy, leads to a more favorable store price image.

Further, the 1994 study of Hoch, Drèze and Purk (1994) on sales data indicated that frequent but shallow promotions increased sales volume more than a tactic of deep but infrequent price-cuts.

More evidence for the above conclusions were found by Bell and Lattin (1998), who studied 1,042 consumers who were classified as "small" or "large" basket shoppers. They find that large basket shoppers are less responsive to price variations in single categories, and thus are less prone to store-switching because of one-off promotions in a category. Instead, they are more sensitive to the perceived price of their total basket. The average price for that basket of products at the EDLP store becomes critical. Small basket shoppers on the other hand care less for average prices at a store – even when controlling for different advertising levels at EDLP and hi-lo stores. Thus they are more expected to shop at a hi-lo store, in spite of *average prices* being higher there. Retailers should think carefully about which customer type they attract and decide on appropriate store format and price strategy based on that insight since it will affect store price image.

7.2.2   Price Structure and Price Dispersion

Retailers often have different pricing tactics, some offering low prices across all categories while others focus on certain target categories where they are especially cheap (R. Hamilton & Chernev, 2013). A basket of items bought at these different retailers may thus have the same average price, while consumers have probably formed different price images, especially in certain product categories.

Some retailers come to be known for their "destination categories". Consumers sometimes use compensatory inferences to conclude that such stores cannot be competitively priced across the board, but have to focus on a limited amount of categories (Chernev, 2007; R. Hamilton & Chernev, 2013). Retailers with such a strategy or image should be extra careful to communicate that they are competitive across the line.

Sprinkling especially low prices across the assortment can often be advantageous as it is more noticeable to the consumer, however there also has to be an underlying competitive price level. At the micro level, Hamilton and Chernev (2010) showed that the price structure within the category serves an important role as reference point. High and low-priced items are contrasted against the other items in the category. In certain shopping situations a high-priced item can serve to lower the price image by making it seem that the desired item is fairly reasonably priced.

7.2.3   Price Perceptibility and Processability

Consumers in modern retail stores are bombarded by different stimuli. Since consumers in many circumstances also prefer an efficient and quick store visit, we are prone to devote as little cognitive resources and time as possible to stimuli and information in the store. It is thus of great importance that the actual prices are effectively communicated and that consumers are afforded simple tools to establish a quick reference point for different alternatives.

Zielke (2010) used a multi-dimensional model to measure price image using price-level perception (high-low), value for money, price perceptibility (how easily one can find products' prices in the store), price processability (the ease of price processing, for example comparable products and unit prices) and evaluation certainty (how easy and certain consumers perceive the process of actually evaluating prices to be).

Price processability and price perceptibility have a significant impact on shopping intentions for discount stores, which also have a high level of price evaluation certainty. For the supermarket

format both price level and price processability is rated lower and is more important than for discounters, probably causing lower price evaluation certainty.

In order to improve the actual price level image, supermarket retailers could make it easier for consumers to judge prices, e.g., by putting different category alternatives close to each other in the store, as well as making sure that shelf pricing information is clear and easy to absorb quickly. The price alternatives should be structured and shown in the shelf in such a way as to strengthen the desired price image, and not conflicting with overall store image.

7.2.4 Does the Retailer's Price Communication Matter?

Many retailers devote large resources to communicating their prices and promotions at the central and local level, and building a case about how much value for money consumers can get at the retailer. There is however limited research in this area, especially concerning its impact on general price image in the long run.

In general terms it is important for the retailer to be consistent in what it claims and what it delivers in the actual purchasing situation. Retailers who gain a reputation for being accurate and fair in their price communication are more effective. Having frequent out of stocks and forcing the consumer to substitute one item for another in the store, whether on regular or promotional price, will affect the feeling of fair pricing and the dependability of the retailer's price communication as a qualitative information source negatively.

Compeau and Grewal (1998) found that comparative advertising is more effective in lowering price image than advertising without an external reference point for the consumer. However, in many countries the possibility of making such comparisons in advertising is heavily restricted. Hamilton and Chernev (2013) also argue that the *framing of savings* in advertising matters. For example, monetary savings are more effective when the amount is relatively high, whereas percentage savings are better when the amount is small.

Semantic price cues, i.e., how retailers describe their price offers in comparison to some reference, are examined by Grewal, Roggeveen & Lindsey (2014). Such price cues are important in communicating differences in pricing. Within-store price cues compare the price to some other price that had been found in the store, in contrast to the between-store cues which effectively amount to some sort of competitor comparison. Grewal et al (2014) argue that semantic price cues are more effective than communicating promotional prices that are nominally lower, because the effects on perceived value are stronger. Such cues may also lower perceived uncertainty and can help facilitate in-store decisions when the product is present.

7.2.4.1 Low-price Guarantees

There may be reasons to be careful when adopting and communicating a low-price guarantee. Ho et al (2011) show that Always Low Price (essentially EDLP) discourages consumer search between stores but that ALP stores have a less favorable store image among consumers. Ho et al argue that ALP thus is more consistent with EDLP and discount stores. Low-Price Guarantees (price-matching or price-beating) on the other hand, are more likely to build a favorable store image and are thus more consistent with a more premium positioning.

7.3   Price War as a Retailing Strategy

We have already established the importance of price for consumers and retailers. We have also established that consumer price awareness is quite low or at least imprecise and is only one of the factors that determine price image. Even so, retailers – often those saddled with a weak price image – sometimes use tactics such as aggressive promotions or broad price cutting campaigns in an attempt to change their price image in the short term and/or increase store traffic and sales volume. These tactics aim to increase market share and focus mainly on the competitors, not the consumer (Heil & Helsen, 2001). When competitors respond to such tactics they can escalate into what could be considered to be a "price war." In a price war, "virtually every competitive move is based on price, and every countermeasure is a retaliatory price cut" (Rao, Bergen, & Davis, 2000) and there is a "price-cutting momentum" (Urbany & Dickson, 1991).

Price wars can take place nationally between entire retail chains or locally between a small number of stores. Heil and Helsen (2001) in their overview of seventeen different price wars in diverse industries, identify many negative outcomes for their participants, ranging from eroded corporate image, unrealistic consumer reference prices, profit erosion, poorer quality and the squeezing of smaller firms. However, for the individual firm and its management the outcome can also be positive.

There are many anecdotes but very few documented detailed analyses of the *results* of a price war in retailing (Van Heerde, Gijsbrechts, & Pauwels, 2008). This section will focus on the only detailed retailing case we have found in the modern literature in order to make some general conclusions about the impact on retailers' price image.

7.3.1   The Dutch Price War

In an in-depth analysis of the Dutch national price war in grocery retailing between 2003-2005, van Heerde et al (2008) followed up the consequences for the retail chains involved as well as the impact on consumer attitudes and behavior. Using data from GFK on consumers' price images as well as their buying behavior, they could model the outcome on store visits, spending, market share, price sensitivity, store quality image and store price image before, during and after two years' worth of price war.

The background of the price war was desperation from the part of long-time market leader Albert Heijn which had seen decreasing market shares and a worsening price image for several years, especially after the successful incursions of hard discounters Aldi and Lidl. Albert Heijn was positioned as a premium retailer with strengths in quality, service and store network. This was not a viable position to build on and there was substantial pressure due also to non-market events on management to take action to reverse market share loss and strengthen its position on the market. In October 2003 Albert Heijn thus cut prices on more than 1,000 items in a nationwide campaign accompanied by widely publicized advertisements claiming "dramatic savings." During the following 24 months many rounds of price cuts by Albert Heijn and its competitors had resulted in an overall reduction of Dutch food prices by 8.2% (van Heerde et al 2008).

7.3.2   Impact on Consumer Behavior and Price Image

In the first rounds of the price war, consumers responded by increasing spending and shopping around, resulting in an increase of their store visits. However, these effects gradually subsided as the price cutting continued and became anticipated by consumers. Spending levels decreased by as much as 10.3% on the market for the established chains as prices plummeted. Interestingly, weekly

promotional activities still retained much of their effect on consumer spending and store choice, as price sensitivity increased.

Pre-or postprice war period	Albert Heijn		Super Boer		C1000		Edah		Aldi		Lidl	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Market share	32%	31%	14%	13%	24%	24%	10%	8%	16%	18%	4%	7%
Weekly store visits	.36	.35	.16	.15	.27	.27	.14	.11	.24	.25	.08	.12
Weekly spending	28.92	27.12	27.74	26.03	28.03	27.57	24.07	22.17	20.66	21.70	15.96	17.14
Price image (1 = lowest; 7 = highest)	5.1	5.5	5.4	5.4	6.0	6.1	5.8	5.8	6.7	6.7	6.7	6.7
Produce image (1 = lowest; 7 = highest)	6.4	6.5	6.2	6.1	6.2	6.2	5.5	5.5	4.3	4.5	4.7	5.0
Distance to panelists (km)	2.3	2.3	4.0	4.0	3.1	3.0	5.1	5.2	3.2	3.2	7.0	5.2
Price (index)	119	120	111	112	98	96	101	101	60	58	58	59

Figure 9: Before and after the Dutch price war (van Heerde et al, 2008).

Of the major players, Albert Heijn enjoyed the most obvious increase in price image. This in fact enabled them to retain market share despite the increased consumer price sensitivity and having initially the worst price image in 2003 relative to the other major chains. The "starting position" was thus less than optimal for Albert Heijn and in fact posed some serious risks. Lidl and Aldi together increased their market share by five percentage points between 2003 and 2005, while Albert Heijn in fact lost another percentage point. However, this was perceived as a favorable outcome by the market in light of the previous quick slide in market share. Edah lost two percentage points of the market and subsequently had to be sold by its owners due to the sustained pressure on its margins.

7.3.3 Conclusion

Van Heerde et al (2008) summarize their analysis by arguing that there is a definite first mover's advantage in a price war. In this case, Albert Heijn was the beneficiary as they were more easily perceived by consumers as lowering prices than the other non-discount chains who had followed. However, Albert Heijn also benefited from being the market leader, which enabled them to put major pressure on their manufacturers to lower prices who experienced squeezed profit margins by 80% and went on trying to sue Albert Heijn for selling goods below cost. Albert Heijn also carried out internal rationalizations and cost reduction campaigns which could be invested into the price. By the owners, capital markets and consumers, they were then able to be seen as "winners" at the end.

Finally, from a price image perspective we can see the dangers in embarking on the course of price war as a premium player unless most of the above conditions are met beforehand. During the price war consumers were being continually sensitized to price in the marketing mix. It also raised questions about why all the grocery chains suddenly could slash prices – why could they not do that before? This probably impacted negatively on perceived price fairness and benefited the discounters. The major beneficiaries in Holland were in fact the hard discounters, the major loser was the chain Edah and to a lesser degree the other mainstream chains.

However, price image turned out to be very important in determining the winners and losers and Albert Heijn had done enough of a turnaround in their price image to emerge as a winner in the long term – the increase in the price image variable was not substantial at face value (from around 5.00 to 5.50, about 10%) but it was apparently still enough of a push for such a large player with a big customer base. This last may also be an important learning; a large premium player may not need a

complete repositioning of its price image. Together with its traditional strengths – if carefully nurtured throughout the price war – a slight boost in price image may go a long way.

7.4 Assortment, Private label and Value

The assortment is a central parameter in any retailer's strategies and is heavily weighted by the consumer when making store choices. From the early beginnings of the marketplace the role of the retailer has been to serve as the consumer's agent by selecting an assortment with products of value to the consumer and pricing it according to demand. It is only quite recently that the retailer has taken a broader responsibility in the retail channel. But the fundamental role of offering a relevant assortment to the local consumer has not changed.

7.4.1 The Importance of the Assortment in Price Image Strategy

In the context of this working paper the assortment will be an important factor in creating the retailer's attractiveness. We know that the store's perceived assortment strongly contributes towards the feeling of value and customer satisfaction with the store.

Known value items (KVIs) must be handled and promoted towards the consumer and the right assortment strategy must be put into place. The depth, breadth and quality of the assortment will be evaluated by the consumer as one part of forming store image and value perceptions. For some consumers the value of many alternatives will be high from an efficiency perspective and also as many reference prices will be available. However, large assortments may produce a negative impact if they are not managed properly towards the target consumers and the store layout is not conducive to getting around quickly.

Hamilton and Chernev (2013) point out that the depth, breadth and type of assortment influences price image. Retailers with highly specialized but deep assortments are perceived as less expensive, as well as those with very large assortment across the all lines. Retailers with more high-end high-design or high-fashion assortments may be perceived as more expensive, based on consumer inferences about costs for designing and sourcing the products.

Chernev and Hamilton (2009) examine "optimal" assortment sizes and attractiveness. They find that depending on the perceived attractiveness of the assortment the optimal size varies. For retailers with more qualitative assortments, the marginal utility for the consumer of expanding the assortment more quickly tapers off. By contrast, in stores with lower quality assortments, size and alternatives are more important. Hence, consumers will put different value on these assortment strategies, also probably differing both between consumers as well as between shopping situations. For example, when searching for a complex product, specialty stores with deep assortments may become an attractive option to generate many alternatives and price points, in spite of a an average price level perceived as expensive.

Suri et al (2012) argue that the retailer itself can influence the importance of the price or brand and quality cues by sorting and presenting the assortment either by price or brand. In the brand sorting case the role of the price as cue will become weaker. Consumers often like their store and brand images to be consistent, thus in theory a "premium" retailer which over-emphasizes pure price instead of letting the customer calculate the value of the store offering based on brand and quality perceptions could risk its own brand image and customer loyalty.

7.4.2 The Role of Private Label

Private label lines are now common for all types of retail industries. From being me-too products mainly competing on price, PL product lines have often matured into high-end qualitative products. They have also been purposefully developed into other lines such as budget products with an aim to be favorably compared to discounters, on order word broadening choice. While the impact of private label on consumer choice, quality, innovativeness and the distribution of power within the retail sector initially was debated in early 2000's, by now most consumers, manufacturers and retailers alike are used to having PL as a natural part of the assortment and price structure.

7.4.2.1 Do Private Label Strategies Really Have an Influence on Price Image?

We do not believe that attitudes towards private label will have a significant impact in itself on price image, but instead works through general store image, merchandise quality and choice perceptions. Private label introductions such as budget lines can help to favorably anchor the consumers' perceptions of prices while in the store, however, it does not come without risks (Hamilton and Chernev 2010).

In the academic literature PL has often been studied from the perspective of how they interact both with manufacturer brands and the retailer as a brand. For example Lourenco (2010) and Lourenco and Gijsbrechts (2013) study how a national brand will contribute to discounter store image and price image, which is reported elsewhere in this paper.

Diallo (2012) found that the perceived risk of buying private label items affected purchase intention of private label, while PL price image as measured by their relative price level and perceived benefit in the store's assortment were both strongly correlated to store image and impacted on PL purchase intention. This is also in line with Burt and Sparks (2002) and Semeijn et al (2001). These findings lead this author to believe that ensuring consistency between store image and price image factors are key in lowering perceived risk in purchasing PL. It can also serve to transfer some quality image components from the retailer as a brand, which should heighten the sense of value.

A complementing set of results are presented by Kremer and Viot (2012). They study whether an "image transfer" also takes place between the store's mid-range private label and the retailer as a brand. The argument is that private label influences retailer brand image on three mirrored dimensions (they are measured both for private label image and retailer image):

- Price (low prices, good deals, value for money)
- Supply (alternatives in assortment, assortment quality, innovation)
- Values (convenience, affordable products for everyone, fights for consumers' buying power etc)

Kremer and Viot (2012) indeed verify such a reciprocal (two-way) relationship between private label and store image. Specifically, the perceived price and perceived value of private label help strengthen the retailer's competitive image and customer loyalty. Interestingly, in this study private label has a negligible effect on the retailer's quality perceptions.

Hamilton and Chernev (2010) investigate how private label works as a price anchor in the assortment. The premise is that vertical private label line extensions can work in either increasing or decreasing a retailer's price image. This is a common strategy adopted by retailers, often as a

defensive tactic against discounters and in order to preserve margins. Questioning this conventional wisdom Hamilton and Chernev's study finds that this can actually achieve the reverse effect, e.g., a budget private label alternative can *decrease* the retailer's price image. The critical influence here is what the shopping goal of the consumer is; merely browsing the category or the store, or actually focusing on buying. Goal states can also vary during different phases of the shopping trip. For example, a consumer may have a specific item on a list and will be very focused on that, but may well be open for browsing before and after making that purchase.

Hamilton and Chernev (2010) argue that contrast effects make consumers who are more narrowly goal oriented during the shopping trip, such as in grocery retail, to their browsing in the category. If they then focus on a moderately priced option and subsequently evaluate that price in contrast to the relevant alternatives within the category, the result will often be that the *high-priced vertical extension forms the reference point*, the contrast effect making it a cue for a lower price image. When broadly just browsing the store, however, consumers are more likely to integrate more complete information about a category. Thus in this case the vertical extensions fulfil their purpose as intended. Hence retailers should carefully analyze purchase patterns in different categories. If the vertical extension purchased by relatively few customers, there is a risk that it is not doing its job in the assortment as a reference point.

7.4.3   Conclusion

Private label strategy seems work both ways for the retailer. On the one hand private label image can strengthen the retailer's price image, while a strong retailer image can serve to lower the consumers' perceived risk in buying private label. Private label products can also serve as price anchors in the assortment. Depending on the consumer's shopping goal, however, different parts of a category's line may become salient, thus negating this strategy. Finally, when introducing private label, they should have a presence in most important categories to be more easily perceived as a viable alternative. The same is true for discounters and manufacturer brands.

For mainstream and premium retailers private label lines should be used carefully in price communication and exposure in the store. Since many PL lines do communicate value and low price, and this can be transmitted to the retailer as a brand, private label should not be allowed to dominate the retailer's traditional offer. Further, as we have seen previously, excessive cues with regards to price may shift the consumer's attention to pricing rather than other dimensions of the offer.

7.5   Store Architecture, Environment and Design

Although on-line retailing has gained great momentum, e.g. in Sweden it increased by 15% between 2012 and 2013, the physical or "brick-and-mortar" store remains the fixture for most retailers. Indeed many retailers which started out as pure e-tailers now have showrooms or entire chains of physical stores, e.g., Swedish electronics retailer Netonnet. Most consumers have been exposed to store environments typical for each retail chain in their markets. Often governed by specific location characteristics and its limitations, as well as local building- or aesthetic regulations, most retail chains still attempt to design store exteriors that are as uniform and easily recognizable as possible. Also the store interior and atmosphere are built and created along similar lines to facilitate customer interaction with the store during a visit. It is inevitable then that consumers are affected by what they see outside and inside the store and sometimes form quite strong impressions and expectations

about the stores which influence the retailer's price image (Grewal & Compeau, 2007; R. Hamilton & Chernev, 2013).

Importantly for store image and price image considerations, exteriors and interiors have design and layout guidelines that are made to fit the retailer as a brand as closely as possible – and to conform to what stores within a particular format are expected to convey. "In a sense, consumers may rely on environmental cues [such as signage, exterior design and other physical evidence] in much the same way as they rely on packaging to categorize and form the initial expectations about consumer goods" (Ward, Bitner and Barnes 1992). For example a Swedish ICA Maxi hypermarket store would obviously have the ICA logotype and basic color scheme as a starting point and many design elements in common with the other ICA store formats which would serve as cues or signals about the ICA master brand (Kirby & Kent, 2010). This would form the starting point for overall expectations about the store for the customer, including how prices are perceived. However, it would also have specific elements for its store format and position within the ICA brand strategy, where each format serves a specific customer segment and is expected to communicate some core benefits to that segment.

Figure 10: Exterior of a typical Maxi ICA Stormarknad hypermarket store. Image source: ICA Sverige AB.

The store environment is thus an important part of this brand communication (Esbjerg & Bech-Larsen, 2009). For example an external location and a large physical store front with a big parking lot would set certain expectations for the store over and beyond what the master brand communicates. Adding to this a very spacious interior with a high ceiling, large product displays, a broad selection of products, automated services and few staff members would probably conjure up a picture of an efficient store with the right prerequisites to offer prices at least below the market average.

7.5.1   Consumer Inferences Influencing Price Image Based on Store Environment Cues

There are some elements of store design and atmosphere that often are mentioned in discussions with retail managers as well as consumers about inferences that can influence price image. Hamilton and Chernev (2013) categorize physical attribute cues about price image as those related either to *retailer costs* or those signaling *sales volume*, as consumers tend to make inferences about store price levels based on those two basic parameters. Some examples can be found below.

- Already the store front is thought to affect the consumer's categorization process and communicate a feeling of expensiveness or cheapness from a distance apart from that conveyed by the store logotype (Ward, Bitner and Barnes 1992). This can be due to its being of a unique design, because of choices of colors or materials in the structure of the store (concrete vs wood etc). This may affect ease of price evaluation, price-level perception and thus approach behavior and store choice (Kirby & Kent, 2010).
- Fittings, shelves, floor and wall materials and ceilings are thought to contribute to a "cheap" or "expensive" look and make customers factor in the supposed investment in their formation of store price image. Verhoeven et al (2009) note this phenomenon and argue that it is important for the retailer to be consistent in its ins-store communication, e.g., a no-frills hard discount store sporting a corner with high-end fresh products and quality fittings and signs may be perceived as inconsistent or phony and the products dismissed as too cheap to be true.
- A cluttered or "rough" store contributes to a "cheaper" feel. Consumers may infer lower costs for, e.g., shelves, stocking up, cleaning and not having to re-structure the store periodically.
- A spacious store with simple high volume displays and large design elements, such as signage, contribute to a "warehouse feeling" and a feeling of high sales volume and value or cheapness depending on the execution.
- Lighting can affect the attractiveness of the store atmosphere, ease of evaluation of products and price image (Esbjerg & Bech-Larsen, 2009; Leudesdorff, M., Schielke, T., 2012).
- Although not specifically an interior design issue, staff appearance can contribute to enhancing the general store atmosphere, e.g., a "warehouse look" or a "gourmet/restaurant look." Thus indirectly influencing store price image (J. Baker, Parasuraman, Grewal, & Voss, 2002).

In many practical settings then, an important consideration is not only where a store should be located, which consumers it should serve and what format it should have but also its architectural, layout and design properties (Ward, Bitner and Barnes 1992). This general conclusion is quite well-researched especially in terms of elements of interior design (lighting, color, fittings, materials etc), often connected to promotion of in-store sales, or mood enhancement, e.g., store environment cues and store atmosphere. There are some studies which specifically focus on price image or value perceptions (J. Baker et al., 2002; e.g., J. Baker, Grewal, & Parasuraman, 1994). Studies of exterior store design cues, especially from a price image perspective, are however few, although anecdotal and qualitative evidence is easy to find (Zielke and Toporowski 2012). This is unfortunate but also a good opportunity for researchers.

We will review the evidence of the effects of architectural design, layout and other atmospheric elements on the consumer's store price image and consumer behavior.

7.5.2 Store External Environment and Design

The retail store categorization model presented in the theoretical section of the paper was tested empirically in a fast food restaurant setting by Ward, Bitner and Barnes (1992). They collected data in a field study on overall, external and environment fast food outlet family resemblance based on a list of typical attributes generated by respondents. The study clearly showed that fast food restaurants were mostly categorized based on their exterior environment.

In contrast, Kent and Kirby (2009) found that respondents in their experimental study on food stores tended to focus on the interior details of the stores. It could be hypothesized that stores in different retail industries will be categorized based on different cues, and the exterior and interior environments weighted differently. In a grocery store for instance, customers will have a fairly complex and often repeated interaction with the store and the interior environment which has to meet expectations regarding ease in navigation, cleanliness, quality of materials etc. Once they have found their way to a local store the first time and evaluated it, exterior characteristics may very well play a minor role. In contrast, when visiting another neighborhood or city, the categorization process is likely to begin again starting with the exterior environment (indicated by proprietary research 2014). A common exterior environment conforming to category (store format) and retail brand expectations will thus make consumer categorization and patronage decisions easier.

Zielke and Toporowski (2009, 2012) have made the only studies we have found of grocery retail store exterior environment or design. In their earlier experimental field study, Zielke and Toporowski (2009) found positive effects of an "appealing" store on consumers' perceptions of value for money and shopping intentions. This is similar to the results in Baker et al's experimental study (2002). However, there were no differences on price-level perception or ease of price evaluation.

In their 2012 study, the problem examined was whether "appealing" store architecture could affect store price image negatively while controlling for brand and price information. The authors hypothesized that based on inference and categorization theory, in the presence of retail brand or price information there should be only minor differences in consumer price perception and ease of price evaluation between the two stores ("appealing" exterior vs "conventional" grocery store exterior). The cues from the retail brand and the price should hence supersede any inferences based solely on the exterior architecture.

Using photographs of two stores in a medium-sized European city with and without brand information, respondents were asked to answer questions about price perception, ease of price evaluation, typicality etc. The results confirmed that the presence of price or retail brand information dominated the architectural cues. Zielke and Toporowski (2012) argue that this finding explains why there have been some conflicting results in the literature concerning the effect of the store environment on price image variables. If retail brand and price information are not controlled for, different results may occur.

They acknowledge however, that depending on the level of the consumer's knowledge about the retailer or the store, effects on price perception may still be present. Some retail sectors are quite fragmented and may thus be more susceptible to evaluation through exterior environment cues as the store or brand name may not contain any salient information for the consumer. Also, as argued above, the *weight* accorded the exterior environment may differ between retail industries. In the case of grocery retailing, for example, the interior environment will probably carry a greater weight than the exterior.

7.5.3   Store Interior Environment and Design
In discussions about the store environment and price image, retailers sometimes try to factor in the influence of "the warehouse" or "hard discount" look; e.g., having conspicuously cheap-looking materials in shelves, flooring etc., limiting assortment choice, having huge volume displays, minimizing the number of staff and putting the staff in non-descript clothes. It is unclear what facts

these notions are based on, but consumers often mention these same cues in studies about the store environment and price image, as well as when attempting to describe their store format categorization processes (proprietary focus groups in Sweden, April 2013 and May 2014). When asked to elaborate, consumers often infer the previously mentioned cost savings and purchase volume savings for the retailer.

Discount retailers are very aware of the impact of the store environment and often have stores that "are designed with cost minimization and speed of shopping in mind in order to get as many consumers as possible through the stores in an efficient and predictable manner" (Esbjerg and Larsen 2009). Exteriors and interiors are very functionally constructed with standardized and no-frills materials, signage and displays. In the case of Lidl, bright lighting is used to emphasize cleanliness, thus also contributing to a somewhat clinical feel.

The retail store's interior environment or in-store atmospherics' impact on consumer behavior has been the subject of many studies over the years, see e.g., Martineau (1958) for colorful anecdotes and hypotheses, and also Donovan and Rossiter (1994), Baker et al (2002) and Nordfält (2011) for more contemporary literature reviews. We now know that the consumer can be heavily influenced by the retail environment, some of it purposely put in place by the retailer or manufacturer, and some of it coincidentally. However, the objective of the bulk of these studies has only rarely been to examine the interior store environment's direct influence on the consumer's store price image. We will discuss the more pertinent studies here.

Grewal and Baker (1994) examined the impact of store environmental factors on price acceptability as measured by consumers' assessment of whether the selling price of an item was fair. Grewal and Baker argue that the exact same price for an identical item can be perceived as more or less fair depending on which store it is purchased in. In order to achieve clear differences between a "high image" and a "low image" store in the experiment, the store image was manipulated based on *ambient*, *social* and *design store environment factors*.

Ambient store environment factors consist of, e.g., ventilation, lighting and music; **social** store environment factors represent both the staff and other consumers in the store while the **design** store environment factors include visual factors such as store layout, materials, style and comfort. In the high image store environment setting, ambience was cued by classical music and soft lighting, while in the low-image store environment Top 40 music and bright lighting was used. The social store environment was manipulated using fewer staff who did not greet the customers, while wearing a non-descript apron in the low image situation, versus more staff who greeted everyone, wearing no apron. Finally, the design store environment factor was varied using a brown/white color scheme in the low-image store coupled with a grid layout, scattered merchandise and no visible trim on displays. The high image store had a bright interior color scheme, structured organization of merchandise and brass trim on displays. The manipulations were made using eight videotaped sequences from a real store that was remodeled.

The item to be evaluated was a brass picture frame priced at $24.00 in all conditions, the setting being a card-and-gift store. Price acceptability was measured using four five-point or seven-point items. To sum up the results, the high-image conditions produced higher price acceptability overall, however for the low-image condition there was little effect except for the social factor manipulation.

Grewal and Baker argue that since the high-image conditions produced consistent effects, congruent store environment cues are key in achieving the desired effect of price acceptability and purchase intention. Having a "low-ambient" store environment with a "high design" may appear incongruent and raise questions as to how fair the price is, hence increasing the uncertainty with which the price evaluation is made as well as the consumer's cognitive effort. Maximizing the consumers' perceptual fluency and the congruency of the store environment as well as price and quality cues thus may serve to increase price acceptability and positively affect price image. The high and low image conditions were not perceived very differently, hence using more extreme store environments may produce stronger effects. Interestingly, Grewal and Baker also mention that it would be useful to examine the exterior environment and if congruence between exterior and interior store environments cues also affect price acceptability (or price image for that matter). To conclude, even though the main focus was an individual product, we believe that the results can be used to highlight the importance of interior store environment cues and the importance of congruency on quality and price images. In this case the retailer as a brand or the store as a brand were not manipulated, but that will without a doubt also play a role.

Eight years later, Baker et al (2002) conducted a major extension of the 1994 study into the store environment's impact on store choice criteria while including a solid theoretical model and a number of detailed hypotheses. The dependent variable this time consisted of "merchandise value perceptions" (of the entire store, not just one single product) and store patronage intentions. The attempt to measure an aspect of store price image takes it quite close to the topic of this report, while one of the 23 hypotheses is of particular interest here, namely the one positing that "as customers' perceptions of store design cues become more favorable, customers will perceive monetary prices to be higher."

One of the central premises of the study, just as in the discussion at the start of this section (Ward, Bitner and Barnes 1992), is that consumers make use of the many cues in the store environment to evaluate, e.g., the merchandise quality, the price and what to expect from the overall shopping experience. This supposition is firmly based on the theoretical constructs of inference, schemas and affordance, all three of which describe how consumers process information from the environment in order to "flesh out" their expectations and image of the store.

The more favorably perceived are the ambient, social and design cues, the more expensive the store will be perceived to be. Even a negative perception of the store layout in terms of crowding will affect merchandise value perceptions and store patronage intentions negatively in terms of the "psychic", time and effort cost in getting around the store (**shopping experience costs**). This also relates to the affective reactions "M-R-model" (approach-avoidance) posited by Mehrabian and Russell (1974) and as described by Donovan and Rossiter (1982), Donovan et al (1994) and Nordfält (2011).

As in the 1994 study, the experiment was designed using videotaped scenarios from a card and gift shop, showing the varying conditions of store design, store employees and store music (ambient) cues. In this study no price information was given. The perceived merchandise value factor was measured with three seven-point Likert-type items; the store having "fair gift prices", "good value" and "economical gifts." Perceived monetary price was measured by two items; the store having "expensive gifts" and "[gifts] costing too much money."

The study found direct effects of store design on **perceived monetary price**, but not from the other two cues. Thus as in the 1994 study an interior design that is perceived as "high image" results in perceived prices being higher, but at the same time merchandise quality is also perceived as better. In terms of **merchandise value perceptions**, only merchandise quality and monetary price perceptions have a significant impact, the latter construct the strongest. Perceived monetary price has the strongest negative impact on merchandise value. Time/effort and psychic costs have no influence here. In the analysis of store patronage however, all four hypothesized factors have a significant impact.

Despite some weaknesses in the study and some of the hypothesized analytical paths the authors argue that the results suggest that store environment cues indeed may cause consumers to avoid the store if the shopping experience costs are perceived to be too high; without calculating the trade-off against quality and price. An efficient and relatively stress-free store environment thus is of great benefit in keeping customers attracted to the store.

7.5.4   Conclusion

The external store environment has indeed been found to affect consumers' expectations of the store, store format and the retailer as a brand through external cues when approaching the store through activation of schema and categorization. Being categorized into the "wrong" category of stores may trigger avoidance behaviors and unfavorable expectations which can color experiences during the store visit. The retailer must manage this through extensive knowledge about its market and the salient external design attributes, colors etc. Which send the most significant signals to prospective customers in its markets and store formats? This external design effect is apparently mediated by consumer familiarity with the retailer as a brand and the local store (Zielke and Toporowksi, 2012).

The way the internal store environment is designed and perceived also has a significant impact on value perception; through monetary price perception and quality perception. The store environment should be designed to be consistent, i.e., a retailer with stores in a "premium" positioning should be careful not to introduce elements which are radically inconsistent with that image. The same applies to discount stores tempted to introduce fittings, flooring etc. which could be perceived as fancy. In both cases, providing loyal customers with reasons for changes in the environment and why it does not compromise the store's core offering should be key in managing value and quality perceptions. Ambient and social store environment factors are also important to manage consistent with the design factors in order to protect and strengthen store patronage intentions.

Verhoeven et al (2012) suggest that managers pretest interior designs in service environments. We also believe that achieving a deeper understanding of the retailer's core customers' expectations of price levels as well as which extrinsic cues they are most likely to use in calibrating their price image and price expectations, would be beneficial in managing overall customer perceptions of local stores.

In closing this section, however, we would like to call for more research in this area. There is still so much to explore with regard to price and quality image, and so much resources invested by retailer in exterior and interior store design and atmospherics.

7.6 Discount Store Formats and Price Image

The (hard) discounter offering has been successful on many markets and is dependent on an outstanding price image. In some ways the challenges that discounters face are a mirror image of those of traditional retailers – how to nurture their price image while attracting new groups of customers and maintaining profitability? In the section on store environment we noted that discounters work consistently with their interiors to bolster their image. In this section we will further discuss how price image considerations will affect discounter strategies and their customers. We will attempt to take away some general learnings from this.

The discount store is a successful format present in both European and North American markets. They are characterized by limited assortments, originally composed of 100% private label brands but currently the trend has been that national brands have been introduced, up to 25-30% of the assortment. Discounters generally pursue an EDLP strategy and are designed in a no-frills and shopping-efficient manner.

In recent years there has been a shift in earlier rigid cost-minimization practices, which also were used to signal to the consumer why prices could and should be lower that of the traditional competition. National brands have been introduced, as well as organic and fair trade ranges. All Lidl stores in Sweden have been equipped with in-store baking and a large and inviting fresh bread section created. In Sweden, national advertising campaigns have focused on Lidl's quality and the taste being good enough for an upscale restaurant. These changes, also seen in other discount chains and countries, are interesting as they would appear to go counter to a simple price positioning. They are however in line with the response seen in other parts of grocery retail to strong CSR-related trends towards consumer demands for more transparency in the wake of several food scandals and growing concern about where and how food is produced. There is also a long-term trend in many consumer groups in growing demand for organics and locally produced food. Hence this can be seen as a natural response to market changes. Since the discount format traditionally has depended on a pure price and value positioning, we should be able to learn something about price image management and consumer behavior from that experience. Also, how have the recent changes in assortment strategy and brand communication affected consumer price image and value perceptions?

7.6.1.1 Discounters and Value-added Assortments' Influence on Price Image

A study by Deelersnyder et al (2007) first tackled the issue on whether national brand introductions were a positive for European discounters. They hypothesize that national brands can produce a win-win situation for manufacturers and discounters. For the discounters and their customers, national brands introduce a new reference point with regards to price and quality. Price image-wise customers can get in-store confirmation of the price-distance between private label and national brand alternatives. Customers who cross-shop in mainstream retailers also may perceive a benefit if they are more quality-oriented and/or buy a particular national brand. Between stores non-customers can be attracted since the discounter would be assumed to have a low price level for a particular national brand. In the long-term however, both the higher price level and different quality image of national brands may risk the carefully managed congruency of price and quality signals from the discounter in the store environment, the assortment, the price level and marketing communication. Both price image and overall brand positioning may suffer as a result.

Deelersnyder et al (2007) only provide answers to some of these questions. They are restricted to Europanel sales data between 2001 and 2002, a period when the national brand trend was quite new. However they do find that national brand introductions often can be a positive for both manufacturers and discounters, in 24% of the products analyzed. Price-wise, national brands were found to be at a level with the prices charged at other retailers, while the in-store price-gap to the corresponding private label was quite high, something that often seemed to benefit both parties and not really a negative. The results also indicated that discounters should make use of national brands with attractive designs and higher innovativeness that stand out more in the category.

Lourenco (2010) builds on this research taking a more long-term perspective on possible effects on "consumers' long-lasting perceptions" of Lidl due to private label introduction into the hard discounter's assortment In Holland. Lourenco uses a rich GFK data set between 2002 and 2006 where both household purchase data and twice-annual price and quality image surveys provide a good foundation for exploring these questions. The main issue is whether the positive effects on store image by the quality signaling effect that can be expected from the introduction of national brands will be offset by the higher price image signaling effect.

The results indicate that there is a stronger negative effect on Lidl's price image over time, than could have been expected from the objective store price increase. However, the data show that Lidl at this time had quite a small price gap to mainstream retailers on their national brands. Further increasing this price gap in order to show consumers who cross-shop at other retailers and regularly buy national brands that the "discounter business model" works, would be an obvious first step to attempt to reverse the negative effect on price image.

Also, somewhat surprisingly there is no discernible direct effect on Lidl's quality image of an increased national brand portfolio, neither positive nor negative. The only quality effect comes from the perceived value of a broader assortment in general, i.e., more SKUs to choose from. These asymmetrical results concerning price and quality image should naturally concern discounters. Lourenco argues that there may be three reasons behind the results.

The first is that national brands are inconsistent with the discounters' core selling propositions about efficient operations and a stringently pruned assortment where only price and intrinsic product characteristics (taste, smell etc) govern what is put on the shelves. National brands have a different value proposition where the brand itself is part of the cost of the product; many consumers infer that well-known brands incur higher costs because of advertising and brand-building, contrary to the HD business logic. Secondly, the actual national brands incorporated into Lidl's portfolio may have been perceived to have been too close quality-wise to Lidl's own brands. Thus they would not have contributed to a shift in quality image. Thirdly, adding national brands may not have enhanced the assortment in any other meaningful way than brand-wise; such as new packaging or flavors which many national brand manufacturers tote as unique reasons for a price premium. In conclusion, this study showed no positive effects on neither Lidl's price image nor quality image over time, but also pointed to some simple ways of improving on this, such as increasing NB price gap relative to mainstream retailers, assuring that NB were more easily perceived as adding value in the assortment.

Lourenco and Gijsbrechts (2013) further extend this stream of research to the impact on store choice using a newer and more extensive GFK panel with retailer brand image and purchase data, this time from the Belgian market between 2005-2010 This data set incorporates measures of price image,

merchandise quality image and assortment image. Lourenco and Gijsbrechts model the long-term impact of the introduction of national brands into Lidl Belgium's assortment on the image measures and sales (customer share of wallet). Price and merchandise quality image questions are here merged into a "value" measure, not separately price image and quality image as in the previous study.

The study finds that "leading national brands typically enhance the HD's 'value-for-money' image." However, it is the "A-brands" that produce this effect rather than "B-brands" that are not so well-known in the category. Lourenco and Gijsbrecht argue that the signaling effect versus Lidl's private label may become too small if a B-brand is used, presumably a range effect. Such brands may not be seen to warrant the price gap to the private label alternative. Introductions of national brands also lead to a more positive assortment image. Introductions of a small but noticeable line of several SKUs of the same brand have a further positive effect; indeed single-SKU introductions may produce a negative effect on assortment perceptions. The changes in Lidl's value and assortment image also exert a significant positive effect on share-of-wallet, the critical outcome metric.

Consumers appear to rely more heavily on processing in-store cues, such as price gaps between alternative products, rather than on between-store differences or reference prices stored in memory. Hence the importance of the price gap between the two alternatives on the shelf. However, there are limits and risks here also; too high a price gap may impact Lidl's value image negatively, this may be due to a too marked departure from the certainty that everything in the stories is cheap (perceptual fluency is weakened).

Lourenco and Gijsbrecht's conclusions are highly interesting as they show that discounters may indeed be able to enhance and broaden their assortments without risking their store image or customer share-of-wallet. However, if we look at both studies by Lourenco we have quoted, discounters walk a fine line that makes it imperative that the assortment changes be carefully managed, and both in-store and between-store price gaps monitored.

For mainstream and more premium-oriented retailers who wish to enhance their own value image there are some learnings in that introduction of budget alternatives in the private label assortment also must be monitored. Both quality and price gaps may produce unanticipated effects if consumers also process these differences primarily at the shelf. If loyal consumers perceive that price and/or quality is too low, it may affect the consumer's store image and value image negatively and subsequently share of wallet. Also, if the objective is to make a premium retailer's price-sensitive customers more loyal, budget private label introductions should be made carefully and in a way so that they can perceive that the private label line is not constricted to a few categories but is a viable alternative across the board.

7.6.1.2   Discounter Customers, Emotions and Price Perception
We turn to an interesting paper by Zielke (2014) concerning price-related attributions, emotions and value perception and the intention to shop at a discounter. Zielke attempts to improve on models explaining store price perception by showing that the emotions brought forth by the discount store and low prices also exert an influence over, e.g., patronage behavior. As examples of relevant emotions Zielke mentions enjoyment (of low prices and shopping in discount stores), shame and guilt (for thinking that the discounter is cutting corners or having lower CSR standards). The negative emotions may have no basis in reality but are often based on the schema and attributions that

consumers make concerning discount stores and how they achieve low prices; in the paper those attributions are exemplified by low product quality, exploitation of or unfairness to people in the distribution channel and employees, tricks in price communication and the efficiency of the business model (positive). Hence price-related attributions should affect emotions and value perception and subsequently shopping intention at the discounter.
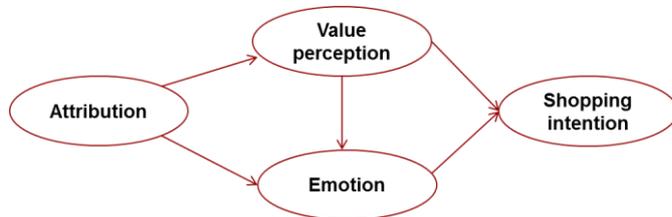

Figure 11: General framework of Zielke (2014).

Zielke chooses to concentrate on value perception on the price image side as he argues that it has been shown that it has strong effect on shopping intentions for discount stores. Emotions – the previously mentioned enjoyment, shame and guilt – will mediate value perception and its influence on shopping intentions. A moderating variable consists of consumers' degree of price consciousness, where the hypothesis is that the attributional components except the efficient business model will have a more prominent negative impact on the mediating emotions as well as shopping intention in the case of less price conscious consumers. Price consciousness should also moderate emotions. In particular, the enjoyment emotion will be weaker in the case of less price conscious consumers. Enjoyment may also mediate the effect of value perception since enjoyment in itself should be of value to the highly price-conscious consumer.

The model is tested on data from 402 German respondents who evaluated one discount store each, with which they were familiar. The shopping intention metric is indeed most strongly directly impacted by value perception, as measured by the three items "the prices here are appropriate in relation to what I get for my money," "compared to other stores, the price-performance ratio is very good here," and "I get good value for my money here." The higher the value perception, the more enjoyment and the less shame and guilt. Of the emotions, enjoyment increases shopping intention while shame and guilt have negative effects. Attributions only have a partial effect on value perception and emotions. However, it is to be noted that the inferior quality attribution does have a negative effect on value perception; also the efficiency attribution serves to raise the perception of value. Attributions also have a direct effect on shopping intentions. Price consciousness mediates the effects of the other variables in several cases, mostly as hypothesized. There are significant and anticipated differences between the low and high price consciousness groups on several variables, however often the absolute numbers are quite small for both groups, e.g., for guilt it is 2.04 for low price consciousness group vs 1.70 for the high price consciousness group.

In conclusion, value perceptions have the strongest positive impact on shopping intention for discounters, followed by guilt and the inferior quality attribution. Both emotions and attributions contribute a significant amount to the model's explanatory power compared to one without those factors included (50% compared to 73%). Hence understanding more about beliefs and attributions made in retailing in general could be very interesting to learn more about in order to influence consumers. This to understand what lies behind some of the cues we have noted so far and what they actually trigger in the consumer. For example, since the efficiency attribution in fact is important

for both high- and low price conscious consumers albeit in different ways, communicating more about the business model and how it saves money for the retailer might boost this attribution and increase shopping intention. The same goes for, e.g., unfairness and tricks attributions; especially so for less price conscious consumers.

7.6.1.3   Are Discounters' Price Image Formed by the Same Factors as for Mainstream Retailers?

Zielke (2010) also deals with discounters and price image in the context of differences in shopping intentions between store formats, discounters being one of them. Zielke develops a multi-dimensional model measuring price image using price-level perception (high-low), value for money (see above), price perceptibility (how easily one can find products' prices in the store), price processibility (the ease of price processing, for example comparable products and unit prices) and evaluation certainty (how easy and certain consumers perceive the process of actually evaluating prices to be).The impact on shopping intentions in different store formats is hypothesized to differ, although no exact hypotheses are posited. Data was taken from a sample of 302 German consumers.

For discounters there is a large direct effect on shopping intentions by value for money (as earlier). Price level perceptions are mediated by value for money, i.e., the level of prices is not directly what makes people choose a discounter; it is primarily the perceived value. Further, Zielke shows that evaluation certainty is determined by the perceived price level and this effect is much larger than for other store formats; discounters seem to be more trusted with a low everyday price level. Evaluation certainty also impacts value perception positively. Price processibility and perceptibility also have a significant impact on shopping intentions in total effects, perceptibility mostly through indirect influences on value, processibility and evaluation certainty. Tying in with Lourenco and Gijsbrechts (2013), **discounters should benefit from adding more value to their assortments**, such as in the form of more national brands, organic products etc. Just lowering prices further would not be the right way to further increase attractiveness.

In contrast, for the supermarket format both the price level and value perceptions are important for shopping intentions. Price processibility is rated lower, as well as price perceptibility and these factors are more important than for discounters to handle, probably because of much larger assortments and more hi-lo pricing (more evaluation uncertainty). Hence supermarket format retailers should work **both with lower prices and improving the total value equation**, adding different kinds of value in the store and brand image. In order to improve the actual price level image, making it easier for consumers to judge prices, e.g., by putting different category alternatives close to each other in the store, as well as making sure that shelf pricing information is clear and easy to read quickly, are also important points to work with.

7.6.1.4   The Local Impact of Discounters vs Supermarkets

Do discounters and mainstream supermarket stores complement each other or do they compete for the same customers? While somewhat off-focus regarding price image these are questions that many incumbent local grocery stores have been faced with, and of course the strength of a discounter is based predominantly on a strong price image.

Vroegrijk et al (2013) address some of these questions about local hard discounter entry. Based on a literature review they present a conceptual framework to help evaluate the impact of discounter entry. From a consumer behavioral point of view, two factors are identified: perceived acquisition

utility (here including price, national brands and private label assortment) and perceived transaction utility (here store environment and distance). These two factors in turn are affected by incumbent chain complementarity and interstore distance. The attractiveness of the incumbent chain is determined by transaction and acquisition utility, the attractiveness of multiple-store shopping by chain complementarity and the attractiveness of organizing combined shopping trips by interstore distance. These factors are mediated by household characteristics such as time constraints, price-quality orientation, attitude towards private label etc. This finally results in the selected shopping pattern, including store set choice and allocating of spending between stores. The data used is from GFK's 2002-2006 panel data in the Netherlands from the 194 local market entries made by Aldi and Lidl. A total of 903 households lived in one these markets during the entire time period covered by the data, meaning that their complete purchase and store patronage patterns are represented.

Results show that on average Aldi and Lidl gain both customers and to a lesser extent spending. Customers reduce spending at the incumbents by an average of 9.2%, interestingly enough with a large span between chains, e.g., the more quality-oriented Albert Heijn only loses 4.4% in spending. This is indicative of the findings when comparing losses in different customer segments. In one example the new discounter entrant gains 61% of its customer base from a segment which is private label-prone, representing 25% of the market. In contrast a quality oriented segment represents only 2% of the new discount store's customer base, but correspond to about 19% of the total market. Further, customers identified as multiple-store shoppers (MSS) defect in a much larger proportion than single-store shoppers (SSS). For example only 3.8% of Albert Heijn's SSS start to patron the discounter. The general implication is that households that already were MSS are much more prone to start shopping at the discounter, and that relatively few SSS households become more disloyal than before, especially those at premium retailers.

Vroegrijk et al (2013) subsequently estimate outcomes based on the two response scenarios 1) focus on SSS customers who already are loyal or 2) try to retain some MSS customers. They do this by using marketing mix changes in three weak and three strong categories respectively. Results show that by strengthening the already strong categories more by adding SKUs both for national brands and private label and substantially lowering the price, the highest reduction in customer defection is achieved. The authors thus argue that by making the complementarity of the two stores on the local market clearer, more of the MSS customers come back to shop at the incumbent. Merely working with the weak categories would have been less successful. In fact this is what many store owners say in Europe. Taking a clear complementary position on the market usually is a win-win situation for a well-run premium incumbent and the new discount store, especially if they are close in terms of distance. Naturally another winner is the consumer who gets increased acquisition and transaction utility.

(Cleeren, Verboven, Dekimpe, & Gielens, 2010) study how local markets in Germany are affected by successive discounter entry. They extend the analysis to intraformat competition within the traditional supermarket chains which is found to be strong. They also show that the impact of the first and second discounter on a local market usually is relatively mild as they tend to attract a very price sensitive segment of consumers. As the number of discounters grows to three, the effects become more severe on traditional supermarkets, measured as loss of market share and sales volume. The authors argue that "first, the discounters' combined impact on the general price sensitivity becomes larger, putting extra pressure on incumbent supermarkets to also decrease

prices, which reduces their profit margins" (ibid., p 470). Secondly, although limited, the combined assortments of several different discounters cover a larger part of a traditional supermarket's assortment, thus making it possible to find more relevant products among the discounters. This is at least partially dependent on the time consumers' are willing to allocate in shopping around, a variable that should differ significantly between, e.g., Sweden and France on the one side and Germany and the Netherlands on the other, due to demographic (share of women employed) and cultural factors.

It is important to note that intraformat competition also within the discount format grows stronger with more discounters entering the market as the EDLP-pricing model and limited assortments make direct comparisons between discounters relatively easy. Cleeren et al (2010) argue that it is possible for mainstream operators to take advantage of the fact that there is a definite advantage of being among the first discounters on a local market – if they start operating their own discount chains.

7.6.1.5 *Conclusion and Learnings from Discounters*
Discounters have been very successful in many retail markets in both Europe and the United States. In new local markets they easily corner the low price image position. While many discounters appear to have reached the limit for the classical "hard discount" store and are adapting to certain "soft" mega trends globally, there are some learnings to be made for the mainstream retailers in managing price image.

- Stick to EDLP as much as possible and avoid excessive promotions in order to facilitate price evaluation and price awareness. Promotional tactics can soon become anticipated by consumers and lower both the reference price and price awareness.
- Work in-store with price processibility and price perceptibility.
- As mirrored in national brands' introductions among discounters, mainstream retailers should carefully manage budget products/PL introductions and make sure that they are perceived to be available in many categories.
- Be consistent in value offering and customer targeting. As we will see later, in mature European markets, many consumers may not be overly price conscious and may infer a negative shift in a premium retailer's quality consciousness if private label development and introduction is not managed appropriately. This may trigger a stronger negative impact on quality perceptions than anticipated.
- Be careful when adding components to the store exterior or interior that may cause customers to infer higher costs or uncertainty about which store format they can expect if the retail brand is not well known.
- Build primarily on strengths and complementarity rather than wasting time and resources on things that discounters traditionally excel at. Increase perceived value among core customers.
- A build-up of discounters on a market may cause consumers in general to become more price sensitive, especial after the third discounter sets up shop.

7.7 Price Fairness

As we discussed at length in the section about memory, biases and decision making, consumers are prone to create their own simplified image of a retailer or a store, which includes price image. One important outcome of price image is its influence on the consumer's perceived fairness of the retailer's or the local store's prices. Fairness may be denoted as "the extent to which outcomes are deemed reasonable and just" where a retailer's reference profit is that which "from a consumer's perspective, may refer to some reasonable amount above cost" ((Bolton, Warlop, & Alba, 2003), p 475). For example, some stores –as indeed actors in other industries – are accused of making "excessive profits" and calls are raised for them to be regulated. The notion being that consumer prices should be lowered instead. Perceived price unfairness is an important consideration for the retailer, as it may lead to consumers choosing another store or damaging consumer loyalty in the long run.

Many consumers have their own beliefs about how a certain retail industry works, e.g., how prices are set and profits are made; a sort of business model. For example, a local store owner's display of perceived wealth may be factored into the judgment of whether enough of the profits are reinvested into the consumer price or into raising the quality of the store offering, such as more services or a better store environment. Consumers also have a history of reference prices from a set of retailers or stores. These reference prices may or may not be an accurate representation of actual historical prices. They nonetheless constitute perceived prior knowledge used in making judgments about how reasonable store prices are both in a historical context and compared to other stores.

The principle of **dual entitlement** has been one the most important theoretical concepts in the exploration of price fairness (Bolton et al., 2003; Kahneman, Knetsch, & Thaler, 1986). This principle assumes that consumers accept that the retailer is entitled to a reference profit, but they also assume that consumers are entitled to a reference price. This balance should not be shifted by the retailer solely to make more profits but must be based on some sort of logical development in the marketplace or the retailer's environment, or other circumstances such as legislation or natural disasters. For example, tripling the price of an umbrella when it starts pouring down is mostly seen as unfair, while raising the price due to taking action against child labor and minimum wages in umbrella factories would be seen as reasonable.

In Bolton et al's very useful 2003 study, an elaboration on the principle of dual entitlement is made using information on 1) past prices, 2) competitor prices and 3) costs. In a series of ten experiments, respondents were exposed to different scenarios as well as different price, quality, cost and profit levels which were manipulated to test the different hypotheses. Results indicated that:

1) Consumers underestimate the effect of inflation over time and many tend to make limited use of inflationary data. This may lead to poorer understanding of inflation's impact on retail prices over time and influence the sense of price unfairness.
2) Consumers tend to attribute price differences between competitors to differences in profits rather than costs. They also incorporate the manner in which profits are made in their assessment of price fairness. Using high sales volume strategy is viewed more favorably than a high margin strategy. To consumers, the most obvious (and fair) reason for price differences are quality differences in the products or the store offering.

3) Further, the retailer's costs are systematically underestimated and some costs are viewed as unfair, such as marketing and promotional costs.

One conclusion from the above may be that it is important to have a clear positioning in the market such as that consumers make reasonable comparisons between competitors, and not compare prices directly between, e.g., hard discount stores and premium retailers with a high degree of personal customer service and a broad offering of fresh products. Failure to make that distinction will risk damaging perceived price fairness and customer loyalty, something that has happened in the UK grocery retail market.

Martin et al (2009) also note that cueing reasons external to the retailer can minimize perceived unfairness for smaller price increases. This can then be employed when communicating about smaller price increases. However, for larger price increases any reason communicated is better than none at all in moderating perceived price unfairness.

The retailer's understanding of consumers' everyday market-related thinking, or "marketplace meta-cognition", is vital for understanding and anticipating reactions to prices (Wright, 2002). This is made abundantly clear in the case of price fairness.

7.8   The Retailer as a Brand and the Local Market

Levy et al (2014) and many others mentioned in the introductory section about the retailer as a brand agree that brand building has become a crucial factor in modern retailing. In the academic literature however, most efforts have been directed at "store image," the phrase coined by Martineau (1958) and elaborated on during the following decades (Ailawadi & Keller, 2004; Burt & Davies, 2010). There is also a more recent stream of research on a bewilderingly similar topic, retail brands (see, e.g., Burt and Davies 2010). In this instance, "retail brands" are identical to "store brands", "private label" and "distributor-own brands." Therefore I use the term "retailer as a brand", while I am of the opinion that in modern retailing research "retail brand" actually should refer to the retailer as a brand, while "private label" should designate the old "retail brand".

The retailer builds itself up as a brand in the same way that any brand in any industry would, by examining how it is perceived by its focal customers and consumers in general, taking into account how its competitors are positioned image-wise and choosing a position on the market. Old retail brands with long histories can often build on inherent strengths, although in some cases undesirable traits have to be removed or the brand even rebuilt completely as markets and consumers change over time (see, e.g., Target and Whole Foods in the U.S., and the Mekonomen auto parts chain in Sweden).

A strong, consistent and clearly positioned brand helps the consumer when processing information in different situations and when making decisions about where to shop and what to buy. However, the retailer does not have complete control over the brand, especially not in the age of social media where the consumers increasingly co-create it. Merely relying on corporate or price communication is often insufficient and does not contribute enough to brand credibility in itself.

Some aspects of brands are also "sticky", meaning that consumers are slow to update their brand schema and associations to the retailer. Some of the reasons for this were brought up in the section about consumer memory, decision-making and judgment. Even when confronted with new

information about the brand on numerous occasions, this information is interpreted as an exception, ignored or downplayed in favor of the original brand schema. Infrequent occurrences can instead be used to strengthen the validity of old brand beliefs. We also mentioned compensatory inferences earlier, where claims about generally low price levels are disbelieved. This is based on a consumer logic that retailers who have a strongly favorable price image in certain categories compensate for that elsewhere in the assortment. There are plenty of retailers who suffer from the above phenomena and experience brand beliefs that are very slow to change.

7.8.1   Conceptual Reasoning

The overall idea (supported in many anecdotes) is that the retailer as a brand provides the overreaching filter through which price image is mediated. Since the retailer as a brand incorporates many facets apart from price, and we have seen that each consumer's value equation consists of several different aspects, merely working with, say, price communication or actual price level would be insufficient to change price image in the short or medium term. From proprietary research we know that the retailer as a brand is also closely linked to consumers local store image, where most of the consumer's interaction with and evaluation of the brand takes place. There is enough significant variation in what stores deliver, both within centrally owned and managed retail chains, as well as retail federations, that it will be reflected in the retailer's overall brand and price image. Even if actual prices can be centrally managed, the local variation of many other aspects will come through in the consumers' value perceptions, as will local competitive circumstances.

Swoboda et al (2013) examine the relationship between retail brand equity (see definition below) and store location attractiveness. They have a similar argument to my own, namely that the associations that the consumer has of the retailer as a brand serves as the first level of categorization when confronted with or comparing different retailers and activates schema which influence cognitive processing.

 "Retail brand equity is defined as a consumer's associations of a focal or competing retail chain as a strong, unique, and attractive brand. Retail brand equity refers to a chain-level retailer; therefore, it corresponds to the 'Gestalt view' of a retail brand and differs from the perspective of Martineau (1958), who interpreted store image as the sum of store-level associations. We refer to schema theory and thus rely on network models of consumer memory... A network consists of nodes or concepts, such as objects and attributes, which represent stored information, and the links between those nodes that are based on past experience. For example, consumers possess information regarding a chain's retail brand and its stores as nodes in their minds as well as links between them; in hierarchical networks, retail brands are linked to subcategories, such as store-level information… As general information regarding retail brands is stored on the corporate (retail brand) level, retail brand equity refers to superior-level associations rather than store-level information... The retail brand of a chain store retailer acts as an 'umbrella' that comprises each individual store. However, each local store generates specific associations, has individual characteristics, and is thus perceived in an individual manner" (Swoboda et al, pp. 251-252).

Figure 12: Is this local Lidl store completely consistent with the retailer as a brand? How would a visit affect consumers' images of Lidl?

As we did in the theoretical section, adapting the above reasoning to the problem of price image we would have a rough conceptual model. Store price image is the dependent variable, with mediators in the form of the chain and store image of the local competition, the store's relative price level on the local market as well consumers' individual characteristics. Associations to the retailer as a brand and local store image would have reciprocal influences. This is also broadly consistent with results from several proprietary studies in the Swedish grocery retail industry.
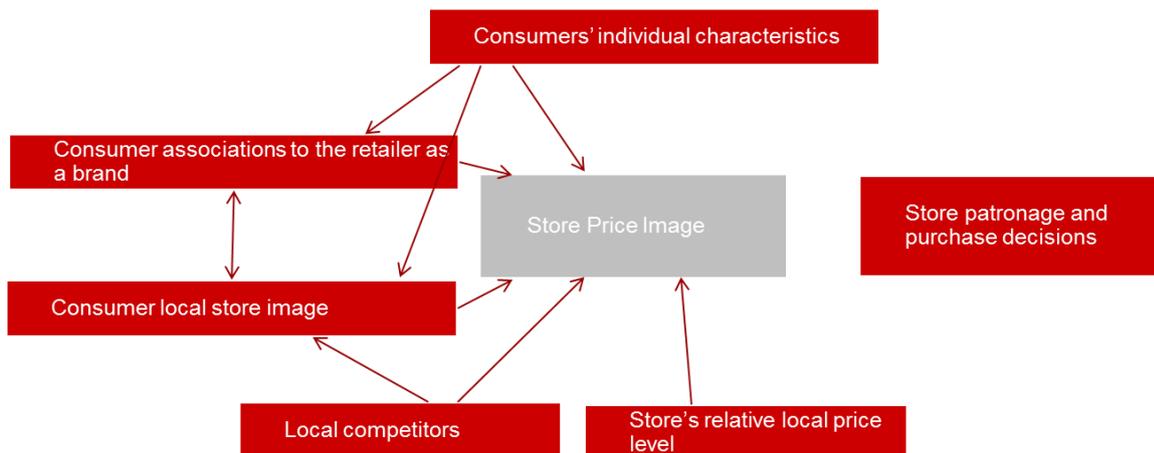
Figure 13: Conceptual model of the retailer as a brand and store image.

7.8.2 Brand Credibility and Price Image

Another useful view of the retailer as a brand concerns the credibility with which the retailer and its stores can use certain strategies and tactics. The reason for this is that there are limits to what retail brand managers can claim, at least in the short run. We have also seen that retailer price image can be very slow to change despite powerful attempts to do so. Lack of credibility and consistency may be important reasons for this.

Burt and Davies (2010) argue that the reputation of retailers is key to consumer trust and the success of private label. Erdem et al (p.3 Erdem, Swait, & Louviere, 2002) define brand credibility as "the believability of the product position information contained in a brand, which entails ''consistently delivering what is promised... Firms can use various individual marketing mix elements to signal product quality, such as charging higher prices, offering extended warranties or distributing via high

end channels. Such mix actions may or may not be credible depending on market conditions (e.g., competitive and consumer behavior), but the signal conveyed by a ''brand'' differs from other mix elements because a brand embodies and represents a firm's past and present marketing mix strategy, activities and brand investments. Similarly, brand credibility differs from the credibility of individual marketing mix signals (e.g. advertising as a quality signal) because brand credibility represents the cumulative effect of the credibility of all previous marketing actions taken by that brand, or as Kapferer (1997) put it, the ''living memory of acts taken by a brand'. The concept of credibility has two main dimensions…trustworthiness and expertise.''

It should be noted that all types of retailers can have high credibility as a brand, both premium and discount. Erdem et al (2002) find that perceived brand credibility influences price sensitivity negatively, i.e., the higher the credibility, the lower the price sensitivity. This effect differs between products, as products where consumers have a high familiarity and low uncertainty such as frequently bought groceries are less influenced, while products which are more complex are more influenced by brand credibility.

Importantly for the topic of this paper, as we found in the section about store environment Erdem et al (2002) underline how critical it is for the brand to be consistent in every aspect and not "overstep" its brand promise. Consumers love consistency and the subsequent reduction in uncertainty and perceived risk. Hence both retail brand managers and the local store should be well aware of the brand's operational limits with regards to price levels and what specific components should be added as value to the consumer. High credibility can help stretch the limit of actual price levels.

7.8.3   Price Image Updating and Adjustment

We have found that consumers only partially rely on actual pricing information when forming and updating price images. Such factual information may also be misinterpreted or disconfirmed when current store images and brand schema are activated or if knowledge about the relevant set of stores is out of date or incomplete. There are many other things that we use as cues when processing information for a decision where price or value is an important factor. Many researchers have found evidence that consumers often are slow to update and re-evaluate their price images of different retailers. Different types of consumers use different cues in their updating process. Even when targeted by long-term activities and marketing communication, we saw that Dutch consumers during the price war were quite slow to change their price images and the attitudinal shift was quite small.

What then are the main factors influencing this kind of behavior, and how can consumers and retailers alike learn to become more efficient in communicating and adapting to new circumstances?

As consumers we have developed many types of schema and associations to different phenomena that we use as a first resort when faced with a new situation or problem. Many studies show that we are naturally resistant to changing our existing ways of simplifying decisions and avoid allocating more cognitive resources than absolutely necessary. Any new information regarding prices on individual items, a basket of item or a retailer's pricing strategies will thus be unlikely to be processed and assimilated the first time we encounter it.

Hence repetition and confirmation of the message consistently in several different ways is probably key to success. A simple claim in a single marketing campaign is not likely to be successful. Increasing

saliency to the consumer is one way to cause a disruption in existing schemas and beliefs, if such cues can be found and communicated. "Price images, as diffuse impressions, require dramatic and consistent discrepancies to be changed" (R. Hamilton & Chernev, 2013).

In the section below highlighting Hamilton and Chernev's integrative model, some of the most important parameters for the retailer to leverage are summarized. For a well-established retailer employing multiple tactics simultaneously is probably the only way to make sure that long-term and measurable change in price image is achieved – simply doing the hard and boring work. As we have noted earlier, consistency is a key factor when attempting to change customer perception.

It is also highly likely that shifts towards a higher price image (more expensive) will be noticed, processed and integrated more quickly than shifts towards a lower price image (cheaper). This is an interesting asymmetry which may be due to loss aversion (Bolton et al., 2003; R. Hamilton & Chernev, 2013). Hence, as we have said before, some retailers will feel that they have an "unfair" disadvantage compared to some of the competition.

7.8.4   Price Image and Brand Repositioning

Many established retailers have strong brands, where older, premium retailers often are saddled with higher, more expensive price image as well as having acquired broader palette of associations towards the retailer as a brand than more recent competitors. Changing this kind of brand may be a challenge as brand associations are quite resilient. Brand positioning research may thus provide us with some more keys to understand how to work with this kind of retailer. However, research into the repositioning of an established brand is actually quite scarce (Jewell, 2007).

Jewell (2007) does provide some interesting ideas and insights into this problem using a well-known fashion retailer as the base for an experiment. He notes that it can be difficult to weaken the strength of consumers' associations to the brand on a particular node (e.g., price) even if the repositioning message is repeated many times. In order to achieve an effect more quickly he proposes to also inhibit the old positioning association by causing "competitive interference". This is achieved in the study's three experiments by making sure that the focal brand's communication/advertising is viewed in close conjunction with a competitor's which has a clear position on the attribute that the focal brand wants to inhibit (weaken). The results, where Abercrombie & Fitch is the focal brand and Banana Republic the brand that helps inhibit the old attribute, were quite clear-cut in an experiment with students. That is, both the boost in shopping intention for the re-positioned A&F based on the desired attribute (fashion) as well as the mirroring of the undesired attribute to Banana Republic were successful.

In other retail settings this result could be used to weaken an undesirable brand node such as "high price" or "questionable value for money" by exposing consumers to a retail competitor known to be perceived as more expensive while simultaneously communicating another attribute which could enhance value and quality perceptions of the focal brand. The difficulty, as in the case of other comparative advertising, could be to find real legal and media solutions that work outside the lab.

7.8.4.1   *An Empirical Example of Retail Repositioning and its Impact on Price Image*

Downs and Haynes (1984) report on a repositioning study carried out when a fashion retailer closed an old store and opened a new one which was substantially larger and more modern, without raising the actual price level. The new store was built in a completely new shopping center and was almost

three times as large. Several new departments were added, such as a photo studio, a lamp and china department and a concession area. Product lines were extended in the best part of the assortment, with new brand names such as "Executive Suite" were introduced. Interior design changed as the old store had been twenty years old. The new store incorporated more elaborated signs, more expensive fixtures and wider aisles. The new store was aimed at being a "upper-level" store of the retail chain.

The primary purpose of the study was to compare retail management's image of the new store to their customers'. On most parameters management's and customers' images three months after the opening differed significantly, customer's mostly experiencing a less radical change than management did.

Interestingly for this report, price image, measured on a semantic differential scale as the store having "expensive or inexpensive prices", was one of several attributes where the change was perceived significantly larger than expected, in the direction of more expensive prices. Management perceived no change in prices as the strategy was that they were to be held constant in the new store. Given that a range of store attributes that we have previously found often serve as cues for higher costs and higher prices, were changed, this is not terribly surprising but rather a confirmation of earlier reasoning. This is also an instructive empirical example of how management were caught off-guard by this change in price image, relying on the assumption that the general price levels were comparable between the new and old stores and hence this parameter should not change.

7.8.5 On-line Information – Its Impact on How Consumers Evaluate Stores and a Fair Price

On-line price information has been available to consumers in large parts of the retail industry for many years. There is however limited research into how this information is used by consumers and specifically its impact on reference price formation, price image formation and buying behavior. One general hypothesis – yet to be confirmed empirically – suggests that the proliferation of regional and cross-border price and product information in many areas of retailing has contributed to lower prices and higher consumer price sensitivity. Reference prices are pushed down and effects on perceived price fairness can be expected.

Grewal et al (2010) review the existing research on strategic multichannel retail pricing and note that theoretical models would predict that as consumers' search costs are reduced, such as when being able to use online price comparison services, price dispersion in a market will gradually decrease towards zero. In reality, though, such a drastic pattern has not been found in retailing (ibid.) as significant price dispersion still exists for many products. There are a number of reasons for this, not the least being differences in consumer preferences, search, purchase situations and buying behaviors, as well as different weightings of product characteristics of which price is only one. Some consumers will also put a higher emphasis on physical inspection of the product prior to purchase, such as for size in fashion, exact color, flavor or scent. Finally, online and multichannel retailers often make comparisons less than fully transparent when offering slightly different versions of an item.

The type of product ("non-look-and-feel" vs "look-and-feel") will also impact price and value perceptions (2014a); products that are more readily evaluated qualitatively online will be perceived to have a higher value. This finding would indicate that for categories such as food, online price information will have less of an immediate impact on value perception. Although price perception in

the form of expected price ranges were not affected in Jung et al's (2014) study, exposure to price comparison site information seemed to reduce uncertainty about the price ranges.

Proprietary research at a large Swedish grocery retailer conducted for the past four years shows that at least in this part of the retail industry, consumers are very conservative in how they conduct price search. While the industry has started moving rapidly towards digital marketing and communication and consumers have more easily accessible information about prices, goods and promotions than ever before, most still prefer to use analog weekly flyers and ads for price search. Many do not even know that they can access personal and general promotional information via the retailers' Smartphone apps. There is still a paradoxical and interesting behavior in many other retail industries as well, since weekly flyers are still the norm in such non-look-and-feel industries as consumer electronics.

This remains a research stream that could potentially produce many more interesting studies and is of high relevance considering the investments being made in the digital channels. We make some suggestions for further research in the concluding section.

7.9   Use of Price Image and Actual Prices in Store Choice

So far in this paper our discussion has mainly been from a collective "consumer" perspective, tacitly assuming that most retail shoppers are similar. However, we know that shoppers are driven by different motivations and goals. Since Stone's (1954) study on shopper typologies, a long line of research has looked at the heterogeneity in how consumers approach the task of shopping, either by identifying segments of consumers with different approaches to shopping (e.g., Williams et al. 1978), or incorporating individual differences variables such as price consciousness (Mägi, 2003).

Julander and Mägi (2005) found that consumers who were more price conscious cross-shopped more and also exhibited better objective local store price knowledge. These consumers used available information sources on prices and promotions more extensively than other local shoppers. This then can be one – relatively time-consuming – strategy in approaching the task of judging prices in different stores. We would however hypothesize that many consumers would adopt other strategies because of differing individual circumstances and motivations. Time is one resource that is valued highly individually, hence some consumers would put a high price tag on it and adopt a price image model and store choice strategy based on that. Other consumers value other parts of the different store offerings and peripheral cues, and may also base their price images less on actual prices.

Lourenco (2010) examines this idea in a study of how Dutch consumers use store price image and actual price information in their store choices. He argues that consumers may be divided into four basic groups as illustrated in the figure. "Convenience shoppers" are non-price sensitive and choose stores based on non-price cues such as convenience or perceived quality. They may also be driven by time constraints. "Eye-for-detail consumers" are the typical price conscious consumers described above, spending many hours on perusing flyers, and being disloyal visiting different stores. "Big picture consumers" avoid spending too much time searching for price information but may instead use regular store visits to gather and integrate store prices for future use. They only switch to new stores when they feel quite sure that the current store has lost its value for money. "Combined consumers" finally, may use both types of store price information to select stores. Depending on situational factors they may be more or less prone to shop around for instance, using a "convenience" strategy when time pressure is high or their grocery budgets allow it.

	Store price images	
Store basket prices	**No**	**Yes**
Yes	Eye-for-detail	Combined
No	Convenience	Big picture

Figure 14: Lourenco's (2010) conceptualization of different consumer strategies in forming store price image and selecting stores.

As in his earlier study of lighthouse categories, Lourenco uses GFK scanner data, this time from 2002-2005 on 4,400 Dutch households. This is the time of the Dutch price war described earlier. The data set includes purchase data, location and promotion data as well as attitudinal data such as self-reported price consciousness, deal proneness and store price image.

The way Lourenco models the data is based on the premise that at each point in time the consumer holds a belief about the different local stores' price images, then every time the consumer shops at a store that price image is updated based on input from encountered in-store prices and promotions; the difference between the two processes being whether the consumer reacts to different price cues:

1. Is directly affected in his or her store choice by each change in actual store prices or
2. Is indirectly affected through incorporation of price information over time which serves to change their store price image (SPI) primarily formed by other cues such as convenient location and perceived quality ("SPI parameters").

Data on in-store prices for each time period is combined with promotional prices for the categories that each household has in its weighted basket. Distance to each local store, assortment size as well as store loyalty as measured as share of total store trips are also computed. Store price image is measured by an ordinal variable where 1 = most favorable price perception and 9 = least favorable. Households answer this question for all grocery chains twice a year.

Estimation results confirm that consumers "adjust their store choice to actual prices directly, through the actual price coefficient, or indirectly, through the learning and SPI parameters" (Lourenco, 2010, p 62). There is considerable variation among consumers however, indicating that a segmentation approach may be useful, as hypothesized.

The results as summarized in the figure are based upon consumers having a zero or non-zero parameter estimate for responding to none, one or both price cues. An overwhelming majority of consumers show no price response, i.e., the Convenience segment. Further, Big Picture consumers primarily choose stores based on non-price cues such as convenient location or perceived quality. Only around one-fifth of consumers exhibit some response to store basket price cues. For retail managers it is interesting to note that the distribution for the different grocery chains varies substantially. Discount chains such as Aldi and Lidl have a low share of Convenience customers,

instead Eye-for detail and Big Picture customers are over-represented. Thus pure price image serves these retailers just as well in attracting customers as having an actual low price level. Premium retailers like Albert Heijn, on the other hand, are popular among Convenience customers, i.e., non-price sensitive.

Store price images

Store basket prices	No	Yes
Yes	Eye-for-detail **16.2%**	Combined **3.6%**
No	Convenience **68.5%**	Big picture **11.7%**

Figure 15: Distribution of the different consumer strategies in Holland (Lourenco, 2010).

7.9.1 Conclusion

Estimating the extra effect on store choice of consumers' updating of their store price image over time, Lourenco shows that a dynamic store price image serves to make a substantial number of consumers from the Big Picture and Combined segments switch stores that otherwise would not have done so. Many of these consumers will shift their entire grocery basket to a new store. Despite this finding, a majority of consumers remain basically unaffected by price information in the short and medium run.

Hence, we see evidence that retailers need to take into account that price reductions only have a gradual effect on consumer behavior through price image change. Further, in order to affect store choice more efficiently and in larger consumer segments, complementary tactics are necessary. Such tactics should be designed to affect the perception of salient cues of the type discussed elsewhere in the paper (convenience, quality, assortment, atmospherics and design to name a few). The analytical framework used in this study should however be of high interest to retailers and Lourenco suggests extending it to other countries and retail industries.

8 Summing up: Conceptual Research Frameworks and Proposed Extensions

8.1 Discussion

This working paper proposed to be an overview of what we know about what makes up and influences the retailer's price image. There are many similar definitions of the "price image" general research area, and exactly what focus any given text will have depends on the choice of analytical level; consumer, item, basket, store or retail chain. Inevitably they all play a role in better understanding the processes behind the formation of the consumer's image of retailer prices and value. Thus in spite of our "retail chain" focus we have switched between levels many times. However, I have tried to always come back to a discussion of the importance and relevance for strategic retail management.

What we can easily conclude is that most retail customers have imperfect knowledge of prices even at the basic level. They simply cannot recall prices they have read on a shelf or a weekly flyer even right after the fact. While many may be able to fairly accurately rank different local stores according to their price level, many refuse to even give an estimate and few can tell you what they base their ranking on. A majority only change their price image gradually based on actual prices, while extrinsic cues may be more salient in effecting a change. Most consumers have a limited basket of "known value items" which they refer to when attempting to understand the price level of a store. Frequently bought and/or items with a large share of the consumer's budget are more salient in this process, but other factors such as item price relative the mean price in the basket are also important for learning over time. However, retailers need to be wary of simply cutting prices on such items as they may be critical for overall profitability. Locating items with high informativeness but low impact on margins is thus optimal.

Aggressively pursuing a price-based strategy has rarely been shown to be beneficial for an established mainstream retailer unless accompanied by other activities which show consistency, i.e., that the retailer's core offering is unchanged (or has been improved). One of the reasons for this is that price-based strategies tend to sensitize consumers to price and promotions and also risk inducing uncertainty into the perception of the core retailer offering. Thus discounters may become perceived as more relevant and credible while making the difference between discounters and mainstream retailers less clear.

It has been difficult find clear empirical results which can help to better understand which parameters can best serve to make price image less "sticky", especially for retailers. Research on brand repositioning may be one promising avenue, but we have not been successful in clearly showing how findings in that area, such as competitive interference, may be used to empirically investigate possible leverage on price image position change. Especially mainstream retailers may have to pursue a multi-pronged strategy with the aim of being as consistent as possible in all aspects of pricing, communication, store design and atmospherics, assortment and offer to core customer segments, when attempting to strengthen retailer price image. Customers will be triggered in a variety of ways; some will have their loyalty and price image reinforced by extrinsic cues and

inferences, while others, who may be less loyal, may choose to shop more often based on the actual pricing and promotion activities of the retailer.

8.2   The Critical Role of Biases

In the theoretical and empirical sections we highlighted a number of findings which showed how consumers are affected in their decision making and information processing with regards to the correlation between actual store prices and price image. Just as in many other areas, consumers strive to minimize the cognitive resources devoted to each decision, hence being reluctant to actively acquire and process new information at a deeper level.

Prior beliefs about stores and retailers, type of product purchased, the store's architecture and ambience, the structure and presentation of the assortment, the anchoring points of the price dispersion in each category, the consumers reference prices, the availability of price comparisons, as well as the composition of the consumer's portfolio of known value items may very well be more influential in moderating the effect of the retailer's or store's price strategies.

A key characteristic of facilitating consumer purchase decision making and strengthening price image appears to be *consistency*. That is, sticking to communication and positioning that the retailer's core customers are used to and feel are logical will probably strengthen the sense of value for money. Any feeling of discrepancy in the perception of the store, such as clashes between premium décor and hastily put together bulk promotions of cheap products, or between a selection budget of items at rock-bottom prices and an A-brand item at triple the price, may cause confusion and potentially lowering the price image and the sense of value for money. The consumers may start to question their internal reference prices and their cognitive model of how the retailer operates in order to produce its offer (e.g., Verhoeven et al 2009).

We have shown that such cognitive models may be only loosely based on reality and can quite easily be put into question based on perceived changes in quite irrelevant variables. Being careful about changes in positioning and in-store communication is thus key to not trigger a sudden change in price image and potentially losing valuable customers.

8.3   Lessons About the Customer

In today's society we are all more or less experienced retail customers. However, the degree of involvement in shopping varies significantly between us as individuals. We also have different levels of knowledge and experience about different retail markets, including such cues as prices and quality markers, as well as which alternative retailers there are for specific occasions. Some of us are cherry-pickers and gladly visit several shops each week to get the best deals, while a majority mostly sticks to their tried-and –true shop. In certain situations we have the luxury of being able to compare merchandise and prices at our leisure, while frequently we can be stressed and time-constrained.

The same consumer may also exhibit different price sensitivities when shopping for different types of products (Wakefield & Inman, 2003). For example, shopping for hedonic products (where consumption will be more for pleasure, e.g., candy or movie tickets) or for use in a social context, has been shown to weaken price sensitivity compared to more functional products (toilet paper) or services (subway ticket to work). This effect varies with price level, lower-priced products being less affected.

All of these factors result in consumers having different styles for approaching shopping, and searching for and processing information about prices. Hamilton and Chernev (2013) state that situational factors such as financial consequences of buying decisions, amount of time pressure and availability of cognitive resources are key factors in determining the consumer's mode of price processing and price image formation. We now know that consumers quite easily revert to low-processing mode and reliance on cues if the conditions are not met for deeper processing. This can be of crucial importance to know when designing real-world communication and persuasion tactics, store layout and staff training.

Getting to know your customer intimately is thus as always a critical piece of groundwork for the retailer. Today's information systems enable retailers to potentially learn quite a lot in detail about shopping patterns such as what store format customers tend to shop in, how loyal they are to the retailer, if they are attracted by discounts and coupons, what their KVIs are and how much they use tech-based tools such as smartphone apps to check for deals in the store? Are consumers "large basket" or "small basket" shoppers? This could determine the whether EDLP or hi-lo pricing is the right strategy (Bell & Lattin, 1998).

Retailers should make a priority to profile their customers more qualitatively to get a feel for different segments' shopping processes. Is it structured, how much pricing information is gathered before visiting the store, what sources are used, how do they evaluate your prices, how fair do they think that prices are and how good is the fit perceived between the retailer's overall customer promise of price and what is encountered in the store? Another type of critical insight is <u>why</u> core customers actually value the retailer's offer as this determines how price is perceived as compared to what customers perceive that they get from shopping at a particular chain or store. This type of valuation can be highly individual.

8.4   Conceptual Framework

We have shown that there is a tremendous amount of quality research into pricing issues, but surprisingly less if we narrow our focus to relevant empirical research examining the formation and management of price image in retailing. The reviews by Grewal and Compeau (2007) as well as Chernev and Hamilton (2013) also reach the conclusion that there are still many issues unresolved in retail pricing research. It is also a quite heterogeneous research area, as well evidenced by the diversity of topics covered in this report alone.

Using the recent literature reviews and calls for further research as a base, and possibly broadening the scope to theoretical and empirical contributions from other research fields such as marketing communications, brand research and cognitive psychology may push the area forward into new domains. Testing theories and models in several different retail industries and national markets may also contribute towards deeper and more relevant insight into price image formation and effects. Grocery retailing has so far dominated research while there are many other different retail industries where consumers may act differently.

Hamilton and Chernev (2013), in their comprehensive review of price image research, sum up many of these different components making up what we know affect the retailer's price image. Their conceptual framework, which we will refer to as the H&C framework, is very useful for visualizing the research area and spotting which factors may be influenced by retailers themselves, which are dependent on individual differences between consumers and which the outcomes of price image

may be, see below. Most of the components in the model have been discussed in this text. We do however believe that it would be useful to add a few parameters to this conceptualization.

8.5   Lessons for the Retailer

What then can the retailer affect in order to change a price image which is not consistent with current needs? Without indicating what weight each component may have, Hamilton and Chernev (2013) suggest that based on research findings the following have an impact on price image, on which they elaborate. We have discussed many of these aspects in this working paper.

- Dispersion of prices: The dispersion or range of prices encountered by the consumer in the store, or in a specific category. The more frequently low prices are perceived in the assortment, the more positive the impact on the retailer's price image. A reputation for low prices deeply into a certain category may also be beneficial, although as we have mentioned consumers may infer that the retailer "makes up" for this price level by charging higher prices in the rest of the assortment. The range of price in a category may also affect price image, anchoring price perception at different levels in the range while mean prices may be the same.

- Price dynamics: Promotional and pricing strategies. Mainly the frequency and depth of price promotions. Whether EDLP or hi-lo is the best pricing tactic for the retailer often depends on the customers' buying behavior; large or small baskets, frequent or infrequent store visits; or cherry-picking behavior or not.

- Price related policies: For example price-match guarantees, same-store lowest price guarantees (within a specified time-period) and how restrictive payment form policies are. Whether these impact retailer price image positively may depend on the overall price credibility of the retailer. Guarantees may however make some customers less likely to switch stores and others less likely to shop around or hesitate to buy while in-store, i.e., minimize choice deferral.

- Price-related communications: Price-based advertising and its perceived credibility. Comparative advertising has been shown to be more effective and credible in affecting price image, however this may difficult to test in the real world.

- Average price level: The actual price level for a relevant basket of goods at the store or chain. The importance of this cue varies between consumers. Many consumers cannot even estimate the actual prices and are slow to update their price image based on price information gained from store visits and price communication over time. A majority of consumers do not use price-based information at all in everyday store choice.

- Assortment characteristics: The size, depth, breadth, uniqueness and type of items. Generally, larger assortments are thought to mean lower prices because of inferred greater sales volume and economies of scale. Retailers with narrow but deep assortments or broad but shallow assortment can also have a low price image. Stock-outs in the assortment may indicate low prices (high demand and turnover). Stocking some items such as "self-expressive" or "designer" items may cause the retailer to be perceived as more expensive because of inferred higher costs.

- Physical attributes: Interior and exterior store design serve as cues for categorization of stores and influences whether the store is perceived as less or more expensive depending on,

e.g., consumer logic regarding retailer costs and sales volume. Information and expectations triggered via the retailer brand may supersede many of these cues.

- Service level: A high service level in the form of staff may cause inferences about higher costs and prices.
- Nonprice policies: Inferences from costs generated by generous return policies, CR-work such as fair working conditions and high retailer quality levels for animal protection and sourcing.

8.6 Proposed Additions to the H&C Framework

There a few areas that we believe are useful to add to the general framework.

8.6.1 The Retailer as a Brand and Local Store Image

As we discussed at length in the theoretical section, we believe that brand management activities at the strategic retail chain level interact with local store image and price image. For example, the quality, value, credibility and fairness components of the brand may affect price image for the umbrella brand. Similarly, the consumer's interactions with and experiences with local stores of a particular retail chain should affect the perceptions of that retailer's umbrella brand. The local store can "contaminate" or strengthen the umbrella brand.

8.6.2 Local Competitive Environment

Apart from the local aspect in terms of store brand/store image, the impact of the local competitive environment on the formation of store and retailer price image could be explored further. By this we mean the structure of retail competition, competitors' store and price images, local price indices, type of store formats, the focal store's local history and image, distances between stores and to other alternative retail markets. From proprietary studies in Sweden we know that having a local competitor with a more favorable price image than their primary store where customers also shop, will affect store price image negatively. A local market with many (more than two) discounters tend provide strong price cues to consumers as well as a broader discounter assortment (Germany; Cleeren et al, 2010).

Some studies, most significantly the Dutch research stream with van Heerde et al (2008), Lourenco (2010) and Lourenco & Gijsbrechts (2013), but also the German hard discounter study of Cleeren et al (2010) as well as Julander and Mägi (2005) have all incorporated data describing some aspects of the local marketplace such as distance to competitors, type of competition, consumer profiles, store images, price indices and evolution of competitive structure over time. These aspects are mostly independent of the retailer and would probably work through local store image to affect retailer price image.

8.6.3 Consumer Store and Retail Brand Familiarity

Zielke and Toporowski (2009; 2012) showed that the influence of storefront design on price image will be significant if the consumer is unfamiliar with the store and the retail brand. We would hypothesize that the importance of cues overall increases as familiarity with the retail brand and the store decreases.
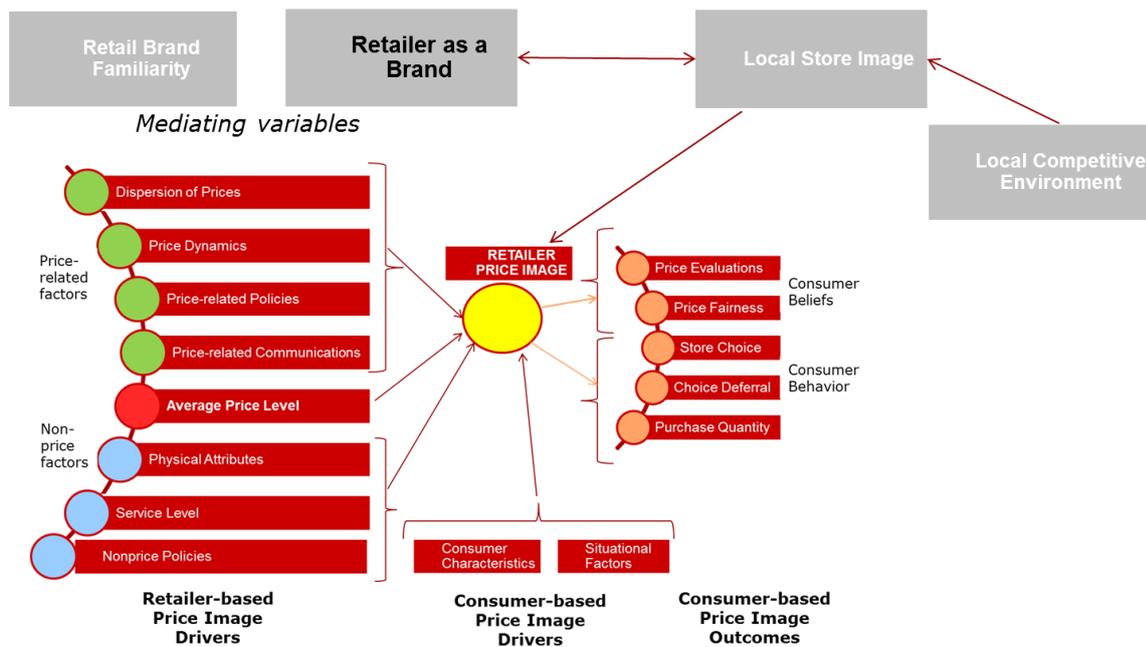
Figure 16: Proposed additions to the conceptual H&C framework.

9 Proposed Research Gaps and Suggestions for Further Research

We have noted that there are many opportunities for more ambitious empirical efforts that could be structured after the general H&C framework above. They could also be based on the individual areas identified by Hamilton and Chernev (2013) or Grewal and Compeau (2007).

9.1 The Relative Importance of Factors Influencing Price Image

Although the H&C model is an elegant way of illustrating current understanding of the area, we know little about the relative importance of each factor purported to influence the entire conceptual model of the formation of price image. We do not know if there are differential effects of price image on the model's consumer responses.

We need to further advance and integrate the by now well-documented theory in the price image area. Much of the research until now has focused on one factor at a time. This makes it difficult to ascertain the importance of, e.g., manipulating the average price level in conjunction with other tools available.

D'Andrea et al (2009) attempt to weight several different factors that impact price image, arguing that "store reference price" and KVIs are the most important drivers of OSPI, followed by "cheap alternative brands". The analytical method employed was unfortunately not divulged.

9.2 Best practice for the Retailer's Bottom Line

In managing price image, we suggest that there is a range of outcomes to the retailer depending on the strategies adopted by management. If we are serious about increasing the relevance of price image research at this level, there is potential to gain more insight into the influence of different actions on retailing metrics such as market share, market penetration, margins, profits, loyalty and brand equity. Can we isolate the impact on the bottom line when adopting different courses of action? Can we learn more about which mix of actions which will create the best leverage on investments in price related tactics? How can retailers minimize the cost entailed with influencing price image?

9.3 Price Image Shifts over Time

Closely related to the issue of gaining a generally broader grasp of the area is the possibility of longitudinal studies of the kind made by Lourenco (2010) pooling GFK household sales data and price/image measurements over time, as well as van Heerde et al's (2008) study of the Dutch price war and its outcome. In this way, we might be able to learn more about how consumers' price image shift over time and in response to which extrinsic cues or "shocks". It would be useful to look separately into different consumer groups and learn more about how they are affected and if there are different individual trajectories in the shifting of price image over time.

One research question could be whether consumers with different levels of price knowledge and involvement behave differently. Do retailers' actions on the market contribute to price image shifts or what factors contribute to these changes over time? Moving to a new area is one natural cause for updating previous retail categorizations and schema (Julander and Mägi, 2005).

While the longitudinal research quoted above has been of a quantitative character, it might be a fruitful area for consumer researchers using other research methods in order to gain deeper insight into consumers' decision making processes as a complement to the previous work.

9.4   Strategic Case Studies

From a strategic learning perspective we believe it would be instructive to have more case studies. There are plenty of opportunities for retail researchers there. I have mentioned a few in the paper, such as the British market. In Sweden the repositioning of the Mekonomen auto parts chain from a value for money perspective, and the successful national roll-out of the City Gross grocery chain come to mind. The establishment of German electronics superstore MediaMarkt in Sweden could serve as a useful example of which tactics are used in electronics retailing to quickly create a viable price image position. Discounter Lidl's wholly unsuccessful foray into the soft discounter-dominated Norwegian market could provide insight into the limits of the hard discounter's appeal.

How have retailers responded to new competition and what role has price image played in those responses? What tactics have managers used to influence price image and how effective have they been? Such experiences would advance our understanding of the importance of price image in modern retail and in different markets and retail industries.

9.5   Effective Strategies for Changing Price Image

It is often challenging to change a retailer's price image as argued by, e.g., Alba et al. (1994), Hamilton and Chernev (2013) and this paper. We have highlighted the importance of prior beliefs on information processing and the stickiness of consumer's beliefs about retailers, and propose some explanations mainly based on decision making theory as to why. But there is scarce empirical material which sheds light on the issue. At which point is a change in prices or value noticed by the customer? What cues play the most prominent role? When is the new input processed, integrated and has served to change the consumer's behavior?

9.6   E-tailers and Digital Price Information

Much of the extant price image research has been based on brick and mortar retailers and physical stores. However, as many traditional retailers adopt a multi-channel strategy and are challenged by pure e-tailing newcomers new critical questions have to be answered. Are there differences in the formation of price image for pure e-tailers as compared to more traditional retailers? How well is an established retailer's price image carried over to other channels? How do younger generations who may be exposed mainly to e-tailing behave and respond to traditional pricing tactics?

A related question concerns the role of price comparison tools in different retailing industries. Here there are a number of questions to be explored relating to differences in usage patterns between types of products. Since price comparison tools also incorporate information on the quality of the product as well as the different retailers where it can be found, there possibilities to explore the usage and effect of these cues as well.

Another issue to explore is whether access to digital price information actually increases price awareness and how it impacts the IRP and range of prices used by the consumer. Is this only a delusion? Are consumers who use price comparison tools really more knowledgeable about prices? Access to almost unlimited information might in fact cause consumer to more easily overload and fall

back on their original price image. Easy access to information can also cause consumers to rely too much on external information, further downgrading actual price awareness.

9.7   The Retailer as a Brand, Local Store Image and Price Image

Are there differences in the type and strength of this relationship between different kinds of retailers? Some retailers have complex brands with multiple associations while others have one or two. The latter should make it easier to understand and manage price image and how customers create their view of the value that the retailers provide.

9.8   Economic Climate as Perceived by Households

General economic factors have been shown to affect consumers' price awareness. It will presumably also affect price search strategies, processing mode (deep vs shallow) and which cues become salient, e.g., actual price relative to non-price cues. Considering the enormous stresses in the global financial system and the very real implications for millions of consumers since the financial crisis of 2008 this is a research area with good opportunities to explore further.

10 Appendix: Operationalization and Methodology

10.1 Price image

Different studies have operationalized price image as a dependent variable from different perspectives. Hamilton & Chernev (2013) make an excellent summary of many of these, including references to source studies, which I report part of here.

10.1.1 Categorical impression of the aggregate price level of a retailer or store

For a categorical impression using a single variable there are mainly two ways to operationalize price image; using a direct non-comparative or comparative question.

An example of a **non-comparative** direct question is taken from Kukar-Kinney & Grewal's study on price-matching guarantees (2007); "I expect that the overall prices of this store are… 1 = very low, 7 = very high". In Desai and Talukdar's study on KVIs (2003) the store OSPI was rated as "In general, the prices of products available at X grocery stores is 1 = very low, 9 = very high". Estelami et al (2007) use a simple "This store has very good prices" as well as on a 7-point Likert rating scale. D'Andrea et al (2009) use a variation in their study of KVIs: "This store has low prices on familiar items and items bought most often".

Kukar-Kinney & Grewal (2003) also include a **comparative** question in their study; "Relative to other electronics stores, the prices at this store are most likely (1=low; 7=high)". Estelami et al (2007) use "It's very unlikely that I'll find lower prices elsewhere" as well as "The prices at this store are very competitive".

10.1.2 Other, indirect price image measures

Researchers often use a more indirect approach to measure consumer price image and price perception.

- Store ranking. Mägi and Julander (2005) use an iteration of this method in their study of a local Swedish grocery market. Listing the five dominant stores in the area, respondents are asked estimate the price level relative the perceived mean price level in the area, within 5-percent brackets. This is then used to rank stores. In Brown (1969) respondents are asked just to rank local stores from least to most expensive.
- Store choice. Simply picking the store which has the lowest (or highest) prices from a list or as a store comparison task.
- Purchase intent. This kind of item aims to measure the consumer's propensity to keep looking for an item at other stores. Kukar-Kinney and Grewal (2007) use this kind of item as a post-purchase variable; "In approximately how many stores would you check the price of this camera after the purchase?"
- Price estimate. This type of question presents the respondent with an item or a basket of items and asks for an estimate of the price at a particular store or retail chain. Alba et al (1994) use a variation of this in one of their experiments, where respondents were presented with a list of sixty items and asked to estimate the cost of the basket at two different stores (they were told the cost fell within $100-$130).

10.1.3 Multi-dimensional construct

This type of construct is exemplified by Zielke (2010). The study and theoretical background of each dimension has been discussed in the paper. The scale used is 1 (strongly disagree) to 7 (strongly agree).

Price-level image

- The prices are generally very low here
- The price level is very high here
- You can buy cheap groceries here
- The prices are cheaper here than in other stores
- This store is more expensive than other stores

Value for money

- The prices here are appropriate in relation to what I get for my money
- The prices here are excessive in relation to what I get for my money
- I get good value for money here
- Compared with other stores, the price-performance ratio is very good here
- The ratio between price and performance is considerably worse here than in other stores

Price perceptibility

- The prices are easily discernible in this store
- You can easily discern how much a particular product costs here
- The prices are harder to discern here compared with other stores

Price processibility

- Comparing the prices of different products requires a lot of effort in this store
- It takes a long time to find the most reasonably-priced product within a product group here
- Price comparisons within a product group reveal that products are costlier here than in other stores

Evaluation certainty

- I can assess this store very well regarding the prices
- I cannot assess this store at all regarding the prices
- I find it difficult to assess the prices in this store

10.2 Price Knowledge

Subjective price knowledge

Taken from Mägi and Julander (2005). The scale used is 1 (strongly disagree) to 10 (strongly agree).

- I am very knowledgeable about grocery prices
- When it comes to food prices I believe that I am quite knowledgeable

- Compared to most other people I know quite little about prices of groceries

10.3 Reference Price and Range Price Perception

As discussed in the paper, the reference price is defined as a "specific price or range of prices consumers use as a standard when evaluating a purchase price". Measuring some aspect of the reference price may be of interest to some researchers.

In their seminal study of range price perception Januszewski and Lichtenstein (1999) use an operationalization of the respondents' **internal reference prices** as "the price you would expect to pay" for a specific item (or basket of items).

Similarly, in the same study the respondents' estimates of the **"market price"** was judged on a 13-point scale anchored as 1, "way too low"; 3, "great deal"; 5, "good deal"; 7, "I would expect to pay"; 9, "more than I would expect"; 11, "most [customers would still] pay"; and 13. "way too high." Finally, a self-report of the **range of evoked prices** was represented by the most and the least the respondent would be willing to pay for the item while holding quality perception constant.

Januszewski and Lichtenstein (1999) measured the perception of three different mean prices depending on the range of 10 prices shown in three different ranges: 1) 0.75-1.25 (moderate scenario), 2) 1.00-1.75 (high) or 3) 0.75-1.50 (low). The mean of each distribution was approximately 1.25. This was replicated with different ranges for mean prices of 1.89 and 2.69.

The dependent variables were the attractiveness of the market prices; rated directly by respondents as unattractive (1) or attractive (7), followed by the above-mentioned self-report of the internal reference price and a self-report of the range of evoked prices. In the experiment, consumers' mean IRP was not affected, but changing the lower and upper endpoints did affect attractiveness of the market price and the range of prices that respondents would pay.

10.4 Known Value Items

Julander and Mägi (2005, questionnaire details communicated by the authors) used the following wording to elicit a list of known value items from consumers in a mid-sized Swedish city. "What products do you usually check prices on when you want to get a sense for the price level of a grocery store? Just note the products you usually check, no need to fill in all ten boxes (there were ten pre-printed blank boxes available)".

Desai and Talukdar (2003) used the following method in a pretest to elicit a basket of twenty products. First a selection was made of 50-60 common items found during store field trips. Pre-test subjects were each shown a subgroup of 16 items and asked how often they bought each product; ranging from "never in a year" (1), "9-12 times a year" (6) to "more than 100 times in a year" (11). Next, the products were rated as to how long the consumption span was; "less than a week" (1) to more than six months (7). The prices of each item were then rated with a scale using the endpoints "high" and "low". "Products with mean ratings of less than 3 (or less than twice a year) on regularity of usage question were considered irregularly used/consumed products and dropped from further analysis. This resulted in the dropping of 8 products; the final 20 were selected from the remaining 56 products" (p 918). The ratings for price and consumption span could then be used to classify products.

D'Andrea et al (2009) measured how many KVIs consumers used. First respondents were asked whether they based their assessment of store prices on a few key products. If yes, they were asked "How many items do you normally memorize the price of to assess the price level of a store?" and subsequently which these were.

10.5 Price Fairness

Price fairness involves consumers'" judgment of whether a price is reasonable, equitable, and just, relative to similar exchanges" and it is an outcome of the retailer's price image.

Chang and Wang (2014) use two simple items to measure price fairness.

- Overall, I think the store's price offer to consumers is fair.
- The price I pay for the merchandise is fair.

In order to learn more about what assumptions, inference and attributions consumers have in particular retail sectors, it may be beneficial to adopt an experimental approach to judge how consumers react to different cues and pieces of information. Bolton et al (2003) provide several examples of such an approach.

10.6 Store Image

As elaborated at length in the paper, store image is a "multidimensional attitude toward a retailer's prices, merchandise quality, assortment, decor, layout, location, and convenience".

Chang and Wang (2014) operationalize store image as follows. Note that no price image items are included, this is measured as a separate construct.

- The retail store would be a pleasant place to shop.
- The customer has an attractive shopping experience in the
- retail store
- The retail store offers good overall service.
- The retail store has helpful salespeople
- The retail store has knowledgeable salespeople

Diallo (2012) used the following constructs to measure store image perceptions.

Layout

- Physical facilities are visually appealing
- Store layout is clear
- It is easy to find articles in promotion

Merchandise

- Merchandise is available when needed
- Store offers high quality merchandise
- Store offers broad assortment

Service

- Employees are knowledgeable
- Employees are courteous
- Employees are willing to find custom solutions

Beristain and Zorilla (2011) used yet another set of factors:

Marketing image

- It is convenient to do my shopping in this hypermarket
- It offers a wide variety of products
- It offers good quality products
- It offers the services I am looking for (e.g., payment by instalments, return of products)
- It offers good prices

Social image

- It is a company that is concerned for the environment
- It makes a commitment to society (donations, social campaigns, etc.)
- It behaves ethically/honestly
- It is concerned with the health and the welfare of consumers

Strategic image

- It is a company with a lot of experience
- It adapts to local culture/customs
- It is a company with a future (growing, making alliances, etc.)
- It makes an effort to launch new products and services

10.7 Retailer as a Brand

10.7.1 Retailer image

Kremer and Viot (2012) use the following validated items to measure what they call "retailer brand image".

- The retailer X is committed to sustainable development
- The retailer X is concerned with the environment
- The retailer X fights for the customers' interests
- The retailer X is close to customers
- The retailer X is convenient
- The retailer X provides a large array of products
- The retailer X offers good quality products
- The retailer X has pleasant stores
- The retailer X has low prices every day
- The retailer X offers good value for money

10.7.2 Brand associations

To be separated from brand or retailer personality, a retailer may attempt to use the direct associations to the brand at the umbrella brand level to create a simple perceptual map of strengths and weaknesses relative to competitors. Examples of such items where respondents answer simply Yes/No to what retailers they associate a particular statement are:

- A grocery chain with the lowest prices
- Inspiration and ideas about good food
- A grocery chain I turn to when I want to try something new
- Have a personal touch
- Are innovative
- Are knowledgeable about food and meals
- Is a good everyday store
- Has high quality products
- Have high prices
- Good at fresh
- Value for money
- Has an assortment that suits me

10.7.3 Self-congruity

In the context of retailing, research on self-congruity has studied how consumers gravitate towards stores that either are perceived to have typical shoppers that relate to the consumer's self (2000), or that have a perceived personality that is congruent with that of the consumer (D'Astous & Lévesque, 2003). In the former approach, consumers would tend to shop at stores where "people like me/my ideal me/my social me/my ideal social me… shop."

Self-congruity is one aspect of the outcomes of price image and store image which we have not covered in the paper. However, it has been studied in the literature, and should be of interest to some researchers.

O'Cass and Grace (2008) investigate self– and store image congruency. We rephrase some of items from the article.

- This store is consistent with my self-image
- This store reflects who I am
- People similar to me use this store
- The other customers in this store feel just like me

10.8 Price perceptions and the role of price for consumers

Lichtenstein et al (1993) investigated consumers' shopping behavior relative to price's positive and negative role for price search, sale responsiveness, coupon redemption, generic product purchases

and price recall. The authors used seven validated price-related constructs which may be useful in some aspects of price-related research. The constructs were:

- Value consciousness (e.g., "When purchasing a product, I always try to maximize the quality I get for the money I spend").
- Price consciousness (e.g., "The money saved by finding low prices is usually not worth the time and effort"; reverse-coded).
- Coupon proneness (e.g., "Redeeming coupons makes me feel good").
- Sale proneness (e.g., "If a product is on sale that can be reason for me to buy it").
- Price mavenism (e.g., "My friends think of me as a good source of price information").
- Price-quality schema (e.g., "You always have to pay a bit more for the best").
- Prestige sensitivity (e.g., "I think others make judgments about me by the kinds of products and brands I buy").

10.9 Consumer Inferences about Stores and Price Image

As we have noted, consumers often categorize stores and retailers based previous experiences and beliefs, as well as infer their properties based on different cues.

10.9.1 Inferences about Store Attributes

Buyukkurt and Buyukkurt (1986) measured the degree and direction of perceived correlation between various store attributes and store price image. This could be a useful framework for identifying consumer beliefs about different cues and store price image. The items should of course be updated as needed.

My grocery bill will be…						
Store A	Higher at store A	Somewhat higher at store A	About the same at store A and store B	Somewhat higher at store B	Higher at store B	**Store B**
You often have to wait a long time in the check-out line						You rarely wait a long time in the check-out line
Has been open four years						Has been open two weeks
One of the smaller food retailers in the city						One of the largest food retailers in the city
Plain store décor and lighting						Elegant store décor and lighting
Large offering of non-food products						Small offering of non-food products
Family-owned independent store						Part of a chain with a large number of stores
Untidy, messy						Tidy, neat
Products are displayed in carton boxes						Products are displayed on the shelves
No services such as bagging and carry-out						Services such as carry-out and bagging offered

Figure 17: Beliefs about stores and relationship to price perception. Buyukkurt and Buyukkurt (1986).

10.9.2 Attributions and Inferences about Retailer Behavior

As reported in the paper, Zielke (2014) investigated the role of emotions and attributions in shopping at discounters. This is an interesting approach which yielded many useful insights. Emotions and beliefs were measured as follows.

Inferior quality

- Prices are low because products contain more artificial ingredients
- Prices are low because the retailer doesn't attach great importance to quality management
- Prices are low because the retailer compromises product quality

Unfair relations

- Prices are low because the retailer exploits the employees
- Prices are low because the retailer exploits the suppliers
- Prices are low because the retailer behaves unethically towards suppliers and farmers

Tricks

- This store is only perceived as low-priced because the retailer uses psychological tricks
- Prices in this store are not as low as many people believe

Efficiency

- Prices are low because the retailer purchases products at lower prices
- Prices are low because the business model is more efficient
- Prices are low because the retailer buys larger quantities

Value perception

- The prices here are appropriate in relation to what I get for my money
- Compared to other stores, the price-performance ratio is very good here
- I get good value for money here

Enjoyment

- I am often delighted by the prices in this store
- When I think about the prices in this store, I am happy
- I am joyful about the prices in this store

Shame

- I feel embarrassed buying food in this store
- I feel a bit embarrassed when I have to shop here
- I feel awkward offering guests food from this store

Guilt

- I have a bad conscience when I buy groceries here
- It is not correct to buy food from this store
- I feel irresponsible when I buy groceries here

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