Licentiate Dissertation

Assumptions of Retail Price Strategy and Price Tactic Decisions

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Abstract

This licentiate thesis sets out to analyse how a retail price decision frame can be understood. It is argued that it is possible to view price determination within retailing by determining the level of rationality and using behavioural theories. In this way, it is possible to use assumptions derived from economics and marketing to establish a decision frame. By taking a management perspective, it is possible to take into consideration how it is assumed that the retailer should strategically manage price decisions, which decisions might be assumed to be price decisions, and which decisions can be assumed to be under the control of the retailer.

Theoretically, this licentiate thesis has its foundations in different assumptions about decision frames regarding the level of information collected, the goal of the decisions, and the outcomes of the decisions. Since the concepts that are to be analysed within this thesis are price decisions, the latter part of the theory discusses price decision in specific: sequential price decisions, at the point of the decision, and trade-offs when making a decision. Here, it is evident that a conceptual decision frame that is intended to illustrate price decisions includes several aspects: several decision alternatives and what assumptions of rationality that can be made in relation to the decision frame.

A semi-structured literature review was conducted. As a result, it became apparent that two important things in the decision frame were unclear: time assumptions regarding the decisions and the amount of information that is assumed in relation to the different decision alternatives. By using the same articles that were used to adjust the decision frame, a topical study was made in order to determine the time specific assumptions, as well as the analytical level based on the assumed information necessary for individual decision alternatives. This, together with an experimental study, was necessary to be able to discuss the consequences of the rationality assumption.

When the retail literature is analysed for the level of rationality and consequences of assuming certain assumptions of rationality, three main things becomes apparent. First, the level of rationality or the assumptions of rationality are seldom made or accounted for in the literature. In fact, there are indications that perfect and bounded rationality assumptions are used simultaneously within studies. Second, although bounded rationality is a recognised theoretical perspective, very few articles seem to use these assumptions. Third, since the outcome of a price decision seems to provide no incremental sale, it is questionable which assumptions of rationality that should be used. It might even be the case that no assumptions of rationality at all should be used.

In a broader perspective, the findings from this licentiate thesis show that the assumptions of rationality within retail research is unclear. There is an imbalance between the perspectives used, where the main assumptions seem to be concentrated to perfect rationality. However, it is suggested that by clarifying which assumptions of rationality that is used and using bounded rationality assumptions within research would result in a clearer picture of the multifaceted price decisions that could be assumed within retailing.

The theoretical contribution of this thesis mainly surround the identification of how the level of rationality provides limiting assumptions within retail research. Furthermore, since indications show that learning might not occur within this specific context it is questioned whether the basic learning assumption within bounded rationality should be used in this context.
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Arriving at the half-waypoint in the PhD-studies, a journey with as many vicissitudes as a rollercoaster or a mountain road in the Alps, it is evident that the PhD life is coloured with no real answers or any single way to go. Like the rollercoaster, or the road up to the mountain top, you slowly work your way up to be on top of the world and then you go back down to figure out which top you are to reach next. Fortunately, several persons have joined me on my very own journey.

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Borlänge, October 2015

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List of Abbreviations
ACM: assortment category management (several products that could be complements or substitutes)
BM: brand management (one brand within one product category)
CM: category management (one product within the assortment)
Chain strategy: a whole chain/several identical stores
DM: department management (one department/isle in the store)
EDLP: everyday-low-prices (usually at the store/chain level)
HiLo/PROMO: high-low prices (usually at the store/chain level)
MDM: multiple department management (several departments/isles in the store)
SKU: Store-keeping unit (the individual product)
Store strategy: an individual store

List of Definitions
Decision premises: can be based on the available decision alternatives and is what the decision maker uses to evaluate good or bad decisions.
Intendedly rational: a decision maker that is adaptive but goal oriented.
Substantive limits: cooperation with actors is higher than necessary.
Sub-goal identification: an assumption made to identify decisions that are of empirical importance.
Sub-strategies: decisions that can be considered as empirically important due to sub-goal identification.
Problem frame: a conceptual framework that illustrates a decision maker’s decision alternatives and the connections between the decision alternatives.
Procedural rationality limits: assumptions about limited planning time, the existence of multiple goals with a satisfying assumption, and sequential price decisions.
Theoretical rationality assumption: if the decision maker is assumed to be bounded rational or perfect rational when making a decision.
1. Introduction

It has been noted that the management perspective within price research has had a limited impact (Diamantopoulos 1991; Leone et al. 2012), and is seldom used in journal articles (Hallberg 2008). The same lack of managerial focus has been identified within retail research, where the focus is often on the consumer or the manufacturer rather than the retailer per se (Fassnacht and El Husseini 2013). This lack of management perspective might be what Öz er and Phillips (2012) point towards when they claim that the assumptions made within price research about a decision maker is often too simplistic.

In their effort to highlight the theoretical constructs, differences and contributions from Marketing and Economics on pricing issues, Skouras et al. (2005) concluded that theories connected to price determination included everything from the neoclassical price theory to e.g. the pricing objective that is being pursued, the pricing policy that has been adopted, and other factors which influence a specific decision. Based on the basic aspects of a transaction, Skouras et al. (2005) pointed out that it is in the behavioural theories, and the level of rationality which has been accounted for, that the two disciplines jointly touch upon managerial price determination, including decisions on price strategy and price tactics. It has been argued that the relationship between specific price strategies and price tactics are seldom investigated (Grewal and Levy 2007) but within a decision frame it is possible to analyse different decision alternatives for a decision maker (Simon 1979). A retailer decision frame can thereby explain and illustrate the assumptions of rationality made about the retailer. Even though price decisions can implicitly have a strategic or tactical nature (Ingenbleek 2002), price strategy and price tactical concepts have been used interchangeably when researching price determination (Diamantopoulos 1991). For example, while Carricano (2014) tried to separate the price strategy decision from a more operational level by using the concept of price structure (e.g. discounts) and offering structures (e.g. product combinations), Rao (1984) argued that price can be seen as interrelated decision making variables related to long-term strategies and short-term tactics (e.g. the structure of discount) (Rao 1984).

The interrelated decision-making is due to the fact that price decisions are dependent upon each other and simultaneously made. For example, it has been shown that interrelated decisions are made when:

1. the consumer market and company objectives are used to decide the price strategy (Tellis 1986),
2. a decision regarding a pricing method is made within an organisation (Cannon and Morgan 1990),
3. there is a pricing situation (Noble and Grucu 1999),
4. setting the price for a new product (Shipley and Jobber 2001), and
5. the overall implementation of the pricing process is made (Hwang et al. 2011).

To understand the retailer’s price determination three aspects need to be considered. Firstly, approaching price decisions from the perspective of the manager implies that the topic covers the issue of how the manager strategically manages price decisions (Leone et al. 2012). This means that assumptions of the retailer’s goals and purpose for making the decisions need to be considered.

Secondly, the approach needs to include the management of various decisions surrounding price determination within the organisation (Diamantopoulos 1991). However, the set price, i.e. the price level, is according to Carricano (2014) a consequence of price decisions and not in itself strategic and tactical. Instead, strategic and tactical decisions are made within an organisation, which leads to the third aspect: the decisions that the retailer is in control over.

Thirdly, the approach needs to include the assumptions and thoughts of which decisions over which the retailer has control, as well as the effects of these decisions (Gauri 2013). While Kopalle et al. (2009) argue that retail price strategies are affected by both internal and external influences, Gauri (2013) concludes that the external effects (that are market related exogenous inputs) are something that the retailer cannot control or determine. The retailer is instead assumed to have control over the internal inputs/influences. However, these inputs/influences have not been the object of focus in previous retail studies (Gauri 2013). Internal influences/effects are related to store specific aspects, aspects concerning in-channel competition within a store, and may not always be perceived as pure price decisions (Kopalle et al. 2009). The reason for the latter is due to the effects mentioned by Gauri (2013). These effects imply that aspects of promotion, complementary products, brands and the general assortment of the store (Kopalle et al. 2009) needs to be considered when looking at the assumption of rationality, especially in terms of which information one assumes that the retailer collects and uses in their decision making. These internal price determinants (e.g. market share, complementary and/or substitute products within the store premises) (Carricano 2014), require that the assumptions of the retailer’s information gathering process are considered.

On the bases of information, the price decisions that lead to an internal effect could be thought of as having a strategic and/or a tactical nature in relation to a conceptual decision frame. This would indicate that the assumptions of rationality of the retailer in terms of price strategy and tactical pricing decision concepts have not been the focus within
research. Furthermore, a lack of management perspective within retail studies could also imply that theoretical assumptions are not based on the retailer as the decision maker.

The purpose of this thesis is to add to existent research by analysing and adding knowledge to how the retailer’s decision frame for price setting can be understood.

1.1 Academic contribution and outline of the thesis

The thesis contributes to the academic body of knowledge by theoretically examining price strategy and tactical pricing decisions by developing a framework to understand the retailer’s decision-making process. It is argued in this thesis that the aspect of price strategy and tactical price decisions should be understood as multiple strategical and tactical price decisions for the retailer (i.e. more than two), and that the different price strategy decisions and tactical price decisions have inherent rationality assumptions. It is these rationality assumptions that creates a connection between different price decisions.

The outline of the thesis is as follows.

The second chapter covers the basic assumptions of rationality. Since the perspective of perfect rationality has more strict assumptions than bounded rationality, the main section of this chapter focuses on the latter in order to be able to establish the basic components of a decision frame. The components of the decision frame are illustrated and discussed at the end of the chapter (figure 6).

The third chapter is a retail review analysis of previous retail studies. Although conducted in a subjective manner, the analysis takes its departure in chapter two in order to be able to identify the underlying assumptions of rationality made about the retailer’s price decisions in previous retail research. Therefore, the structure of chapter three is the same as for chapter two and ends in an illustration of the components of a retailer’s decision frame (figure 12).

Chapter four describes the methodological choices used in the two papers that are included in the appendix, as well as the aforementioned retail review analysis. Here, it is explained why subjective reviews are used and the basic choices made in the experimental paper in order to be able to conduct a field experiment.

Chapter five contains a summary of the two papers found in the appendix. The chapter ends with a discussion of the connection between the two papers, their individual contributions, and their connection to the decision frame presented in chapter three.

In chapter six, the discussion is based on creating the decision frame for the retailer to be able to discuss the consequences of making specific assumptions of rationality. The discussion is conducted in two steps. The first step is an illustration of a retailer’s decision frame that is created by highlighting the operational concepts, the time horizon assumptions of these concepts as decision alternatives, and the information that is necessary for the individual decision alternative. In the second step, possible bounded rationality assumptions of the retailer at the point of making a price decision is discussed where the aspect of repeated decisions are consider.

In chapter seven, the overall conclusions show that although the retailer can be assumed to face a multifaceted decision frame, this is often treated by perfect rationality assumptions. Despite of this, this licentiate thesis indicates several aspects that points towards allowing less strict assumptions within research. It is also pointed out that assuming simultaneous decisions or independent decisions determine whether tactical and strategical decisions are to be seen as a part of the same decision frame. Further research indicates a necessity to conduct research that is more experimental in order to test the different theoretical assumptions, as well as the possibility to use a mixture of qualitative and quantitative methods in the development and assessment of assumptions.
2. Decision making

To be able to analyse the assumptions within previous retail research, it is necessary to determine what type of decision needs to be in focus when reviewing the literature. Furthermore, to determine the consequences of certain assumptions, the type of decision needs to be combined with the assumption of a decision maker’s behaviour when making price decisions. To determine the type of decision, price research (e.g. Oxenfeldt 1975; Tellis 1986; Cannon and Morgan 1990; Diamantopoulos and Mathews 1995; Noble and Gruca 1999; Shipley and Jobber 2001; Skouras et al. 2005; Hwang et al. 2011) in combination with basic thoughts about strategy and tactics (e.g. Bateman and Zeithaml 1989; Rumelt et al. 1991), are discussed within this chapter. Furthermore, to understand what assumptions that are made about the decision maker and how assumptions about a decision frame with specific decision alternatives is created. Simon’s (1959; 1979; 1986) thoughts about bounded rationality are complemented with Jones (1999) article on bounded rationality.

2.1 Bounded rationality

Simon (1979) explain that bounded rationality assumes that the decision maker has some knowledge of the consequences of a decision and there is an uncertainty about the external environment. Furthermore, these types of assumptions also mean that a decision maker does not possess the capability of managing the complexity of diverse and heterogeneous decisions. Hence, the assumptions are flexible, could have an excluding effect in terms of decision alternatives, as well as providing the assumption that the decision maker goes through learning and adapting processes (Simon 1986). Simon (1986) thereby argues that a theory based on bounded rationality assumptions, includes both a reasoning process and a decision frame of the decision maker’s (possible) subjective representation of reality. Although the predictive power of a theory is considered to be negatively influenced by bounded rationality assumptions, bounded rationality provides a richer set of theoretical properties.

The theoretical properties allow assumptions, not only on decision outcomes, but also on the premises of the decisions made (Simon 1979). The premise of a decision is illustrated as the empirical fact that a decision maker uses when evaluating good or bad decisions. By using the decision alternatives to determine what the decision premises is, it is possible to create a conceptual framework of a decision frame. By using the decision alternatives as the decision premise, the focus in the assumptions would shift from focusing solely on the outcome of a decision (as is done within perfect rationality) to combining the outcome of a decision with different decision alternatives (as is done within bounded rationality). (Simon 1959) Specifically, a decision frame would then evaluate both the reasoning process of the decision maker and the outcome of specific decisions (Simon 1986). Even though using bounded rationality influences the predictive power of a theory, it provides the possibility of looking at decisions in particular situations at the micro-level. In this way, the reality of the theoretical constructs increases (Simon 1979).

2.1.1 Researching the micro-level

Investigating something on the micro-level means that the focus is on the behaviour of a decision maker within a firm, rather than on the market per se (Simon 1959). This would then mean that when studying rationality assumptions on the micro-level, the micro-level theories/concepts of a decision maker and specific decisions alternatives are in focus. These concepts or theories can have two functions within a decision frame, given the aforementioned discussion. Firstly, the concepts can be used to describe the decision maker’s decision mechanisms, i.e. decision alternatives as empirical facts, and thereby create the decision frame of a decision maker. Secondly, the micro-level concepts can be used to evaluate the consequences of specific decisions. In sum, the micro-level theories/concepts would then be assumed to be the possible decisions that a decision maker needs to evaluate at the time of making a decision. It is at this point that the assumptions of rationality can be used to evaluate the specific decisions. By constructing a decision frame in this way, Simon (1979) argues that the real life situation for the decision maker can be explained. Furthermore, Jones (1999) argues that it is possible to test which micro-level theory/concept will most likely reflect the reality of a decision maker.

There are three main differences between assumptions in a decision frame. First, the assumptions of the decision maker’s goals differ between bounded rationality and perfect rationality. In the evaluation of the alternatives it becomes a question of whether the decision maker is assumed to maximise/optimise or reach a satisfying level on the set goals within the organisation (Simon 1979). While the former assumption belongs to perfect rationality, the latter assumption belongs to bounded rationality. A satisfying goal, a goal that meet the decision maker’s criterion, implies that real life is not as simple as just maximisation of e.g. profit (Simon 1959). However, the existence of a satisfying goal does not exclude the assumption of a goal driven decision maker. Instead, the assumption within bounded rationality is that the decision maker is intendedly rational. Jones (1999) describes an intendedly rational decision maker as adaptive but goal oriented. If a decision maker is intendedly rational, a failed decision in the evaluation does not necessarily mean that the
decision maker is irrational. Instead, the failed decision can be a result from the cognitive constraints of the decision maker, where the bounded rationality assumption is that the decision maker learns over time, i.e., adapting/learning is assumed to occur over time. Cognitive constraints are something for which perfect rationality does not account for. However, these cognitive constraints lead to the second aspect that is of importance when evaluating the assumptions of perfect rationality and bounded rationality.

The second aspect concerns the decision maker’s search for decision alternatives. The difference between perfect rationality and bounded rationality is that the former assumes that the decision maker has all of the information, while the latter assumes a restricted assumption of searching for alternatives (Simon 1979). The latter implies an assumption that the decision maker does not have the possibility to have full knowledge and that the decision maker takes into consideration a limited number of alternatives. Since perfect rationality assumes a decision maker that already possesses all knowledge, it provides a rather static description of a decision maker’s decision situation. However, since bounded rationality assumes that the decision maker searches for information over time, these assumptions provide a more dynamic decision situation by assuming a learning process. (Simon 1986)

The assumption of searching for information in combination with the goal-oriented assumption discussed earlier, leads to the third aspect that needs to be considered: that a decision maker learns from successes and failures over time. In a way, successes and failures act as response mechanisms which prompt the decision maker to adapt and learn (Simon 1979). Hence, evaluating the outcome and decision alternatives in terms of success or failures would lead to the possibility to discuss the hypothetical behaviour of a decision maker, and whether or not learning can be considered to take place. However, it is not assumed that the decision maker goes through a learning process when one assumes perfect rationality (Jones 1999). Most likely due to the freedom of framing the decision frame, Simon (1986) argues that bounded rationality assumptions makes it possible to include or exclude specific decision alternatives which would make it possible to also discuss and analyse the success and failures of specific decision alternatives, if the decision alternatives are used as the decision premises.

Although the decision frame, as a conceptual framework, might seem straightforward, there are no specific starting points when creating this type of theoretical illustration. However, since price strategic and tactical price decisions could be understood as interrelated decision alternatives, it is necessary to discuss whether this interrelationship between decisions is due to the idea that decisions are simultaneously made or if the decisions are assumed to occur in a sequential order.

### 2.2 Sequential or simultaneously made decisions - the aspects of price strategy and price tactics

A discussion regarding the logical separation and connection of price decisions, broadly labelled price strategy and price tactics within this thesis, begins with a general view of what strategy is: managerial decisions regarding the direction of the firm (Rumelt et al. 1991) which are not easily reversed (Casadesus-Masanell and Ricart 2010). The strategic decisions could concern everything from e.g. policies on how to compete, selection of goals, defining policies, etc. and Rumelt et al. (1991) argue that several strategic decisions determine what the strategy is rather than one decision. This would indicate that determining or labelling something as a price strategy involves more aspects than solely the price per se, i.e., the set price, as was also argued by Carricano (2014). Any assumptions of the rationality of a price strategy decision would then include information regarding more aspects of the organisation than the set price.

In addition to that a strategic price decision includes more information than just the set price, Casadesus-Masanell and Ricart (2010) argue that when a strategic decision is made this sets additional or further boundaries for the decision maker on which decisions (she) can make in the future. According to Casadesus-Masanell and Ricart (2010), these residual decisions can be seen as choices and could be perceived as tactical decisions. This would imply that when a price strategy is assumed to be determined, all other decision alternatives (choices) becomes tactical. This line of argumentation, a strategic choice is followed by residual choices, is used by Oxenfeldt (1975) and Diamantopoulos and Mathews (1995) when they try to connect price strategy and tactical price decisions. By defining price strategy and tactical price decisions as choices that follow each other, Oxenfeldt (1975) argues that one can assume that the decision maker has an “[...] explicit line of thinking and accompanying actions designed to achieve a stated objective by effective means” (Oxenfeldt 1975:5). Jones (1999) could be seen as describing the same successive (and limiting) decision process in terms of that “[...] we [the decision maker] take one step down the path toward a solution, we [the decision maker] preclude other options and we [the decision maker] open new opportunities [...]” (Jones 1999:308). Although it then seems as it is assumed that price decisions sequentially follow each other, it does so with the consequence of assuming solely one strategic price decision, while all other price decisions are assumed tactical/residual decisions (see fig 1 below).
Assumptions of Retail Price Strategy and Price Tactic Decision

Figure 1 Sequential price decisions

Considering all other price decisions as tactical might be a problem since decisions often are repeated over time within an organisation (Jones 1999) and that they could be assumed interrelated (e.g. Noble and Gruca 1999; Shipley and Jobber 2001; Hwang et al. 2011). If a tactical decision is repeated over time, it could be assumed to be a long-term strategic decision due to an assumption about time. As a result, the interrelationship between a strategic price decision and a tactical price decision would be even higher, which could lead to assuming that all decisions are strategic and the outcome of a decision would be hard to measure. However, within the literature regarding price, an assumption is that a decision maker has the possibility to trace back a potential outcome of a tactical decision by including sub-strategies when structuring price decisions (Diamantopoulos and Mathews 1995). If sub-strategies are assumed to be used to enable the evaluation of outcomes, this would imply that the sub-strategies, by themselves, reflect one part of the strategy, i.e. to create sub-strategies one breaks down the strategy into smaller pieces. This would mean that by including an assumption about sub-strategies one would assume three types of price decisions by a decision maker. Since it is already assumed that decisions occur in a sequential order, this would lead to an assumption that a strategic price decision is followed by a sub-strategic decision, which in turn is followed by a tactical decision. The assumption then is a sequential price decision process in the mind of the manager, i.e. that different price decisions follows each other. By using this approach to pricing issues, Duke (1994) argues that one would be capable of organising price issues at different levels and thereby connect the decisions to each other, which enables an evaluation of possible alternatives.

Even though the aspects of sub-strategies are not considered in the articles by Simon (1959; 1979; 1986), he (Simon 1979) mentioned an assumption of sub-goal identification that is made within bounded rationality. Sub-goal identification helps identify decisions that are of empirical importance and are determined by the knowledge, experience and organisational environment (Simon 1979). Since sub-goal identification is of empirical importance it can be directly connected to the aforementioned decision premises within a decision frame (e.g. Simon 1979; Bateman and Zeithaml 1989). If sub-goal identification is assumed, this means that it is assumed that a decision maker strive to achieve other goals than the overall strategy (Simon 1979), i.e. the decision maker strive to accomplish solely one of the sub-strategies instead of all of the sub-strategies. If this is assumed, one also needs to assume that any rational connection between price strategy and sub-strategies cannot be made. If one where to assume that there is only one strategic price decision, as well as the rest of the decisions were solely tactical, sub-goal identification would not be a possibility. However, if sub-strategies are included, it is possible to evaluate the assumption of sub-goal identification in relation to specific sub-strategies (see figure 2).

Figure 2 Sequential price decisions and sub-goal identification

The assumption of sequential decisions means that a series of decisions are assumed to be connected to each over time (Bateman and Zeithaml 1989). The assumption would then be that over time it would be possible to evaluate the outcome of the strategic decision since it would be assumed that the sub-strategies and tactical price decisions have different time assumptions (compared to the strategy). However, within prior research, it is often assumed that price decisions are made simultaneously (Tellis 1986; Cannon and Morgan 1990; Noble and Gruca 1999; Shipley and Jobber 2001; Hwang et al. 2011) with no clear time aspect connected to the different decisions. However, in terms of time horizons of decisions, Che et al. (2007) conclude that a bounded rational monopolistic retailer, who takes into consideration household state dependence when making price decisions, uses a twelve-week planning horizon. This length (12 weeks) was considered long term when setting a price. However, there is no clear assumption of the time
aspects regarding long-term and short-term price decisions. Although this is the case, time assumptions are essential to be able to determine the difference between a strategic decision and sub-strategic decision, or for that matter, a tactical decision and a sub-strategic decision (see figure 3).

Figure 3 The components of sequential price decisions

The sequential price decisions indicate that there are three different decisions for a decision maker, or levels if one is to follow the argumentation that Duke (1994) has regarding organising decisions on different levels. However, this does not include assumptions of the actual decision situation and the potential bias due to the psychological base of the decision maker at the point of making a decision. As argued by Jones (1999), assumptions regarding the decision maker from a bounded rationality perspective should include an examination of the behaviour of the decision maker.

2.3 At the point of a decision

At the point of the decision, the focus on the assumptions would be on the decision maker’s reasoning process, i.e. which factors are included when making a decision. Here, several assumptions about the decision maker can be made. First, that a decision maker has decision preferences. Second, that there are different types of price decisions that a decision maker can be assumed to make. Third, other actors may or may not influence a decision maker. Fourth, that one assume that the decision maker goes through a learning process and relies on past knowledge. Fifth, how the decision maker is assumed to consider the present- and future situation. Sixth, if there are assumptions about a framing illusion, i.e. the assumptions of a miss-specified decision frame.

2.3.1 Decision preferences

In terms of decision preferences, Simon (1959) argues that an assumption is that when a decision maker is faced with only two alternatives (s)he can favour one or the other, or see them as indifferent. What this would imply is that if only two price decisions were assumed, the decision maker would be assumed to have either a pre-set perception that one decision is better than the other, or that the decision maker would consider the two decision alternatives equally good (or bad). Although it is evident in the discussions regarding sequential price decisions that one can assume at least three levels of decisions when including sub-strategies, which probably lead to more decision alternatives than the two decision preferences that are discussed by Simon (1959). However, the indication of a limited set of decision alternatives due to decision preferences indicates a limitation assumption.

This limitation assumption could be related to what Jones (1999) refers to as procedural limits and is connected to the assumption that a decision maker has limited capability of long-term and sequentially planning when making decisions. This assumption is connected to the satisfying aspiration assumption within bounded rationality. Additionally, it is assumed that multiple goals exist with the aim of simply reaching satisfying levels instead of reaching maximising levels, that decisions are made sequentially instead of simultaneously (due to short-term memory), and that the search behaviour of the decision maker is limited to a satisfying level of information. This will of course influence which decision is made and which decision that is assumed to be important for the decision maker. As a result, the assumed behaviour of a decision maker is based on a limited search to understand the problem, as well as a limited search on decision alternatives. (Jones 1999) Although Jones (1999) does not specify the number of alternatives to include in the procedural limitation assumptions, he bases his theoretical arguments solely on Simon’s thoughts. If, from the beginning, one assumes the existence of only two decision alternatives, this might exclude relevant or possible decision alternatives that a decision maker may actually consider in reality. This would render a decision frame that is miss-specified in its conceptual components. As will be evident when discussing specific price decisions in the next section, it is clear that within the price literature it is seldom solely a matter of assuming two price decision alternatives. Instead, the search for information that is required by a decision maker to understand the problem is highly complex when multiple decision alternatives are assumed.
2.3.2 The Specific Price Decision

One could conclude that specific price decisions have been researched at length. For example, it has been argued that a price decision is in fact a complex and multifaceted decision that is comprised of six aspects.

First, price decisions have both a strategic and tactical nature (Ingenbleek 2002). This aspect implies that when one makes assumptions about sequential price decisions one needs to take into consideration the type of decision. Second, since the decision could be seen as a way of achieving profitability, it can be based on three principles: the decision is consumer value-based, it is proactive, and it is profit-driven (Nagle et al. 2011). These aspects imply that the decision maker, to some extent, needs to know the market and be a market leader in order to achieve profitability. Third, price decisions are closely interlinked with decisions regarding the product strategy, the market pricing strategy in terms of creating an image and the actual price made on a day-to-day basis (Monroe 2003). Since the price decisions are closely interlinked with the market and the specific products, some decisions might not be assumed to be pure price decisions. This aspect has also previously been examined by Kopalle et al. (2009) in the introduction of this licentiate thesis. Fourth, that since the price decision is consumer focused an organisation needs a pricing method1 that is controllable for the organisation (Cannon and Morgan 1990). Since a pricing method very broadly involves which information the decision maker includes in the decision-making, this aspect indicates that one needs to consider what information and decisions that the decision maker is in control of. Fifth, price decisions are made due to many reasons, e.g. a new product, competition, the product line, etc. (Noble and Gruca 1999; Shipley and Jobber 2001) which indicates that one need to assume the reason for why a specific price decision is made. Sixth, price decisions are made throughout the pricing process implementation (Hwang et al. 2011) which once again indicates that decisions are made on a sequential basis rather than simultaneously.

With the exception of Cannon and Morgan (1990) and Noble and Gruca (1999), the ideas brought forward by the others (e.g. Shipley and Jobber 2001; Ingenbleek 2002; Monroe 2003; Hwang et al. 2011; Nagle et al. 2011) show that when making an assumption about a price decision, one needs to consider more than simply the price. In the light of the assumption of information gathering in terms of decision preferences when more decision alternatives are included, the level of information that a decision maker needs to gather increases and so does the level of complexity of the decision. The complexity of the individual decisions create boundaries for the decision maker and thereby also create conceptual boundaries, implications, limitations, and assumptions for a decision frame since this is supposed to consist of decision alternatives that reflect the empirical setting, i.e. the decision maker’s reality. Examples of boundaries that can be set to a price decision can be that it is:

- solely a part of the marketing strategy (e.g. Dorward 1987), or
- a strategy in itself if the result of the strategy is solely related to price (Oxenfeldt 1973), or
- the price level of the company (Hague 1971; Lee 1992), or
- be divided into decisions with a strategic (signalling, portfolio and planning decisions) or a tactical (policy, price and deviation decisions) nature (Ingenbleek 2002), or
- related to other price decisions (Monroe 2003; Nagle et al. 2011).

That price decisions can be assumed to be related to each other is explained by the assumption that certain decisions are interrelated and that one decision cannot be made without considering the other available decisions. In combination with the procedural limitations discussed in decision preferences, this could imply that decision alternatives cannot be ignored when making assumptions. For example, Nagle et al. (2011) view the decisions of the price level (e.g. price setting), the pricing policy (e.g. tactics and discounting), the price and value communication (e.g. selling tools), the price structure (e.g. controls), and the value creation (e.g. economic value, segmentation) as interrelated. If alternatives cannot be ignored, this would imply that one needs to make the assumption that a decision maker has at least five types of decisions that are interrelated to each other. Furthermore, and to a high degree connected to the reasoning of Duke (1994) regarding decisions on different levels, Shipley and Jobber (2001) argue that price decisions are a multistage process where evaluation needs to be made in relation to each individual decision. If this is a base of the assumptions of rationality, Hwang et al. (2011) state that the success of a price decision depends on the information that the decision maker has at the time of the decision.

Overall, when the decision preferences and the specific available decisions alternatives are combined with the assumption of sequential price decisions it leads to a necessity to consider procedural rationality limits (see figure 4 below).

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1 e.g. cost-plus pricing, target-profit pricing, perceived-value pricing

Madeleen Lagn Assumptions of Retail Price Strategy and Price Tactic Decision 7
As explained before, but worth repeating, Jones (1999) summarises the fundamental characteristics of the procedural rationality limits in four important notions. First, there are limitations in the possibility of long term planning due to bounded cognitive behaviour of a decision maker and the complexity of the environment in which the firms operate. Second, the decision maker is often faced with multiple goals and a satisfying level for each individual goal need to be reached. Third, decisions are often viewed as following each other rather than being made simultaneously. Fourth, rather than to have the goal of maximisation there is a tendency to have a satisfying goal, where all dimensions related to an alternative need to be satisfied, otherwise new information is to be sought. In sum, all the characteristics can be restrictions connected to the processing process of the decision maker. In addition to these procedural limits, another aspect that Jones (1999) brings forward in his article is the aspect of whether the decision maker has a too high cooperation level with other actors, which can affect the reasoning assumptions of a decision maker.

2.3.3 Other actors

Within bounded rationality, it is assumed that the market is imperfect and within this type of market it is possible for one actor to influence another actor (Simon 1959). Even if this is possible, the assumption is that the decision maker makes the decision that is best for his or her own business. However, if the decision maker chooses to make decisions that are not in favour of his or her own business, it can be a sign of that (s)he is affected by substantive limits. Jones (1999) argues that the assumption of substantive limits is based on the notion that the cooperation level is higher than what is rationally necessary. This could affect the outcome of a decision negatively for one party. However, Jones (1999) also adds that cooperation might be necessary as a reasoned response to the task environment, i.e. if the market demands it, and is based on that a decision maker assumes or believes that both parties will benefit from a specific decision in the long run. Although the long run is not defined by Jones (1999), this latter point indicates that the outcome is not necessary in focus but that decisions might be made due to the relationship with a specific actor. As a result, substantive limits would be assumed if there is an assumption that other actors influence the decision maker and this in turn affects the decision situation, and can be a reason for assuming sub-goal identification which results in sub-goal identification (see figure 5 at the end of this sub-chapter). Even if this is the case, one thing that is essential in the discussion are the psychological aspects of the decision maker in terms of information and assumptions about a miss-specified decision frame.
2.3.4 Psychological aspects of a decision maker

According to Bateman and Zeithaml (1989) a decision maker can base a decision on (1) the past knowledge (learning from mistakes), (2) the present situation (considering organisational resources or a competitive environment), and/or (3) the belief of how the future will turn out to be (positive or negative). Information about the past, the present and the future becomes important to consider since it can be assumed to incur trade-offs between the goal of a decision and the outcomes of specific decision alternatives. Hence, it concerns information regarding decision alternatives from various perspectives. Although one might assume that these three aspects are separate, they are highly intertwined and will be discussed in more details in the upcoming sub-chapter when goals and outcomes are discussed. However, to be able to discuss the assumption of a miss-specified decision frame, it is necessary to discuss the aspect of learning from mistakes within this chapter.

While learning is something that is assumed within bounded rationality it also relates to the assumption that an organisation adapts over time (Simon 1979) i.e. some type of learning process takes place. The learning assumption is connected to the decision maker’s possibility to evaluate previous decisions (Simon 1959) and thereby also the decision maker’s preferences and specific decision alternatives. If the decision maker is not assumed to adapt, and thereby not assumed to go through a learning process, then the assumptions about cognitive constraints are missing. If this is the case, one does not assume the evaluation of decision alternatives that makes it possible to evaluate the success and failure of a decision (Simon 1979). However, since decisions often are connected to significant investments or an intent to maintain an original course of action, it is common that previous failed decisions are continued within an organisation due to one or both of those two aspects.

If this behaviour is assumed and the decision maker is assumed to miss or receiving flawed predictive information (maybe from another actor), Bateman and Zeithaml (1989) argue that this type of behaviour can be costly. The behaviour can result in that the decision maker, due to cognitive and emotional influences, starts to identify with sub-goals and thereby restrict the possibility of making decisions which would result in a better outcome (Jones 1999). If this type of behaviour occurs, it can be a sign that the decision maker is attempting to demonstrate that the previous decision was rationally right or that the decision frame used from the beginning created limitations for subsequent decisions (Bateman and Zeithaml 1989). Although this framing illusion provides the possibility to determine if some decisions are to be assumed as not comparable, striving for sub-goals leads to the conclusion that the decision frame was miss-specified from the start and sub-goal identification is assumed to be a problem. This would then be connected to the sequential price decisions since sub-goal identification limits the available options that the decision maker has in mind when making a decision (see figure 5 below).

In the light of bounded rationality, this type of behaviour would be classified as illogical or irrational for two reasons. First, one of the main assumptions within bounded rationality is that the decision maker learns from previous mistakes. Repeating decisions that lead to a failed outcome would indicate that no learning has taken place and the miss-specified decision frame has not been changed. Second, a costly decision with a failed outcome cannot give a satisfying outcome in the end due to the fact that decisions are repeated over time. Hence, the decision would not be assumed to be in favour for the decision maker. In the light of perfect rationality, this type of behaviour contradicts the very notion of perfect knowledge and full information. Hence, a framing illusion would not be assumed. The party would essentially have a correctly specified decision frame from start.
2.4 Potential trade-offs: goals and outcomes

In chapter 2.1.1, it was argued that micro-level concepts could be used as decision alternatives and that these could be used as a means of evaluating the consequences of specific decisions, especially in terms of the specified goal of a decision. It then becomes relevant to look at specific assumptions of rationality regarding goals, where information is used to evaluate the outcome of past decisions, the current situation and the future situation. Since it is assumed that the basis of evaluation can be traced back to the information search process and in order to evaluate the possible outcomes of a specific decision alternative, this would mean that the goal assumption needs to be combined with the type of information that the decision maker is assumed to collect.

2.4.1 Goal

In terms of price decisions, the type of rationality assumed by the decision maker can be seen in the assumed objective (Skouras et al. 2005) i.e. which goal the decision maker has. There are several different types of goals connected to price decisions that a decision maker can strive for, all of which can be used in relation to both perfect and bounded rationality assumptions. Examples of frequently used goals are market share (Simon 1959), profit (Tellis 1986), and sales volume (Skouras et al. 2005). In relation to an aspiration/satisfying goal, Simon (1959) claims that if a company has a solid position in the market, it is most likely that these companies do not strive to increase sales (when compared to firms with a decreasing market share). This would imply that a market leader would strive for achieving a profit goal, while organisations with a smaller market share would strive to either increase the market share or increase the sales volume. However, the specific goal is not necessarily tied to a specific decision.

In combination with the assumption of learning, goals become an important part of determining a decision maker’s rationality. For example, Simon (1959) concluded that empirical studies on firm goals indicate satisfying terms rather than maximising behaviour of firms. Rao (1984), Tellis (1986), Ingenbleek and van der Lans (2013) and other forerunners within price research, however describe price decisions based on perfect rationality assumptions. They thereby assume that the decision maker has the objective or goal to maximise or optimise the outcome of any decisions. This indicates that price research does not account for the possible cognitive limitations of the decision maker (Simon 1979; Skouras et al. 2005).

In terms of objectives and goals, the decision maker might choose to focus on smaller parts rather than the overall objective (Simon 1959). If several objectives and goals are possible it points towards that several possible choices are present for the decision maker and provides the possibility to assume sub-goal identification. When smaller parts, rather
than the objective as a whole, are considered, Simon (1979) argues that the goal of a decision changes to become a survival condition. This survival condition is later connected to the aspiration level of the decision maker’s information search. This implies that it is the collected information that determines the goal of the decisions and thereby the evaluation of the outcome. Although aspiration criteria are used in relation to survival criteria it is not clear whether it is assumed that it is a satisfying outcome, as discussed in bounded rationality, or if it is a slightly different assumption that is made.

The time dimension is also related to the goals where Simon (1979) mention satisfying goals as short-term. He (Simon 1979) explains that it is the learning assumption together with the time restrictions of decisions that makes it possible to assume satisfying/aspiration levels, rather than maximisation. This implies that learning, time and goals are closely connected to each other. In relation to the business cycle, which could be assumed to be long-term, Simon (1986) argues that the assumptions of a decision maker are instead based on the process that takes place in the real world (i.e. bounded rationality assumptions).

2.4.2 Outcomes

Simon (1939) argues that the assumption within price theory is that information is collected about possible alternatives until the decision maker appreciates that further information will not lead to any more incremental profit. However, Simon (1979) later points out that due to the assumption that a decision maker cannot know everything there are restrictions on the number of alternatives that can be assumed. This would also be true for the outcome to be able to evaluate certain decisions, i.e. the outcome, number of decision alternatives, and information are closely interrelated. Furthermore, it would not include the sequential price decisions explained earlier. Although there is no specified outcome there are indications from Kopalle et al. (2009) and Gauri (2013), in the introduction, that price decisions are to be evaluated in terms of the in-channel effects. Since sales, profit, and market share are types of goals that are commonly used, this would imply that a positive and/or negative sales/profit/volume effect could be assumed to be the outcomes that are to be evaluated as a success or a failure. This would mean that the outcome is directly related to the goal of different decision alternatives, where the information at hand leads to the possibility to evaluate the outcome and thereby assumes an intendedly rational decision maker (see figure 6 below).

In line with the arguments brought forward in sections 2.1 and 2.1.1, figure 6 below would thereby illustrate the different components and their related assumptions that would be necessary to make when creating a decision frame. The components of framing illusion, procedural limits, substantive limits, and intendedly rational behaviour (as represented by the dotted red lines in figure 6), would not be considered when assuming perfect rationality. These would instead be assumed in relation to a bounded rational decision make, where these assumptions limit the components that can be assumed, i.e. would might need to exclude certain price decision alternatives since it is not possible to assume that a decision maker use or consider all possible options. In comparison, since bounded rationality assumptions would exclude some of the components within the basic model it would at least include one of the limitation assumptions (red dotted lines). As pointed at earlier, there is an uncertainty regarding the time aspect and the connection to goals (as represented by the striped black line). The reason for this is that the assumption is that bounded rational decisions are assumed to be short-term, long-terms goals are assumed to not be rational, and perfect rational goals have no specific time assumptions (i.e. the time assumption is undefined).

Since figure 6 builds on basic components and assumptions of price decisions, this does not provide the specific micro-level theories/concepts that describe price decisions within retailing in particular. What it does provide is a structured decision frame for conducting a review analysis of retail research to be able to determine which micro-level retail specific theories/concepts are to be included in a decision frame.
Figure 6 Adding the aspects of goals and outcomes to the price situation components and the sequential price decisions
3. Retail Review Analysis

As discussed in the previous chapter, when the assumptions regarding a pricing decision are viewed as a decision frame, that frame would include the following points:

(1) assumptions regarding the time duration of the decisions,
(2) how one decision is assumed to follow another decision,
(3) the assumed behaviour of the decision maker at the point of making a decision, and
(4) any potential trade-offs in terms of goals and outcomes.

To be able to make these assumptions retail specific, a retail research review is conducted. This review builds on the same article search conducted in the first of the two papers attached at the end of this thesis and therefore the methodological decisions are explained in chapter 4: Methodology. The review is by no means to be understood as exhaustive. It is to be read as a brief overview of previous research in relation to the different assumptions discussed in the previous chapter. Before moving forward to the actual review, it is worth pointing out two important aspects of the articles included in this chapter.

First, few of the retail studies identified in the literature search had a clear focus on the retailer. This was somewhat expected, since it has been pointed out elsewhere that it is usually the consumer or the manufacturer that is the focus of retail price research (e.g. Fassnacht and El Husseini 2013). Therefore, the information within this chapter is either based on the operational definitions of the articles or the policy implications made in the articles, i.e. it is a subjective interpretation of what the articles attempts to communicate with regard to the retailer as a decision maker.

Second, most of the studies do not have a clear theoretical point of departure and thereby they are not easily placed within any specific theoretical framework within the behavioural theories of economics (e.g. neoclassical price theory, transaction cost economics), marketing (e.g. resource advantage theory) and/or management (e.g. resource based view). Neither does any article specifically have the theoretical departure of bounded or perfect rationality. Once again, the theoretical interpretation of the different articles becomes a subjective, topic evaluation.

Moving on to the review analysis, it is structured in the same way as chapter two with short repetition to provide a clear connection between this review and chapter two.

3.1 What assumption is more common: bounded or perfect?

In the previous chapter, a decision frame and the characteristics of it were described. These could be related to perfect and bounded rationality assumptions, respectively. By using Simon (1979), it was pointed out that one of the aspects that differentiate perfect rationality and bounded rationality was the assumptions of whether a decision maker was seeking to achieve maximising or satisfactory outcomes of their decisions. These two rationality assumptions helps to define underlying assumptions in the retail articles. While identifying maximisation assumptions or satisfying assumptions within the articles, the interpretation is that there are two distinct assumptions made in the operational definitions or policy implications within the articles: perfect rationality or an unclear view of the retailer as the decision maker.

In terms of perfect rationality, it seems as if it is assumed that the retailer should act perfectly rational when deciding on;

- coupons and discounts (e.g. 20 % off) (Leone and Srinivasan 1996; Kumar and Swaminathan 2005; Swaminathan and Bawa 2005; Johnson et al. 2013; Su et al. 2014),
- price promotion variation, price promotion volume, and depth of discounts (Bolton and Shankar 2003; Voss and Seiders 2003),
- setting nine-ending prices (e.g. 9,99 SEK) (Gedenk and Sattler 1999; Macé 2012),
- the reference price (psychological aspect) (Kopalle et al. 2012),
- price bundling (combining e.g. ketchup and spaghetti in the offer) (Yan and Bandyopadhyay 2011; Girju et al. 2013),
- whether impulse behaviour takes place (Kacen et al. 2012),
- temporary discounts in relation to brand and category management (Kumar and Divakar 1999; Martínez-Ruiz et al. 2006; Grewal and Levy 2007; Hall et al. 2010),
- when making decisions related solely to category management (Shugan and Desiraju 2001; Desrochers and Nelson 2006; Bandyopadhyay et al. 2009),
- accepting manufacturer deals or not (Pancras et al. 2013) which could be connected to e.g. coupons,
- the effect of price decisions due to intertype and intra type competition (e.g. how the price of one product effects the sales of the product and compliment/substitutes products) (Kopalle et al. 2009; Cardinali and Bellini 2014), and
- firm characteristics (e.g. size of store, differentiation, assortment) (Voss and Seiders 2003).

Most of these decisions were also considered in articles with an unclear focus;
Assumptions of Retail Price Strategy and Price Tactic Decision

firm specific aspects (Ailawadi and Keller 2004; Gauri et al. 2008; Carpenter and Moore 2009; Staas 2011; Kumar et al. 2012),
cross-category and within category assortment (Ailawadi and Keller, 2004),
brand assortment/management (Ailawadi and Keller 2004; Olbrich and Grewe 2013),
retail-supplier relationships (Praharsri et al. 2014),
temporary price promotions and price promotion effects (cannibalisation) (Zenor et al. 1998; Darke and Chung 2005; Kamakura and Kang 2007; Allender and Richards 2012; Dawes 2012; Richards et al. 2012),
price bundling (Manning and Sprott 2007; Lee et al. 2011), and
nine-ending prices (Schindler and Kibarian 1996; Schindler 2006; Carver and Padgett 2012).

However, within the “unclear” articles there were two additional consumer aspects that the retailer needed to consider. First, if it is likely that the consumer is sale prone (e.g. if the consumer is assumed sensitive to offers or not) (Bailey 2008). Second, if the consumer has a good knowledge about the retailer’s price decisions i.e. knows about how and why the retailer makes their decision (Hardesty et al. 2007).

In relation to assumptions about bounded rationality, only four articles could be identified. These articles cover the aspects of category management in relation to suppliers and effects (Dhar et al. 2001; Lindblom and Olkkonen 2008), nine-ending prices (Aalto-Setälä and Halonen 2004), setting the price (Che et al. 2007), and price promotion (Shankar and Krishnamurthi 1996).

This first introductory analysis is summarised in table 1 below, in which price promotions have been grouped with coupons and discounts since these often are explained in similar terms: as short term, temporary offerings to the consumer. This table indicates that the operational definitions and policy implications are directed to assumptions that are either undefined or perfectly rational. However, bounded rationality assumptions could be identified in four aspects: price promotions, coupons and discounts, nine-ending prices, intertype- and intratype competition and manufacturer deals. In the upcoming chapter, the discussion of these specific operational definitions in table 1 is based on whether, within the articles, they are used as a strategy or as a tactic.

Table 1 The assumed rationality in relation to specific decision concepts

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<tr>
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<th>Perfect</th>
<th>Bounded</th>
<th>Unclear</th>
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<tbody>
<tr>
<td>Price promotion, coupons and discounts</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Nine-ending prices</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Reference price</td>
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<tr>
<td>Price bundling</td>
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<tr>
<td>Brand management</td>
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<tr>
<td>Category management</td>
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<td>Intertype and intratype competition</td>
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<td>Manufacturer deals</td>
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<tr>
<td>Consumer aspects</td>
<td>X</td>
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3.2. The sequential order of retail price decisions

It was explained in chapter 2.2 that if price decisions where viewed as sequential decisions with a certain time aspect, strategy → sub-strategy → tactic, it could lead to sub-goal identification (due to sub-strategies). To be able to identify potential strategic, sub-strategies and tactics that has been assumed in previous retail research, the operational definitions and policy implications within the retail articles were interpreted in terms of time and connection between different decisions (if different decisions were assumed).

In 1996, Shankar and Krishnamurthi (1996) concluded that the regular price is often treated as the long-term price decision, while price cuts are treated as short-term decisions. This would imply that the regular would be the price strategy and the price cut would be the tactical price decisions, and that these two should be connected. In more recent articles it seemed most common to use a price promotion decision, e.g. (manufacturer) coupons, and connect this to the product/brand/product category (e.g. Ailawadi and Keller 2004; Lindblom and Olkkonen 2008; Su et al. 2014). Although it is not clear, it seems as the assumption is that the latter is to be perceived as price strategy decisions. Another example can be found in the research conducted by Bolton and Shankar (2003). Even though Bolton and Shankar (2003) do not necessarily contradict that e.g. the product or the brand should be perceived as a price strategic decision, they argue that price promotional decisions is what provides the store price strategy over time. Due to this,
Bolton and Shankar (2003) view price strategy as related to decisions of the price level, price variation, deal intensity, deal support and relative price.

However, if the price promotional decision are assumed to be a tactical decision and the product, the brand, and the product category decision is perceived as price strategy decisions, it would end in and illustrate a reverse picture of the strategy-tactic discussion made in the previous chapter. In chapter 2.2 it was argued that a strategic decision leads to (residual) tactical decisions (see figure 1 earlier) which is not what is illustrated if one assumes one promotional decision and several strategic decisions (see figure 7 below). This latter would mean that the residual choices would be the strategic decisions and not the tactical decisions, since only one tactical decision is possible.

The connection to the previously mentioned store level (Bolton and Shankar 2003) is also indicated in Gauri et al. (2008) article since it is argued that the continuum between everyday-low-price (EDLP2) and promotional pricing (PROMO3) is one of retailers most effective and strategic pricing tools for market positioning. However, EDLP and PROMO is not always seen as a price strategy. For instance, Shankar and Krishnamurthi (1996) label it pricing policy and Hardesty et al. (2007) state that EDLP as a pricing tactic is considered to be a holistic message to create a price image. However, in comparison to Shankar and Krishnamurthi (1996), Hall et al. (2010) labelled category management and brand management as pricing policies and pricing strategies. As a result, everything from the individual products, the individual brands and the (product) category, the store, and the price level could have been seen as being the price strategy (and in some cases the tactic as well). However, there is no indication of existing sub-strategies. While Bolton and Shankar (2003) conclude an overall price decision with the smaller, tactical decisions (without explicitly discussing how), Shankar and Krishnamurthi (1996) can instead be seen as separating e.g. the brand management decision from the category management decision. They (Shankar and Krishnamurthi 1996) concluded that EDLP and PROMO are two distinct price decisions that a retailer faces at the same time and that promotional decisions, e.g. price cuts, are other decisions. This would indicate that EDLP and PROMO decisions are made simultaneously and never repeated again and thereby would have a very long time duration.

In terms of identifying time specific assumptions of price decisions, these are indicated in the operational definitions and the methodological designs. However, before embarking on these indicated time assumptions it is worth mentioning that Ailawadi et al. (2009) pointed out that much of the retailers’ current behaviour is reactive and short-term (without specifying what short-term is). For example, in terms of the duration of the decisions, Che et al. (2007) conclude that a bounded rational monopolistic retailer, who takes into consideration household state dependence when making price decisions, uses a twelve-week planning horizon. This length (12 weeks) was considered long term when setting a price. In comparison, Ailawadi and Harlam (2009) seem to have assumed that the retailer makes price decisions on a weekly basis. However, whether this is assumed to be long-term or short-term is not evident within the articles.

Moving towards a methodological indication, Hall et al. (2010) design provides another example of assumed time horizons. They used 48/52 weeks of data investigating price offerings in connection to brand management and the product category. Bolton and Shankar (2003) used a similar time frame when studying how price promotion decisions resulted in the price strategy of a store. However, once again, whether this is to be seen as short or long time is not clearly explained or indicated within the article. In comparison to both Che et al. (2007) and Ailawadi and Harlam (2009), the time period used in the methodology by Hall et al. (2010) and Bolton and Shankar (2003) is longer. Since this implies that the operational definitions are shorter than the methodological designs, it is uncertain what time

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1 Offering low prices and using no (or) few promotional tools over time.
2 Offering relatively high prices but frequently using promotional tools. Also abbreviated to HLP or HiLo in some studies (see e.g. Shankar and Krishnamurthi, 1996)
assumption one can make in terms of price decisions and how this can facilitate the explanation of sequential price decisions within retailing (see figure 8 on next page). It is evident here that there are no indications that sub-strategies are assumed and thereby it can be determined that sub-goal identification has not been considered within the retail articles.

Although it is indicated that it is assumed that decisions might take place simultaneously, e.g. EDLP and PROMO (Shankar and Krishnamurthi 1996), it is time to move forward to the specific assumptions made regarding the point of making a decision.

3.3 At the point of the retail price decision

Since it is a matter of trying to identify which assumptions that are made about a decision maker in previous retail studies, it is relevant to look for assumptions on factors that the retailer consider when making a decision regarding price. More directly, these rationality assumptions would concern whether it is assumed that the retailer suffers from procedural limits (regarding decision preferences and the type of decision), is acting irrational due to substantive limits (other actors), if it is assumed that the retailer has a miss-specified decision frame, and what information the retailer takes in consideration (past, present, future).

3.3.1 Presumed retailer decision preferences

Decision preferences concerned the number of decision alternatives that a decision maker takes in consideration when making a decision. The reviewed retail articles seem to assume two possible options, even though there is no indication of which of the options are supposed to be the predominant choices. This “two-decision approach” is mentioned by Simon (1959) and can, in the light of Jones (1999) argument, indicate that procedural limits are accounted for in previous retail studies. For example, Hall et al. (2010) used both category management and brand management to determine which should be the retailer’s preferred price decision alternative. They concluded that the retailer should focus on category management as the base for any decisions regarding pricing. Another example is Bolton and Shankar (2003) who, in their study, used the price variations in promotional tools to determine that the price strategy are set on the brand-store level. This suggests that Bolton and Shankar (2003) assume that all price decisions should be made on the brand-store level.

Although it is indicated that procedural limits are accounted for, it is solely an interpretation of the articles. Since most of the articles assume perfect rationality (or have an unidentified level of rationality) it is not likely that procedural rationality is assumed since this rationality concept is derived from bounded rationality. However, if procedural limits are assumed within a decision frame, this could mean that possible decision alternatives that might be of empirical importance are directly excluded within these studies. It therefore becomes important to move forward to the type of decision that is assumed to be made.

3.3.2 Presumed specific retail price decisions

It was argued in chapter 2.3.2 that a price decision is assumed to achieve profitability (Nagle et al. 2011) and that the organisation requires that decisions regarding pricing need to be controllable (Cannon and Morgan 1990). Furthermore, it was argued that price decisions are connected to the products, the market image and the day-to-day decisions (Noble and Gruca 1999; Shipley and Jobber 2001; Monroe 2003). In total, this gives room to include (or exclude) many decisions and this might be the reason to the multifaceted picture of specific pricing decisions that emerges from the
articles found during the literature search (see table 4 in appendix 1). However, these can broadly be categorised and structured into three types of decisions: the price level and marketing strategy, the price outcome decision, and price offering decisions.

A discussion of pricing decisions as the price level and marketing strategy of a retail company would include broader aspects than solely the price. The most frequently used concepts are the individual product (SKU), brand management, category management, and price store strategy (Dhar et al. 2001; Kamakura and Kang 2007; Ailawadi et al. 2009; Hall et al. 2010; Olbrich and Grewe 2013). It is indicated that all of these decisions provide the retailer with the overall price level and thereby create an image in the mind of the consumer, i.e. positioning the retailer in the market. In relation to these price decision alternatives, Ailawadi et al. (2009) argue that it is the category management and the store level decisions that are the most interesting decisions for the retailer. This line of thinking is also evident in Dhar et al. (2001) article where they argue that this decision (category management) is the most valuable decision and that it forces retailers’ to thinking twelve months. This is a result of that the retailer is assumed to treat a category as a strategic business unit, i.e. as a secluded business. Furthermore, Levy et al. (2004) explain a category management decision as the process in which the retailer determines that an assortment of items are perceived as substitutable by the consumer and then set the price in accordance to this specific product group. However, it still indicates that there is the assumption of two pricing options.

That the retailer should focus on category management in their decision has been evident in several articles (e.g. Grewal and Levy 2007; Olbrich and Grewe 2013) and this even includes stretching the category management decision assumption to take place between departments (Desrochers and Nelson 2006). A category management decision thereby does not need to be department based. This implies that several departments need to be considered within category management, i.e. that a product in one department actually is a complement or substitute product to a product in another department and could indicate that one should assume multiple department management (MDM) rather than category management. No matter how broad one stretches the assumption of category management, Lindblom and Olkkonen (2008) suggest that if focus should be on the particular category management decision, pricing and store promotional decisions becomes short-term and tactics (Lindblom and Olkkonen 2008). This would mean that pricing (the set price) and promotional decisions are residual choices.

Going back to the statement that the store level decision is the most interesting decision for the retailer (Ailawadi et al. 2009) this is often ignored in terms of price decisions (Kamakura and Kang 2007). Instead, Kamakura and Kang (2007) state that price decisions occur on every single store-keeping unit (SKU) and thereby provides the (price) base for the category. This would then imply that the assumption is that price decisions are not made on the store level, but instead something that is the consequence of price decisions at the SKU-level. This might be what Gauri et al. (2008) point at when they claim that a store level decision is not solely a matter of a price decision, but instead an interrelated store format decision and a price strategy decision. However, both of these views would still indicate the “backward” decision process explained earlier in figure 7: that there is a tactical pricing decision and many strategic decisions.

Moving forward to discussing price decisions as price outcomes concerns the usage of odd and even ending pricing within retailing and is discussed frequently within several articles (e.g. Schindler and Kibarian 1996; Gedenk and Sattler 1999; Schindler 2006; Carver and Padgett 2012; Macé 2012), i.e. what comes out on the price tag. Here, nine-ending prices comprise just one example of this psychological price setting technique. Even though some argue that using odd and even prices results in increased purchases (Schindler and Kibarian 1996; Macé 2012) the actual success of odd and even ending pricing has been discussed frequently since no clear relationships can be measured in the marketplace (Gedenk and Sattler 1999; Schindler 2006). Hence, the outcome of this decision is uncertain. When choosing this decision the retailer is assumed to consider the product group and is often believed to be a more successful decision in unknown product groups (Carver and Padgett 2012). The connection to the product group indicates a connection to the aforementioned product category decision related to the price level and the marketing decision of the company.

In addition to this, and since it is assumed that the consumer has a price threshold, where a change in the price might result in a sales decrease if the price is changed from an odd number to an even number (Gedenk and Sattler 1999), e.g. from 19.99 SEK to 20 SEK. This indicates that it is assumed that the retailer can optimise their business by using odd ending prices rather than even ending prices. However, if odd ending pricing, especially nine-ending prices, are used as a normal way of communicating price, Macé (2012) argues that it can lose its effect and instead result in a sales decrease, which could be seen as an irrational decision by the consumer. This might be why the outcome of this type of decision is unclear.

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1 Stock keeping unit: unique product identification
2 E.g. that the consumer perceives a product as too expensive and therefore does not buy the product
While discussing price decisions as price offerings, it seems most common to use different types of discounts, deals, and promotions within the articles (e.g. Leone and Srinivasan 1996; Bolton and Shankar 2003; Raghbir 2004; Kumar and Swaminathan 2005; Hall et al. 2010; Allender and Richards 2012; Johnson et al. 2013; Su et al. 2014). Here, the main assumptions seem to be that the retailer focuses on price discrimination decisions, i.e. make a price decision that makes it possible to charge different prices in relation to different consumers.

Coupons are a price discrimination tool (Leone and Srinivasan 1996) that is used in relation to price sensitive consumers, where it is the face value of the coupon that is of importance to the retailer and particularly given that the face value that maximizes the profit (Kumar and Swaminathan 2005). According to Raghbir (2004), the face value and the contextual cues (e.g. reference price) can either positively or negatively affect the impact of a coupon. However, it is assumed that if the retailer provides more information in direct relation to the coupon, the greater is the likelihood that there is a positive outcome. In addition to this, Leone and Srinivasan (1996) argue that coupons have an effect on brand sales. This would indicate a direct connection to the brand management decision in terms of price level and strategic marketing decision mentioned earlier. In comparison to Leone and Srinivasan (1996), both Allender and Richards (2012) and Swaminathan and Bawa (2003) argue that it is the specific (product) category level that should be used to investigate coupon decisions in order to improve the measurement of coupons. At the product category level, a specific category could be assumed to be local due to geographical market differences. (Swaminathan and Bawa 2005; Allender and Richards 2012)

An interesting aspect brought forward by Kumar and Swaminathan (2005) is that even though coupons are a national variable that the manufacturer is in control of, rather than a local variable that the retailer controls. They state that it is important for the retailer to know the outcome of this price decision on their own business in order to make better decisions in the future. Hence, there is a close connection between the manufacturer’s decisions and the retailer’s business. Here, one has to take in consideration that coupons decided on the national level are not always in the best interest of individual retail chains (Leone and Srinivasan 1996). However, worth noting is that Su et al. (2014) point out that a coupon is either perfectly6 or imperfectly targeted7 since it depends on the goal of the decision. This means that a coupon decision does not necessarily have to be assumed to have the intention of being locally adapted.

Other studies that have had a price discrimination base, similar to the one in relation to coupons, have dealt with bundling (Manning and Sprott 2007; Lee et al. 2011; Yan and Bandyopadhyay 2011; Girju et al. 2013). Bundling means that several products are sold together through an offer (Girju et al. 2013) and many of the studies are concerned with the effects on complementary products. This would imply another connection to the aspects of price level and marketing strategy decisions since complementary products are often found within e.g. a product group. Like EDLP and other concepts mentioned above, bundling has also been treated as a policy by some (e.g. Yan and Bandyopadhyay 2011). An interesting point to make here is how Johnson et al (2013) treat bundling. Johnson et al. (2013) treat bundling and coupons as being the same type of discriminatory decisions, but and argue that these decisions are not price decisions per se, due to the fact that the retailer differentiates groups of consumers and the focus is not on price. Price decisions, where discounts are the main focus, are according to them very broad since it could be everything from a price cut to a coupon. If one then considers the close connection between the manufacturer’s decisions and the retailer’s business it is evident that other actors might be assumed to influence the retailer’s price decisions, although such external influence is not clearly indicated or assumed within the articles. Since the most frequent rationality assumption is related to perfect rationality and the somewhat unclear with regard to the specificity of the type of decisions, it is unclear whether procedural limits have been considered (see figure 8 below).

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6 That every single consumer gets his or her own price (which is illegal).
7 Consumers are divided into groups (markets) and are charged a certain price.
3.3.3 Influences of other actors

The influence of other actors was discussed and thought to be connected to assumptions regarding substantive limits, which did not need to be irrational if the decision maker is assumed to believe that both parties benefit from the decisions. If the retailer chooses to use, for example, the different types of discount offerings discussed in the previous chapter, it might be a sign that the retailer is concerned with trying to provide the best offering to the consumer (Grewal et al. 2012). In relation to these types of decisions, it is assumed that the retailer, together with the manufacturer, is the agent of persuasion price tactics (Hardesty et al. 2007). This implies that the retailer’s price (tactical) decisions are made in cooperation with the manufacturer to influence the consumer, which is also indicated in the article by Ailawadi et al. (2009), but it is unclear to what extent that cooperation is assumed to be. However, some assume that the retailer’s tactical price decisions and strategic pricing decisions are influenced by the manufacturer’s decisions (Shankar and Krishnamurthi 1996; Gauri et al. 2008; Kopalle et al. 2009), i.e. that the manufacturer has control over the retailer. However, it has been frequently discussed elsewhere8 who of the two influences the other (Sigué 2008; Martin-Herrán et al. 2010), i.e. who has the power in the relationship. The main argument that the retailer has the power advantage in the relationship is based on the notion that it is the retailer’s decision to use and implement the manufacturer’s

8 This discussion was not evident in the literature base for this review analysis and therefore additional articles was used to complement the discussion, due to the indication by Ailawadi et al. 2009 that no one decided, i.e. none of the actors had influence on the other.
suggestions within their store(s). Hence, the retailer ought to be assumed to ask the question “what’s in it for me to use this price decision?”

Reasons for the retailer to adjust their decisions due to the relationship with a manufacturer have been specifically investigated in some of the articles (e.g., Lindblom and Olkkonen 2008; Allender and Richards 2012; Praharsi et al. 2014). For example, Lindblom and Olkkonen (2008) argue that a bounded rational retailer would choose to cooperate if cooperation results in [product] category leadership, increased market share, increased profitability, and improved revenues for both parties. However, they also point out that there is a risk of opportunistic behaviour if one of the actors starts to focus on maximizing their own business instead of outcomes to which both parties allegedly aspire and seek to achieve through cooperation. This would indicate that it should be assumed that neither of the actors are “allowed” to focus solely on their own business in the quest to reach satisfactory outcomes. This would further indicate that it is assumed that a retailer solely uses or adapts to a manufacturer’s suggestions when striving for a satisfying outcome as opposed to realizing a maximizing outcome. Furthermore, the retailer is assumed to only use suggestions from one manufacturer at a time since this is assumed to benefit the retailer the most (Hall et al. 2010). In relation to category management, Bandyopadhyay et al. (2009) argue that the retailer determines whether or not to cooperate with the manufacturer on these types of price decisions if the decisions do not negatively affect the retail output or the cross-price effects.

Despite this possibility of a satisfactory outcome, Allender and Richards (2012) argue that this type of cooperative behaviour can have a negative outcome on the retailer’s own business and Ailawadi et al. (2009) state that a manufacturer’s pull decisions (e.g. coupons) are most likely to influence the retailer the greatest. The retailer then needs to evaluate the price decisions that are suggested by the manufacturer. According to Hall et al. (2010) a retailer receives the information regarding upcoming discounts from the manufacturer between three to six months before those discounts are implemented. In relation to this, the retailer needs to consider and measure the outcome of these decisions on chain, store, product category, private label and consumer profits when the discounts are displayed within the store (Ailawadi et al. 2009). All of this indicates that it is assumed that the retailer, at the point of the decisions, needs to consider information that relates back to the past, the present-, and the future situation.

3.3.4 Psychological aspects of retailer

It was discussed in chapter 2.3.4 that a decision maker could base their decisions on information relating to past knowledge and learning from mistakes, on the present situation by considering organisational resources or the competitive environment, and/or the belief of the future situation.

In terms of learning from previous mistakes, it seems that this is not really taken into consideration in the previous studies. It is not evident in the operational definitions, the policy implications, or the methodological designs. However, many articles argue that the retailer needs to know the outcomes of price decisions and evaluate the decisions afterwards. Hence, some type of future learning is assumed.

In terms of considering the present situation, it is most common within previous studies to assume that the retailer consider either the competitors or the consumers. This is not surprising since many retail studies has the consumer in focus. Furthermore, since most of these articles do not specifically take the approach of the retailer and it can therefore be argued that they ignore firm specific (organisational) resources and information that the retailer might need at the time of the price decision, i.e. the articles do not assume that the retailer takes into consideration the present situation. However, if the outcomes of price decisions can imply that some type of future learning is to take place, the frequent usage of e.g. the store keeping unit (SKU), the brands, the product categories, etc. could be perceived as assumptions that represent the organisational resources and information that the retailer needs at the point of the price decision.

In terms of future beliefs, it seems as this aspect is also missing within the articles. Although it can be indicated in the managerial implications and recommendations that a retailer should base decisions on certain aspects, it is solely in terms of the idea that the retailer should change its behaviour to survive in the market.

Last, nowhere in the articles are there indications that a framing illusion is assumed, which is not strange since the most common assumptions is connected to perfect rationality assumptions.

Since it is unclear whether the psychological assumptions of the retailer have been considered in the article, the components related to these assumptions in figure 10 below are either stated as a question mark, unclear, or not available. Substantive limits are unclear since there seems to be an assumption made, or at least a discussion, of the relationship between the manufacturer and the retailer. The framing illusion is labelled not available since it cannot be interpreted that these assumptions are made due to the frequent usage of perfect rationality assumptions. The past-, present-, and future situation is labelled with question marks since there are indications on what these could be assumed to be, but it is not clear within the articles.
3.4 Goals and outcomes – a matter of trade-off

While there are some question marks regarding assumptions about the past-, the present-, and the future situation, it was argued in chapter 2.1.1 and 2.4 that the goal of a decision could be evaluated by the information that is collected. In this way, it is possible to see which information is assumed to be collected by the retailer. Furthermore, by using decision alternatives as a means of evaluating the consequence of a specific decision, it is possible to identify the past-, present-, and future situation assumptions within the retail studies found in the literature search. It is therefore a matter of identifying specific assumptions regarding specific goals of specific decisions as well as the outcome of these decisions.

3.4.1 A retailer’s goals

Since one basic difference between perfect and bounded rationality is the assumption of maximisation and satisfactory outcomes, this is the first part of this interpretation. Although the point here is not to compare these two perspectives, the goal is the identification of what type rationality assumption that is used within the articles. This choice was made since the articles as such did not have a clear theoretical point of departure. What this meant in terms of determining the rationality level of the articles is that if it is argued in an article that the retailer is supposed to maximize the outcome by making a specific decision, this article is classified as building on the assumptions of perfect rationality. In comparison, if it is argued in the article that the retailer should aim for a satisfying outcome, it is classified as building on bounded rationality assumptions. If no such classification could be made, the article is labelled as unclear.
Figure 11 below summarises the most common types of goal under each of the above classifications. Since survival conditions are a part of the assumptions made in chapter 2 (p. 11) this is included. However, no survival conditions could be found in the articles.

<table>
<thead>
<tr>
<th>Type of goal</th>
<th>Survival condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximise</td>
<td>N/A</td>
</tr>
<tr>
<td>Sales volume</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td></td>
</tr>
<tr>
<td>Localisation</td>
<td></td>
</tr>
<tr>
<td>Satisfy</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td></td>
</tr>
<tr>
<td>Sales volume</td>
<td></td>
</tr>
<tr>
<td>Market share</td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td></td>
</tr>
<tr>
<td>Inventory levels</td>
<td></td>
</tr>
</tbody>
</table>

Figure 11 Goals used within retail research

All studies do assume that the retailer has some kind of goal. It seems most common, within the included articles, to assume a maximising goal rather than a satisfying goal (see table 5 in appendix 1 for a specification). This indicates that no cognitive limitations are accounted for within previous studies. The only studies that assume a satisfying goal are the articles that examine the retail-manufacturer relationships and category management (Dhar et al. 2001; Aalto-Setälä and Halonen 2004; Lindblom and Olkkonen 2008), i.e. the ones that indicate that substantive limits have been accounted for. Within these articles, it is also common to use multiple goals rather than a single goal. The fact that maximisation seems to be the most common assumption indicates assumptions of total knowledge and strengthens the first interpretation that bounded rationality assumptions (e.g. sub-goal identification, substantive limits, and procedural limits) are not of any concern in the articles. No matter if the assumptions regarding the retailer’s goals are based on perfect or bounded rationality, it seems as if sales volume and profit are the most common types of goals (e.g. Kumar and Divakar 1999; Manning and Sprott 2007; Gauri 2013; Cardinali and Bellini 2014). This would indicate that the assumption is that these are the two types of goals that are to be aimed for and they are practically the same types of goals that are discussed in chapter 2.4.1.

However, Ailawadi et al. (2009) argues that the retailer can set goals at different levels: the brand level, the product category level, and the store level. All of which can be related to some of the specific decisions mentioned earlier in chapter 3.3.2. For example, at the brand level, possible goals are sales volume and/or profit, growth, margin, product profit. At the product category level, possible goals are penetration, sales volume and/or profit, market share, growth, margin. At the store level, possible goals are traffic, sales, share, growth, profit. (Ailawadi et al. 2009) The possibility to set goals at different levels, e.g. brand and product category, indicates that these could be assumed to function as decision alternatives in the decision frame since it would be a representation of the reality. However, since goals are only one part of making assumptions of an intendedly rational decision maker it was argued that the outcomes of the decisions need to be accounted for. As a result, the goals of decisions becomes closely related to the specific decision that is made and the information that the retailer is assumed to account for when making decisions.

3.4.2 Retail outcomes

It is in relation to the specific types of decision alternatives that are included in a decision frame that information about the outcome needs to be considered, i.e. in relation to e.g. SKU, brand, product category, assortment category, the store level, odd and even ending price, and price offerings. Many of these price decision alternatives assume that the retailer collects information on the product assortment and that this is taken into consideration at the point of the price decision (chapter 3.3.2). It is by considering the product assortment, when making price decisions, that the retailer includes or excludes the complexity of the business. Here, the complexity is due to both the multi-brand situation and the multi-period aspects of retail stores (Hall et al. 2010) which once again points towards the aspects of time assumptions, although the assumptions are still unclear. It is within this complexity that the effects of price decisions occur and labelled cross-price effects or in-channel effects (e.g. Levy et al. 2004; Kopalle et al. 2009; Dawes 2012; Kumar et al. 2012). It is the cross-price effects that Kopalle et al. (2009) label internal competitive effects. Although this effect is the outcome of a price decision, there are some different perspectives on how these cross-price effects are to be understood and assumed to be dealt with by the retailer.

For example, Hall et al. (2010) argue that focusing on the brand decision ignores cross-price effects that occur due to the brand-switching behaviour of consumers. This brand-switching behaviour means that the consumer chooses to buy a brand they would not usually purchase, rather than the brand they usually buy because the brand they decide to purchase is offered at a lower than usual price. This indicates that Hall et al. (2010) argument that the outcome should
be measured on a more overall level than the individual brand. This is also indicated by Kamakura and Kang (2007) who perceive that the cross-category effects should be measured at the brand level since the price decision is made on every single SKU, i.e. one single product is measured in relation to the brands that have an identical product. The reason for this is that any higher aggregation of sales can lead to biased measurements. However, Richards et al. (2012) argue that most of the effect from a price decision can be seen in the brand-switching effect, i.e. at the brand level.

Overall, Levy et al. (2004) argue that a cross-category effect exists due to the fact that products or product categories are complement or substitute for each other. In the first case, complement products, an increase in sales should take place if a change in price occurs on one of the products. In the second case, substitution products, a sales decrease will occur if the price changes on one of the products. Overall, Levy et al. (2004) argue for the assumption that there is a positive effect if categories are complements and a negative effect if categories are substitutes. An interesting aspect here is the connection back to bundling as a specific decision alternative. It seems as, in relation to bundling, the complementary effects will be the outcome of that specific decision alternative since the decision itself builds on complementary products (e.g. Manning and Sprott 2007; Lee et al. 2011; Yan and Bandyopadhyay 2011; Girju et al. 2013). Since bundling concerns pricing two or more products in an offer to the consumer, it indicates that some of the retailer studies assumes that the retailer considers two or more products at the point of the decision.

However, according to Kopalle et al. (2009), these types of cross-price effects can occur both within and between product categories, which are both related and unrelated. It is then not solely a matter of brand or a matter of making a bundling decision. Here, Richards et al. (2012) concluded that negative cross-price effects for the retailer are due to both vertical differentiation between products (i.e. quality aspects, brands) and horizontal differentiation between products (i.e. size, flavour, and colour). When discussing the optimal price within retailing, Levy et al. (2004) argue that maximization occurs in relation to either an individual item or to a group of items. However, in line with what Hall et al. (2010) and Kamakura and Kang (2007) pointed out in relation to brand management decisions, Levy et al. (2004) also comment on the risk of (negative) cross-price effects if the retailer solely focuses on the individual item. They label this cross-price effect as the substitution effect, which is a result of individual SKU’s competing with each other. As a result, the individual product also needs to be considered and evaluated. Hence, the assumption regarding the outcome can be based on everything from the SKU to the difference between many different products. This implies that one cannot assume that the retailer exclusively considers several brands, but that it has to be assumed that specific products and other product categories are included at the time of the price decision.

Since both positive and negative outcomes have been identified in the studies (e.g. Dawes 2012; Kumar et al. 2012). It is necessary to make assumptions on the degree of the effects that a certain price decision provides. Here, Dawes (2012) argues that the degree (impact) of cross-price effects is dependent on several things e.g. the level of the price change, frequency of promoting a brand, the normal selling price (if it is high), the price difference between substitute products, and the brand share. While the level of the price cut, the frequency of promotion, the price difference between substitute products, and several products within a brand would increase the level of the cross-price effect, the normal selling price and a larger market share would result in a less marked cross-price effect (i.e. not necessarily positive) (Dawes 2012). This would then mean that one needs to assume that there is a weighted risk made by the retailer at the point of the decision and that the retailer is assumed to consider these aspects.

Figure 12 below has the same structure as the last figure in chapter 2. However, the figure below is retail specific and built on the articles that have been reviewed and could therefore be seen as illustrating the different assumptions that are made within retailing. As has been illustrated in this chapter, there are some assumptions that are not made within the retail literature, namely sub-strategic decisions, sub-goal identification, framing illusions, procedural limits, and survival conditions. At the same time, some assumptions might have been considered but it is unclear if this is the case, namely substantive limits and an intendedly rational decision maker. Additionally, there were indication of that the retail studies found in the literature search did make assumptions regarding the past-, present-, and future situation. However, who and how the articles are interpreted most likely determine this indication. Furthermore, it is not evident, based on the literature, how goals are supposed to work over time (this is indicated by a red question mark over black striped line in the graphic) which is something that was discussed in chapter 2.4 as a component to determine intendedly rational behaviour, where it was argued that rationality seems to disappear over time. Since many of the concepts have been used mainly together with assumptions similar to perfect rationality assumptions, this would mean that a retailer would know all components to fulfill the assumption of full knowledge of the decision alternatives. However, since there are several assumptions that are uncertain in figure 12 it becomes important to discuss these in particular.
First, it was not clear from reviewing the literature if any procedural rationality aspects of the retailer have been considered. It was suggested that procedural rationality within retailing could be identified by discussing the length of decisions (time) and the type of decision (strategy, sub-strategy, and/or tactic) in combination with the decision preferences and specific decisions. By determining the time duration of specific decisions, and treating these time dimensions as strategic, sub-strategic, or tactical, it should be possible to create assumptions regarding the retailer’s sequential price decisions and thereby make it possible to evaluate decision preferences and the other aspects related to procedural rationality.

Second, it was not clear whether one could assume an intendedly rational retailer. If the retailer were assumed intendedly rational, this would mean that the retailer based price decisions on past knowledge in relation to the type of goal set and the evaluation of potential decision alternatives, while having the present- and future situation in mind. However, the aspects of previous knowledge related to intendedly rational and the price tactical decision as related to the procedural rationality can be “disturbed” by substantive limits and thereby indicate a framing illusion of the decision frame. This would mean that if the retailer is assumed to be limited in the decision-making and it is impossible to assume that a retailer act in accordance to both procedural rationality assumptions and intendedly rational assumptions when conducting research.

Therefore, two different types of studies were conducted and are explained in the upcoming methodology chapter.
4. Methodology

The methodological choices related to both studies, and the review analysis in the previous chapter, are discussed here.

4.1 Literature reviews

As was discussed in the beginning of chapter 3, the literature search used for article one was also used for the review analysis above. Overall, the literature search process was, from the beginning, quite broad to be able to cover price strategy and tactical price decision concepts from a more general perspective. Since the usage of the articles in chapter three has been explained earlier, this section of the methodology chapter covers the actual selection process and the usage of the chosen articles in paper 1. Overall, the literature reviews could be understood as semi-systematic: a planned process with adaptations throughout the process. Systematic reviews build on a planned process that is not adjusted (Tranfield et al. 2003). According to Tranfield et al. (2003) a strict systematic literature review is hindered by the multifaceted contributions within management research and therefore needs to be adjusted in accordance with the aim of the review. This indicates that literature reviews on the assumptions of rationality made in price decisions can have a formal planning process, which is later adapted to characteristics of the field. Since a systematic review builds on three stages, planning-, conducting-, and reporting the review (Tranfield et al. 2003), these stages are accounted for in the chapters below, in relation to the aspects of data sources, keywords, and inclusion/exclusion criteria. However, most of the focus is on the second and third stages since it is here that the systematic review is adapted towards the nature of the field, i.e. it becomes a semi-systematic review under the stages of conducting the review (selection process) and the reporting of the review.

4.1.1 The planning of a literature review

Since this thesis focuses on the assumptions of rationality made within the field of retail research and the consequences of these assumptions, the literature search was planned to be conducted in the two top retailing journals: Journal of Retailing and Journal of Retailing and Consumer Services. These journals were intended to be the basis for the literature reviews. From the beginning, it was planned to solely use the keywords price tactic and price strategy as keywords. As will be evident later on, this was insufficient. The inclusion and exclusion criteria were based on the ability to identify the assumptions of retail decision making in the articles, as well concepts used in two different articles; Fassnacht and El Husseini (2013) and Bolton and Shankar (2003). The concepts from these two articles will be explained under the section titled conducting the review. Since the literature review was planned to be conducted in two reviewed journals, the articles are written in English, they have been reviewed by scholars and are published papers. In addition to this, it is possible to include different article types (original, review, theoretical) in the review. The literature search was planned to be conducted during October 2014. The planning of the literature review was executed on time with main adjustments regarding keywords.

4.1.2 Conducting the review

Although the intention was to use price strategy and price tactic as the keywords in the literature search, this was determined to be insufficient. The reason for this is that on the initial search for articles when using the keyword price tactic in the Journal of Retailing and Consumer Services there were no hits. Instead, several keywords were used in the end: price strategy, price tactic, price promotion, pricing practices, pricing tactic, and pricing promotion, since it was necessary to complement the price tactic keyword with additional keywords (price promotion, pricing practices, pricing tactic, and pricing promotion). This adjustment was made in both journals. This is then a first adaption from the systematic approach to reviews. The number of hits from the literature search and the number of selected articles is illustrated in table 2 below.

As a first step in the selection process, several concepts were skimmed for in the abstract. The specific concepts that were looked for in relation to the keyword price strategy were based on the concepts that Fassnacht and El Husseini (2013) had determined as being used as price strategy concepts: everyday-low-pricing, (EDLP), promotional pricing (PROMO), category management (CM), brand management (BM), and price strategy and/or marketing strategy. As a result, the first step in the selection process involved determining whether the abstract contained one or more of these concepts. If that were the case, they were classified as fitting the scope of the review.

Although the same selection process took place in relation to the price tactical search, the concepts that were of interest differed slightly from the concepts skimmed for in relation to the keyword price strategy. Since some of the strategic concepts had been used as tactical concepts in some studies (Fassnacht and El Husseini 2013) these where
once again of interest to find in the abstracts. In addition to these concepts, price tactical concepts related to price cuts and price discrimination (e.g. discounts, coupons) were searched for in the abstracts. This process resulted in 149 articles that were worthy of a full reading.

### Table 2 Results of the literature search and selection process

<table>
<thead>
<tr>
<th>Key word</th>
<th>Journal</th>
<th>Number of hits</th>
<th>Extracted by the usage of words in heading and at a later stage of abstract</th>
<th>Number of articles used within the scope of the article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price strategy</td>
<td>Journal of Retailing</td>
<td>555</td>
<td>49</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Journal of Retailing and Consumer Services</td>
<td>613</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Price tactic</td>
<td>Journal of Retailing</td>
<td>Price tactic (161)</td>
<td>Price tactic (21)</td>
<td>8⁰</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price promotion (423)</td>
<td>Price promotion (19)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pricing practices (318)</td>
<td>Pricing practices (10)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pricing tactic (117)</td>
<td>Pricing tactic (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pricing promotion (317)</td>
<td>Pricing promotion (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Journal of Retailing and Consumer Services</td>
<td>Price tactic (100)</td>
<td>Price tactic (9)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price promotion (97)</td>
<td>Price promotion (6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pricing practices (8)</td>
<td>Pricing practices (1)</td>
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<td></td>
<td></td>
<td>Pricing tactic (9)</td>
<td>Pricing tactic (1)</td>
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<td></td>
<td></td>
<td>Pricing promotion (9)</td>
<td>Pricing promotion (1)</td>
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<td></td>
<td>Total: 2727</td>
<td>Total: 149</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Total: 149</td>
<td>Total: 63</td>
<td></td>
</tr>
</tbody>
</table>

The second step in the selection process was then to evaluate whether all 149 articles where to be included in the literature review. Here, the main criteria for inclusion were related to the possibility of identifying at least some rationality assumption about the retailer as a decision maker within the articles. This means, on a very broad level, that if it is argued that the retailer is assumed to maximise/satisfy/make decisions within the organisation, it is assumed that some type of assumptions of rationality is made and the article is included. It also means, on a very broad level, that if e.g. it was argued that consumer’s behave, manufacturer decides, etc. these were not included. Most of these latter articles often had no focus on the retailer, neither in the operational definitions nor in the managerial implications. In sum, the criteria for an article to be seen as fitting the scope of the thesis is that an article either within the operational definitions framework or the managerial implications pointed towards the decision making of the retailer (rather than solely the consequences of consumer behaviour). If any editorial met these criteria, they were included since they often summarise the current issue within a journal and therefore provides an overall view of potential assumptions. In the end, 63 articles were used in the previous review analysis and paper 1 (Lagin and Gebert-Persson 2014).

#### 4.1.3 Reporting the reviews

While the analysis of the articles in chapter three is explained in the beginning of that specific chapter (p. 14) and follows the structure and concepts from chapter two, this chapter focuses on the reporting of analysing assumptions of the length of decisions (time) and the type of decision (strategy, sub-strategy, and/or tactic). The study, paper one in the appendix, aims to determine the time duration of specific decisions and thereby be able to label different concepts as strategic or tactical. (Lagin and Gebert-Persson 2014) Therefore, the objective of paper one is to define retail pricing strategy and tactics conceptually in relation to planning horizons.

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¹ The actual number is 37 but since 29 of the articles were already retrieved in the price strategy search within Journal of Retailing, only 8 are viewed as being derived from the keywords that are assumed to be price tactical decisions.

² The actual number is 8 but since 2 of the articles were already retrieved in the price strategy search within Journal of Retailing and Consumer Services, solely 6 are viewed as being derived from the keywords that are assumed to be price tactical decisions. Both of these two footnotes are interesting results in this process and indicate the conceptual closeness between a strategic and a tactical decision.

³ A specification of the articles and the connection to the keywords used and journals are found in table 6 and 7, in appendix 2.
When time is considered in the selected articles, it is made in a non-specific way, i.e. long-term and short-term. For this reason, the time dimension of supply chain decisions, as described by Hübner et al. (2013), is used as the summary tool to report the results of the review analysis in paper one. Hence, the research synthesis of paper one, with its topical structure, provides a discussion on the nature of price strategy, the nature of price tactics, and lastly, the time dimensions of these decisions, which makes it possible to make further assumptions about procedural rationality and potential sub-strategic decisions. However, to be able to discuss the consequences of certain assumptions of rationality that are connected to the procedural rationality (intendedly rational behaviour, sub-goal identification, and substantive limits) it is not sufficient to conduct a literature review. Instead, a field experiment was conducted as a second study.

4.2 The effect of tactical price decisions— an experiment

It was argued that while an intendedly rational behaviour could be mirrored by the retailer’s previous knowledge in relation to specific goals and thereby being adaptive, the substantive limits concerned whether the retailer could be assumed to be influenced by other actors when making pricing decisions. Furthermore, it was claimed that it was assumed substantive limits could lead to an assumption that the retailer does not act in accordance with procedural rationality and intendedly rational behaviour, which in turn could lead to the necessity of assuming sub-goal identification. Therefore, the aim of paper two is to empirically test the effects of an in-store discount tool on sales volume through a field experiment. It should then be possible, through the effects of these coupons, to evaluate the decision alternatives and the specific outcomes for the retailer. (Lagin et al. 2014)

It was evident in the review analysis that there is an ongoing debate within the academic literature regarding the relationship between the manufacturer and the retailer, i.e. an ongoing discussion regarding who is influencing whom. However, it is quite common that, in reality retailers use a manufacturer’s price suggestions, and especially with regard to coupons. Therefore, to be able to discuss a potential influence by the manufacturer on the retailer (or vice versa), i.e. substantive limits, a manufacturer coupon is used in the experiment. Even if coupons are in reality something that comes from the manufacturer, it is the retailer’s decision to place them within the store (e.g. Mulhern and Leone 1991; Kumar and Pereira 1995; Lal and Villas-Boas 1998) and is thereby assumed to be retailers price decision.

4.2.1 Field experiment

Field experiments are necessary to be able to evaluate the optimisation of particular price decisions where many factors such as category management, unit sales, deals, promotion, complementary and substitute products can be accounted for (Levy et al. 2004). These factors have been labelled as retail specific factors (Grewal and Levy 2007) and can be related to the factors discussed as in-channel effects (e.g. Kopalle et al. 2009) i.e. outcomes of decisions. To test the effects of coupons as a tactical price decisions, previous studies have mostly used secondary data in the form of retail sales data has been used. However, the data has in many cases not been gathered by the researchers themselves. Instead, marketing research companies collects the sales data and provides it to researchers for scientific analysis. It is also quite common to use questionnaire data based on an experimental design to create an understanding for how the consumer would react when a price decision is made. (e.g. Kumar et al. 2012; Pillai and Kumar 2012; Gauri 2013; Johnson et al. 2013). While these experimental questionnaires would only measure the consumer preferences and not how they actually behave (Franses and Paap 2001), the data from marketing research companies is not created with the intention of measuring a pre-defined effect, i.e. there is an uncertainty about what is actually measured. (Moutinho et al. 1998). In comparison, a field experiment would provide primary data that is created specifically for the phenomenon that is to be studied and relies of actual behaviour of the consumer. As a result, the field experiment would provide an outcome of the assumed price decision that is closely related to a real-life outcome. The closely related real-life outcome is a result of a field experiment and is thereby considered to provide a high degree of realism.
(Moutinho et al. 1998) because it is considered to account for the complexity of the decision maker’s reality. In this way, a field experiment is a good choice, especially when investigating bounded rationality assumptions since the complexity of reality is what creates the boundaries for the assumptions made.

So, in comparison to previous experimental research based on either laboratory settings (e.g. Bobinski et al. 1996; Bailey 2008; Kachersky 2011; Lee et al. 2011; Grewal et al. 2014), or scenario-based questionnaires (e.g. Desrochers and Nelson 2006), paper two would account for the complexity of reality since a field experiment takes place in a natural setting. In this way, paper two increases its ecological validity if compared to previous studies (Manning and Sprott 2007) i.e. the result is more likely to reflect the real conditions and effects for the retailer. However, the cost of a higher degree of realism is the level of control in relation to external variables and to some extent the independent variable (Moutinho et al. 1998).

4.2.2 Variables and design decisions

When conducting an experiment, the aim is to investigate how a change in one independent variable affects the outcome of another, dependent, variable (Moutinho et al. 1998; Hamlin 2005). Paper two is an examination of how changes in the price variable, through the introduction of rebate coupons (the independent variable), affected the sales quantity (the dependent variable) by accounting for retail specific factors (dummy variables). More specifically, a rebate coupon was introduced on individual products, i.e. the store-keeping unit (SKU). The impact on sales quantity, i.e. sales volume, was analysed by accounting for the individual product (SKU), the individual brand in which some products had been discounted (BM), the product category (CM), and the broader assortment category (AC) as dummy variables. The dummy variables were treated as different levels, i.e. if AC was one of the dummy variables, this included the other, lower levelled dummy variables (e.g. every SKU, brand etc.). As a result, the higher the level of dummy variable, the greater the amount of information could be assumed and more outcomes could be measured.

However, dummy variables that measure the outcome are just one part of designing a field experiment. Other decisions of importance are, for example, the choice of store, the number of stores, control vs. experiment stores, and the choice of intervention.

Starting with the choice of stores, Gaur and Fisher (2003) argue that the choice of store is one of the most crucial choices in a field experiment. In paper two, one type of store format from one large retail chain in Sweden participated in the experiment. Since the store type, and the retail chain, is not a market leader, the chain is likely to use promotions within all their stores with the aim of increasing the sales volume but not profitability (see chapter 2.4.1). Since all stores in the experiment belong to the same retail chain, this decision (overall strategic decision) becomes a controllable variable (Kopalle 2010), e.g. EDLP and PROMO decisions. Keeping this variable constant it a desired set-up when studying performance implications (Ingenbleek and Lans 2013) which the effects and the outcomes of pricing decisions could be considered to be. A total of 16 stores located in a region of Stockholm participated in the experiment, which provides the same geographical region for all stores. The stores are then comparable in terms of both chain membership and the type of market. Before the experiment was conducted, the stores were divided into control stores (4) and experiment stores (12). The control stores are necessary to make sure that it is the outcome of the coupon that is measured and nothing else.

Sales volume is not only an assumed goal for an organisation that is not the market leader (chapter 2.4.1), but is also the type of goal that is assumed quite often when researching coupons. (e.g. Mulhern and Leone 1991). It was stated earlier that coupons were used due to the connection to the manufacturer. However, according to Kumar and Swaminathan (2005) the face value of coupons are important to consider since it is assumed that the level of the face value influences the outcome of a coupon for the retailer. Therefore, different coupon values were used in the intervention stores. Grouped in pairs, two stores had a face value of 2 SEK on the intervention coupon while the other two had a face value of 3 SEK on the intervention coupons. By using different face values, it is possible to evaluate the potential outcome from two different face values and thereby the price decision that is made. The coupons where placed and displayed within the store: at the checkout counter where the included assortment (AC) was usually displayed in the store. Hence, we allow the consumer to make a price comparison between substitute and complementary products. This type of placement of the coupon is an important decision since it allows the consumer the possibility to make contextual comparisons of the prices, i.e. an activity which the consumer goes through in the immediate shopping environment (Carver and Padtgett 2012).

Although the close connection between the retailer and the manufacturer is one of the main arguments for choosing coupons, there are two additional aspects to why coupons were seen as the suitable retail tactical decision. First, coupons are one of the most frequently used price discrimination tools in retailing (Su et al. 2014). The assumption made when using a price discrimination tool is that the retailer uses dynamic price models (Grewal et al. 2011) i.e. that prices can vary over time and that price is frequently updated due to new information. This then implies that it is possible to
assume that the retailer gathers information and learns from previous decisions, just as the assumptions within bounded rationality. Second, coupons are clearly communicated to the consumer and usually increase the quantity sold to a greater extent than other tactical price decisions (Neslin et al. 1985). This increases the possibility of getting an outcome that is strong enough to be used for the evaluation of substantive limits.

However, it has been argued that the outcome of a coupon is also dependent on the type of product that the coupon is connected to. The reason for this is that certain products have a higher tendency to influence the impulse buying behaviour of the consumer, which would increase the impact even further (Kacen et al. 2012). In paper two, we used an assortment category (AC) labelled *Fresheners*. This AC contained three different types of product categories (CM), namely chewing gum, cough drops, and sugar pills. All of which could be considered as products that a consumer is more likely to impulsively buy than have on the regular shopping list. Furthermore, within each CM there were several different brands (BM) which consequently lead to a total of 18 brands and 221 products within the data. The AC is then relatively broad, where the products could be assumed to influence a consumer in the same way and thereby provide a stronger outcome from the intervention coupon.

The data used in the article contained 24 weeks of sales data. It was collected for the same 12 week period in two consecutive years. However, while year 1 was solely used as a control period, year two contained both control and experiment periods. The data set then contained pre-, during- and after experiment data for the experiment period, as well as control data for the previous year at the same period (when no campaign was conducted within the stores). Then a difference-in-difference ordinary least square regression model (Studenmund 2011), also controlling for all unobservable time invariant differences between intervention and control stores, was employed to investigate the causal effects of the coupon campaign on the different assumed decision alternatives, i.e. the retail specific factors.

Therefore, by conducting another review analysis and an experimental study it is possible to develop the assumptions of specific decisions and the consequences of those decisions. In the upcoming chapter, the studies accounted for within this chapter are summarised, connected to each other and lastly implemented in figure 12 (p. 25).
5. Summary of appending papers

In the previous chapter, it was explained that by conducting a topical paper it was possible to get a foundation for the procedural rationality assumptions of the retailer. Furthermore, it was argued that a field experiment could serve as a means for evaluating if substantive limits could be assumed in research. Thereby, it is possible to determine the consequences of assuming procedural rationality and intendedly rational behaviour when researching retailers’ price decisions. Within this chapter, papers one and two are summarised. This summary is not adapted to the terminology derived from chapter two within this thesis since the intention with the summary is to provide a broad comprehension of the result of both articles. This is later brought into chapter 6: Discussion and here related to the terminology used in chapter two. The full articles can be found in appendix 3.

5.1. Paper 1 – Defining the link between retail price strategies and price tactics

Paper one aimed to define retail price strategy and tactics conceptually in relation to planning horizons. (Lagin and Gebert-Persson 2014) As this is a topical paper, many of the aforementioned concepts in chapter three are used within this paper. Brought into the discussion later on, paper one contributes with the time aspects of individual decisions within the price decision structure that is explained in chapter three. By doing this, the aspect of procedural rationality can be considered.

In the paper, it is illustrated that price strategy can be understood as everything from positioning the store (every-day-low price strategy vs. promotional strategy), to the brands held within the store. Price tactics on the other hand can be seen as everything from offering a discount (price cut) in general to using a promotional tool or even setting the actual price (price endings).

By using a general perspective of that price strategy is a long-term decision and price tactics is short-term decisions, some, but not all, of the concepts mentioned in chapter three (figure 12) are discussed in relation to each other in paper one (e.g. EDLP, PROMO (chain strategy (CS), store strategy (SS), brand-store strategy (BSS)), category management (CM), brand management (BM), product management (PM), discounts, coupons, and odd-even ending prices). In addition to these, loss leaders are included in the paper since this is a price decision that is often made within retailing. By combining long-term vs. short-term aspects of these operational definitions with the planning horizons from operation planning, as explained by Hübner et al. (2013), it is possible to create analytical levels of these decisions.

Here, both the time aspect of a specific decision and how the decisions are related to each other determine the analytical level. For example, if a BM decision is considered short-term, the CM decision, which involves a whole product group and not only a single brand, becomes a long-term decision. In comparison, it can be explained that if the CM is the short-term decision, the BSS becomes the long-term decision.

In addition to these analytical levels, or connection between price decisions, it is argued in paper one that decisions could be related to each other as groups of decisions. By using the operation planning horizons within the article, decisions could be seen as having different time durations and it is these potential time durations that create groups of decisions.

When adding these time duration aspects to the aforementioned decisions, groups of interrelated decisions become visible. Here, it is shown in the article that while some decisions are in place for up to six months (price tactics, brand management, category management), other decisions are in place for up to 12 months (e.g. store strategy), and others up to one and a half year (chain strategy). However, one need to have in mind that decisions within the different decision groups also are related to the other decision group, i.e. there is an interrelation between the decision groups.

The key findings in this article are that retail specific factors that influence the definition of price strategy and tactical price decisions used within research are the foundations for the analytical levels and all connected to the assortment of the retailer. Furthermore, from the retailer’s perspective, the connection between the two concepts might not necessarily be a problem of definition but rather a sign of their organisational complexity and planning horizons. However, these two findings are related since it is evident that a higher analytical level could be argued to illustrate a higher complexity in the decision to be made, especially in terms of price strategy.

More specifically, this means that the retailer’s decisions on price strategy and tactical price decisions include decision variables that stretch not only between which product to offer a price cut on but also the way of managing the price level of the entire store. Both of which are decisions that have different time aspects. Another thing evident in the theoretical discussion is that it is almost impossible to not consider, or define, price strategy and tactical price decisions without accounting for the assortment of the retailer.
5.2 Paper 2 – How does the use of in-store discount coupons affect sales? A retailer’s perspective

The second paper was written in order to get a foundation of whether the substantive limits, i.e. the influence of other actors, could be argued to exist. If this were the case, the retailer might not have the possibility to act intendedly rational and thereby the procedural rationality assumptions are not possible either. Therefore, some of the aforementioned retail decisions were tested in a field experiment by using manufacturer coupons with the aim to empirically test the effects of an in-store discount tool on sales volume through a field experiment. (Lagin et al. 2014)

The in-store promotional tool was tested in relation to the retailer’s decisions on the individual product, the brands’ discounted products, the manufacturer’s brand, the category management decision, and the assortment category decision. Thereby, paper two contributes with the actual affects or impacts of a manufacturer’s decision that the retailer has chosen to implement within the store’s premises, i.e. the retailer decided the discount. Overall, the article set out to test the effect through six hypotheses.

The first hypothesis was related to the individual product for which the price tactic is offered (store-keeping unit, SKU). On average, the experiment shows that the individual product sales increased by 55 % when using the coupon, i.e. supporting hypothesis one.

The second hypothesis was related to the effect of the price tactic on the manufacturer’s brand, i.e. that there is a cannibalisation effect for the manufacturer. Since the experiment only resulted in an insignificant sales decrease of -1 %, the hypothesis was not supported.

The third hypothesis was related to the effect on substitution products, i.e. all brands that have the same type of products as the one being discounted. As with the second hypothesis, the third was not supported due to an insignificant sales decrease of -1.5 %.

The fourth hypothesis was related to the effect on a broader assortment category. Due to the substitution effect, the retailer will notice that cannibalisation will take place. On average, the experiment shows a decrease in sales volume of -5.5 % for the other products due to the experiment.

The fifth hypothesis was related to whether or not this discount decision was, overall, beneficial for the retailer. For a beneficial result to take place, it was argued that the overall sales effect needed to be positive, i.e. the net sales volume for the store needs to increase as a result of the campaign. With an insignificant increase of 1.8 %, this hypothesis was not supported.

Finally, the sixth hypothesis was related to an assumption that a higher price cut (i.e. face value) increases the sales volume more than a smaller price cut. An argument often found in the coupon literature. The experiment shows that there is a higher effect if the discount offered is higher, with an increase difference of 16 %12, and the hypothesis is supported.

A key finding in this paper is that the positive effect tends to decrease in line with the level of assortment one considers. From the experiment it became evident that the this particular decision is a zero-sum game for the retailer since the sales increases on the manufacturer’s brand is offset by the negative sales decrease on the product category and the assortment category.

5.3 Overall findings, connecting the papers, and returning to the retail decision frame

The main findings of the two articles are summarised in table 3 below. In paper one, the retailer’s decision alternatives of product management, brand management, and category management are all identified as important aspects of the strategic price and tactical price tactic definition. In relation to paper two, these aspects can be compared to the store-keeping unit (SKU) as the product management decision, manufacturer’s brand (BM) as the brand management decision, and all products that are equal to the offered product (CM) as the category management decision. However, in paper two the broader assortment category management (AC) was added, since this increases the possibility of substitution or complementary effects.

12 SEK: 47 % increase, 3 SEK: 63 % increase
Assumptions of Retail Price Strategy and Price Tactic Decision

Table 3 Main findings of appending papers

<table>
<thead>
<tr>
<th>Paper</th>
<th>Aim</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper I</td>
<td>To conceptually discuss the concepts of price strategy and price tactic</td>
<td>Drawing the line between a tactical price decision and a price strategy decision is hard. Many of the concepts have been used differently as both a tactical and a strategic decision. Where to draw the line between what is a price strategy and tactical price decisions (and in some instances also price promotion) seems to be the most critical part when conceptualizing these complex theories together. A connection between the concept of price strategy and tactical price decisions can be made in terms of the retailer’s planning horizon and the decision that the individual retailer makes. In combination with this, and the closeness of the theoretical concepts in general, it then becomes important to define (and/or account for) at which level the definition is measured and what this means for the decision per se, i.e. the analytical level of the definition needs to be described in relation to the decision maker.</td>
</tr>
<tr>
<td>Paper II</td>
<td>To empirically investigate the effects of in-store discounts coupons on sales volume through a field experiment</td>
<td>The positive coupon effect on the SKU-level is offset by the impact on the broader category assortment, making the campaign a zero-sum game for the retailer. In addition, the face value of the coupon gave the expected effect: a higher face value would result in a higher sales volume increase.</td>
</tr>
</tbody>
</table>

Since it is concluded that the concept used in paper one (e.g. EDLP, PROMOR (chain strategy (CS), store strategy (SS), brand-store strategy (BSS)), category management (CM), brand management (BM), product management (PM), discounts, coupons, and odd-even ending prices) have inherent time limitations, these conclusions can be connected to the operational definitions of price strategy or price tactics. Furthermore, by discussing how different decisions are operationalised on different analytical levels, paper one provides the possibility to make assumptions of sub-strategies. Thereby, further developments of the assumptions of rationality regarding the sequential price decisions within retailing, (See the blue striped areas in figure 13 below) Since paper two shows that the effect of a tactical pricing decision influences the outcome of a decision and that the tactical price decision can be assumed to be related to the manufacturer, the conclusions of the paper can be connected to the outcome and other actors discussed in chapter 3. Since the methodological design is set up for two years, this provides the information that could be used and perceived as data which the retailer would use to learn from the past. (See the green squared areas in figure 13 below) Since both papers take in consideration several of the specific decision alternatives in chapter 3 and the basic assumptions regarding these decisions, can both be connected to the specific decision alternatives, the decision situation, and the information that the retailer is assumed to collect at the point of the decision. (See the orange wave areas in figure 13 below)

By covering the highlighted areas in figure 13 in the individual studies, it becomes possible to discuss the other assumptions of rationality more precisely. For example, since there is an outcome of a tactical pricing decision and assumed time limits to specific decisions, it can be discussed whether this could be assumed to be intendedly rational, if there is a framing illusion due to substantive limits which in turn leads to an indication of sub-goal identification assumptions. Furthermore, since both studies include several decisions (and not only two) it is possible to discuss the consequences of solely assuming two decision alternatives in comparison to the number used in the paper as well as determining whether procedural rationality assumptions are necessary. (See the brown diagonal bricks in figure 13 below)

As can be seen, the only aspects that cannot be discussed in the upcoming chapter are present- and future situations.
Figure 13 Connections between the appending papers and the retailer decision frame
6. Discussion

In the previous chapter it was illustrated how the supplemental papers contributed to making assumptions and evaluating assumptions in the retail decision frame. This chapter contains two different parts. The first part focuses on the aspect of micro-level theories. More precisely, which concepts used in the first supplemental paper that could constitute a description of the retailer’s price decisions frame and how the time assumption of specific decisions, due to their inherent operational definition, can be organised in a sequential order. This is made in relation to assuming that the different specific decisions have an inherent information assumption that also is based on analytical levels. By doing this, it is possible to rearrange the sequential price decisions and point out which decisions could be assumed to be sub-goal identification strategies and the consequences that procedural rationality assumptions would have on this rearranged problem frame. Hence, it illustrates a more detailed retail decision frame. The second part of the discussion focuses on the other aspects highlighted in previous chapter: intendedly rational assumptions, substantive limits, sub-goal identification, and framing illusion assumptions. By doing this in a second step, it is possible to discuss the consequences of certain assumptions of rationality.

6.1 The retailer’s decision frame

This thesis presents arguments for the possibility to evaluate the decision premises of different decisions using a decision frame. In paper one it was evident that many of the operational concepts that have been used in previous research have a close interrelationship in terms of time assumptions and which type of decision one is examining. In its essence, this could be understood as if the level of analysis leads to the assumption that a higher decision would include several of the lower level decisions e.g. an assortment category management decision (ACM) would, per definition include category management (CM), brand management (BM), and store-keeping unit (SKU) decisions. Since assumed information varies with the rationality assumptions, the base of this inclusion or exclusion could then be assumed to be related to the information search of the retailer, i.e. the level of analysis indicates the information assumption for each specific decision.

This is also indicated in paper two when using several of these as decision alternatives that the outcome of a price tactical decision should be measured towards. The higher level of analysis would then lead to the assumption that more information is to be collected. This information could be assumed to be based on the past-, the present-, or the future situation. By using the level on analysis directly related to the information assumption it is possible to assume that decision sequentially follows each other by being organised on different levels, almost in a hierarchical way. This line of thinking was discussed in chapter 2.2 (e.g. Oxenfeldt 1975; Duke 1994; Diamantopoulos and Mathews 1995; Jones 1999; Casadesus-Masanell and Ricart 2010). It is thereby assumed, as argued by Simon (1959), that when more information is collected the decision situation becomes more complex for the decision maker.

Figure 14 Retailer decision frame

Although most of the concepts within figure 14 are covered both in paper one and chapter 3, there are two operational concepts that are solely covered in chapter 3 (the shaded areas in figure 14). Multiple-department
management (MDM) and department management (DM) are included in the figure since it was indicated that Desrochers and Nelson (2006) assumed these decisions. The logic would be that these decisions include more information than the decisions with a lower level of analysis (e.g. CM, SKU), and that multiple-department decisions would be assumed to include information from several departments.

Furthermore, it was concluded in paper one that three groups of decisions could be considered by assuming time specific aspects; up to six months, six-twelve months, and over 12 months, where the decisions can be evaluated within the groups (group 1, 2, and 3 in figure 14). Whereas the former is assumed to be short-term, the second could be classified as semi-long assumptions and the last as long-term assumptions in two steps (horizontal axis in figure 14). Hence, the semi-long assumptions and the long-term assumptions could be assumed to be broad strategic decisions, as argued by Rumelt et al. (1991), and would result in that the decisions from CM to chain strategy could all be seen as broad strategic decisions. As a result, the retailer would only have one tactical decision in direct relation to an individual product. This makes it possible to evaluate whether the retailer’s objective has been reached at a later stage in the analysis and makes it possible to discuss the retailer’s limitations.

However, the groups of decisions are interrelated. For example, the category management decision might be assumed to be a short-term decision (up to six months) or to be “semi-long” decisions since category management might concern decisions that are made for the regular operations. The same line of thinking would be possible to apply on ACM, DM, and MDM as well. On the other hand, store strategy and chain strategy assumptions could be assumed to be valid for all three groups, i.e. can be assumed in both short-term, semi-long term, and long-term, since it might concern decisions for the entire chain. In contrast to this, SKU and BM assumptions would only be valid assumptions in the short-term because these decisions can be assumed to be activities within the store. As a result, figure 14 below would illustrate the retailer’s decision frame. Within this decision frame, there would be no limiting assumptions (i.e. substantive limits, intendedly rational, sub-goal identification or procedural limits). However, what it does indicate is which micro-level concepts could be assumed in the decision maker’s problem frame.

A total of eight decision alternatives used in previous research could be understood and used as micro-level concepts: the individual product (SKU), brand management (BM), (product) category management (CM), assortment category management (ACM), department management (DM), multiple department management (DMD), store price strategy, and chain price strategy. It does not really matter if the different decisions illustrated in figure 14 are perceived as a strategy in itself (Oxenfeldt 1975), a promotional decision (Ingenbleek 2002), or solely as a part of the marketing strategy (e.g. Dorward 1987), since it is assumed, and thereby interpreted, that the retailer controls these decisions (Cannon and Morgan 1990). Furthermore, the assumption of the decisions are most likely to be different depending on the time assumption of the decision, e.g. store strategy can might as well be perceived as a strategy in itself (long-term) but also as a promotional decision (short-term). However, by taking all of these decisions into consideration, figure 14 reflects Ingenbleek (2002) argumentation that price decisions have both a strategic and tactical nature.

From a broader perspective, it can be assumed that if perfect rationality assumptions were applied to figure 14 this would mean that one need to assume all decision alternatives within the illustration and thereby full knowledge ought to be assumed. Although most retail studies were determined to assume perfect rationality due to the tendency to assume a maximising behaviour, most retail studies consider a limited number of decision alternatives (chapter 3.3). In the light of figure 14, the latter would indicate assumptions that are similar to the ones made in bounded rationality (chapter 2.3 and forward), i.e. procedural limits, framing illusion, substantive limits, intendedly rational behaviour and sub-goal identification.

6.2 The consequences of different assumptions

There are several aspects that are yet to be considered in relation to figure 14: the tendency to repeat decisions over time, sub-goal strategies, sub-goal identification, procedural limits, framing illusion, substantive limits, intendedly rational behaviour. All of which could explain the consequences of specific assumptions about retailers’ price decision frames by developing figure 14.

In paper one it was evident that pricing decisions regarding the individual product, the brand, the product category and the broader assortment category can be seen as short term, tactical decisions, on an individual basis, from a time perspective of up to six months. However, since the latter three include more dimensions in the decision premises than the individual product, these decisions also have a strategic nature for the retailer in terms of assortment breadth and effects of decisions. In this way, these two could be considered sub-strategies (the brands and the product category) while the last (assortment category) could be seen as a price strategy decision. Since these three are different from the individual product, these can be assumed to have a longer time perspective.

The last group within the illustration could be considered the “real” long-term decisions that are hard to change, i.e. the “true” strategic price decision. Store and chain price strategy is something that could be assumed to be pre-
determined if the store is already established. If this is the case, the price strategy decision of the store and the chain becomes a non-issue for the retailer and is not included in the decision frame. By excluding these two price decisions, the decision frame illustrates and describes the messy reality of the retailer’s price decisions that are made over time.

Furthermore, if specific decision alternatives were assumed to be repeated over time, this would lead to assuming only one time duration, i.e. the aforementioned decision groups disappear as an assumption. If we take the starting point in paper one and solely assume the long-term decision assumption at the store level (<18 months), this would lead to an assumption that specific decision alternatives are repeated a various number of times. For example, SKU decisions would be assumed to be made at least six times, BM decisions would be assumed to be made four times, CM decision would be assumed to be made three times, etc. (see figure 15 below)

However, since the retailer’s decision frame is multifaceted and highly complex, outcomes of decisions would be hard to trace back. To evaluate outcomes, it was possible to include sub-strategic decisions when discussing sequential price decisions and in that way make it possible to assume sub-goal identification (which would indicate empirical important goals) (chapter 2.2). If one assumes that there is solely one strategic decision (chain strategy) and one tactical decision (SKU) for the retailer, this would lead to assuming that BM up to store strategy decisions are sub-strategic decisions, in which sub-goal identification could be used as a rationality assumption. Although, all sub-strategies are covered in previous research, there are no pre-dominant decisions indicated in the review analysis (chapter 3.1), even if it could be concluded that it was common to assume that two types of decisions took place (chapter 3.3.1).

As discussed earlier, assuming two decisions (or less than all decisions) would imply that procedural limits are accounted for. Therefore, even if a maximising assumption is made within most retail research in the review analysis, it seems as they are done by considering this bounded rationality assumption. Since there are basic differences in the information gathering assumptions (Simon 1979), this would mean that maximising assumptions can only be made by considering information from two decision alternatives (e.g. SKU and BM). However, in paper two, when including four decision alternatives (SKU-ACM in figure 15) the outcome of the experiment indicates that assuming solely two decision alternatives might be insufficient. The reason for this is that when one trace back the outcome of a price tactical decision (the coupon) it is evident that in relation to an “easy” decision (SKU, BM) the retailer faces a positive outcome. In comparison, in relation to (CM, ACM), which are two slightly more complex decisions, the retailer faces a negative outcome and in the end a zero-sum result.

If the focus would be solely on the outcome of the experiment in paper two, the consequence would be that one would assume the SKU and the BM decision to be of empirical importance and it would result in the necessity to assume procedural limits by excluding six of the decision alternatives. Furthermore, in the light of the sub-goal identification assumption (Simon 1979) this would mean that the procedural limits assumption per definition would lead to a sub-goal identification assumption that is based on survival conditions. Of course, this would mean that it is only possible to make satisfying, bounded rationality assumption, and that no other outcomes than substitution effects

Figure 15 Consequences of the assumptions of rationality
which are due to brand-switching can be assumed, i.e. product substitution effects, complementary effects and cannibalisation effects cannot be assumed as empirically important. However, it is important to remember that the tactical price decision used in the experiment is, from the beginning, something that the manufacturer decides upon and which the retailer accepts into the store. The mere indication of procedural limitations, and the frequent usage of these tactical price decisions within retailing, might be a result of the fact that the retailer is influenced by the manufacturer, rather than that the retailer suffers from procedural limitations. As a result, one might have to assume substantive limits instead of procedural rationality.

While substantive limits generally occur due to the fact that one actor has influence over the other actor, Jones (1999) adds that substantive limits are also a reflection of a higher cooperation level than is rationally necessary. Identifying substantive limits is done by assessing which decision is in the best interest for the retailer’s business and not the manufacturer’s. Here, the negative effect on the ACM decision and the overall zero-sum outcome of the experiment indicates that the retailer does not make any incremental sales volume in general from the specific price tactical decision. Although there is an ongoing discussion within the retail literature on whether the manufacturer influences the retailer or the other way around, it seems as though the manufacturer might influence the retailer, or that the cooperation level is too high. The use of coupons is a frequently used tactical price decision within retailing and since the outcome of the experiment provides no significant result for the retailer other than at the SKU level, this would indicate that the decision is not in the best interest of the retailer.

However, it might be that the cooperation is necessary due to market demands, which would mean that it is not an “irrational” decision, and that the retailer is expected to benefit from the specific decision in the end. This line of thinking was argued by Jones (1999): cooperation becomes rational when the market demands it, and there is an assumption that both parties will benefit from a specific decision in the long-run. Although market demands could imply that one needs to assume that the retailer might believe that they are better off pleasing the manufacturer or the consumer in the end, it seems, as the retailer would be assumed to lose by cooperating with the manufacturer on this specific price decision, especially when one considers the methodological design of the experiment. The experiment set up by using two consecutive years. If the retailer were to benefit from this decision in the long-run, one would have to assume that they strive for more than satisfactory outcomes on solely two decision alternatives, i.e. outcomes that are higher than zero-sum. Since the zero-sum outcome becomes visible when more decision alternatives than two are included, this would once again indicate that this specific tactical price decision would not be in the best interest of the retailer.

Although evident that it seem to be appropriate to assume some sort of substantive limits and procedural limits, this does not exclude an assumption about a decision maker that is goal oriented but adaptive and learning, i.e. intendedly rational (Simon 1980). However, within this assumptions it is argued that failed outcomes act as a response mechanism for the decision maker (Simon 1979) which would mean that if the outcome is not of a satisfactory level, the retailer would be assumed to change to another decision. Since the experiment contains data that can be used to assume learning or adaptive behaviour by including past information in the decision, the experiment still indicates that no learning takes place since the only positive outcome occurs at the SKU level. This would indicate that one could not assume an intendedly rational decision maker in the retailing, especially not since, in this case, coupons are frequently used as a pricing tactic.

Since it is indicated that one can assume both procedural limits and substantive limits within retailing, but one cannot assume intendedly rational behaviour, it is possible that retailers, to some extent, suffer from a miss-specified decision frame. If the decision frame would not be assumed miss-specified, and the retailer would be assumed intendedly rational, it would be assumed that the retailer would have stopped using these types of decisions. However, since it was discussed earlier that intendedly rational behaviour could probably not be assumed and that it seems as sub-goal identification can be assumed, there is a necessity to assume a miss-specified decision frame. In the light of the discussion regarding procedural limits and substantive limits, the assumed miss-specified decision frame would be built on as few decision alternatives as possible. Furthermore, it would be assumed that there is no possibility to change the decision to one with a better outcome, since Jones (1999) argues that sub-goals identification hinders the possibility to make decisions with better outcomes. According to Bateman and Zeithaml (1989) this would mean that the decision maker’s decision frame is miss-specified and that there would be a framing illusion (chapter 2.3.4).

The effects from the experiment in relation to the theoretical paper would then indicate that a manageable set of decision alternatives for the retailer is two (SKU and BM). This would in turn mean that procedural limits and substantive limits always exist and that assumptions of these can be based on a miss-specified decision frame or market imperatives. As a result, it could be argued that there is a miss-specified decision frame that is to be assumed to reflect the retailer’s reality and the rationality assumptions are then based on that basic argument. Although the different assumptions discussed above is part of the bounded rationality assumptions, it is evident that since these can be
questioned in terms of price decisions, so would perfect rationality assumptions due to the inherent differences between the two (information, goal, learning etc.). However, since satisfying goals could be assumed to be short-term (Simon 1979) it might be the case that the retailer has in fact lowered the aspiration level at the point of the decision, but failed to evaluate and learn from the decision or that it simply can be assumed that the retailer does not take time into consideration. If this is assumed, Simon (1979) argues that satisfying assumptions do hold, due to the short-term assumption (chapter 2.4.1). Bounded rationality assumptions, with their satisfying criterion, would then be possible to make for two decision alternatives (SKU and BM) that have an inherent time assumption of 12 weeks. Given the amount of decision alternatives in figures 14 and 15, it is then interesting that many of the studies have used maximisation assumptions.

Maybe the manageable set of decision alternatives is why so many of the retail studies in chapter three, the review analysis, were determined as having no rationality assumptions of the retailer. Following Simon’s (1959) thoughts, this would mean that since new information is not gathered and the aspiration level is not lowered, the decision maker stops behaving rationally in the end and it could not be assumed that the retailer is rational at all. Here, Simon (1979) argued that cognitive constraints of the decision maker could be assumed since the outcomes of specific decisions do not create a response mechanism, i.e. learning is not assumed to take place.
7. Conclusion and contributions

The purpose of this thesis was to analyse how the retailer’s decision frame for price setting can be understood. As is evident in the previous discussion chapter, there are many price decision alternatives for the retailer in their decision frame. It is interesting that price decisions within retailing can be described as a multifaceted activity that concerns a multitude of price decisions with an inherent strategic or tactical nature. However, several things point towards allowing less strict assumptions regarding price decisions within retailing, especially since it is indicated that the retailer’s decision frame could resemble features of perfect rationality, while brand management decisions resemble features of bounded rationality. It would also result in the need for one to assume that tactical and strategic price decisions have different decision frames. This would however, not make sense when discussing assumptions about price decisions as simultaneously or independently made decisions.

Assumptions in research can be based on the notion that price decisions are assumed to occur simultaneously or independent of each other, depending on the situation. While the latter would simplify the assumption (as it is within the experiment in paper 2), the former would create multiple decisions that must be made within the decision frame, and not only on every single analytical level. Although simplified, this still provides the necessity to account for the assumptions of rationality made, i.e. clearly account for how and why the retailer’s reality is assumed to work a certain way. Hence, once again clarity in assumptions is necessary.

In 1995, Diamantopoulos and Mathews (1995) stated that price decisions are the least rational decision made in organisations. Regardless of this statement made 20 years ago, the retailer is still assumed to maximise and optimise his/her price decisions in many current articles (e.g. Girju et al. 2013; Johnson et al. 2013; Pancras et al. 2013; Cardinali and Bellini 2014; Su et al. 2014). This view was pointed out in an editorial by Levy et al. (2004:xv) where they state; “retailers are interested in maximizing their profits [...]”. Also according to the literature review in this thesis it is evident that most of the articles use maximisation assumptions or do not elaborate on any indications of what rationality assumptions are made. The message here would be that it is assumed that retailers are in control of their decision-making, but solely by (ii) two decision alternatives are assumed as strategically managed. However, the interesting contrast to this are the few articles that consider bounded rationality assumptions. Although bounded rationality assumptions were indicated in a few articles, and no assumptions could be found in several articles, there was the same lack of clarity regarding the rationality assumptions. A lack of clarity in the assumptions made and the limitations that the chosen approach provides might result in uncertainties about the outcomes of the studies, i.e. it is easier to criticize the article(s) specifically.

Even if uncertainties regarding outcomes can arise, the lack of assumptions of rationality made can have theoretical consequences that were not the intention from the beginning. It is unlikely that perfect rationality are possible in practice due to the inherent complexity of the retailer’s decision frame (information, number of alternatives, and time). Furthermore, it is doubtful that the theoretical definition of bounded rationality assumptions entirely reflects the retailer’s reality, mostly due to the missing indication of an intendedly rational behaviour. Here, it might become evident that many of the studies have an obvious lack of connection to the rationality theories of the retailer’s pricing decisions (e.g. Allender and Richards 2012; Dawes 2012; Kumar et al. 2012; Richards et al. 2012; Gauri 2013; Olbrich and Grewe 2013; Praharsi et al. 2014). This obvious lack within the literature would imply or provide theoretical consequences related to the possibility to assume a manager who strategically manage these questions, especially if the assumptions are that the retailer solely adapts due to market imperatives (i.e. assuming substantive limits). If one would assume that the retailer is doing this, it would have an impact on other assumptions as well. For example, it would not be possible to assume that the retailer is in control of the decisions and it would be unnecessary to consider several decision alternatives.

Furthermore, if one were to stretch the overall conclusion, it is indicated that very little of the retailer’s reality (or total knowledge of it) is covered in the studies due to the extensive focus on perfect rationality and lack of bounded rationality assumptions, or discussions on assumptions made.

In sum, and given the retailer’s decision frame and the multitude of decision alternatives, practice indicates a decision frame, which neither fits with descriptions on perfect nor bounded rationality. The simplistic assumptions of price decisions within retail research, and price research in general, would then be obsolete and slightly inappropriate. Even though this might seem to be a harsh conclusion, the implication for theoretical assumptions provides an explanation.

7.1 Implications for theoretical assumptions

The implications for theoretical assumptions are directed towards the necessity to make clarifications on the assumptions that are made within retail research, where it is necessary to clarify the perspective that is used within the article (perfect, bounded or irrational, for instance). However, simplifications made in the literature and assumptions,
explicitly or implicitly made, often indicate maximisation goals within retail research. Although not a part of the maximisation thoughts, the later leads to the importance of including or using the limitation assumptions argued for within this thesis: procedural limits, substantive limits, intendedly rational behaviour, sub-goal identification, and a miss-specified problem frame. Furthermore, the arguments brought forward within this thesis indicates a need to focus on decisions that the retailer controls and therefore makes. In this way, a management perspective can be established that allows assumptions on which specific decisions that could be considered and how various decisions affect one another. The effect can then be discussed both on various levels (stores, brands, etc.), and in relation to different actors (consumers, retailers, manufacturers). This would provide assumptions within the literature that are more likely to reflect the retailer’s reality and would lead to a possibility to make more context specific assumptions regarding procedural limits, substantive limits, intendedly rational behaviour, sub-goal identification, and a miss-specified problem frame.

7.2 Limitations and future research

As with all studies, this thesis has its limitations that provide grounds for future research.

One of the limitations with this thesis is that most of the discussion is based on theoretical assumptions and reviews of previous research. Hence, there is no depth in the empirical world; the reality is, to a very small extent, taken into consideration (which also makes it impossible to make practical implications). As a result, the theoretical assumptions about the retailer’s decision frame might not be fully accurately made, especially since bounded rationality assumptions are not made as frequently within previous research. Therefore, it is necessary to conduct studies that would develop the theoretical assumptions, which in turn would allow one to make managerial implications. Here it is necessary to focus on the assumptions of procedural limits, substantive limits, intendedly rational behaviour, sub-goal identification, and a miss-specified decision frame. By focusing on these concepts and the decision frame of the retailer in qualitative studies it is possible to develop an understanding of how retailers understand the decisions that they make and through this understanding develop the retailer specific assumptions of rationality. Maybe this is particularly important due to the indication that sub-goal identification might exist within retailing and it might be necessary to determine which type of goal (sales volume, profit, etc.) is actually in focus.

This would of course mean that it necessary to re-consider the methodologies used when conducting price research in retailing. Previous research has mostly used quantitative approaches and it is therefore difficult to state whether the interpretations of decisions made is valid in the empirical context. Although made a long time ago, Voss and Seiders (2003) suggest that to fully understand the decisions made within retailing one has to ask why the retailer makes that decisions instead of making assumptions. Exploring the decision maker’s strategic and tactical price decisions through a qualitative in-depth approach could then be considered to complement the already existing research on retail price decisions, and thereby develop the theoretical assumptions.

However, this does not mean that one should stop doing quantitative studies, since there are a couple of areas in which these could help facilitate the development of theoretical assumptions. Take the assumption of substantive limits as an example. Within this thesis, substantive limit was connected to the manufacturer only. However, there might be other actors that could be seen as influencing the retailer, especially if substantive limits are assumed to occur due to market imperatives. There have been indications within previous research that the retailer makes the price decisions to adapt in order to the price conscious consumer in today’s society (e.g. Burt 2010) which might be reflected in the focus used in the articles scrutinised within this thesis: they all have a strong focus on consumer behaviour. For example, recent studies (e.g. Su et al. 2014) theoretically argue that when the consumer has the freedom to choose and manage the price values for a product the retailer is better off. This would indicate that if the retailer allows the consumer some degree of freedom to choose the face value of a price offering, the retailer would be better off than when deciding the face value according to his own basis. As for substantive limits, and thereby intendedly rational behaviour, this would imply that the outcome of a price decision would be better if one assume that the retailer adapts its decision towards the market, i.e. the consumers. However, as most of these studies are of a game theoretical nature, it would be suitable to test the same price tactical decision (coupons) in experiments. Off course this opens up for a multitude of experiments to be conducted (bundling, odd- and even ending prices, etc.) where the theoretical assumptions can be analysed and measured as if the retailer is making the decision and evaluating it in relation to its own store.

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References


Lagin, M. & Gebert-Persson, S. 2014. Defining the links between retail price strategies and price tactics *HUI working papers*. HUI.


### Appendix 1 Review tables

#### Table 4 Micro-level theories/concept and the type of rationality

<table>
<thead>
<tr>
<th>Type of rationality</th>
<th>Studies</th>
<th>Micro-level theory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perfect rationality</strong></td>
<td>Su, Zheng and Sun (2014), Johnson, Tellis and Ip (2013), Kumar and Swaminathan (2005), Swaminathan and Bawa (2005), Leone and Srinivasan (1996)</td>
<td>Price strategy, coupon, discounts</td>
</tr>
<tr>
<td></td>
<td>Kopalle, Kannan, Boldt and Atrora (2012)</td>
<td>Reference price, household heterogeneity</td>
</tr>
<tr>
<td></td>
<td>Girju, Prasad and Bhatnagar (2013), Yan and Bandyopadhyay (2011)</td>
<td>Bundling</td>
</tr>
<tr>
<td></td>
<td>Kacen, Hess and Walker (2012)</td>
<td>Impulse behaviour</td>
</tr>
<tr>
<td></td>
<td>Bandyopadhyay, Rominger and Basaviah (2009), Destechers and Nelson (2007), Shugan and Destriau (2001),</td>
<td>Category management</td>
</tr>
<tr>
<td></td>
<td>Pancras, Gauri and Talukdar (2013)</td>
<td>Retailer pass-through</td>
</tr>
<tr>
<td></td>
<td>Cardinali and Bellini (2014)</td>
<td>Competitive convergence, intertype and intratype competition</td>
</tr>
<tr>
<td></td>
<td>Voss and Seider (2003),</td>
<td>Sector characteristics (assortment perishability and heterogeneity), firm characteristics (retailer differentiation, store size, number of stores), Competitive and demand characteristics (local), retail price promotion strategy (price variation, price promotion advertising volume, average depth of discounts)</td>
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<tr>
<td></td>
<td>Bolton and Shankar (2003)</td>
<td>Price variation, deal intensity, deal support, relative price</td>
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<td></td>
<td>Kopalle et al. (2009)</td>
<td>Competitive effects and price strategy</td>
</tr>
<tr>
<td><strong>Bounded rationality</strong></td>
<td>Lindblom and Oliikonen (2008), Dhar, Hoch and Kumar (2001)</td>
<td>Category management</td>
</tr>
<tr>
<td></td>
<td>Aalto-Setälä and Halonen (2004)</td>
<td>Rightmost digits (level effects, image effects)</td>
</tr>
<tr>
<td></td>
<td>Shankar and Krishnamurthi (1996)</td>
<td>Price sensitivity, price policy, promotional variables</td>
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<td><strong>Unclear</strong></td>
<td>Kumar, Trivedi, Bezawada and Sindhar (2012), Stauss (2011), Carpenter and Moore (2009), Gauri, Trivedi and Grewal (2008),</td>
<td>Store format, price strategy</td>
</tr>
<tr>
<td></td>
<td>Aliwadi and Keller (2004)</td>
<td>Retail branding/image (access, store atmosphere, price and promotion, pricing format, store price perceptions, price promotion induced store switching, cross-category assortment, within category assortment) Brand assortment (private labels, impact of manufacturers brands on private labels)</td>
</tr>
<tr>
<td></td>
<td>Praharsi, Wee, Sukwadi and Padilan (2014)</td>
<td>Strategic planning, retail functional-businesses, consumer loyalty, retail-supplier relationship, retail performance</td>
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<tr>
<td></td>
<td>Lee, Tsai and Wu (2011), Manning and Sprott</td>
<td>Bundling (mixed and same item)</td>
</tr>
<tr>
<td>Assumed objective</td>
<td>Type of goal</td>
<td>Studies</td>
</tr>
<tr>
<td>-------------------</td>
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<td>---------</td>
</tr>
<tr>
<td>Unclear</td>
<td></td>
<td>Desrochers and Nelson (2006), Swaminathan and Bawa (2005), Bolton and Shankar (2003), Shugan and Desiraju (2001)</td>
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<tr>
<td>Satisfy</td>
<td>Profitability, sales volume, market share, turnover, inventory levels,</td>
<td>Lindblom and Olkkonen (2008), Dhar, Hoch and Kumar (2001)</td>
</tr>
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</table>

Table 5 Previous retail research: assumed objective and type of goal
Appendix 2 Result of systematic article search

Table 6 The 64 articles in relation to which main keyword the hit occurred in relation to

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Journal of Retailing Articles</th>
<th>Journal of Retailing and Consumer Services Articles</th>
</tr>
</thead>
</table>

Table 7 Studies of price strategy and price tactic within retailing

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Journal</th>
<th>Price strategy</th>
<th>Price tactic</th>
<th>Price strategy and price tactic</th>
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</thead>
<tbody>
<tr>
<td>Su, Zheng and Sun (2014)</td>
<td>Coupon trading and its impact on consumer purchase and firm profits</td>
<td>JR</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Praharsi, Wee, Sukwadi and Padilan (2014)</td>
<td>Small-independent retailers vs. organized retailers: an empirical study in Indonesian economies of service industries</td>
<td>JRCS</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cardinali and Bellini (2014)</td>
<td>Interformat competition in the grocery retailing</td>
<td>JRCS</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Olbrich and Grewe (2013)</td>
<td>Proliferation of private labels in the grocery sector: the impact on category performance</td>
<td>JRCS</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Gaur (2013)</td>
<td>Benchmarking retail productivity considering retail pricing and format strategy</td>
<td>JR</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Johnson, Tellis and Ip (2013)</td>
<td>To whom, and how much to discount? A constrained optimization of customized temporal discounts</td>
<td>JR</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Paneras, Gauri and Talukdar (2013)</td>
<td>Loss leaders and cross-category retailer pass-through: a Bayesian multilevel analysis</td>
<td>JR</td>
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<td>X</td>
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