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Pricing capability development and its antecedents

Linn Andersson

DOCTORAL DISSERTATION

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<p>Previous studies have convincingly argued that firms' ability to efficiently utilize their resources is linked to the effectiveness of their routines and resources for pricing. The ability to appropriate value and achieve a more efficient resource utilization relative to competitors through routines and resources for pricing has been named pricing capability. If an effective pricing capability could enable a firm to achieve a more efficient resource utilization and gain a competitive advantage, the questions if, and if so how, managers are able to design pricing capabilities are highly relevant. However, previous studies have presented conflicting arguments regarding managers' ability to design pricing capabilities and stated that pricing capabilities are protected by isolating mechanisms. I argue that both the antecedents of pricing capability development and managers' ability to design pricing capabilities are unclear.</p> <p>The purpose of this thesis is to identify the antecedents of pricing capability development. The findings from this longitudinal case study of pricing capability development in five business units within "Technologica", a multinational manufacturing firm acting on mature markets within business-to-business relations, provide empirical evidence of how managers are able to design pricing capabilities through their discretionary decision making. I propose that managerial governance choices, originating from individual managers' perception concerning which pricing governance structure they perceive to be the most efficient and profitable, are key antecedents of pricing capability development. Also, I suggest that managers, through pricing governance arrangements, are able to tackle behavioral aspects among sales representatives that create obstacles for effective value appropriation. This study shows that one such behavioral aspect is sales representatives' tendency to sometimes favor hedonic intrinsic motives over extrinsic incentives in customer meetings and, thus, prioritize a friendly, pleasant customer relation at the expense of profit maximization.</p> <p>I suggest that a better understanding for managers' ability to develop organizational capabilities could be gained by shedding more light on the link between managers' choices regarding capability governance structures and the designability of different types of organizational capabilities. Finally, I propose that different types of organizational capabilities differ in terms of manageability and imitability, and vary in their relevance for different firms depending on industry conditions.</p>			
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Pricing capability development and its antecedents

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Linn Andersson

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1. Introduction

Previous studies (Dutta, Zbaracki, & Bergen, 2003; Hallberg, 2008) have convincingly argued that firms' ability to efficiently utilize their resources is linked to the effectiveness of their routines and resources for pricing. A firm that fails to handle the often existing information asymmetry between itself and the buyer regarding the products' often idiosyncratic customer value will, as a consequence, fail to achieve an efficient use of its resources. Too high prices will result in too small a quantity being sold, whereas too low prices will result in a failure to maximize profit margin and, therefore, an imperfect resource utilization (Dutta et al., 2003).

A firm's ability to appropriate value by means of its routines and resources for pricing has been named "pricing capability" (Dutta et al., 2003; Hallberg, 2008). In contrast with publications that build on game theory reasoning and address how value is divided between, and appropriated by, competing firms (Brandenburger & Stuart, 1996; MacDonald & Ryall, 2004), the notion of pricing capability concerns how a focal firm appropriates value by means of its resources and routines for pricing. If the effectiveness of a firm's pricing capability is linked to the ability to efficiently utilize resources and gain competitive advantage (Dutta et al., 2003), the questions if, and if so how, managers¹ are able to design² pricing capabilities are highly relevant. However,

¹ Following Simon's (1947) reasoning regarding organizational hierarchy, 'managers' are defined as the individuals that have been formally assigned the superiors over a group of subordinates.

² The designability of an organizational capability is "the ability of the firm to deliberately design for the capability" (Schoemaker & Amit, 1994:10), such as managers' ability to implement capability-specific resources and routines. Following Schoemaker and Amit (1994), managers' ability to design pricing capabilities is their ability to change and develop the

previous studies (Dutta et al., 2003; Hallberg, 2008) have presented conflicting arguments regarding managers' ability to design pricing capabilities. Therefore, I argue that both the antecedents of pricing capability development and managers' ability to design pricing capabilities are unclear. The following section elaborates on these arguments.

1.1. Pricing capability development

According to Dutta et al. (2003), the firm specific pricing routines and skills that constitute the foundation of pricing capabilities are impossible to imitate due to time compression diseconomies. They argue that pricing capabilities are extraordinarily complex (2003:619) and founded on a combination of nested "routines, coordination mechanisms, systems, skills, and other complementary resources that are difficult to imitate", including the sales force's tacit know-how of customers and competitors (Dutta et al., 2003:622). They emphasize the extraordinary complexity of pricing capabilities and argue that the required nested pricing routines and resources need a long time to evolve. In a related publication, Dutta, Bergen, Levy, Ritson and Zbaracki (2002:62) define resources for pricing as three "pricing capitals": human capital, system capital and social capital. Human capital comprises pricing skills and know-how whereas system capital refers to IT systems specifically designed for pricing. Dutta et al. (2002:65) define social capital as the "internal glue that coordinates and holds together the many participants in the pricing process", and argue that it cannot be purchased and is both time-consuming and difficult to build. The "blend" of three capitals is "difficult to imitate" and, thus, a source of sustainable competitive advantage (Dutta et al., 2002:66).

In line with Dutta et al.'s (2003) description of pricing capabilities as difficult to imitate, Hallberg (2008:248) concluded in his empirical study that none of those five pricing capability elements that he identified "showed anything close

firm's routines and resources for pricing in order to develop the firm's pricing capability elements.

to perfect mobility”. According to Hallberg (2008), barriers for imitation were created as a result of the co-specialization between the different pricing capability elements, the studied firm’s overall strategy and other parts of the organization. Moreover, Hallberg (2008) identified individual commercial experience of key employees, which is probably very difficult to imitate, as one of five pricing capability elements. Hallberg (2008:249) concluded; “the risk of imitation is severely reduced by the pricing capability’s complex composite and historically path dependent nature”.

Dutta et al. (2003) claim that management at the firm that provided the case for their study was able to develop and design a pricing capability. However, Dutta et al.’s (2003) description of the different pricing capability elements raises doubts whether managers actually are able to design pricing capabilities. Hallberg’s (2008) argument that pricing capabilities are history-dependent, founded on key employees’ commercial experience and difficult to imitate due to co-specialization adds further to these doubts. Assuming that pricing capabilities are; 1) extraordinarily complex (Dutta et al., 2003:619), 2) history-dependent (Dutta et al., 2003; Hallberg, 2008), and 3) composed by several co-specialized elements (Hallberg, 2008), including the individual commercial experience of employees (Hallberg, 2008), integrated, tied, bundles of assets and routines (Hallberg, 2008:54), firm specific social capital (Dutta et al., 2002), tacit know-how and nested routines, the question that arises is: How are managers able to design pricing capabilities? If pricing capabilities are socially complex and founded on tacit knowledge (Dutta et al., 2003), difficulties with identifying the social, interpersonal relationships (Collis, 1994), and codifying and transferring tacit knowledge (Szulanski, 1996) will most likely create barriers for managerial initiated pricing capability development. Moreover, the description of pricing capabilities by both Dutta et al. (2003) and Hallberg (2008) implies that their composition is causally ambiguous. A complex combination of resources and skills tends to be impossible to imitate due to difficulties with identifying the exact causes, and the interdependency between the different causes that create a certain outcome (Lippman & Rumelt, 1982; Reed & DeFillippi, 1990; Rivkin, 2000). This is especially likely to occur if the capability at hand has evolved over time (Ambrosini & Bowman, 2009), and is founded on a combination of tacit know-how (King & Zeithaml, 2001) and firm-specific social capital (Blyler & Coff, 2003). Hence, a causally ambiguous capability is very difficult, perhaps even impossible, to manage and design, since no one, including management, is able to fully understand the determinants explaining the capability’s outcome (Collis, 1994; King & Zeithaml, 2001;

Szulanski, Cappetta, & Jensen, 2004). Due to difficulties with understanding which elements that make up the capability at hand, the firm might fail to sustain the capability intact and, thus, sooner or later destroy it unintentionally (Collis, 1994). Consequently, a pricing capability that due to causal ambiguity is protected from imitation is presumably not only difficult to manage, but also difficult to maintain in the long run.

On the other hand, if management is able to identify the causality between the firm's pricing capability elements and their outcome, other firms are most likely able to imitate the pricing capability (Barney, 1991). Schoemaker and Amit (1994:9) refer to this as the tradeoff between "imitability and manageability". Consequently, Dutta et al.'s (2003) and Hallberg's (2008) description of pricing capabilities as protected by isolating mechanisms contradicts Dutta et al.'s (2003) argument that managers are able to control and develop pricing capabilities.

1.1.1. Towards a better understanding of the antecedents of pricing capability development

As indicated, this thesis addresses the antecedents of pricing capability development³. The term 'antecedents' comprises events and factors that: 1) explain the initial establishment of pricing capabilities, 2) impose changes on already established pricing capabilities, and 3) cause continuous, incremental changes of existing pricing capabilities. In other words, 'antecedents' are the causes of pricing capability development.⁴ Although Dutta et al. (2003) to some

³ The term 'development' might be interpreted as positive changes, as opposed to changes with a negative outcome. However, 'pricing capability development' comprises *both* changes in pricing capabilities that lead to a more effective pricing capability (i.e. positive changes) *and* changes leading to a less effective pricing capability (i.e. negative changes).

⁴ The choice of using the word 'antecedents' when addressing the causes that *both* explain the initial establishment of a completely new pricing capability, *and* the development of existing pricing capability development is in line with the vocabulary of other publications that have set out to explain the development of both new and already established organizational capabilities (e.g. Ambrosini & Bowman, 2009; Barreto, 2010; Danneels, 2008; Døving & Gooderham, 2008; Felin & Foss, 2009b; Felin & Foss, 2011). One

extent discuss the antecedents of pricing capability development (e.g. tacit experience accumulation and investments in human capital), their discussion of the different antecedents of pricing capability can, as discussed above, be understood as conflicting. In line with Dutta et al. (2003), Hallberg (2008) concluded that individual commercial experience of key employees is a pricing capability element. However, the main contribution of Hallberg's (2008) study was to demonstrate that different identified pricing capability elements are linked to certain economic outcomes, not to identify the antecedent of pricing capability development. Consequently, contrary to the main focus of the studies by Dutta et al. (2003) and Hallberg (2008), the present study specifically addresses the antecedents of pricing capability and managers' ability to design pricing capabilities. Thus, the identification of pricing capability elements is *not* the primary focus of this study. The following section introduces the empirical setting of this study and key empirical findings.

1.1.2. A longitudinal case study of pricing capability development in mature industries

Just like both Dutta et al. (2003) and Hallberg (2008), this thesis concerns pricing capabilities within manufacturing firms acting in mature industries and business-to-business settings. But, the empirical findings from this study challenge Dutta et al.'s (2003) and Hallberg's (2008) description of pricing capabilities as protected by isolating mechanisms (i.e. barriers to imitation, see

might propose 'origin' as another potential concept to use instead of 'antecedent'. However, 'origin' is not preferable since this study addresses *both* the founding stage of pricing capabilities, *and* the pricing capability development that occurs continuously over time. Publications that use 'origins' tend to use it in a meaning that refers to a specific phenomenon or event that explains the original establishment of a routine, capability, or other organizational activity. For example, Winter (2011:10) writes; the "origin of today's organizational routines and capabilities lies in the past, along with the origins of the Constitution of the United States, the Earth, and the element carbon". A second potential word to replace 'antecedent' with is 'sources' (see Feldman, 2000). However, since the literature review showed that 'antecedents' is used more frequently than 'sources' in contemporary publications it is used in this study.

Mahoney & Pandian, 1992). The empirical findings from this longitudinal case study of five business units within “Technologica” (anonymous), a multinational manufacturing firm acting on mature markets within business-to-business relations, provide empirical evidence of how managers are able to design pricing capabilities through their discretionary decision making. Thus, in this study, I challenge the notion that the sales representatives’ (and other potential price setters such as sales managers) commercial experience (Hallberg, 2008) and tacit know-how regarding customers and competitors (Dutta et al., 2003) are key antecedents of pricing capability development. The empirical findings from the present study indicate that relying on the sales representatives’ tacit know-how (as suggested by Dutta et al., 2003) and individual, commercial experiences (as suggested by Hallberg, 2008) could negatively influence pricing capability development. Instead, I propose that managers’ decision making regarding the firm’s pricing governance structure is the key to their ability to design pricing capabilities. The empirical findings from this study show that managerial pricing governance choices, originating from what each individual manager perceives to be the most efficient and profitable pricing governance structure, are key antecedents of pricing capability development. Consequently, I introduce the concept ‘pricing governance structure’ and argue that it is the key to managers’ ability to design effective pricing capabilities. The finding that managers are able to design and, thus, develop pricing capabilities is interesting from a strategic management perspective since a firm’s pricing capability is linked to the firm’s ability to efficiently utilize its resources (Dutta et al., 2003).

The durability and relevance of manageable pricing capabilities

If managers are able to develop pricing capabilities within a few years, pricing capabilities might, due to the tradeoff between imitability and manageability (Schoemaker & Amit, 1994), be less durable in terms of the time period during which the competitive advantage lasts, relative to organizational capabilities that are less imitable and less manageable, for example product innovation capabilities that are protected by isolating mechanisms such as socially complexity. In other words, the higher the designability of a given capability (i.e. managers’ ability to design it), the shorter the durability (i.e. the time period during which the capability is valuable to the firm) and the lower the appropriability (i.e. the excess rent the capability generate to the firm) (Schoemaker & Amit, 1994).

Presumably, the designability, durability and appropriability of organizational capabilities differ between different types of capabilities, depending on the capability specific resources and routines. Organizational capabilities that rest on tacit knowledge and nested routines might entail greater barriers to imitation. However, they are presumably also very difficult, perhaps even impossible, for managers to shape and control. As suggested by Collis (1994), a firm's ability to gain and sustain a competitive advantage through the possession of an organizational capability with a given operational outcome⁵ differs presumably between different industries, depending on how quickly the capability at hand is either replaced, surpassed by a better one, or erodes. Thus, the durability of a given organizational capability might be shorter in more growing, dynamic markets, where the market conditions (e.g. customer tastes, competitors' offerings, substitutes) change more rapidly than in more mature, stable markets. For that reason, capabilities with a relatively shorter durability in dynamic markets might be more durable in mature markets. Consequently, even if pricing capabilities are designable and, if so, have a relatively short durability within dynamic markets, firms within mature markets might still be able to generate rents from effective pricing capabilities during a relatively longer time-period. Thus, I propose that pricing capability development is particularly relevant for manufacturing firms acting within mature industries.

Within mature markets, the products are generally in the maturity stage of the product life cycle and product development concerns generally incremental changes of existing products (in contrast with radical product innovations). Also, these firms often face the challenge of commoditization and, thus,

⁵ Organizational capabilities are often described as the processes through which firm utilize their resources (Penrose, 1959) in order to achieve a certain operational outcome (Amit & Schoemaker, 1993; Dutta, Narasimhan, & Rajiv, 2005; Grant, 1991; Helfat & Peteraf, 2003; Helfat & Winter, 2011; Winter, 2003), and to produce more efficiently than the competitors (Collis, 1994; Henderson & Cockburn, 1994). Thus, all organizational capabilities, sometimes referred to as operational capabilities (e.g. Helfat & Peteraf, 2003) and lower-order capabilities (Collis, 1994; Winter, 2003), accomplish a certain operational, such as manufacturing, logistics or pricing, that result in a certain outcome (e.g. products, shipping or prices) (Collis, 1994; Helfat & Peteraf, 2003; Helfat & Winter, 2011; Teece, Pisano, & Shuen, 1997; Winter, 2003).

increasing price pressure. Hence, the ability to create short-term competitive advantages is particularly relevant for firms on mature markets. For that reason, I argue that managers' ability to design pricing capabilities is particularly relevant for manufacturing firms acting on mature markets.

Relevance of pricing capabilities in different types of market structures

An effective pricing capability enables the firm to match prices with the products' often idiosyncratic value to different customers (Dutta et al., 2003). With the exception of some markets for commodities, the value-in-use of a given resource to different firms is often idiosyncratic depending on the different firms' heterogeneous capabilities and possibilities for resource combinations (Denrell, Fang, & Winter, 2003). Thus, a resource's value to an individual firm is determined by a combination of the resource's attributes *and* the individual firm's existing resources and capabilities with which the resource is integrated (Argyres & Zenger, 2012). The ability to take advantage of products' idiosyncratic value to different customers is central to the notion of pricing capabilities (Dutta et al., 2003). Thus, the ability to adjust prices according to differences in product value between buyers in order to maximize both profit margin and volume (see Dutta et al., 2003) presupposes that the firm is not acting in a perfectly competitive industry. Within perfect competition, the firm faces several competitors that offer identical goods, and serves buyers that are well-informed about the customer value of the products and have cost-less access to product information and prices (Besanko, Dranove, Shanley, & Schaefer, 2007). Because of that, individual firms in perfectly competitive industries have no or limited ability to influence prices. However, this study addresses pricing capability development within markets that are characterized by heterogeneous, differentiated products. The products offered by Technologica, the firm providing the case for this study, are differentiated and often customized for individual customers' needs. Often, the customer value of a given product differs between different customers, partly due to the customers' varying needs and access to resources. In addition, the process of searching for and comparing prices and product features between different sellers is often time consuming, requiring activities such as making several phone calls and writing inquiries. For these reasons, Technologica have the ability to influence prices and profit margins, although that ability is shrinking when the market reaches the maturity stage and the firms are faced with the challenge of commoditization.

Researchers have convincingly argued that competition and the structure of the market, such as perfect competition, monopoly and oligopoly, influence the level of efficiency through which the market actors utilize their resources (e.g. Hart, 1983; Makowski, 1980; Vickers, 1995). Empirical studies have shown that the efficiency through which firms utilize their resource differs, *ceteris paribus*, depending on the level of competition of the industry in which the firms act (e.g. Hay & Liu, 1997; Nickell, 1996; Nickell, Nicolitsas, & Dryden, 1997). With that said, this study is concerned with differences in resource efficiency between firms that act in identical market structures and are facing identical competitive situations. This study builds on the notion that an effective pricing capability facilitates a more efficient resource utilization, *ceteris paribus*, for the individual firm in comparison with a firm that possesses a less effective one (Dutta et al., 2003; Hallberg, 2008).

The following section discusses the potential role of the nature of the customer relationships in pricing capability development.

1.1.3. The nature of the customer relationships and its potential relevance

Firms that act within business-to-business relations and produce customized, complex, high-technological products are often handling customer relationships that are of a long term, close nature⁶. Close customer relationships enable the firm to develop a deep understanding of customer needs, provide tailored customer service and, thus, create value to the customer through the relationships (Kalwani & Narayandas, 1995). Due to a continuous exchange of information between the parties, the close, long-term relationships supposedly result in relatively lower transaction costs for repeated transactions, assuming that the two parties engage in transactions frequently (Bradach & Eccles, 1989;

⁶ Following Kalwani and Narayandas (1995:2), 'long-term customer relationships' are defined as relationships in which both the seller and the buyer have an "expectation of continuity and dependence". 'Dependence' is, for example, established if one or both of the parties make relation-specific investments, such as relation-specific investments in knowledge or manufacturing facilities.

Noordewier, John, & Nevin, 1990). As a result of the continuous exchange of information, the close relationships create barriers for competitors that possess no, or less, customer specific information. The individual sales representatives play a key role in establishing and maintaining close personal relationships with the individual customers (Bradford & Weitz, 2009; Narayandas & Rangan, 2004). Customers are more likely to develop loyalty to an individual, rather than a selling firm (Jap, 2001; Palmatier, Scheer, & Steenkamp, 2007), and the benefits for the selling firm with close customer relationships are expected to be greater if they are built with an individual (Palmatier, Dant, Grewal, & Evans, 2006). Considering that individual sales representatives that are assigned to individual customers are likely to accumulate in-depth customer specific information throughout the many customer interactions, the individual sales representatives are likely to have an information advantage over management about individual customers. Therefore, significant for manufacturing firms that produce customized products and act within business-to-business settings is: 1) the importance of close, long-term customer relationships, 2) the key role of the individual sales representatives in establishing and maintaining the relationships with the individual customers and, lastly, 3) the information asymmetry between management and the sales representatives. The empirical findings from this study show that as a result of the character of the customer relations, the design of the pricing governance structure is the key to managers' ability to design pricing capabilities.

1.2. The role of managerial design in general capability development

The question whether managers are able to develop and design pricing capabilities mirrors the debate whether managers are able to develop and design *any* organizational capability, regardless of the operational outcome of the capability at hand. Publications addressing the development of organizational capabilities with a different operational activity than pricing, such as product development and manufacturing, are relevant when studying pricing capability development since organizational capabilities are often described as socially complex (e.g. Amit & Schoemaker, 1993; Collis, 1994; Schreyögg & Kliesch-Eberl, 2007), history dependent (e.g. Amit & Schoemaker, 1993; Collis, 1994; Jacobides & Winter, 2005; Winter, 2000; Winter, 2003; Zollo & Winter,

2002) and founded on tacit know-how (e.g. Collis, 1994; Leonard-Barton, 1992; Teece et al., 1997; Zollo & Winter, 2002). Hence, both Dutta et al.'s (2002, 2003) and Hallberg's (2008) notion of the isolating mechanisms of pricing capabilities is similar to those often suggested for organizational capabilities with different operational outcomes than pricing. Consequently, the tradeoff between manageability and imitability (see Schoemaker & Amit, 1994) applies for most organizational capabilities, regardless of which operational activity the capability at hand fulfills.

1.3. Antecedents of organizational capability development

Even though a stream of publications have argued that firms' ability to develop organizational capabilities is strongly linked to their capacity to gain competitive advantages (e.g. Augier & Teece, 2008; Eisenhardt & Martin, 2000; Helfat & Peteraf, 2009; Teece, 2007; Teece & Pisano, 1994; Teece et al., 1997), our understanding of the antecedents of organizational capability development is incomplete. More importantly, the question whether managers are able influence organizational capability development is disputed (Foss, Knudsen, & Montgomery, 1995; Winter, 2003). Publications addressing the antecedents of organizational capability development often follow two types of reasoning traditions. One of these traditions asserts that organizational capability development is primarily determined by signals from the firm's external environment⁷ and firm history (e.g. Hannan & Freeman, 1977; Hannan & Freeman, 1984; Narduzzo, Rocco, & Warglien, 2000; Winter, 2000; Winter, 2003; Zollo & Winter, 2002). Researchers within the other

⁷ Signals and influences from the firm's external environment are influences from market conditions that are exogenous to the firm (see Nelson & Winter, 1982:1,18-19,24), such as influences from competitors, customers, supplier, governmental institutions, trendsetters and cultural norms. A firm's external environment is thus market conditions that are exogenous to the firm.

tradition argue that organizational capability development is more accurately explained by managers' discretionary decision making (e.g. Adner & Helfat, 2003; Amit & Schoemaker, 1993; Felin & Foss, 2009a; Felin & Foss, 2011; Helfat & Peteraf, 2003; Schoemaker & Amit, 1994). Although one can point at substantial differences between these two traditions, such as different views regarding the origin of organizational capability development, empirical studies have indicated that they both contribute to our understanding of organizational capability development. For example, in his empirical study, Salvato (2009) concluded that product development capabilities develop through a combination of the employees' daily activities, which are changed according to both internal and external selection forces, and managerial interventions.

The debate on whether the key antecedents of organizational capability development are signals from the firm's external environment, or individual managers' subjective decision making is especially relevant regarding pricing capability development. The reason is that firms often assume prices to be purely determined by market conditions outside the firm, and left for the firm is to adjust to the market's price signals (Zbaracki & Bergen, 2010), and work with the cost structure and product differentiation (Dolan & Simon, 1996; Hinterhuber, 2004; Marn, Roegner, & Zawada, 2004). For example, Augier and Teece (2009:415) mention prices as an example of environmental signals. This indicates that pricing capabilities would evolve as firms learn to quickly respond to external "price signals". Considering that the evolutionary theory of firm behavior prescribes that capabilities evolve continuously "according to signals from the environment" (Nelson & Winter, 1982:134), through the firm's "search routines" for detecting external changes (Zollo & Winter, 2002), it appears most suitable to explain pricing capability development. However, the notion that organizations evolve through an interweaved, unclear combination of "blind" and 'deliberate' processes" (Nelson & Winter, 1982:10-11) implies that capability development is determined by an unclear, undistinguishable combination of luck and deliberate efforts. If so, the role of management is reduced to only selecting among new, emergent (see Mintzberg & McHugh, 1985; Mintzberg & Waters, 1985) routines (Augier & Teece, 2009).

1.4. Purpose

The purpose of this thesis is to identify the antecedents of pricing capability development. This is relevant from both a theoretical and practical point of view for the following two reasons: 1) if an effective pricing capability could enable a firm to achieve a more efficient resource utilization and gain a competitive advantage (Dutta et al., 2003), the question if, and if so how, managers are able to influence pricing capability development is highly relevant, and 2) prior studies of pricing capabilities (Dutta et al., 2002; Dutta et al., 2003; Hallberg, 2008) have pointed at several isolating mechanisms and, thus, indicated that managers face several barriers when attempting to develop and design pricing capabilities.

A better understanding of the antecedents for pricing capability development is especially relevant for our understanding of organizational capability development for the following five reasons: 1) There is an assumption that prices are solely determined by the market and, thus, of less strategic importance in publications both within strategic management⁸ and within marketing⁹. 2) This assumption is reflected in practice, since firms often assume that prices are solely determined by market conditions (Dolan & Simon, 1996; Hinterhuber, 2004; Marn et al., 2004; Rao, Bergen, & Davis, 2000) and left is only to work with cost structure and product differentiation (Dolan & Simon, 1996; Hinterhuber, 2004; Marn et al., 2004). 3) This might explain why firms often delegate the pricing authority to the sales representatives¹⁰ (Marn et al., 2004; Richards, Reynolds, & Hammerstein, 2005) who often have the autonomy to decide how to calculate and communicate prices, in order to

⁸ For example, McGee and Thomas (1989:105, cited in Dutta et al. 2003) claimed that “pricing (for example) on its own is less useful than examining how distinctive firm-level characteristics (which are embodied in different asset structures) influence competitive forces”.

⁹ Publications within marketing often assume that prices are changed easily and quickly (Kotler, Wong, Saunders, & Armstrong, 2005:665) at a relatively low cost (Rao, 1984).

¹⁰ Throughout the text, “sales representative” refers to an individual who is employed by the focal firm, as opposed to an independent sales agent who offers selling services.

facilitate quick responses to changes in their environment (Dolan & Simon, 1996; Nagle & Holden, 2002). 4) A decentralized pricing authority combined with considerable autonomy for the sales representatives to decide how to set and communicate prices indicates that pricing capabilities should evolve according to the sales representatives' responses to market signals (i.e. customers' responses and competitors' prices). 5) Since the evolutionary theory of firm behavior prescribes that capabilities evolve continuously "according to signals from the environment" (Nelson & Winter, 1982:134) through cumulative trial and error learning (Nelson & Winter, 2002; Zollo & Winter, 2002), it appears most suitable to explain how pricing capabilities evolve. For that reason, managers' potential ability to design a pricing capability is especially relevant for our understanding of managers' ability to design any organizational capability.

1.5. Outline of the thesis

The disposition of the thesis is as follows:

Chapter 2: Pricing capability development

This chapter presents the literature review that was carried out in order to identify potential antecedents of pricing capability development. Additionally, the notion of organizational capabilities in general and pricing capabilities in particular is discussed, including different elements of pricing capabilities. In the last section, a preliminary theoretical framework of pricing capability development is presented.

Chapter 3: Method

In this chapter, the research design is outlined. Thereafter, the choice of selecting five embedded cases, which each represent a business unit within Technologica, is elaborated. Also, the decision to study two of the embedded cases longitudinally, two retrospectively, and using one as a case of reference is explained. Then, the process of constructing a preliminary theoretical framework in order to allow for abductive reasoning is discussed. Subsequently, the process of collecting empirical material is described; this was performed using multiple sources (participating observations, 59 semi-structured interviews with 47 respondents and hundreds of pages of documents), in order to facilitate data triangulation. Additionally, the phase of analyzing the data is

outlined. This was conducted by means of pattern-matching, as recommended by Yin (2009).

Chapter 4: The case company

The empirical study constitutes pricing capability development within five embedded cases. In order to set the context of the study, this chapter provides a historical background of Technologica and its current organizational structure. Also, the group-wide “pricing excellence” project that was carried out at Technologica between 2009 and 2011 with the intention to develop new pricing resources and routines at the group’s business units, is presented. The pricing excellence project is relevant for this study because it provided the umbrella and the starting point for the selection of the five embedded cases. Moreover, the five embedded cases are introduced in this chapter. Lastly, the timelines of the studied pricing capability development projects are presented.

Chapter 5: Pricing capability development at the embedded cases

This chapter provides a chronological presentation of pricing capability development at each embedded case. The intention is to present; 1) the pricing capability elements possessed by the embedded cases prior to each respective pricing capability development project, 2) the reasons for initiating pricing capability development at each embedded case, 3) the projects of developing and implementing new pricing capability elements at the embedded cases, and the managerial actions that were taken in order to achieve pricing capability development, and 4) the pricing capability elements possessed by the embedded cases after the respective development projects.

Chapter 6: Analysis

In this chapter, the empirical observations from the studied pricing capability development projects are compared with the antecedents proposed in the preliminary theoretical framework. Empirical findings are presented that challenge the notion that the sales representatives’, and other price setters such as sales managers, commercial experience (Hallberg, 2008) and tacit know-how (Dutta et al., 2003) are key antecedents of pricing capability development. In addition, empirical evidence showing that managers’ discretionary decision making regarding the firm’s pricing governance structure is the key to their ability to design pricing capabilities is analyzed.

In the last section, a revised theoretical framework of pricing capability development is outlined and the purpose of this thesis is answered. I present

and discuss empirical findings showing that managerial governance choices, originating from individual managers' subjective perception concerning which pricing governance structure they perceive to be the most efficient and profitable, are key antecedents of pricing capability development. Thus, in this chapter, the concept of pricing governance structure is introduced.

Chapter 7: Conclusion and discussion

In the final chapter, I propose that pricing governance structures within firms that produce customized offerings and handle close, long-term customer relationships, comprise aspects of both market contracting and hierarchies. On the one hand, due to the sales representatives' information advantage over management about individual customers, they often have considerable autonomy to decide how to calculate, communicate and negotiate prices, resulting in a pricing governance structure that comprises features of market contracting. On the other hand, largely due to difficulties in assessing the performance of individual sales representatives, the sales representatives are organized as internal sales representatives, as opposed to external sales agents. The empirical findings indicate that the close customer relationships sometimes result in internal sales representatives becoming more loyal towards the customers than their employer, resulting in sales representatives sometimes granting discounts as a gesture of friendship at the expense of profit maximization.

Moreover, this study makes a contribution to the debate whether managers are able to develop organizational capabilities by suggesting that researchers should take more interest in the hierarchy between different organizational capabilities, created as a result of differences in designability, durability and appropriability (Schoemaker & Amit, 1994). I propose that a better understanding of managers' ability to develop organizational capabilities could be gained by shedding more light on the link between managers' choices regarding capability governance structures and the designability of different types of organizational capabilities. Finally, I propose that different types of organizational capabilities differ in terms of manageability and imitability, and vary in their relevance for different firms depending on industry conditions.

2. Pricing capability development

The chapter starts with a review of publications addressing managers' ability to influence organizational capability development and design organizational capabilities. Since research that specifically addresses pricing capability is limited, with a few notable exceptions (see Dutta et al., 2003; Hallberg, 2008), the discussion on organizational capability development is largely based on publications addressing organizational capability development in general. As mentioned, publications addressing the development of organizational capabilities with a different operational outcome than prices is relevant when studying pricing capability development since the descriptions presented by both Dutta et al. (2002, 2003) and Hallberg (2008) of the isolating mechanisms of pricing capabilities are largely similar to those suggested for organizational capabilities with different operational activities than pricing. Consequently, just like the development of *any* organizational capability with *any* operational outcome, the development of a pricing capability is likely to comprise the tradeoff between manageability and imitability (see Schoemaker & Amit, 1994).

In the second section of this chapter, different types of organizational capabilities, referring to the different operational outcomes and, thus, different operational activities (e.g. pricing and product development) of various capabilities, are discussed. Thereafter, the notion of pricing capability is elaborated, including various suggested pricing capability elements. The fourth section discusses and compares concepts that have been suggested as antecedent of organizational capability development. In the last section, a preliminary theoretical framework of pricing capability development is outlined.

2.1. Managers' ability to design organizational capabilities

Penrose (1959) argues that managers through an effective and creative use of both internal as well as external resources are able to create new opportunities for organizational growth. By means of the identification, deployment and development of excess and unused resources, referred to as “organizational slack” by Cyert and March (1963), managers are able to generate rents, achieve organizational growth (Penrose, 1959) and innovation (Cyert & March, 1963). According to Penrose, managers' ability to deploy resources is determined by their individual skills, motivation and prior experiences. Hence, Penrose argues that resource availability is a subjective perception of different managers. For that reason, firms acting within the same external environment will, partly due to the differences in managerial decisions and actions, develop different resources and capabilities (Penrose, 1959), despite being exposed to similar external factors and events. The following section discusses the role of managerial decision making in organizational capability development.

2.1.1. The role of managerial decision making and capability development

Drawing on the ideas developed by Penrose (1959), Teece (1982) argues that managers are able to create new opportunities for organizational growth through an effective and creative use of both internal as well as external resources. The prerequisite for this is not only continuous learning within management but, moreover, that new procedures are established and, once routinized, become in less and less need of managerial attention (Teece, 1982). The reasoning by Teece captures the notion that in addition to the capability to effectively exploit the firm's existing resources, firm performance is also largely dependent on managers' ability to develop new capabilities. This ability has been named dynamic capabilities (Adner & Helfat, 2003; Augier & Teece, 2008; Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003; Helfat & Winter, 2011; Helfat et al., 2007; Teece, 2007; Teece & Pisano, 1994; Teece et al., 1997; Winter, 2003; Zollo & Winter, 2002), higher order capabilities (Collis, 1994), core capabilities (Leonard-Barton, 1992), combinative capabilities (Kogut & Zander, 1992) and core competences (Prahalad & Hamel, 1990).

According to Amit and Schoemaker (1993), firms' ability to develop organizational capabilities is determined by a combination of managers' discretionary decision making and resource market imperfection. They stress that managers differ in their decision making due to: 1) uncertainty about the economic, industrial, social and technological environment, 2) complexity regarding the interrelation between both the firm and its competitors, and the firm and its external environment, and 3) intraorganizational conflicts. The combination of uncertainty, complexity and organizational conflicts results in different perceptions among managers regarding capability development. This in turn results in firms developing different organizational capabilities.

Hence, firms' ability to develop organizational capabilities is, according to Amit and Schoemaker (1993), explained by a combination of managers' subjective decision making about resource development and deployment, and resource market imperfection. Their emphasis on subjective managerial decision making as a key explanation for capability development stands in contrast to the notion that organizational change is determined primarily by a combination of external factors, mainly market conditions, and the firm's prevailing capital stock and routines that have been shaped through the firm's historical evolutionary process (Nelson & Winter, 1982). In line with Nelson and Winter's (1982) reasoning, a stream of publications have pointed at the firm's external environment as the primary source for organizational development (Hannan & Freeman, 1977; Hannan & Freeman, 1984; Jemison, 1981; Lieberman & O'Connor, 1972). In a similar vein, other publications have proposed that firm behavior is decided primarily by the everyday behavior of lower level management (Burgelman, 1983) due to difficulties for top management in larger organizations to overview the scope needed in order to implement strategies (Burgelman, 1991). Supposedly, this results in middle managers primarily following internal selection mechanisms, not directions from top management (Burgelman, 1994).

Contrary to the notion that firms' organizational capabilities primarily are the result of different managers' subjective perception about opportunities for capability development (Adner & Helfat, 2003; Amit & Schoemaker, 1993; Danneels, 2010; Helfat & Peteraf, 2003) and motivation to initiate capability development (Simon, 1947), researchers have argued that organizational capability development is primarily explained by a firm's history (e.g. Collis, 1994; Jacobides & Winter, 2005; Nelson & Winter, 1982; Winter, 1988) and organizational responses to external signals (Narduzzo et al., 2000; Winter, 2000; Winter, 2003; Zollo & Winter, 2002). For example, Collis (1994)

stresses that organizational capabilities are the outcome of the firm's historical resource accumulation and socially complex routines, not composed by resources acquired on the factor market. According to Collis (1994), organizational capabilities are for that reason inimitable.

Considering the tradeoff between imitability and manageability (Amit & Schoemaker, 1993), managers are according to Collis' (1994) reasoning, unable to design organizational capabilities. Hence, Collis (1994), among others, is largely inspired by Nelson and Winter (1982:134) who argue that routines are automatically "choosing" the future path of the organizations by changing "according to signals from the environment". Considering that organizational capabilities often are described as composed by routines (e.g. Collis, 1994; Winter, 2000), the antecedents that cause organizational routines to change are presumably closely linked to organizational capability development. Yet, Winter (2000) explains the difference between routines and organizational capabilities as concerning the outcome of each concept. When routines, according to Winter (2000), evolve purely based on external influences provide capabilities managers with decision options regarding production processes. Winter (2000) proposes the following definition on organizational capabilities:

"An organizational capability is a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of particular type" (Winter, 2000:983).

Winter (2000) explains managers' ambitions to influence capability development by drawing attention to Simon's (1947) argument that decision makers seek to satisfy rather than maximize. Hence, managers' deliberate capability development will, Winter (2000) argues, end once the capability in question generates a, in the eyes of management, satisfying outcome. Until this stage has been reached, capabilities will, according to Winter (2000), continue to evolve through the individual trial and error based learning. However, although Winter (2000) recognizes that managers differ in their decision making due to varying individual aspirations, he does not specifically acknowledge that bounded rational managers make different decisions regarding the firm's resources due to their differing cognitive ability to foresee a resource's potential profitability (see Kunc & Morecroft, 2010). Neither does he specifically recognize that different managers have different subjective perceptions about which opportunities for capability development are available (see Penrose, 1959), nor that managers differ in their individual perception of

the expected outcome of the opportunities that they perceive (see Foss & Klein, 2012). Thus, Winter (2000) emphasizes an ecological and evolutionary perspective on organizational capability development, not different managers' subjective perception about opportunities for capability development per se. The evolutionary perspective on capability development is, Winter (2000:982) argues, valid since "changes in competitive standards, and learning responses to those changes, are seen as key drives of long-term change in capabilities". Thus, Winter (2000) argues that organizational capabilities are developed as the firm responds to external changes. Hence, Winter's (2000) reasoning stands in contrast to Amit and Schoemaker's (1993) argument that organizational capability development is primarily the result of managers' subjective decision making, not primarily explained by changes in the firms' external environment.

Assuming that subjective managerial decision making is the primary antecedent of capability development (Penrose, 1959), managers' ability to develop capabilities is still constrained by bounded rationality, avoidance of sunk costs and sunk assets (Simon, 1947), path dependency (Arthur, 1994), and structural inertia (Levitt & March, 1988). These constraining factors are discussed in the following sections.

2.1.2. Managerial decision making constrained by bounded rationality

Managers strive to make rational decisions regarding which actions to take (March & Simon, 1958). However, they evaluate the alternatives that according to their subjective perception are available (Cyert & March, 1963) and make risk evaluations that are biased on recent experiences (March, 1994). Hence, bounded rational decision makers consider only a limited number of alternatives (Cyert & March, 1963) and a limited amount of information (March, 1994). Moreover, they change their aspirations over time depending on the past performances by both themselves and the organization (March, 1994). If they are satisfied with the firm's performance, they decrease the intensity with which they search for information and vice versa (Cyert & March, 1963). The main challenge for managers when making decisions is that the information regarding different alternatives is often ambiguous and complex, leading to difficult and messy decision processes (Mintzberg, Raisinghani, & Théorêt, 1976). Thus, managers' decision making depends on individually perceived information, estimations and expectations that often differ more or less from reality (Cyert & March, 1963:99). Cohen, March and

Olsen (1972) suggested the garbage can model as a metaphor for those messy decision making processes where there is no clear link between a clearly identified problem and available choices. According to Cohen et al. (1972), decision makers are formulating problems depending on choices available whereas choices are reformulated once new, evolving problems make new actions possible. There are examples of empirical studies arguing that decision making processes in firms acting within mature, stable industries are sequential and linear (e.g. Fredrickson, 1984). But, there seems to be a general agreement that managerial decision making is characterized as incremental (Quinn, 1980), contextual and labile (Mintzberg, 1978), rather than rational and sequential.

2.1.3. The influence of path dependency

Managerial decision making with regard to the firm's resources will both shape the firm's future path and explain firm heterogeneity (Penrose, 1959). In line with Penrose's (1959) reasoning, a stream of publications addressing organizational capability development recognize the path dependent nature of capabilities, resources and routines (e.g. Adner & Helfat, 2003; Amit & Schoemaker, 1993; Collis, 1994; Frost, Birkinshaw, & Ensign, 2002; Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003; Kogut & Zander, 1992; Szulanski, 1996; Teece et al., 1997; Teece, 2007; Winter, 2000; Winter, 2003; Winter & Szulanski, 2001; Zollo & Winter, 2002).

When making decisions, managers are constrained by positive feedback effects from prior strategic trajectories, former investments in resources and already established routines (Levinthal & Myatt, 1994). Positive feedback (e.g. increasing returns), or the lack of negative feedback (e.g. diminishing returns), will lock the firm's future path to the current trajectory (Arthur, 1994). In other words, the presence of positive feedback or lack of negative feedback will shape the firm's different options for capability development (Levinthal & Myatt, 1994; Teece et al., 1997). Thus, prior investments and existing resources resulting in increasing returns, or the lack of diminishing return, will impact the firm's capability development (Collis, 1994; Teece et al., 1997). Path dependency is not only created by prior investments in tangible assets but also by investments in intangible assets such as knowledge. Leonard-Barton (1992) identified that individuals' unwillingness to abandon counter-productive knowledge in favor of new knowledge may turn former organizational capabilities into "core rigidities" that hinder the development of new capabilities. Consequently, the firm's historical knowledge accumulation

will shape its future knowledge creation and, thus, capability development (Kogut & Zander, 1992). Helfat and Peteraf's (2003) notion of "capability branching" illustrates the alleged path dependent nature of capability development. Through the recombination of resources, an organizational capability might change into a new, modified version (Helfat & Peteraf, 2003).

Additionally, the psychology of sunk cost, which causes individuals to continue to spend time and money on failed endeavors due to a reluctance to admit that resources have been wasted on an unsuccessful investment (Arkes & Blumer, 1985), might cause managers to keep investing in inadequate resources and capabilities (Schreyögg & Kliesch-Eberl, 2007). Holbrook, Cohen, Hounshell and Klepper (2000) demonstrated in their study of the early semiconductor industry that the firms' respective founders' differing pre-founding and early post-founding experiences largely explain heterogeneous production capability development among different firms. In line with Holbrook et al. (2000), other researchers have argued that capability development within new firms is largely determined by the founders' previous experiences (Helfat & Lieberman, 2002; Klepper, 2002). Consequently, new routines are more likely to be implemented if they are closely linked to the organization's current working procedures and processes (Cohen & Levinthal, 1990).

Due to cognitive sunk costs, individuals tend to find it difficult to replace existing procedures and, by doing so, abandon knowledge gained from learning existing procedures (Oliver, 1997). Firms' historical knowledge accumulation will consequently shape their future knowledge creation and, thus, capability development (Kogut & Zander, 1992). The risk is that firms' knowledge accumulation locks them on to an unfavorable path and results in core rigidities that prevent new capabilities from evolving (Leonard-Barton, 1992).

Another perspective of path dependency is the one referring to an entire industry as being path dependent. For example, a specific technological standard, such as QWERTY for the keyboard (David, 1985), results in a seemingly endless era of positive feedback (i.e. increasing returns), which prevent the industry from shifting to another technological standard (Arthur, 1994). However, it should be noted that path dependency in this thesis refers to the first of these two perspectives, i.e. the one Penrose (1959), among others, stresses as a significant factor regarding the firm's future path and capability development.

According to Jacobides and Winter (2005), path dependency is the main explanation for capability heterogeneity among firms. They argue that diverse

historical backgrounds between firms result in path dependent learning processes, firm specific routines and resources, which in turn lead to heterogeneous capability development. However, Jacobides and Winter's (2005) emphasis on path dependency and firm history neglects managers' subjective selection regarding which experience to encode into routines (Levinthal & Rerup, 2006; Salvato, 2009), and which experiences to maintain and which to discard (Eggers & Kaplan, 2013). Consequently, Jacobides and Winter's (2005) reasoning has been criticized for not providing any explanation to how capabilities are established in the first place (Argyres, Felin, Foss, & Zenger, 2012).

The following section discusses different suggested types of organizational capabilities and how managers' ability to design an organizational capability might differ depending on the type of capability.

2.2. Different types of organizational capabilities

The notion of organizational capabilities has been applied to a variety of organizational contexts and operational activities, see Table 1. As illustrated by this table, researchers have proposed a number of different organizational capabilities carrying out a range of different operational activities. Yet, recent publications have suggested that very few firms are able to maintain a competitive advantage over time based on a single, unique capability or resource (D'Aveni, Dagnino, & Smith, 2010; Wiggins & Ruefli, 2002). For example, Jansson (2012) concluded in his empirical study of three firms with a demonstrated long-term, sustained competitive advantage, that the advantage of the respective firms was not explained by one, single resource. Instead, all three firms had achieved a sustained competitive advantage through a combination of several resources. Similarly, Sirmon, Hitt, Arregle and Campbell (2010) argued that most firms are more likely to achieve temporary competitive advantages by continuously investing in multiple organizational capabilities. In line with this reasoning, Dutta et al. (2003) concluded that the firm they studied had during ten years invested both in a product, process and pricing capability. The product capability consisted of a "high-performance product line", whereas the investments in a process capability comprised the implementation of two new production facilities.

Table 1 Publications on different types of organizational capabilities

Operational activity	Publication(s)
Commercial contract designing skills	Argyres and Mayer (2007)
International expansion of small and young technology-based firms	Bingham, Eisenhardt and Furr (2007)
Value appropriation through pricing	Dutta et al. (2003), Hallberg (2008)
Inter-firm relationship capabilities	Dyer and Singh (1998), Gulati, Nohria and Zaheer (2000)
Project management and client specific capabilities within the software industry	Ethiraj, Kale, Krishnan and Singh (2005)
Alliance capabilities	Gulati (1999), Kale, Dyer and Singh (2002), Kale and Singh (2007)
Alliances capabilities within networks of professional service firms	Jones, Hesterly, Fladmoe-Lindquist and Borgatti (1998)
New market entries within the IT industry	King and Tucci (2002)
Product innovation regarding turbo engine manufacturing	Lazonick and Prencipe (2005)
Strategic group formation capabilities	Lee, Lee and Rho (2002)
New process technologies development in the semiconductor industry	Macher and Mowery (2009)
R&D capability development through inter-firm network ties in Taiwan	Mahmood, Zhu and Zajac (2011)
Electronic commerce system at an Ecuadorian stock exchange	Montealegre (2002)
Firms' ability to respond to market information	Morgan, Vorhies and Mason (2009)
Drugs and chemical biology development within the pharmaceutical industry	Narayanan, Colwell and Douglas (2009)
New product development in the pharmaceutical industry	Roberts (1999)
Learning mechanism development within pharmaceutical firms	Roth, Shani and Leary (2007)
Value appropriation through patent protection	Reitzig and Puranam (2009)
Integration capabilities regarding acquired firms within the American banking sector	Zollo and Singh (2004)

According to Schoemaker and Amit (1994), there is always a tradeoff between the designability of a given capability on the one hand, and the capability's durability and appropriability on the other hand. If managers are able to design a given organizational capability, management at competing firms are presumably able to replicate the capability at hand, resulting in a shorter durability of the capability. Also, managers' reduced flexibility to control and manage a given capability might prevent the firm from changing the capability according to new market conditions, making the given capability obsolete.

Assuming that organizational capabilities differ in their ability to generate excess rents (Schoemaker & Amit, 1994), different types of organizational capabilities differ in their impact on firm performance, depending on their operational outcome. For example, based on their empirical study of organizational capability development at an Indian software service firm, Ethiraj et al. (2005) conclude that due to the context dependency of organizational capabilities, different types of organizational capabilities generate different marginal benefits. According to Ethiraj et al. (2005), both the project management capability (i.e. the capability to develop new software programs), and the client specific capability (i.e. the capability to provide service to a given client throughout multiple projects) of the studied firm had a positive impact on firm performance. However, the project management capability had a higher marginal contribution relative to the client capability (Ethiraj et al., 2005). Hence, the expected return on investment and payback period for organizational capability development will most likely differ depending on the operational outcome of different capabilities.

Due to the context dependency of organizational capabilities, the phase of development differs presumably between capabilities depending on the operational activities of the capability and the organizational level at which it resides (e.g. business unit level, department level, organization-wide level). For example, a marketing capability enables the firm to accurately interpret customer demand and efficiently reconfigure its products accordingly (Morgan et al., 2009). The competences and resources required for analyzing market intelligence are most likely distinguished from the "superior technology knowledge" that enabled Rolls-Royce to develop its product innovation capability for turbo engines (see Lazonick & Prencipe, 2005). Clearly, these two different types of organizational capabilities require different skills, knowledge and other resources. Presumably, the development conditions of these two types of organizational capabilities differ, such as time for

development, required capital investments, impact from path dependency and payback time. Rolls-Royce has since the mid-60s¹¹ invested large financial resources in the development of its product innovation capability, in order to maintain a sustained cumulative organizational learning process. For example, total R&D expenditure over the period 1987-2003 was 4014 million GBP (Lazonick & Prencipe, 2005). According to Lazonick and Prencipe (2005), the financial commitment in the development of the product innovation capability has enabled Rolls-Royce to establish knowledge intensive research and development facilities¹². Furthermore, Rolls-Royce managed to ensure that many of the engineers spend their entire career within the company, often within the same department, thus enabling them to extensively develop their individual expertise (Lazonick & Prencipe, 2005). Consequently, trying to imitate Rolls-Royce's product innovation capability would require large investments. Moreover, the investments required would probably have a long payback time, considering the substantial time and financial resources that is required for development. This stands presumably in contrast to a marketing capability, which comprises the ability to perform activities such as distribution management, marketing communication and customer demand analysis better than the competitors (Morgan et al., 2009). Even though it takes both time and effort to develop a marketing capability, the resource requirements are not in the range of several hundreds of highly educated employees and decades of research and development.

Helfat and Peteraf (2003) propose that all organizational capabilities go through a lifecycle of four stages, starting with the founding stage, continuing through the development and maturity stages and ending in one of six "branches", such as death, renewal, replication or redeployment. Presumably,

¹¹ Considering that Rolls-Royce was founded in 1906, investments were most likely made in the product innovation capability long before the 60s. However, Lazonick and Prencipe (2005) present empirical data starting from the mid-60s.

¹² I do not have any figures regarding Rolls-Royce's R&D department. But one of Rolls-Royce's competitors, Siemens Industrial Turbomachinery, employed approximately 350 people at its R&D department (in 2009), of which approximately 40 held a PhD, 50 a licentiate degree and more than 50 percent had a M.Sc. in engineering (as their highest degree). A significant number of them had been employed for several decades.

the length of the capability lifecycle varies depending on which type of operational activity the capability carries out. If the organizational capability concerns product innovation, the development stage of the capability lifecycle is probably longer than a marketing capability for example, assuming that a product innovation capability requires longer time for development. Also, the period during which the firm is able to gain excess rents from a given organizational capability differs presumably between capabilities depending on a combination of the designability of the capability (Schoemaker & Amit, 1994) and the industry context (Collis, 1994). For example, in their quantitative study, Sirmon et al. (2010) concluded that the durability of all organizational capabilities is limited, especially in highly competitive markets.

Since a given organizational capability might either erode or be replaced (see Collis, 1994) more quickly in more dynamic markets, an organizational capability of shorter durability within a firm that acts in a more dynamic market could have a longer durability in a more mature market (i.e. a market where the firms face a more stable demand and supply situation). For that reason, capabilities with a relatively shorter durability in dynamic markets might be more durable and, thus, valuable during a longer time period, for firms within mature markets. Consequently, even if a pricing capability is designable and, if so, has a relatively shorter durability than capabilities with different operational outcomes, especially within dynamic markets, the durability and appropriability of a pricing capability in firms within mature markets might still motivate the investments required to design one. Considering that one of the main tasks for managers is to handle resource limitation, the different resources required, the expected return on investment and the payback period for a given capability within a given industry context are relevant for managers when intending to develop organizational capabilities. If managers are able to influence the development of organizational capabilities, the difference between them within varying industry contexts, such as resources requirements and the expected return on investments, is relevant from a managerial perspective.

The following section discusses the notion of pricing capability and outlines a specification of pricing capability elements.

2.3. The notion of pricing capability

Traditionally, the resource-based view has been concerned with defining those firm specific resources (Peteraf & Barney, 2003) or capabilities (Henderson & Cockburn, 1994) that enable some firms to produce more efficiently and deliver a higher value for the same cost as that of competitors. However, rather than following the tradition and focusing on the value creation of firm specific resources (e.g. Barney, 1991; Peteraf, 1993; Peteraf & Barney, 2003; Wernerfelt, 1984), Dutta et al. (2003) emphasized firms' ability to appropriate the value created and, thus, achieve a more efficient resource utilization. In their empirical study of the pricing capability of a larger, American manufacturing firm acting within business-to-business settings, Dutta et al. (2003) concluded that the studied firm was able to extract a larger surplus from its customer and, thus, increase profit by developing a new and improved pricing capability.

Cyert and March (1963) suggest that firms, when making pricing decisions, may prioritize competing interests and intra-firm conflicts before profit maximization. Drawing on this argument, Dutta et al. (2003) argue that managers are faced with two challenges when managing the firm's prices: 1) appropriating the created value, and 2) balancing internal competing interests between those advocating price changes and those promoting unchanged prices due to the costs associated with price changes (see Bergen et al., 2003). Thus, Dutta et al. (2003) suggest that a firm's pricing capability also, in addition to achieving efficient resource utilization, serves the purpose of handling organizational conflicts. This stands in contrast to the pricing objective that is often proposed within the normative pricing literature, i.e. profit maximization (e.g. Dolan & Simon, 1996; Tellis, 1986).

Table 2 on the next page depicts the description by Dutta et al. (2003) of the pricing capability at the firm they studied. As seen in this table Dutta et al. (2003) describe the pricing capability within the firm as consisting of three steps: 1) identifying competitors' prices, 2) setting pricing strategy, and 3) translation from pricing strategy to price. The pricing capability vis-à-vis the customers consists of two separate steps: 1) convincing customers on the price change logic, and 2) negotiating price changes with major customers. The different steps of the pricing capability described by Dutta et al. (2003) comprise certain routines, skills/know-how and coordinating mechanisms.

Table 2 Pricing capability adapted from the study by Dutta et al. (2003:622;624)

Pricing capability		Activities		
	Routines	Skills/know-how	Coordinating mechanisms	
Within the firm	Identifying competitors' prices	Defining equivalent products. Nested routines for tracking competitive prices. Accessing competitive price information.	Technical know-how about competitive products, product changes. Sales force tacit know-how of field sources for reliable competitive information	Cross-functional teams to generate equivalent competitive product comparison. Coordination between sales force and select customers to establish competitive prices
	Setting pricing strategy and translation from pricing strategy to price	Collecting customer purchase history. Nested conflict resolution routines. Tracking past pricing actions. Pricing action analysis.	System development expertise. Pricing strategy expertise. Database skill. Financial analysis skills. Customer price sensitivity. Scenario analysis of customer response.	Coordinating knowledge of differing assumptions. Developing consensus on assumptions about customers. Coordinating knowledge of differing assumptions. Channeling information of pricing actions.

Table 2 Pricing capability adapted from the study by Dutta et al. (2003:622;624) (cont.)

Pricing capability		Activities		
		Routines	Skills/know-how	Coordinating mechanisms
Vis-à-vis customers	Convincing customers on the price change logic	Information exchange with customers' pricing systems. Identify effects on customers' customer. Send information to pricing team. Prepare price change presentation.	Technical skills: pricing tool kit and price change effects. Know-how on customer response. Tacit know-how to separate sincere concerns from negotiating postures.	Learn about different perspectives. Develop consensus within firm and sales force on new prices. Learn of customer response.
	Negotiating price changes with major customers	Organizational hierarchy approval of new prices. Customer assessment. Development of negotiation material.	Knowledge of firm members biases and relations with customers. Know-how about competitive offerings. Knowledge of customer negotiation strategy. Cross-functional negotiation expertise.	Consensus among participants on new prices. Consensus in negotiation team on negotiation strategy.

Hallberg (2008) extended the argument by Dutta et al. (2003) by demonstrating that certain economic outcomes are linked to certain elements of a firm's pricing capability. He concluded that a firm's pricing capability impacts value appropriation through the following three economic principles: 1) price discrimination, referring to the practice of taking advantage of the products' often idiosyncratic value to different customers by matching prices with different customers' individual willingness-to-pay, 2) price elasticity leverage, meaning that the firm considers the relationship between aggregated demand and prices on the relevant market when deciding prices, and 3) operating leverage, referring to the practice of adjusting prices according to the firm's cost structure. In addition, Hallberg (2008) found that the pricing capabilities of different organizations, acting within different industries and countries, both have similarities as well as differences compared to each other. According to Hallberg (2008), the different pricing capability elements explain to which extent the desired operational outcome is achieved. In accordance with Hallberg (2008), the different components of a pricing capability are in this thesis referred to as pricing capability elements.

In his empirical study of a firm within the corrugated packaging industry, Hallberg (2008) identified the following six pricing capability elements: 1) IT-based systems, 2) price parameters, 3) commercial organization, 4) pricing authority, 5) incentive controlling arrangements, and 6) commercial experience, defined as the individual knowledge and commercial experience of key employees. These pricing elements are, Hallberg (2008) argued, deployed in different "pricing activities", such as price negotiations with customers. According to Hallberg (2008), pricing activities comprise the practice of both gathering required data for the pricing decision (e.g. cost and profitability analysis and information about competitors and customers) and communicating and negotiating prices. The different pricing activities enable the firm to accomplish a specific "pricing policy", which, in his empirical study, appeared differently for each studied business unit. Examples of pricing policies were value based pricing, "opportunity pricing", "capacity pricing" and "stability pricing".

Hallberg (2008:259) concluded that pricing is not to be neglected and dismissed within strategic management based on either of the arguments: 1) that it is something that management have no influence over with the argument that prices are determined by the customers and/or competitor, or 2) that pricing is easily handled within the firm's competitive strategy.

2.3.1. The novelty of the notion of pricing capability

The argument that a firm is able to improve profitability by developing a more effective pricing capability (Dutta et al., 2003; Hallberg, 2008) stands in contrast to the common assumption, within both theory and practice, that prices are purely determined by market conditions (Zbaracki & Bergen, 2010). For example, the assumption that market conditions will coordinate all market knowledge and determine a price that informs individual buyers of an objective value of a given resource in its best use (see Koopmans, 1957:22-23) stipulates that individual buyers are in no need of all information about a given resource's value, since the price mechanism will provide the buyer with it. This assumption rests on the belief that the price mechanism reflects the aggregated knowledge among the individual market actors and determines the value of the resource. However, the idea that market conditions will determine a price that reflects a resource's value in its best use rests on the implicit assumption that markets are complete (i.e. that there is a market and a known market price for the resource at hand and for all necessary complementary resources) (Makowski & Ostroy, 1995). In complete markets, every potential buyer would be fully informed about the value of a given resource in its every alternative use, including the resource's value in its best use, and all possible combinations with the buying firm's existing resources.

However, in practice, most firms are not in possession of accurate price data regarding the value of a certain resource in every possible combination with other resources available to the firm (Lippman & Rumelt, 2003). This is especially valid regarding complex resources (Denrell et al., 2003), such as customized, high-tech products sold to manufacturing, business-to-business firms. Thus, since markets are rarely complete (Makowski & Ostroy, 1995) (with the exception of some commodities), the value-in-use of a given resource to different firms is often idiosyncratic, depending on the different firms' heterogeneous capabilities and possibilities for resource combinations (Denrell et al., 2003). For that reason, market conditions can seldom fully determine the value of a resource if its value to a given firm is partly determined through its integration and combination with firm specific resources. Thus, a resource's value to an individual firm is determined by a combination of its attributes *and* the individual firm's existing resources and capabilities with which the resource is integrated (Argyres & Zenger, 2012). Consequently, the assumptions regarding price coordinating mechanism and aggregated market behavior is distinguished from the notion of pricing capability, which addresses an individual firm's ability to appropriate value by matching prices with the

products' idiosyncratic customer value to different customers (Dutta et al., 2003; Hallberg, 2008).

2.3.2. Pricing capability elements

Both Dutta et al. (2003) and Hallberg (2008) identified that pricing capabilities consist of resources and routines for pricing. However, neither of the two publications provide any clear description of exactly *how* pricing capability elements are built by a combination of resource and routines. For example, Dutta et al. (2003:616) stress that they focus on “the resources, routines and skills” that enable the firm to appropriate value, implying that skills are neither a resource, nor a routine. Also, they provide contradicting descriptions of pricing routines. On the one hand, they refer to the process of solving intra-firm goal conflict as routine (2003:620). On the other hand, they distinguish between coordinating mechanisms and routines (2003:621). Moreover, Dutta et al. (2003:625) suggest that pricing capabilities comprise “procedures” additional to routines, without clarifying the difference between these two concepts. Hallberg (2008:54) addresses this unclarity by considering routines and “different forms of assets” as “integrated bundles tied together by their common function”. However, this type of definition might be problematic when intending to identify the antecedents of pricing capability development and managers' ability to design a pricing capability since it is unclear *which* resources and routines (and how they are related in between) that must be changed in order to develop the firm's pricing capability. Nevertheless, drawing on Dutta et al. (2003) and Hallberg (2008), this thesis defines pricing capabilities as consisting of both pricing resources and pricing routines. In accordance with Helfat and Peteraf (2003), resources are in this thesis considered as consisting of tangible and intangible assets. Hence, resources comprise both intangible assets, such as knowledge, and tangible assets, such as production facilities and IT systems.

Both Dutta et al. (2003) and Hallberg (2008) used a case study method to identify the different pricing capability elements of the manufacturing firms that provided the case for their respective studies. For that reason, Table 3, which depicts the different elements of pricing capabilities, draws largely on insights from these two studies. As illustrated by Table 3, a pricing capability is in this study defined as consisting of four main building blocks: 1) pricing organization, 2) pricing information system 3) pricing skills, and 4) pricing strategies.

Table 3 Conceptual framework of pricing capability elements

Pricing capability element		Logic	Interpreted according to:		
			Dutta et al. (2002)	Dutta et al. (2003)	Hallberg (2008)
Pricing organization (Hallberg, 2008)	Incentive controlling arrangements	Provide sales representatives with monetary incentives.			Incentive controlling arrangements
	Pricing authority delegation	Sales representatives' ability to independently decide which prices to offer the customers.			Pricing authority
Pricing information system (Hallberg, 2008)	IT support for pricing	Pricing data, e.g. information about competitors and customers	System capital	Database skills	IT based systems Price parameters
	Commercial experience	The commercial experience of price setters.	Human capital	Tacit know-how of the sales force	Commercial experience
Pricing skills (Dutta et al. 2003)	Tacit know-how of the sales force		Human capital	Tacit know-how of the sales force	Commercial experience

Table 3 Conceptual framework of pricing capability elements (cont.)

	Pricing capability element	Logic	Dutta et al. (2002)	Dutta et al. (2003)	Hallberg (2008)
Pricing tools (i.e. a pricing skill)	Customers' value map position analysis	Analyze a product's competitive positioning and match price with the product's customer value relative the customer value of competing products.	Human capital	Identify competitors' prices.	Customer assessment
	Quantify customer value provided	Estimate a product's customer value by comparing differentiating features of the focal product (e.g. cost for maintenance or energy consumption) with the price and features of a reference product.	Human capital	Convince customers on the price change logic	Customer assessment
	Revenue-leakage analysis	Identify actual revenue by subtracting discounts and order-specific costs from the initial price.	Human capital		Customer assessment
	Customer profitability	Calculate actual profit margin gained from a certain customer.	Human capital		Evaluation and planning
	Customer segmentation	Categorize customers in segment according to their different demands, order volumes or willingness-to-pay.	Human capital		Customer assessment
	Product profitability analysis	Calculate actual profit margin gained from a certain product.	Human capital		
	Price elasticity of demand analysis	Estimate the customers' price sensitivity.	Human capital		Stability pricing
	Analyze competitors' prices		Human capital	Identify competitors' prices	Customer assessment

Table 3 Conceptual framework of pricing capability elements (cont.)

Pricing capability element	Logic	Dutta et al. (2002)	Dutta et al. (2003)	Hallberg (2008)
Pricing strategies	Cost based	Setting prices according to the cost of the product.		Capacity pricing Stability pricing Model plant pricing
	Competitor based	Matching prices with prices of competing products.		
	Value based	Setting prices according to the products' estimated customer value.		Value based pricing Opportunity pricing
	New product pricing	Pricing a product that is new to the market by for example practicing skimming pricing or penetration pricing		Setting pricing strategy and translation from pricing strategy to price.
	Product-line pricing	Taking advantage of interrelationships between different products when setting prices. Also known as razor-razorblade pricing.		Complementary product pricing Price bundling
	Differential pricing	Different customer segments are offered different prices according to differences in willingness to pay.		Price discrimination

As displayed in Table 3, the pricing capability elements outlined by Dutta et al. (2002, 2003) and Hallberg (2008), respectively, differ. Presumably, the differences are explained by the fact that the empirical studies conducted by both Dutta and colleagues and the one by Hallberg (2008) comprise one single company in each study. Consequently, these researchers' findings are based on the firm specific and industry specific conditions of the studied organization. Thus, these researchers' respective models of pricing capability elements are largely idiosyncratic regarding the unique, studied firm. Therefore, the conceptual framework of pricing capability elements that has been constructed for this thesis comprises, in addition to the pricing capability elements identified by Hallberg (2008) and Dutta et al. (2002, 2003), insights from other pricing publications (e.g. Dolan & Simon, 1996; Marn et al., 2004; Monroe & Della Bitta, 1978; Nagle & Hogan, 2006; Nagle & Holden, 2002), including publications addressing sales force management (e.g. Anderson, 1985; Anderson & Oliver, 1987; Oliver & Anderson, 1994; Oliver & Anderson, 1994; Slater & Olson, 2000) and the fairly limited number (Ingenbleek, Debruyne, Frambach, & Verhallen, 2003; Oxenfeldt, 1973; Rao, 1984) of descriptive studies of pricing strategies (e.g. Hinterhuber, 2008; Ingenbleek et al., 2003; Lancioni, Schau, & Smith, 2005; Thompson & Coe, 1997).

The pricing capability elements listed in Table 3 are presented in the following sections.

Pricing organization

Hallberg (2008) proposed that a pricing organization allows for “organizational control over the pricing process” (2008:247), and defined it as composed by the firm’s commercial organization, pricing authority and incentive controlling arrangements. Following Hallberg (2008), ‘pricing organization’ refers to organizational arrangements that shape the firm’s deployment of pricing information systems and utilization of pricing skills, including the performance of different pricing tools (identified by Dutta et al. [2003] as a pricing capability element). For reasons that are further elaborated in the section below titled ‘pricing strategies’, the outcome of the firm’s pricing information system and pricing skills is, in this thesis, defined as pricing strategies. Thus, the firm’s pricing organization facilitates the firm’s utilization of pricing skills and, thus, realization of desired pricing strategies. For example, if the pricing organization comprises routines that assure that the sales representatives are measured and rewarded on profit margin contribution, as opposed to revenue or volume

achievements, it might facilitate a successful implementation of a value based pricing strategy.

The organizational control mechanisms initially outlined by Ouchi (1979), and later developed by Eisenhardt (1985) have inspired a stream of publications addressing sales force management structure (Anderson & Oliver, 1987; Babakus, Cravens, Grant, Ingram, & LaForge, 1996; Cravens, Ingram, LaForge, & Young, 1993; Krafft, 1999; Oliver & Anderson, 1994; Oliver & Anderson, 1995; Robertson & Anderson, 1993; Slater & Olson, 2000). Based on the findings from her quantitative study of retail store managers, Eisenhardt (1985) proposed the following three organizational control variables: 1) reward structures, either concerning outcome (e.g. rewarding sales representatives based on achieved gross profit margin) or concerning behavior (e.g. rewarding sales representatives based on the number of customer meetings), 2) task characteristics, referring to whether the tasks that are to be controlled can be perfectly programmed or not, and 3) information systems, which is the alternative for situations when neither reward structures nor task programmability is suitable, such as systems for frequent, formal report submission. Several empirical studies of sales force management have drawn on Eisenhardt's (1985) reasoning. For example, Anderson and Oliver (1987) suggest that sales force management concerns the managerial tasks of monitoring, directing, evaluating and rewarding the sales representative. According to Anderson and Oliver (1987), managers have the following two options to choose between when deciding on sales force control: 1) outcome control, such as monitoring and rewarding the sales representatives' gross profit margin contribution, which approximate market contracting (as opposed to hierarchies) in the sense that the sales representatives are given the autonomy to independently decide how to act in order to achieve a desired outcome, and 2) behavior control, such as monitoring the number of customer calls and customer visits made by the sales representatives, which allows for hierarchical control but generates relatively higher administrative costs for monitoring. Two factors decide the selection between the two control systems; 1) costs for measuring behavior versus outcome, and 2) managerial uncertainty regarding sales representatives' behavior and outcome (Anderson & Oliver, 1987). Building on Anderson and Oliver (1987), Challagalla and Shervani (1997) identified in their empirical study the following two different types of behavior control: 1) activity control (i.e. controlling the actions undertaken by the sales representatives), and 2) capability control (i.e. controlling the sales representatives' skills).

Empirical studies have provided contradicting conclusions regarding the expected outcome of using a purely outcome based control system compared to a purely behavior based control systems. For example, it has been argued that the former system leads to: 1) more motivated sales representatives because of the considerable autonomy they have to individually plan their work (Weitz, Sujan, & Sujan, 1986), 2) better firm performance (Turcotte, 1974), or, 3) better firm performance only if the firm practices a low-cost strategy (Slater & Olson, 2000). On the other hand, some studies argue that the expected outcome is unclear (Cravens et al., 1993; Oliver & Anderson, 1994). Studies comparing behavior versus outcome control systems have shown that behavioral control increases performances (Henderson & Lee, 1992), leads to a homogeneous sales force with sales representatives that are more satisfied (Oliver & Anderson, 1994), act and behave in a similar manner (Babakus et al., 1996; Oliver & Anderson, 1994), more ethically (Robertson & Anderson, 1993), are better at establishing close, long-term customer relationships (Slater & Olson, 2000), more committed to his or her employer (Oliver & Anderson, 1994), better at understanding the customers' needs (Cravens et al., 1993; Slater & Olson, 2000), and achieve high customer satisfaction (Cravens et al., 1993).

Also, researchers have recommended firms to implement behavior based control systems in order to promote more knowledge about the firm's products among the sales representatives (cf. human asset specificity, see Anderson & Oliver, 1987) and tackle opportunistic behavior within the sales force (Anderson, 1988; Phillips, 1982). Oliver and Anderson (1995) studied a hybrid of outcome and behavior based control and concluded that compared to both a purely outcome and a purely behavior based control system, a hybrid system led to sales representatives that allocated relatively more hours to planning, had high achievement in terms of profit goals and were relatively more driven by intrinsic motives to attain a high level of performance.

Although a stream of studies have pointed at several advantages with a behavior based control system, and combinations of outcome and behavior based control, managers might, due to the character of the customer relationships and the sales process, find it difficult to implement behavior based control. For example, firms that act within business-to-business settings and produce customized, complex, products often handle customer relationships of a long-term, close nature. The individual sales representatives play a key role in establishing and maintaining close personal relationships with the individual customers (Bradford & Weitz, 2009; Narayandas & Rangan, 2004).

Considering that individual sales representatives who are assigned to individual customers are likely to accumulate in-depth customer specific information through the many customer interactions, the individual sales representatives are likely to have an information advantage over management about individual customers. Consequently, managers at firms handling this type of customer relations might decide not to attempt to program the behavior of the sales representatives in the pricing discussions with the customers, since they might assume that the sales representatives are in a better position to assess the customers' willingness to pay. For that reason, managers might decide to refrain from attempting to interfere in the sales representatives' behavior in customer negotiations. Also, the behavior control observed by Eisenhardt (1985) concerned store managers who were physically present in their stores and, thus, able to monitor their subordinates, albeit not constantly. Naturally, that type of behavior control is difficult to achieve, at least at the same costs for monitoring, in firms that have sales representatives who work partly or fully outside the office. For these reasons, behavior control is presumably more difficult to practice regarding outdoor sales representatives dealing with close, long-term customer relationships and customized products.

Additionally, the sales process regarding customized, complex products often involves several individuals in addition to the sales representative, such as product designers. In situations like these, it might be difficult to measure the productivity of the individual sales representative (see Alchian & Demsetz, 1972). For that reason, the link between individual sales representatives' efforts and performance might be uncertain, which motivates fixed compensation over variable compensation (Basu, Lal, Srinivasan, & Staelin, 1985).

In summary, publications addressing the design of sales force management systems advocate that firms should use a combination of behavior and outcome based control systems (Cravens et al., 1993; Oliver & Anderson, 1994; Oliver & Anderson, 1995; Slater & Olson, 2000). However, managers might find it difficult to implement a behavior based control system if the individual sales representatives have an information advantage over management, regarding the individual customers. For that reason, a manager might not know which behavior that is the most preferable in order to achieve desired results. Presumably, this explains why the pricing literature often emphasizes outcome based control (Hinterhuber, 2004; Hinterhuber, 2008; Marn et al., 2004; Nagle & Hogan, 2006; Vogel, Bright, & Stalk Jr, 2002), in favor of behavior control, in these types of situation. In practice, firms that produce customized offerings might decide to only have a smaller part of total compensation to sales

representatives based on performance, if performance of individual sales representatives is difficult to measure.

Incentive controlling arrangements

Hallberg (2008) identified incentive controlling arrangements as a key pricing capability element. He also concluded that management at two of the embedded cases in his case study manipulated the products' cost data in order to fool the sales representatives to believe that the products were less profitable than they actually were. The intention was to make the sales representatives, who were measured and rewarded on profit margin achievement, to fight harder for the profit margin. His observation of how managers provided monetary incentives to sales representatives, and other price setters (e.g. sales managers), in order to motivate them to fight harder for profit margins is in line with several other pricing publications. Often, the pricing literature recommends that the sales representatives should be rewarded based on gross profit margin, not just revenue (Hinterhuber, 2004; Hinterhuber, 2008; Marn et al., 2004; Nagle & Hogan, 2006; Vogel et al., 2002), assuming that the goal of management is profit maximization. According to these publications, the problem is otherwise that the sales representatives will focus purely on the number of orders and order volume, instead of profitability (Marn et al., 2004; Nagle & Hogan, 2006). Still, even though a reward system based on gross profit margin achievement presumably motivates the sales representatives to practice value based pricing (assuming that it is the most profitable pricing strategy, as suggested by several researchers, e.g. Anderson & Narus, 1998; Cannon & Morgan, 1990; Hinterhuber, 2008; Hinterhuber & Bertini, 2011), firms often find it hard to develop and implement value based pricing (Hinterhuber, 2008; Kortge & Okonkwo, 1993). Despite the large number of pricing tools for value based pricing that are recommended in the literature (e.g. customers' value map position analysis, see Appendix I for more examples), firms still often rely on cost based pricing strategy (Marn et al., 2004; Shipley & Jobber, 2001; Simon, Butscher, & Sebastian, 2003). This indicates that there is a lack of understanding of both the behavior of the sales representatives when they decide and negotiate prices and, also, of what actually motivates them. If monetary rewards are enough in order to motivate sales representatives to achieve the highest possible gross profit margin, the sales representative will behave according to the goals of management (assuming that the goal is profit maximization) regardless of whether they are monitored or not. Yet, providing monetary incentives assumes that the sales representatives are primarily motivated by extrinsic motives. Still, individuals are motivated by different

sources, depending on the situation, the context and their individual preferences. Hence, the source of motivation differs between individuals due to individuals' subjective desires and beliefs (Coff & Kryscynski, 2011; Gottschalg & Zollo, 2007). Thus, even though monetary incentives might be one possible source of motivation for sales representatives in their interactions with customers, it is also likely to assume that other sources of motivation shape the sales representative's behavior in the pricing decision.

Lindenberg (2001) introduced the concept hedonic intrinsic motivation, arguing that individuals in some situations will prioritize the type of behavior that simply makes them feel better here and now. Hedonic intrinsic motivation is distinguished from both normative intrinsic motivation, referring to incentives that make individuals behave according to what they believe that norms stipulate to be appropriate, and extrinsic motivation, which generally is described as concerning more unpleasant actions that individuals are pressured to undertake in order to achieve a reward (Lindenberg, 2001). Seemingly, sales representatives' pricing decisions are not only influenced by extrinsic motives (e.g. Christmas bonus), but also other subjective, hedonic intrinsic sources of motivation.

Presumably, incentive systems that align the firm's goal of profit maximization with the goals of the individual sales representatives are especially relevant for firms that delegate the price setting to the individual sales representatives, assuming that the practice of delegating the price setting prevents behavior control. Gottschalg and Zollo (2007) suggest that managers can create hedonic intrinsic incentives by designing the employees' job tasks so that they perceive their jobs to be enjoyable, self-determining and competence enhancing. However, it is difficult to imagine how managers can create a job design that results in every employee perceiving the tasks of setting, communicating and negotiating prices as more enjoyable, without down-prioritizing the goal of profit maximization.

Since both Hallberg (2008) and a stream of other pricing publications (Hinterhuber, 2004; Hinterhuber, 2008; Marn et al., 2004; Nagle & Hogan, 2006; Vogel et al., 2002) are primarily concerned with monetary incentives (in contrast to incentives that address intrinsic motivation, see Gottschalg & Zollo, 2007), 'incentive controlling arrangements' refers to monetary incentives.

Pricing authority structure

In his empirical study, Hallberg (2008) identified pricing authority as a central element of the studied firm's pricing capability. He defined it as "the organizational level or function at which pricing decisions are made" (2008:263), and argued that the organizational level where the pricing authority resides, such as a special pricing function, a sales manager or the sales representatives, influences not only the managerial control over prices but also the practice for handling customer information and negotiating with customers. Hallberg (2008) concluded that the sales representatives' pricing authority differed not only depending on the organizational level that possessed the pricing authority, but also to what extent their pricing authority was constrained by price guidelines (e.g. minimum prices). Hence, his definition implies that the full pricing authority resides at a certain organizational level. This stands in contrast to the definitions suggested by both Homburg, Jensen and Hahn (2012) and Stephenson, Cron and Frazier (1979), who instead explicitly recognize that sales representatives' pricing authority could vary on a scale between non-existing pricing authority, full pricing authority, or everything in between. For example, minimum gross profit margin rules might restrict the sales representatives' pricing authority but still allow them a limited space for price negotiation and, thus, a constrained pricing authority. On the other hand, a fully delegated pricing authority gives the sales representatives the freedom to, independently of their managers' approval, decide which prices to offer the customers. Following Homburg et al. (2012), in this thesis, pricing authority is defined as the sales representatives' ability to independently decide which prices to offer the customers, such as granting discounts.

There is an ongoing debate whether the pricing authority should be delegated to the individual sales representative or not. Those in favor of such a delegation prescribe that this is to be preferred because of information asymmetry between the sales representatives and higher level managers concerning the unique customer (Frenzen, Hansen, Krafft, Mantrala, & Schmidt, 2010; Lal, 1986; Weinberg, 1975). The argument is that the sales representatives would be in a better position to more accurately set prices according to the individual customer's willingness to pay, as they know more about each customer than their managers do. A centralized pricing authority is recommended only if the market situation entails that there is no information asymmetry between the sales representatives and the managers (Lal, 1986; Mishra & Prasad, 2004). Those in favor of price delegation also argue that sales representatives are motivated by the responsibility that follows with a full authority to set prices

(Dolan & Simon, 1996). On the other side of the camp are those that hold a more restrictive position regarding delegation, stressing that even though there are benefits with delegating the pricing authority, due to information asymmetry, there is a risk that the sales representatives place too much focus on volume rather than profit margin, with the result that they grant excessive discounts (Joseph, 2001; Mishra & Prasad, 2005). An empirical study of wholesalers in the US health care industry showed that the sales representatives with full pricing authority generated the lowest profit margins, compared to those working in organizations that centralized their price setting, despite the fact that the sales representatives were all rewarded according to gross profit (Stephenson et al., 1979). Similarly, in their empirical study of 15 US firms within a variety of industries, Hinterhuber and Liozu (2012) concluded that the firms with the most advanced pricing control systems were able to achieve higher price levels, better price consistency and prices that better matched customers' willingness to pay. The pricing control systems in place at the studied firms with the highest absolute price levels ensured that dedicated managers were responsible for securing that pricing tools were applied and discount guidelines followed. Similarly, Hallberg and Andersson (2012) concluded in their empirical study that a decentralized pricing authority might result in inconsistent prices between different sales representatives and sales regions, which in turn could create obstacles for centrally coordinated price levels and, thus, enable customers to play different sales representatives against each other without their knowledge.

Nevertheless, there appears to be an agreement within the literature that if the individual sales representatives have more information about the specific customer than their manager, the pricing authority should be delegated, assuming that measures are taken in order to align the goals of management and the sales representatives (Hinterhuber, 2004; Hinterhuber, 2008; Homburg et al., 2012; Joseph, 2001; Marn et al., 2004; Mishra & Prasad, 2005; Nagle & Hogan, 2006; Vogel et al., 2002). These recommendations appear to have influenced practice since firms often decide to decentralize the pricing authority (Marn et al., 2004; Richards et al., 2005), due to the assumption that the prices are fully determined by the market (Dolan & Simon, 1996; Hinterhuber, 2004; Marn et al., 2004; Rao et al., 2000) and that a decentralized pricing authority facilitates quick response to changes in the market (Dolan & Simon, 1996; Nagle & Holden, 2002).

Hallberg (2008) identified 'commercial organization' as one of five pricing capability elements, which he defined as "the overall function and social

structure within which pricing decisions are made” (2008:262). As mentioned above, he categorized this element as a part of the firm’s pricing organization and identified that the organizational level at which the pricing decisions were coordinated (e.g. business unit level or national level) was a key element of the pricing capability of the different embedded cases in his single-firm case study. Thus, in Hallberg’s (2008) study, the commercial organization was both interdependent with, and closely connected to, the pricing capability element ‘pricing authority’. Hence, the concept of ‘commercial organization’ is in Table 3 covered by the pricing element ‘pricing authority’.

Pricing information system

The second building block in Table 3, pricing information systems (referred to as “database skills” by Dutta et al., 2003) comprises IT support for pricing, which according to previous studies is an essential pricing capability element (Dutta et al., 2003; Hallberg, 2008).

Hallberg (2008) also included ‘price parameters’ as one element of the firm’s pricing information systems and described it as “the operational constructs used to guide or evaluate pricing decisions” (2008:262). The price parameters identified by Hallberg (2008) had the function of both substituting for a lack of adequate IT support, and distorting pricing information in order to give the sales representatives and other price setters (e.g. sales managers) the impression that the profitability was lower than it actually was and, thus, motivate the price setter to fight harder to maximize profit margin. Thus, the price parameters identified by Hallberg (2008), which appeared differently for each of the five business units in his single-firm case study, both had the function of a more rudimentary version of IT support for pricing, and to provide incentives. For these reasons, this concept is not included in Table 3, instead, the concept of price parameters is represented by ‘pricing organization’ and ‘pricing information systems’.

Pricing skills

The third building block, ‘pricing skills’ is a combination of the employees’ commercial experience, the tacit know-how of the sales force and the firm’s pricing tool kit (identified by Dutta et al. [2003] as a pricing capability element). Hallberg (2008:263) defined commercial experience as “the commercial oriented personal knowledge or experience of key individuals”. Thus, when Dutta et al. (2003) identified the sales force’s tacit know-how as a central element of the firm’s pricing capability, Hallberg (2008) explicitly

added the dimension of individuals' personal experience. Considering that individuals' tacit know-how might stem from experience accumulation (see Zollo & Winter, 2002), the concepts suggested by Dutta et al. (2003) and Hallberg (2008), respectively, are closely related. See Appendix I for a presentation of each one of the eight pricing tools listed in Table 3.

Pricing strategies

Hallberg (2008) prefers the term 'pricing policy' and uses it as a synonym for 'pricing strategy', arguing that 'pricing strategy' too easily could be confused with 'competitive strategy'. His decision to avoid the term 'pricing strategy' stands in contrast to a stream of publications that prefer this term (e.g. Dolan & Jeuland, 1981; Dolan, 1981; Dutta et al., 2003; Forman & Hunt, 2005; Forman & Lancioni, 2002; Hinterhuber, 2008; Hinterhuber & Bertini, 2011; Lancioni et al., 2005; Urbany, 2001).

Hallberg (2008:57) defines pricing policy as "the means by which the firm tries to achieve specific price related market outcomes in response to a given scenario by the use of certain price level or price schedule". Thus, since Hallberg (2008) defines pricing policy as the *means* to achieve a certain outcome, his definition is distinguished from the one in this thesis, which instead defines pricing strategy as the *outcome* of the firm's pricing skill and pricing organization. Distinguishing between the outcome of the pricing strategy and the pricing skills (e.g. pricing tools) is in line with other publications addressing the notion of pricing strategy. For example, those advocating that firms should practice a value based pricing strategy often recommend Forbis and Mehta's (1981) method for evaluating the products' customer value of the product (i.e. calculating customer value based on the focal product's benefits relative a reference product) as the pricing tool to realize value based prices (see Marn et al., 2004; Monroe, 2003). Thus, in order to distinguish between pricing skills (e.g. various pricing tools such as customer segmentation) and the *outcome* of the performance of pricing skills (e.g. differential pricing), the definition of pricing strategy is in this thesis not in line with the one offered by Hallberg (2008). Thus, changes in pricing strategies are achieved based on changes in the pricing organization and the development and implementation of new pricing skills. For example, the pricing tool of categorizing customers in different segments depending on their willingness to pay enables the firm to conduct differential pricing.

The practice of matching prices with the products' customer value, usually referred to as value based pricing, is often claimed to be the most profitable

pricing strategy (Anderson & Narus, 1998; Cannon & Morgan, 1990; Hinterhuber, 2008; Hinterhuber & Bertini, 2011), compared with other pricing strategies such as a cost based and a competitor based one. However, firms often find it difficult to implement a value based pricing strategy due to difficulties of collecting and interpreting data needed when identifying the customer value (Anderson & Narus, 1998). Additionally, the perception among employees that cost based prices are more “fair” (Kahneman, Knetsch, & Thaler, 1986) and easier to justify to customers (Urbany, 2001) creates potential organizational barriers for value based pricing. Naturally, a product’s value to a customer might be both subjective and idiosyncratic. For example, different buyers’ firm specific resources and, thus, heterogeneous possibilities for resource combinations might result in different buyers ascribing differing value to an identical product (Denrell et al., 2003). For that reason, one of the challenges when trying to match prices with the products’ customer value is to identify and quantify the product’s value to different customers. Often, customer value is defined as the difference between the customer’s benefit from possessing a product minus the cost for purchasing and owning it (e.g. Marn et al., 2004; Shapiro & Jackson, 1978). However, limiting the definition of customer value to the difference between benefits and price paid might be problematic when practicing value based pricing, since customers’ willingness to pay should be estimated according to the customers’ total benefit from possessing the product, not the difference between total benefit and total price paid (Monroe, 2003). Drawing on Monroe’s (2003) notion of customer value, a product’s value to a customer is defined as the customer’s total benefit in monetary terms from possessing the product, including but not limited to the product’s technical benefits and the service that the selling firm might provide in addition to the physical product.

See Appendix II for a presentation of each one of the six pricing strategies.

The following section discusses eleven different concepts that in publications addressing the notion of organizational capabilities have been identified as antecedents of capability development.

2.4. Eleven key concepts that supposedly explain organizational capability development

Table 4 on the next page presents eleven concepts (listed on the first row) that have been proposed as antecedents of organizational capability development. Due to space limitations, the table depicts only a selection of the total number of studies that have been included in the literature review. The included publications have been selected based partly on number of citations, and partly to represent as many proposed antecedents as possible.

The intention with Table 4 is to identify different concepts that have been used to explain organizational capability development. Hence, it summarizes those eleven concepts that in the listed publications are either explicitly mentioned, or indirectly put forward as a central aspect for organizational capability development. The cross (✕) marks the publication that stresses each different concept as central for capability development.

Helfat and Peteraf (2003) offer an extensive review of organizational capability development. They cover, with the exception of Winter's (2003) notion of ad hoc problem solving and the argument that managerial motivation is a central antecedent for capability development (see Eneroth, 1997; Penrose, 1959; Simon, 1947), all concepts that have been identified in the literature review. For that reason, Helfat and Peteraf's (2003) description of capability development provides the foundation for Table 4. The following sections elaborate on and compare the eleven concepts.

Table 4 Concepts that have been used to explain organizational capability development

	Search routines	Trial and error learning	Changes in routines	Dynamic capabilities	Ad hoc problem solving	Knowledge deployment
Adner and Helfat (2003)			✗	✗		✗
Amit and Shoemaker (1993)			✗			
Collis (1994)			✗	✗		✗
Durta et al. (2003)			✗			✗
Eisenhardt & Martin (2000)	✗	✗	✗	✗		✗
Felin and Foss (2011)			✗			
Grant (1996)			✗			✗
Helfat and Peteraf (2003)	✗	✗	✗	✗		✗
Kogut and Zander (1992)			✗			✗
Leonard-Barton (1992)			✗			✗
Nelson and Winter (2002)		✗	✗			
Szulanski (1996)			✗			✗
Teece et al. (1997)	✗	✗	✗	✗		✗
Winter (2000)	✗	✗	✗	✗		✗
Winter (2003)	✗	✗	✗	✗	✗	✗
Winter and Szulanski (2001)		✗	✗	✗		✗
Zollo and Winter (2002)	✗	✗	✗	✗		✗

Table 4 Concepts that have been used to explain organizational capability development (cont.)

	Changes in resources	Ex. influences	Managers' perception	Managers' motivation	Path-dep.
Adner and Helfat (2003)	✗		✗		✗
Amit and Shoemaker (1993)	✗		✗		✗
Collis (1994)	✗	✗			✗
Durta et al. (2003)	✗				✗
Eisenhardt & Martin (2000)	✗	✗			✗
Felin and Foss (2011)	✗		✗		
Grant (1996)	✗				
Helfat and Peteraf (2003)	✗	✗	✗		✗
Kogut and Zander (1992)	✗				✗
Leonard-Barton (1992)	✗				✗
Nelson and Winter (2002)	✗	✗			✗
Szulanski (1996)	✗				✗
Teece et al. (1997)	✗	✗			✗
Winter (2000)	✗	✗			✗
Winter (2003)	✗	✗			✗
Winter and Szulanski (2001)	✗				✗
Zollo and Winter (2002)	✗	✗			✗

2.4.1. Search routines

Zollo and Winter (2002) argue that organizational capabilities stem from what Nelson and Winter (1982) refer to as “search routines”, explained as “the counterpart of that of mutation in biological evolutionary theory” (1982:18). According to Nelson and Winter (1982), search routines, combined with selection processes, cause firms to change their current set of operating procedures in response to changes in the market condition through an interweaved, unclear combination of “‘blind’ and ‘deliberate’ processes” (1982:10-11). Nelson and Winter (1982) exemplify this as organizational change that occurs as the firm adapts to price increases in response to excess demand. The recombination of existing routines “ordinarily involves a substantial amount of trial-and-error search” (Nelson & Winter, 1982:131), which provide individuals with emergent selection options through an undistinguishable combination of luck and deliberate efforts (Nelson & Winter, 1982:10-11). Zollo and Winter (2002) follow Nelson and Winter (1982) and argue that organizational change is initiated by the following two phases: 1) search routines that enable the firm to detect changes in the external environment, and 2) trial and error based learning (the second concept listed in Table 4). Hence, search routines might lead to tacit experience accumulation through trial and error based learning, which in turn could result in capability development (Teece, 2007; Zollo & Winter, 2002). Zollo and Winter’s (2002) argument that search routines lead to tacit experience accumulation, which in turn lead to knowledge articulation, knowledge codification and, lastly, dynamic capabilities, is elaborated in section 2.4.4.

Adner and Helfat (2003) argue that although individual managers’ perception presumably is influenced by their individual “blind” and deliberate search routines (cf. Nelson and Winter, [1982]) for detecting changes in their environment, different managers’ subjective perceptions explain more accurately capability development, not the routines through which management detects external changes per se. Hence, the concept of search routines is distinguished from that of managerial perception about opportunities for capability development, which is discussed in section 2.4.9.

2.4.2. Trial and error based learning

The concept of trial and error based learning as a potential antecedent for capability development refers to the notion that capabilities evolve primarily according to external signals through search routines (as defined by Nelson and Winter [1982]), which lead to individual experience accumulation (see Zollo & Winter, 2002). Both Teece et al. (1997) and Eisenhardt and Martin (2000) explain capability development as learning based on experience, trial and feedback. Likewise, Winter and Szulanski (2001) argue that firms' replication capabilities evolve and change over time as a result of performance feedback from repetition.

Naturally, managers' previous experiences, presumably partly gained from trial and error based learning, shape their perception and motivation. However Zollo and Winter's (2002) argument that knowledge accumulation, through search routines and trial and error learning, precedes *deliberate* knowledge articulation and codification illustrates that the concept 'managerial perception about opportunities for capability development' is distinguished from trial and error learning. Additionally, in this thesis, 'knowledge' is considered to be an intangible asset that management to some extent is able to control and manage (this reasoning is elaborated in section 2.4.6). Given this definition of knowledge, Zollo and Winter's (2002) reasoning regarding the separation of trial and error learning on the one hand and deliberated knowledge articulation and codification on the other hand, the concept 'knowledge deployment' (see section 2.4.6) is distinguished from trial and error learning. In other words, managers' deliberate efforts to develop new knowledge through training sessions, and implement new IT systems for knowledge codifications are *not* covered by the concept 'trial and error based learning'. Instead, in Table 4, they are sorted under the concepts of 'knowledge deployment' (see section 2.4.6) and 'changes in resources' (section 2.4.3).

2.4.3. Changes in routines

Compared to an organizational capability, a routine is a more simple and elementary behavioral pattern (Cyert & March, 1963; March & Simon, 1958; Simon, 1947; Winter, 2000). Routines are regular, predictable, patterns (Nelson & Winter, 1982) that often occur as fixed responses to predefined stimuli (March & Simon, 1958; Simon, 1947), follow certain rules (Feldman & Pentland, 2003; Pentland & Rueter, 1994; Reynaud, 2005), and, thus, serve

the purpose of controlling the behavior of the employees (Cyert & March, 1963). Routines enable members of the organization to predict the behavior and actions of each other and thus, prevent both many organizational conflicts from occurring, as well as ongoing conflicts from escalating (Nelson & Winter, 1982).

Routines “store” the knowledge required for performing a given organizational capability (Szulanski, 1996), and the replication of an organizational capability comprises the replication of capability specific routines (combined with capability specific resources) (Szulanski, 1996; Winter & Szulanski, 2001). Collis (1994) argues that organizational capabilities are nested in the organization’s routines, which in turn are the product of the evolutionary history of the firm. Since capability development often requires changes in the routines for carrying out the capability, it is interrelated with changes in routines (Dutta et al., 2003).

Prior to Nelson and Winter’s publication in 1982, March and Simon (1958:141) concluded that routinized work, or “performance programs” as they name it, decide “most behavior in organizations”. In a similar manner, Selznick (1957:31) referred to routines as “the solution of day-to-day problems”. Furthermore, Cyert and March (1963) outlined the importance of “standard operating procedures” for organizations and argued that most of the work in organizations is carried out through routines. Penrose (1959) does not specifically mention routines. However, she stresses that firms generate rent not by simply possessing resources, but through their deployment. Thus, implicitly, she emphasizes routines as a central firm activity that enables firms to create organizational growth through an efficient and creative use of resources.

Nelson and Winter (1982) define routines as rigid (“radical and predictable pattern behavior”), albeit they recognize the ability for “mutation”. Their reasoning stands in contrast to Cyert and March’s (1963:120) explicit emphasis of the changing nature of standard operating procedures, which they explain as the result of adaption according to new experiences. Changes in standard operating procedures are, according to Cyert and March (1963), either guided by performance rules prescribing how to handle short-term feedback, or by changes in the general rules, triggered by long-term feedback. Thus, Cyert and March (1963) argue that managerial decision making might impose changes on standard operating procedures by changing the rules guiding them. However, no decisions to change existing procedures are made until the standard operating procedure in question achieves an unsatisfactory result. Nelson and

Winter (1982), on the contrary, emphasize short-term feedback triggered, trial and error based, problem solving as the explanation for changes in routines. New routines evolve, according to Nelson and Winter (1982), through the combination of existing ones. The recombination of existing routines “ordinarily involves a substantial amount of trial-and-error search” (Nelson & Winter, 1982:131)(Nelson & Winter, 1982:131), which is often the outcome of ‘search routines’ that enable the firm to detect changes in the environment (Nelson & Winter, 1982). Thus ‘search routines’ are distinguished from ‘ordinary’ ones since ‘search routines’ lead to trial and error learning that in turn might impose changes on existing, ordinary ones.

Amit and Schoemaker (1993:35) prefer the term ‘processes’ instead of routines, which they refer to as the firm’s procedures for “developing, carrying and exchanging information through the firm’s human capital”. Similarly, when describing organizational capabilities, Teece et al. (1997) use the word ‘processes’ instead of routines. However, they define processes as routines for coordination, learning and reconfiguration (Teece et al., 1997:518). Thus, these researchers’ notion of processes resembles the argument that capability development requires coordination of knowledge and information (Dutta et al., 2003; Grant, 1996; Kogut & Zander, 1992; Leonard-Barton, 1992; Prahalad & Hamel, 1990; Teece et al., 1997). Knowledge and information coordination is achieved through routines, since these serve the purpose of coordinating the different activities within the organization and thereby function as a substitute for constant supervision by management (Stene, 1940). Thus, the coordinating characteristics of routines are linked to their function as a means for controlling activities (Nelson & Winter, 1982), since routinized behavior is standardized and easy to both monitor and measure. Dutta et al. (2003) describe coordinating mechanisms as the firm’s routines for: 1) obtaining information about market actors (e.g. customers and competitors), 2) codifying the data in information systems, 3) accessing the information when needed, and 4) sharing information internally within the organization. For these reasons, in Table 4, both processes and routines for coordinating mechanisms, identified as a key success factor for pricing capability development (Dutta et al., 2003; Hallberg, 2008), are sorted under the concept of routines.

The assumptions that routines are regular and rigid (Nelson & Winter, 1982) and carried out automatically, triggered by a given stimulus (Simon, 1947), have given rise to the notion that routines change primarily due to exogenous forces (Cohen et al., 1996; Gersick & Hackman, 1990). The following section

reviews the debate on whether routines are the result of exogenous or endogenous causes.

Exogenous versus endogenous triggered changes in routines

Gersick and Hackman (1990:83) list five different occasions for when the individuals performing a certain routine might decide to change it: 1) the encountering of a novel state of affairs, 2) experiencing a failure, 3) reaching a milestone in the life or work of the group, 4) receiving an intervention that calls members' attention to their group norms, and 5) having to cope with a change in the structure of the group itself. Thus, decisions to change routines are, according to Gersick and Hackman (1990), triggered by an external event causing the individuals performing the routine to change the process through which the routine is exercised. In a similar manner, Cohen et al. (1996) propose that routines are fixed until an external event causes them to be changed. Once the change has taken place the routines return to a new fixed and stable mode. However, endogenous forces causing routines to change have been identified (Feldman, 2000; Feldman & Pentland, 2003). In her empirical study, Feldman (2000) showed how routines change endogenously when the individuals carrying out the routines decide to change it. The decision to change the routine was made either due to undesirable and unintended outcomes, or the possibility of improving the outcome. Building on Feldman (2000), Feldman and Pentland (2003) propose that routines might change endogenously when exercised in order to achieve a different performance outcome.

The disagreements on whether routines are changed once an external event forces the routine out of its stable equilibrium (Cohen et al., 1996), or endogenously (Feldman, 2000; Feldman & Pentland, 2003) are closely related to the question whether routines are performed automatically (Simon, 1947) or intentionally (Pentland, 1995; Pentland & Rueter, 1994).

Routines carried out intentionally or automatically?

Simon (1947) refers to routines as "habits" and describes them as actions, that once learned and adopted, are carried out almost automatically without consideration. According to Simon (1947), organizations develop routines as a consequence of those actions that are taken in response to recurring problems and questions. The routines will, just as the habit of a human, "cease to be objects of reconsideration" and, following the same logic, become so established that they will take place by the "mere presence of the stimulus", even if they are

inappropriate due to changed circumstances (Simon, 1947:100). Simon's reasoning stands in contrast to Pentland and Rueter (1994) who argue that routines are performed as a consequence of an effortful accomplishment, in contrast to acting in a mindless fashion (Ashforth & Fried, 1988). Along these lines, Salvato (2009) illustrated empirically the key role of employees' intentional actions in the development of organizational routines. In his longitudinal case study, he showed that the firm's product development capability evolved based on the daily activities carried out by individuals with the intention to improve the firm's operational processes. According to Salvato (2009), managerial long-term planning has less effect on the firm's product development capability, compared to the operational day-to-day activities carried out by the employees. Instead, managerial influence on capability development was most significant when managers focused on encoding the successful experiments carried out by the employees. For that reason, Salvato (2009) recommends that managers should prioritize to motivate the employees to experiment novel ways of developing the firm's capabilities, rather than spend their time with long-term strategic planning.

The debate on whether organizational routines are carried out automatically or effortfully has divided researchers into two camps. One side considers routines as something that is performed automatically and carried out without the individuals in question devoting any attention to their actions (Simon, 1947; Stene, 1940). On the contrary, the other side makes a case of routines being contextual and subject for changes and variations (Becker, Lazaric, Nelson, & Winter, 2005; Becker & Zirpoli, 2008; Feldman, 2000; Feldman & Pentland, 2003; Pentland & Rueter, 1994). Somewhere in between these two camps is Grant (1991:122) who proposes that routines are performed semi-automatically and that "routines are to the organization what skills are to the individual". He argues that organizational routines to a large extent consist of tacit knowledge and that they, just as the skills of the individual, are subject to fall into oblivion when not practiced for a while. Hence, Grant (1991) argues that economies of experience apply to routines.

Routines are the "memory" of organizations

According to Nelson and Winter (1982), organizations "remember" by exercising routines. The close link between routines and knowledge is captured in the metaphor "a storage-room for knowledge", often used when conceptualizing organizational routines (Becker, 2004; Cohen & Bacdayan, 1994; Ginsberg & Baum, 1994; Nelson & Winter, 2002). Researchers have

argued that the key routines for a given organizational capability are the outcome of tacit knowledge accumulation (e.g. Eisenhardt & Martin, 2000; Teece et al., 1997; Zollo & Winter, 2002). These researchers follow Nelson and Winter's (1982) argument that routines change according to search routines (that enable the firm to detect external changes) and short-term feedback triggered, trial and error based, problem solving. In other words, the routines for a given capability "store" the capability specific tacit knowledge. Once the routine and the knowledge become inseparable, it results in isolating mechanisms that prevent competing firms from imitating the routines.

2.4.4. Dynamic capabilities

The concept 'dynamic capability', sometimes referred to as 'higher-order capabilities' (Collis, 1994; Winter, 2003), is often used when explaining organizational capability development (e.g. Collis, 1994; Helfat & Peteraf, 2003; Winter & Szulanski, 2001; Winter, 2003). Dynamic capabilities are distinguished from the firm's organizational capabilities since they operate to extend, modify and create organizational capabilities (Teece et al., 1997; Winter, 2003). Furthermore, dynamic capabilities are distinguished from the traditional definition of routines since they are considered to be deliberate efforts to change the firm's routines (Helfat et al., 2007; Teece, 2007; Winter, 2000; Winter, 2003) and resources (Eisenhardt & Martin, 2000; Teece et al., 1997) in response to external changes (Eisenhardt & Martin, 2000; Teece et al., 1997). Often, dynamic capabilities are explained as the outcome of cumulative, tacit-experience accumulation based on external responses (Teece et al., 1997; Zollo & Winter, 2002) that provides managers with emergent decision options regarding production alternatives (Winter, 2000). Researchers have argued that the role of managers is to seek to codify the employees' experience accumulation (e.g. Eisenhardt & Martin, 2000; Winter, 2000). Thus, 'dynamic capabilities' are distinguished from both 'search routines' and 'trial and error based learning' since they refer to (partly) codified and established routines (see Zollo & Winter, 2002). Hence, although dynamic capabilities might stem partly from experience gained through search routines, not *all* search routines impose changes in the firm's dynamic capabilities.

Although dynamic capabilities are often described as evolving through performance feedback from external influences (Eisenhardt & Martin, 2000; Teece et al., 1997; Winter, 2003), managers' ability to change the firm's resources in response to a changing environment has also been stressed

(Eisenhardt & Martin, 2000; Teece et al., 1997). According to Teece et al. (1997) dynamic capabilities enable firms to survive Schumpeterian shocks since they enable the firm to reconfigure its resources and core competences into more appropriate combinations. According to Teece et al. (1997), 'dynamic' refers to the firm's ability to renew its competences and firm specific assets according to external changes, and match appropriate organizational changes with certain changes in the business environment. 'Capabilities' concern the firm's ability to manage the organization and reconfigure its firm specific assets according to a changing environment (Teece et al., 1997).

Teece et al. (1997:516) describe dynamic capabilities as the ability to "achieve new and innovative forms of competitive advantage given path-dependency and market position", and argue that they comprise the following three organizational processes: 1) Coordination and integration of the firm's resources. 2) Learning, which is often a process of trial and feedback, enabling the firm to both perform existing tasks better and more efficiently, and identify new opportunities for production. 3) Asset reconfiguring and transformation. The trial and error based learning process from which the firm's dynamic capability is developed means, according to Teece et al. (1997:525), that the accumulated knowledge is often tacit. If the knowledge instead was explicit, competing firms would be able to replicate the capability and it would no longer be a source of competitive advantage. Hence, Teece et al. (1997) argue that dynamic capabilities evolve based on external influences, knowledge accumulation through trial and error learning, and managers' ability to reconfigure the firm's resources in response to a changing business environment.

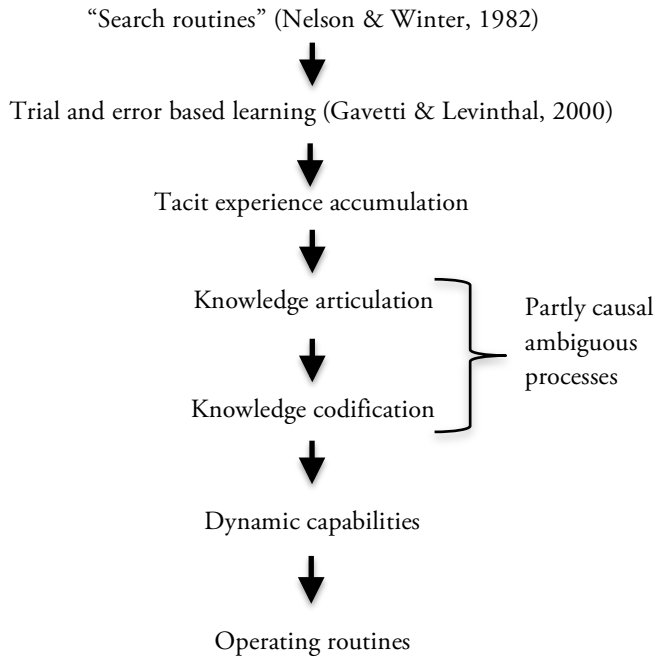
The reasoning by Teece et al. (1997) resembles Zollo and Winter's (2002) description of dynamic capabilities as stemming from tacit knowledge accumulation through trial and error learning. When defining dynamic capabilities, Zollo and Winter (2002) build on Gavetti and Levinthal's (2000:113) argument that organizational routines are "the outcome of trial and error learning and the selection and retention of past behavior". Zollo and Winter (2002) refer to this trial and error based learning as "experience accumulation" and argue that dynamic capabilities evolve through three learning mechanisms: 1) tacit experience accumulation, which requires search routines, 2) knowledge articulation, which always will be partly causal ambiguous, and 3) knowledge codification. Zollo and Winter (2002:341) emphasize the tacitness of the accumulated knowledge, stressing that "tacitness arises when learning is experiential" because knowledge "becomes highly

embedded in the behavior of the individuals involved in the multiple executions” (2002:344).

Additionally, Zollo and Winter (2002:342) recognize that the process of articulating the accumulated knowledge will always be partly causal ambiguous. For that reason, only a small part of the knowledge is actually articulated (Zollo & Winter, 2002:342). Thus, dynamic capabilities are, according to Zollo and Winter (2002), the outcome of articulated and codified tacit experience gained through cumulative trial and error learning. As depicted in Figure 1, illustrating the process of dynamic capability development as described by Zollo and Winter (2002), they argue that tacit knowledge accumulation precedes deliberate knowledge codification and articulation. In other words, they propose that tacit knowledge is able to both articulate and codify (albeit they recognize that only a small part of the knowledge is actually articulated due to a combination of causal ambiguity and tacitness).

In line with Zollo and Winter’s (2002) reasoning, Bingham et al. (2007) suggest that organizational capabilities develop through the employees’ experience accumulation. Based on their empirical study of small and young firms’ international expansion, they concluded that organizational capabilities largely consist of informal rules-of-thumb, resulting from tacit knowledge accumulation, that enable firms to capture opportunities. This argument stands in contrast to the notion that there are greater difficulties with codifying (Teece et al., 1997) and transferring tacit knowledge (Szulanski, 1996). Difficulties with codifying tacit knowledge might explain the results from the empirical study by Zollo and Singh (2004). In their study of US banks’ integration capability of acquired firms, Zollo and Singh (2004) showed that knowledge codification strongly impacted acquisition performance. However, no such correlation was found for experience accumulation. This indicates, according to Zollo and Singh (2004), that deliberate, formalized learning largely determines the development of the firm’s integration capability, whereas the more tacit knowledge gained from “learning-by-doing” is of less importance.

Figure 1 The process of organizational capability development according to Zollo and Winter (2002) (my illustration of their reasoning)



Eisenhardt and Martin (2000) distinguish between dynamic capabilities in moderately changing markets, and dynamic capabilities in highly dynamic markets. When describing the evolution of dynamic capabilities in moderately changing markets, Eisenhardt and Martin (2000) follow Nelson and Winter (1982) and describe dynamic capabilities as routines that evolve according to external feedback. Similar to Zollo and Winter (2002), Eisenhardt and Martin (2000) argue that dynamic capabilities (in moderately changing markets) evolve through codified knowledge accumulation. In highly dynamic markets, on the contrary, dynamic capabilities evolve based on new knowledge created intentionally by the organization's members with the purpose of enabling changes in response to emergent situations (Eisenhardt & Martin, 2000). Thus, similar to Teece et al. (1997), Eisenhardt and Martin (2000) stress managers' ability to change and develop the firm's capabilities and resources. Yet, Eisenhardt and Martin (2000:1114) also stress the causal ambiguity of dynamic

capabilities, describing them as “complicated and difficult to observe”. They acknowledge that sometimes “even the managers themselves do not know why their dynamic capabilities are successful” (2000:1114). Moreover, Eisenhardt and Martin’s (2000) notion of the causes for sustained competitive advantages differ from the reasoning of Teece et al. (1997) who argue that the firm’s dynamic capabilities are the sources for a sustained competitive advantage. On the contrary, Eisenhardt and Martin (2000) stress that it is not the dynamic capabilities per se that lead to a competitive advantage, but rather the resource configuration that they accomplish. See Table 5 for a summary of different suggested definitions of dynamic capabilities

Table 5 Definitions of dynamic capabilities

Publication	Definition
Eisenhardt and Martin (2000:1107)	“The firm’s processes that use resources—specifically the processes to integrate, reconfigure, gain, and release resources—to match and even create market change; dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die.”
Helfat and Peteraf (2003:999)	“Dynamic capabilities build, integrate and reconfigure operational capabilities. Dynamic capabilities do not directly affect output for the firm in which they reside, but indirectly contribute to the output of the firm through an impact on operational capabilities.”
Helfat et al. (2007:4)	“A dynamic capability is the capacity of an organization to purposefully create, extend or modify its resource base.”
Teece (2007:1319)	“Dynamic capabilities can be disaggregated into the capacity (a) to sense and shape opportunities and threats, (b) to seize opportunities, and (c) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise’s intangible and tangible assets.”
Teece and Pisano (1994:541)	“The subset of the competences and capabilities that allow the firm to create new products and processes and respond to changing market circumstances.”
Teece et al. (1997:516)	“The firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.”
Winter (2003:991)	“Those [capabilities] that operate to extend, modify, or create ordinary capabilities.”
Zollo and Winter (2002:340)	“A dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness.”

The role of managerial decision making in shaping dynamic capabilities

As depicted in Table 5, Teece (2007) identifies three managerial processes that according to him underpin dynamic capabilities: 1) recognizing an opportunity, 2) seizing the opportunity by implementing it, and 3) staying alert in order to continuously renew the firm's resources. By following this procedure, managers are, according to Teece (2007), able to achieve firm heterogeneity. Thus, the assumption that capabilities evolve based on a combination of managers' decision regarding resource utilization, performance feedback and path dependency provides the foundation for both Teece (2007) and Teece et al. (1997). Yet, Teece (2007) offers an extended discussion concerning the particular building blocks of dynamic capabilities.

In his case study of a global typewriter manufacturer, Danneels (2010:21) concluded that prior publications addressing dynamic capabilities (primarily Eisenhardt & Martin, 2000 and Teece et al., 1997) have failed to recognize how "executives' cognition about their firm's resources" determines to what extent firms exercise dynamic capabilities. Danneels (2010) introduced the concept "managerial resource cognition", defined as managers' "identification of resources and the understanding of their fungibility" (2010:21), and argued that prior publications on dynamic capabilities have failed to recognize that managers differ in their perception about resource availability. Along these lines, Adner and Helfat (2003:1012) introduced the term "dynamic managerial capabilities", defined as "the capabilities with which managers build, integrate, and reconfigure organizational resources and competences". Based on their quantitative study of the American petroleum industry from 1977 to 1997, they argue that dynamic managerial capabilities are essential for understanding differences in managers' decision making and, thus, firm performance. They describe dynamic managerial capabilities as consisting of three underlying factors: managerial human capital, managerial social capital and managerial cognition (i.e. managerial beliefs, such as perceptions of action alternatives and expected outcomes). Adner and Helfat (2003:1023) concluded that their study revealed that even though the studied corporate managers were "facing similar conditions in the external environment, corporate managers in different companies made different decisions". Building on Adner and Helfat (2003), Ambrosini, Bowman and Collier (2009) suggested that management's perception of the firm's external environment is a critical trigger for dynamic capabilities.

Drawing on Adner and Helfat (2003), Helfat and Peteraf (2003:997) outlined a “capability lifecycle” comprising the four steps of: 1) founding, 2) development, 3) maturity, and 4) branching, in which the capability either dies, retrenches, replicates, redeploys, recombines or is renewed. According to Helfat and Peteraf (2003), these four steps explain heterogeneous organizational capabilities between firms. The founding stage of a capability begins, according to Helfat and Peteraf (2003), when a team assembles with the purpose of fulfilling a mission that requires, or involves, the creation of capabilities. Following the founding stage, the capability is developed based on the team’s search for, and evaluation of, development alternatives. The development alternatives are selected based on conditions provided in the founding stage, initially defined objectives and resources available to the team, such as human and financial capital. Thus, the team member will evaluate different alternatives depending on a combination of their individual and collective skills, and perceptions about different action alternatives and expected outcomes. The third stage, the maturity stage, comprises the team’s practicing of the capability and thus its incorporation into the organization’s memory. In other words, if the team members carry out the capability often and frequently enough, it will, as Simon (1947) suggests, become a habitual routine that is embedded in the organization’s memory.

As indicated, Helfat and Peteraf (2003) argue that capability development is intentionally initiated by management (as opposed to primarily caused by changes in the firm’s environment, see Hannan & Freeman, 1977; Hannan & Freeman, 1984), through, for example, the establishment of a project team given the task to develop a new capability. Even though it might be an external circumstance (e.g. increased raw material costs) that precedes the managerial decision to initiate capability development, managers will, due to differences in human capital and cognition, react differently to the external changes and make varying decisions regarding which actions to take (Helfat & Peteraf, 2003). Once initiated, the capability evolves, according to Helfat and Peteraf (2003), through a combination of intentional resource allocation and trial and error learning from external feedback. The impact of the external feedback depends, according to Helfat and Peteraf (2003), on the reaction of the members of the organization, especially the managers.

According to Helfat and Peteraf (2003), the fourth and final stage in the capability lifecycle development path, labeled “capability branching”, occurs when factors external to the capability alter its current development cycle and causes it to change. For example, the decision to diversify and enter a new

market segment might result in a recombination of the resources that constitute the manufacturing capability of a certain product category. Thus, the capability has “branched” into a renewed version through the recombination of resources. According to Helfat and Peteraf (2003), capability branching is triggered by selection factors either internal within the organization or external to the organization. External factors are, for example, changes in demand or raw material prices whereas “important factors in the internal selection environment include managerial decisions” (Helfat & Peteraf, 2003:1004). Helfat and Peteraf also remind us that managers may not only initiate the development of a capability but also decide to end the capability when making “the final decision to cease capability development” (2003:1002).

The logic of organizational branching applies, Helfat and Peteraf (2003) argue, to both operational and dynamic capabilities. Hence, operational capability development could, according to these researchers, occur without the presence of dynamic capabilities, just as dynamic capabilities follow the same development cycle as operational capabilities.

According to Schreyögg and Kliesch-Eberl (2007), there is a potential risk with practicing dynamic capabilities since constant changes in response to a changing environment might result in valuable knowledge and well-functioning processes being lost. These authors recommend managers to think twice before deciding to build and develop dynamic capabilities, since there often is a tradeoff between continuous changes and reliable replication. Instead, they advocate the separation of, on the one hand, the task of monitoring the firm’s external environment with the intention to detect changes and, on the other hand, the task of monitoring the firm’s current organizational capabilities. Thus, Schreyögg and Kliesch-Eberl (2007) recommend managers to avoid designing organizational capabilities that are “automatically” changing according to an external environment, but instead assure that the organizational capabilities are monitored and remain stable until management decided to impose changes. Indeed, the capability monitoring Schreyögg and Kliesch-Eberl (2007) suggest requires that management is able to fully identify and understand the organizational capability. Thus, capability monitoring comprises presumably the tradeoff between manageability and imitability (see Schoemaker & Amit, 1994).

Defining the notion of dynamic capabilities

Researchers have described dynamic capabilities as firms’ “best practice” (Eisenhardt & Martin, 2000), “capacity” (Helfat et al., 2007; Teece, 2007),

“competence” (Teece & Pisano, 1994), “ability” (Teece et al., 1997; Winter & Szulanski, 2001) and “learned pattern” (Zollo & Winter, 2002) for changing resources and routines. Thus, a stream of publication relates dynamic capabilities with innovation (e.g. Augier & Teece, 2009; Danneels, 2002; Eisenhardt & Martin, 2000; Galunic & Eisenhardt, 2001; Helfat, 1997; Helfat et al., 2007; Hoopes, Madsen, & Walker, 2003; Narayanan et al., 2009; Schreyögg & Kliesch-Eberl, 2007; Teece et al., 1997; Teece, 2007). For example, Eisenhardt and Martin (2000) identify routines for product development as an example of dynamic capabilities. Moreover, Helfat (1997:339) argues that dynamic capabilities “enable firms to create new products and processes and respond to changing market conditions”.

Moreover, dynamic capabilities are often described as routines that are triggered by external events (e.g. Collis, 1994; Winter, 2003; Winter & Szulanski, 2001; Zollo & Winter, 2002), and the role of managers is to seek to codify the employees’ experience accumulation (e.g. Eisenhardt & Martin, 2000; Winter, 2000) and select among the emerging decision options regarding production alternatives (Winter, 2000). In other words, dynamic capabilities are organizational routines originating from aggregated tacit experience accumulation (Zollo & Winter, 2002). For that reason, it is presumably difficult to predict when and how dynamic capabilities will evolve, and probably even more difficult to control that process. As expressed by Eisenhardt and Martin (2000:1114), sometimes “even the managers themselves do not know why their dynamic capabilities are successful”. This indicates that managers presumably have a limited ability to control the firm’s dynamic capabilities, and even less influence the capabilities’ development paths. Hence, contrary to organizational capabilities, which according to Winter (2000:983) are always known to management, including the capabilities’ “control levers [and] intended effects”, dynamic capabilities are described as “emergent” (see Mintzberg & McHugh, 1985; Mintzberg & Waters, 1985) routines that, due to their nature, presumably are difficult to foresee, even less manage. Consequently, the locus of interest in these publications is organizational routines (Salvato, 2009), not managers’ subjective perception about resource availability per se (see Danneels, 2010). For these reasons, these publications (i.e. Eisenhardt & Martin, 2000; Teece, 2007; Teece et al., 1997; Zollo & Winter, 2002; Winter & Szulanski, 2001) implicitly sidestep different managers’ subjective perceptions of opportunities for capability development and motivation to design organizational capabilities in favor of reactive, emergent organizational responses to external changes.

On account of reasons stated above, the notion of dynamic capabilities is in this thesis defined as meta-routines that stem from experience accumulation, which enable the firm to create new resources and routines, and change existing ones in response to external changes. Presumably, the meta-routines are at least partly founded on tacit knowledge (Teece et al., 1997; Zollo & Winter, 2002) and, not seldom, causal ambiguous (Eisenhardt & Martin, 2000). Consequently, the concept ‘dynamic capabilities’ is in Table 3 distinguished from the concepts ‘managerial perception’ and ‘managerial motivation’, respectively.

2.4.5. Ad hoc problem solving

Winter (2003) explains organizational changes that result from unexpected, unpredicted and unique external events as “ad hoc problem solving”. According to Winter (2003), ad hoc problem solving is not repetitious, nor a patterned behavior. Instead, it is an improvised response to a novel, external event. Winter (2003) describes ad hoc problem solving as a substitute for dynamic capabilities that takes place when the cost of dynamic capabilities exceeds the expected benefit. Or when the dynamic capability is not firm unique and, thus, not yielding superior rents. Hence, ad hoc problem solving is not equal to routines nor to dynamic capabilities (Winter, 2003). Schreyögg and Kliesch-Eberl (2007) criticize Winter’s (2003) notion of ad hoc problem solving and argue that it can never be an antecedent of organizational capability development since it fails to recognize that managers differ in their understanding of the firm’s external environment. Thus, the concept ‘ad hoc problem solving’ sidesteps the influence of different managers’ subjective awareness and perception of external events on capability development. Due to individual perception and awareness, managers will recognize and, thus, respond in varying ways to different external events, depending on which one they are aware of. For that reason, the concept of ad hoc problem solving is distinguished from the concept of managerial perception of opportunities for capability development.

2.4.6. Knowledge deployment

A firm’s ability to develop new processes for production is closely related to its ability to adopt new knowledge (Penrose, 1959:50). Knowledge accumulation allows firms to develop new ways to deploy resources and exploit excess and

unused resources. This in turn leads to organizational growth (Penrose, 1959). Consequently, researchers have proposed managerial systems for knowledge control (Leonard-Barton, 1992), the ability to create knowledge (Cohen & Levinthal, 1990; Eisenhardt & Martin, 2000; Leonard-Barton, 1992) and the ability to utilize, integrate and codify individual and local knowledge (Adner & Helfat, 2003; Amit & Schoemaker, 1993; Grant, 1991; Helfat & Peteraf, 2003; Kogut & Zander, 1992; Leonard-Barton, 1992; Prahalad & Hamel, 1990; Teece et al., 1997; Winter & Szulanski, 2001; Zollo & Winter, 2002) as antecedents of capability development. Similarly, Dutta et al. (2003) identified “skills and know-how” as one of three activities (routines and coordinating mechanisms being the other two) that constitute pricing capabilities. Accordingly, managers’ ability to coordinate, handle and deploy knowledge plays a key role in pricing capability development.

There is a dividing line between researchers arguing that organizational capabilities evolve through the utilization and deployment of *existing* knowledge within the firm (Kogut & Zander, 1992; Prahalad & Hamel, 1990; Zander & Kogut, 1995), and scholars emphasizing knowledge *creation* as a key success factor for organizational capability development (Leonard-Barton, 1992). Prahalad and Hamel (1990) argue that competitive advantage is the result of managers’ ability to utilize and coordinate individual knowledge. They refer to this ability as core competence. Similarly, Kogut and Zander (1992) argue that “combinative capabilities” enable firms to develop new capabilities by combining current ones. New capabilities are, they argue, developed through the sharing and transfer of existing knowledge within the organization.

Leonard-Barton (1992) stresses managers’ ability to facilitate new knowledge creation and argue that the firm’s ‘core capabilities’ enable the development of new processes for production. According to her, core capabilities consist of the following four dimensions: 1) individual knowledge among the employees, 2) systems for knowledge codification, 3) managerial systems for knowledge creation and knowledge control, and 4) values and norms embedded within the systems for knowledge creation and control. If they fail to develop and change the firm’s core capabilities due to difficulties with either changing the employees’ existing knowledge or, more likely, their norms and values, the core capabilities will transform into core rigidities that prevent new capabilities from evolving.

The reasoning by Leonard-Barton (1992) is in line with that of Cohen and Levinthal (1990). They also argue that firms’ ability to absorb external and

valuable information determines their ability to change their capabilities. Thus, firms' ability to access and develop new knowledge is closely related to their ability to achieve capability-development. However, March (1991) argues that knowledge exploration might occur at the expense of exploitation of existing knowledge, since these two activities compete over the same resources. Thus, March (1991) notes that firms face the challenge of balancing their resource allocation between either exploring new possibilities or exploiting existing capabilities.

The notion of knowledge

Scholars have discussed epistemological aspects of knowledge (e.g. Brown & Duguid, 2001; Nonaka, 1994; Spender, 1996a; Spender, 1996b), and suggested different types and categories of knowledge, such as tacit versus explicit (Nonaka, 1994), "sticky" versus "leaky" knowledge (Brown & Duguid, 2001) 'know-how' versus 'know-what' (Kogut & Zander, 1992) and 'data' versus 'meaning' (Spender, 1996b). Despite disagreements regarding categorization and labeling of proposed types of knowledge, there seems to be a general consensus that knowledge is something that is created in the mind of the individual (Cook & Brown, 1999; Nahapiet & Ghoshal, 1998), as opposed to within an "organizational brain". Following this reasoning, Grant (1996) argues that the main purpose of an organization is not to create knowledge, but to apply the knowledge that resides within the members of the organization. Thus, according to Grant (1996), firms exist because they are able to utilize and apply the knowledge of the individual members of the organization. Davenport and Prusak (2000) express a similar pragmatic view of knowledge and argue that knowledge is a "dynamic organizational asset" that more or less can be controlled and managed as a tangible resource. Similarly, Turner and Makhija (2006) draw on Ouchi's (1979) three categories of control mechanisms (i.e. output, behavior and clan) when suggesting that managers should choose different control systems depending on the character of the knowledge management process. Different forms of control systems are recommended depending on whether the managerial ambition is to acquire, transfer, interpret or apply knowledge. Drawing on these scholars' view of knowledge, in this thesis knowledge is considered as an intangible asset that management to some extent is able to control and manage. Thus, knowledge is defined as the human capital of individuals that provides them with skills and enables them to act in new ways (Coleman, 1990).

Clearly, tacit knowledge is potentially difficult to manage, due to difficulties with codifying and transferring (Szulanski, 1996). However, managers could facilitate tacit knowledge transfer between employees by promoting their close collaboration and communication (Grant, 1996), such as pairing senior employees with more junior ones. Hence, although some type of knowledge, such as tacit knowledge, restricts managers' ability to fully control all knowledge possessed by the employees, managers are still able to manage other parts of the firm's knowledge base, through, for example, IT systems for knowledge codification (Kalling & Styhre, 2003). The aggregated knowledge of the employees is the firm's intellectual capital that enables the organization to carry out knowledge based activities (Nahapiet & Ghoshal, 1998), founded on the employees' skills and ability to act in new ways (Coleman, 1990). Thus, knowledge management refers to those decisions and actions carried out by managers in order to manage the firm's intellectual capital. Hence, knowledge management comprises those activities undertaken both within the organization as well as between the organization and external parties in order to facilitate and deploy the organization's intellectual capital.

Defining knowledge as an intangible asset entails a separation between, on the one hand, experiences and learning and, on the other hand, knowledge. Even though learning, experience and knowledge are interrelated, the three concepts can still be separated if knowledge is seen as accumulated over time through individuals' interpretations of experiences from subjectively selected parts of their memory, shaped by cognitive constraints (see Levinthal & March, 1993; Levitt & March, 1988; March, 1991; March, 1994). Thus, following the reasoning of these scholars, in this study, knowledge is defined as the output from individuals' learning processes, which is the result of their subjective interpretations of prior experiences, subjectively selected from their memory.

Knowledge transfer

Knowledge transfer concerns the distinct movement, not gradual transmission, of knowledge within the organization from one explicit source to an explicit recipient (Szulanski, 1996). The difference between explicit knowledge, which is able to codify, and tacit knowledge, which is difficult to articulate, creates a dividing line between the knowledge that is fairly easy to transfer and the one that is more difficult to transmit (Penrose, 1959). Managers that pursue the ambition to build, change and replicate organizational capabilities will most likely encounter knowledge related barriers. According to Conner and Prahalad (1996), barriers for knowledge transfer are created because of differences in

individual knowledge and difficulties with communicating individual knowledge. Thus, their argument resembles Szulanski's (1996) reasoning that "knowledge stickiness" is partly due to communication difficulties between individuals. Szulanski (1996) explains the difficulties of transferring organizational capabilities ("best practice" in his words) internally as being due to knowledge-related factors. He proposes that "knowledge stickiness" results from three barriers to knowledge transfer: 1) the lack of absorptive capacity of the recipient, 2) causal ambiguity, and 3) an arduous relationship between the source and the recipient. Building on Szulanski (1996), Denrell, Arvidsson and Zander (2004) concluded, based on their empirical study of six multinational firms attempting to transfer knowledge, that managers often struggle with identifying the relevant knowledge and, as a consequence, often face difficulties with transferring the so called best practices. Denrell et al. (2004) suggest that different individuals' subjective interpretations of best practices and relevant skills partly explain why managers are faced with difficulties when attempting to identify organizational capabilities.

The question whether capabilities are developed mainly through managerial arrangements of the firm's intellectual capital, such as sharing (Leonard-Barton, 1992), combining (Kogut & Zander, 1992) and coordinating (Prahalad & Hamel, 1990) local knowledge, or mainly through tacit knowledge accumulation (e.g. Dutta et al., 2003; Eisenhardt & Martin, 2000; Teece et al., 1997; Zollo & Winter, 2002) has divided researchers into two camps. If the key resource for a given capability is tacit knowledge, it could prevent competing firms from imitating the capability. On the contrary, if the knowledge required is able to articulate and codify, management at competing firms are, presumably, able to imitate the knowledge and, thus, capability at hand. Different publications provide inconclusive answers to the question whether managers are able to deliberately control and implement the adequate knowledge that enables firms to develop organizational capabilities. Nevertheless, knowledge is in this thesis considered to be an intangible asset that management to some extent is able to control and manage. For that reason, investing in new knowledge, such as obtaining it through training sessions, and new systems for knowledge utilizations, such as implementing IT systems for knowledge codifications, are in Table 4 also covered by the concept 'changes in resources', in addition to 'knowledge deployment'. However, the regular routinized procedures carried out in order to obtain information about competitors, for example, are sorted in Table 4 under the concept of 'changing routines'. Thus, the regular behavior related to obtaining and sharing

information is sorted as routines whereas non-regular events in order to obtain new knowledge (e.g. training sessions) and the development and implementation of new tangible assets, such as an IT system that allows for knowledge codification, are sorted as ‘changes in resources’ and ‘knowledge deployment’.

2.4.7. Changes in resources

Winter (2000, 2003) prefers the term “resources” rather than “asset” when discussing capability development. He appears to ascribe a relatively broad definition to resources. For example, he mentions; “resources for problem solving” (Winter, 2000:995), “resources devoted to learning” (Winter, 2000:991). Additionally, he exemplifies resources as “real estate, design skills, construction, equipment and furnishing” (Winter, 2003:993). His supposedly broad definition of resources is in line with the one offered by Helfat et al. (2007:4): “resources are something that the organization can draw upon to accomplish its aims”. Yet, similar to other publications addressing capability development (Amit & Schoemaker, 1993; Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003; Teece et al., 1997), this thesis follows Wernerfelt’s (1984) reasoning and defines resources as comprising both tangible and intangible assets.

When developing a new capability, investments in resources, such as production facilities and human capital are often required (Winter, 2000). Tangible assets, such as technology (Amit & Schoemaker, 1993; Teece, 2007), IT systems (Dutta et al., 2003; Hallberg, 2008), specialized equipment (Eisenhardt & Martin, 2000) and financial assets (Helfat & Peteraf, 2003) are often mentioned as required for capability development. In agreement with Penrose (1959), other researchers stress the utilization of unused resources, by for example recombining them, as a way to achieve capability development (Adner & Helfat, 2003; Danneels, 2010; Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003; Teece, 2007; Teece et al., 1997).

Investments in intangible assets, such as research and development (Teece, 2007), expertise (Eisenhardt & Martin, 2000) and recruitments of employees with new skills (Abell, Felin, & Foss, 2008), are in addition to tangible assets often mentioned as necessary for capability development. For example, investments in skills and know-how (Dutta et al., 2002; Dutta et al., 2003) have been identified as a key success factor for pricing capability development.

As mentioned, knowledge is in this thesis considered to be an intangible asset that management to some extent is able to control and manage. For that reason, investing in new knowledge, such as obtaining it through training sessions, and new systems for knowledge utilizations, such as implementing IT systems for knowledge codifications, is referred to as “changes in resources”.

2.4.8. External influences

The distinction between, on the one hand, stressing different managers’ subjective decision making and, on the other hand emphasizing external influences as the key antecedent for organizational capability development is captured in the disagreement between Amit and Schoemaker (1993) and Winter (2000). Amit and Schoemaker (1993) argue that firms’ organizational capabilities are explained by managers’ decision making shaped by individually perceived uncertainty and complexity (additional to internal conflicts), which results in different perceptions regarding capability development. In contrast, Winter (2000) stresses the manager’s decision options as provided by the ecological and evolutionary change of the firm’s organizational capabilities. Hence, even though the evolutionary perspective acknowledges managers’ decision making as one explanation for capability development, this perspective points at external factors as the primary trigger for organizational change.

2.4.9. Managerial perception

Researchers have argued that managers’ subjective perception most accurately explains why firms develop different organizational capabilities (Abell et al., 2008; Adner & Helfat, 2003; Amit & Schoemaker, 1993; Felin & Foss, 2009a; Felin & Foss, 2011; Foss & Klein, 2012; Felin & Foss, 2011; Helfat & Peteraf, 2003). Publications have proposed that managers differ in their individual perception regarding resource availability (Danneels, 2010) and opportunities for resource acquisition (Barney, 1986; Hambrick, 1989; Makadok & Barney, 2001). Through experiential learning, managers develop varying skills for identifying opportunities for resource utilization and estimating future outcomes of present decisions concerning resource deployment (Foss & Klein, 2012). As a result of managers’ varying ability to identify resources, firms will develop different resources and, thus, different organizational capabilities (Holcomb, Holmes Jr, & Connelly, 2009). Yet, although several publications have pointed at the key role managers’ subjective perception about resource

availability plays in explaining capability heterogeneity between firms (e.g. Danneels, 2010) research on organizational capabilities is highly influenced by the evolutionary theory of the firm (Gavetti & Levinthal, 2004). According to Gavetti (2005), differences in individual managers' strategic decision making and its impact on capability development has for that reason been neglected.

A manager's subjective perception of the opportunities for capability development provided by the firm's internal and external context are the opportunities that he or she perceives (Foss & Klein, 2012) and, consequently, are aware of (Barney, 1986; Hambrick, 1989; Makadok & Barney, 2001), not the objective number of opportunities that might actually be available. This has been referred to as 'selective perception', meaning that individuals due to cognitive constraints only perceive a limited number of the total number of observations that are in their field of vision, observations that in turn are filtered through individuals' cognitive base and values (Hambrick & Mason, 1984). Adner and Helfat (2003) refer to this as "managerial cognition", and suggest that differences in managerial cognition explain partly why firms acting within the same environmental context develop different organizational capabilities. According to Kahneman and Lovallo (1993), due to a tendency to frame problems and scenarios too narrowly, managers are inclined to mainly consider aspects that speak in favor of a positive outcome of their decisions, oversee statistics that speak against and, as a consequence, have overly optimistic beliefs about expected results and goal achievement.

Gavetti (2005:599) elaborates on the notion of managerial cognition and argues that "managers' cognitive representation of their strategic decision problem" limits both their ability to identify all action alternatives that are available, and estimate the expected outcome of different decision options. Due to cognitive constraints, managers form "mental images" of reality, which is the individual manager's perception of the action alternatives that are available and the expected outcome of these alternatives (Gavetti, 2005). This is in line with Penrose's (1959) argument that managers form subjective images of the firm's external environment. Similarly, Barr, Stimpert and Huff (1992) argue that organizational development is explained by changes in managers' "mental models", referring to their limited and inaccurate awareness of all changes taking place in firm's external environment. In a similar vein, Danneels (2010) defines managerial perception as the mental image of managers about which resources the firm has access to and how those resources could be best utilized. He argues that managers form such images in order to create a simplified understanding of their different decision options and, thus, facilitate decision

making. This reasoning is in line with Tversky and Kahneman's (1981) notion of mental "decision frame", which they describe as composed through a combination of the decision maker's formulation of the problem at hand and the decision maker's habits, norms and characteristics.

In his longitudinal case study of organizational capability development, Danneels (2010) concluded that managerial perception about capability development takes its form in individual managers' subjective answers to questions such as "what are our resources?" and "what are the potential applications of our resources?". For example, Danneels (2010) observed that the managers at the firm that provided the case for his study identified the firm's brand as a key resource, which resulted in them allocating resources to brand-levering activities. According to Danneels (2010), management never even considered the alternative opportunity of prioritizing investments in manufacturing equipment, skills or any other resource. Instead, management divested manufacturing resources in order to invest in branding, despite long-standing competences in manufacturing. According to Danneel (2010), the reason was the strong managerial belief that the brand was the key resource. Danneels (2010) also observed that management perceived their understanding of the firm's customers as a key resource, resulting in them making what later could be seen as fatal decisions regarding product development. As numerous unsuccessful product launches later showed, management actually lacked an in-depth understanding of customer needs (Danneels, 2010). Hence, due to individual perception, different managers are likely to be aware of different options for resource development, and also evaluate the potential of identified resources differently.

To summarize, managerial perception is defined as the mental image of managers about which resources the firm has access to, how those resources could be best utilized and, thus, which opportunities for capability development that exist (Danneels, 2010). This mental image is shaped by subjective selections of former experience from similar situations, biased towards both successful and recent experiences (Levitt & March, 1988; March, 1994), the information the managers are aware of about the current situations, which is often incomplete and subjectively evaluated (March, 1994), and norms and values (Tversky & Kahneman, 1981).

As elaborated in previous sections (i.e. 2.4.1, 2.4.1 and 2.4.5), the concept of managers' subjective perception about opportunities for capability development is distinguished from the concepts of search routines, trial and error learning

(see Nelson & Winter, 1982) and ad hoc problem solving (Winter, 2003), which instead emphasize the firm's external environment as the primary antecedent for capability-development, as opposed to managers' individual perception.

2.4.10. Managerial motivation

Managers decide how to allocate their attention depending on their individual motivation (Simon, 1947). Drawing on Simon's (1947) notion that managerial decision making is shaped by individuals' limited attention capacity, Ocasio (1997) argues that firm behavior is the result of how managers decide to allocate attention. According to Ocasio (1997), managerial attention is context dependent and determined by a combination of the individual's perception of which action alternatives are provided by the environment and the manager's personal desire to obtain rewards, recognition and social status. Since the source of motivation differs between individuals, due to their subjective desires and beliefs (Coff & Kryscynski, 2011; Gottschalg & Zollo, 2007), managers allocate their attention and prioritize differently partly depending on their subjective sources of motivation. Consequently, firm heterogeneity is partly explained by managers' personal, subjective source of motivation and choices regarding attention allocation.

The role of managerial motivation in organizational capability development was demonstrated by Eneroth (1997) in her case study of a Swedish high-tech firm. She concluded that strategic competences (i.e. competences that enable firms to gain competitive advantage) are developed through a combination of: 1) motivation, 2) knowledge acquisition, and 3) the ability to utilize the acquired knowledge. Thus, according to Eneroth (1997), knowledge development and knowledge exploitation (cf. March, 1991) are not sufficient alone in order to develop strategic competences; the level of motivation is the third pillar that determines firms' ability to develop strategic competences. Bower (1970) also identified managerial motivation as a central aspect regarding organizational development in his empirical study of a large, international manufacturing company. He concluded that managers decide which projects to fund based on a combination of: 1) the manager's beliefs about the quality of the project (e.g. what the manager believes will be the outcome of the project), 2) what the manager believes that the firm expects from him or her and, thus, if his or her future career could benefit from the project, and 3) the manager's beliefs about other projects competing for the same resources. Accordingly, managers decide

which actions to prioritize partly based on their individual motivation, which is determined through a combination of their individual desires (such as recognition, bonuses and future career moves) and their beliefs about different action alternatives and expected outcomes.

Additionally, as demonstrated by Samuelson and Zeckhauser (1988), individuals tend to prefer the current situation before changes, even though the individual might actually benefit from changes in the long run. Samuelson and Zeckhauser (1988) refer this as “status quo bias” in decision making and argue that it is the consequence of the following three factors; 1) rational decision making, such as replicating old decisions due to identical decision settings or uncertainty avoidance, 2) cognitive misperceptions, for example due to loss aversion, or 3) physiological commitment that, for example, stem from cognitive sunk costs or regret avoidance. Thus, individuals’ preferences for maintaining status quo are likely to influence managerial decision making.

I recognize that managers are motivated by different sources, such as extrinsic rewards (Brief & Aldag, 1977), hedonic intrinsic and normative intrinsic rewards (Lindenberg, 2001), depending on the situation, the context and their individual preferences. However, in this thesis, these different types of sources for managerial motivation will not be elaborated further. Instead, the assumption is made that subjective, individual motivation shapes managerial decision making regarding pricing capability development, regardless which particular source the individual’s motivation stems from.

To summarize, managers’ decision making regarding pricing capability development is shaped by a combination of managers’: 1) subjective perception about opportunities for capability development (Adner & Helfat, 2003; Danneels, 2010; Penrose, 1959), and 2) individual motivation to engage in and achieve capability development (Eneroeth, 1997; Simon, 1947).

2.4.11. Path dependency

A stream of publications addressing organizational capability development recognize the path dependent nature of capabilities, resource and routines (e.g. Adner & Helfat, 2003; Amit & Schoemaker, 1993; Collis, 1994; Frost et al., 2002; Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003; Kogut & Zander, 1992; Szulanski, 1996; Teece et al., 1997; Teece, 2007; Winter, 2000; Winter, 2003; Winter & Szulanski, 2001; Zollo & Winter, 2002). Path dependency is not only created by prior investments in tangible assets, such as machinery, but

also by investments in intangible assets such as knowledge. Helfat and Peteraf's (2003) notion of "capability branching" exemplifies the alleged path dependent nature of capability development. Through the recombination of resources, an organizational capability might change into a new, modified version if external factors, either within or outside the organization, require it to change (Helfat & Peteraf, 2003).

2.5. Defining central theoretical concepts

This chapter presents this thesis' definition of: 1) organizational capabilities, 2) resources, 3) routines, 4) organizational capability development, and 5) pricing capability development. In the following section, a preliminary theoretical framework of pricing capability development is outlined.

2.5.1. Defining organizational capabilities

Organizational capabilities are a combination of routines and resources that enable a firm to fulfill a certain operational outcome and to produce more efficiently relative to the competitors (Winter, 2003). Thus, a single firm unique resource is not in itself a capability. But combined with routines for an efficient utilization of the firm's resources; it becomes an organizational capability.

2.5.2. Defining resources

Helfat and Peteraf (2003:999) define a resource as "an asset or input to production (tangible or intangible) that an organization owns, controls or has access to on a semi-permanent basis". Drawing on Helfat and Peteraf (2003), resources are in this thesis considered as consisting of tangible and intangible assets (Wernerfelt, 1984). Hence, resources comprise both intangible assets, such as knowledge, and tangible assets, such as production facilities and IT systems.

2.5.3. Defining routines

Routines are defined as “all regular and predictable behavioral patterns of firms” (Nelson & Winter, 1982:14). Routines are, as mentioned, distinguished from the concept ‘search routines’. According to Nelson and Winter (1982), the firm’s existing routines change according to search routines, since search routines enable the firm to detect change in the environment.

Dutta et al.’s (2002) definition of social capital for pricing is in this thesis classified as routines since they argue that social capital is built through the establishments of “teams that can anticipate customer relations by involving lead users, conducting market research and analyzing reactions to previous price changes” (Dutta et al., 2002:65). In other words, social capital enables the coordination of different activities that are carried out in order to gather information relevant to pricing decisions (Dutta et al., 2002:65). Drawing on Stene’s (1940) argument that routines coordinate different activities within the organization, Dutta et al.’s (2002) definition of social capital is in this thesis categorized as routines.

2.5.4. Defining organizational capability development

Organizational capability development is defined as changes in those routines and resources that comprise the organizational capability at hand. Hence, the development of any organizational capabilities, such as pricing capabilities, is considered as requiring changes in those routines and resources, tangible as well as intangible assets, which comprise the capability in question.

2.5.5. Defining pricing capability development

Pricing capability development occurs through changes in the firm’s pricing resources and pricing routines. Considering that the resources and routines that compose a firm’s pricing capability can be divided into different pricing capability elements (this was elaborated in 2.3.2), changes in pricing resources and routines result in changes in the firm’s pricing capability elements. Hence, pricing capability development could also be described as either the implementation of new pricing capability elements, or changes of existing pricing capability elements.

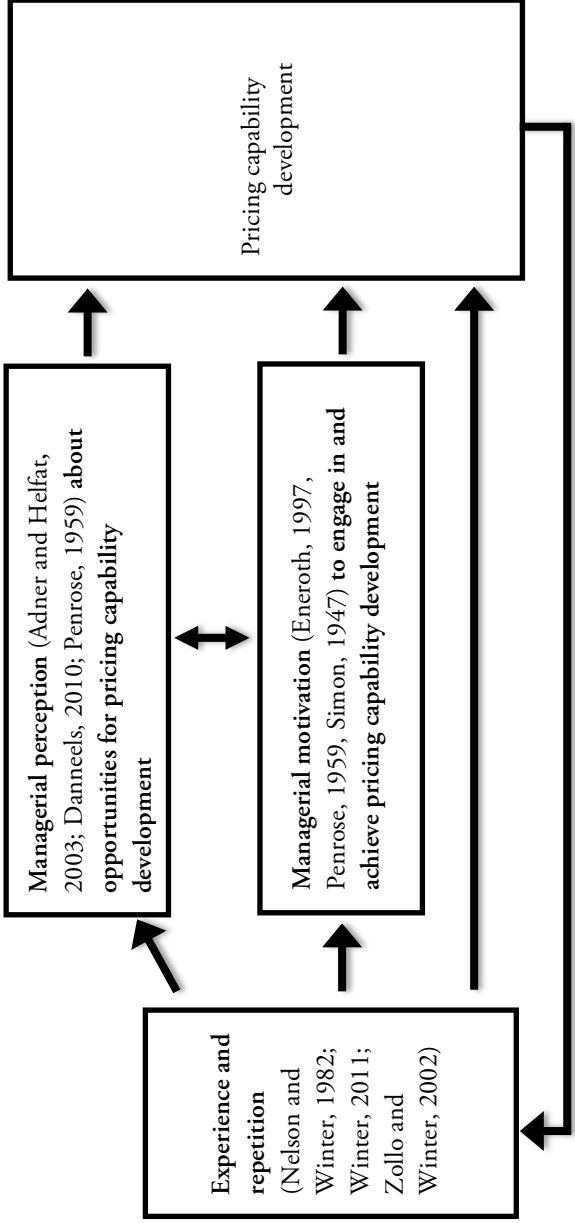
The term ‘development’ might be interpreted as only referring to changes in pricing resources and routines that result in more effective pricing capabilities (i.e. positive changes), as opposed to *less* effective ones (i.e. negative changes). However, in this thesis, ‘pricing capability development’ comprises *both* changes in pricing resources and routines that lead to more effective pricing capabilities *and* changes that lead to less effective ones.

2.6. Preliminary theoretical framework

Figure 2 outlines a preliminary theoretical framework of the following three concepts that according to the literature review are antecedents of organizational capabilities: 1) experience and repetition, 2) managerial perception about opportunities for capability development, and 3) managerial motivation to engage in and achieve capability development. The three antecedents supposedly result in either new resources, created or purchased (Amit & Schoemaker, 1993; Dutta et al., 2003; Teece et al., 1997; Winter, 2000), the establishment of new routines (Zollo & Winter, 2002), and/or changes in the firm’s existing resources and routines (Eisenhardt & Martin, 2000; Teece et al., 1997; Winter, 2000). The three potential antecedents of capability development depicted in the preliminary theoretical framework could result in the development of more advanced pricing capabilities (i.e. more effective pricing capability elements), as well as in changes that lead to a less effective pricing capability, such as if management decides to reduce the firm’s pricing resources (e.g. IT support for pricing) and that results in a less effective pricing capability.

The preliminary theoretical framework is not delimited to the initial phase during which a completely new pricing capability is initiated. Instead, the framework illustrates the concepts that explain *both* the initiation of a completely new pricing capability, meaning the implementation of new pricing resources and routines, *and* the development of an established pricing capability, such as changes in existing resources and routines. Path dependency influences the development path of the firm’s resources and routines. It will consequently have an impact on pricing capability development, regardless of the antecedent(s) that caused it. Since the concept of path dependency is considered as present in all of the three antecedents depicted in in the framework, it is not included as a separate box.

Figure 2 Preliminary theoretical framework



As seen in Figure 2, the concept “experience and repetition” illustrates not only the influence from individual experience on managers’ decision making, but also how individual experience accumulation among members of the organization who are not appointed as managers, such as sales representatives, could lead to pricing capability development. This is elaborated in the next section.

2.6.1. Preliminary antecedents to pricing capability development

The following sections elaborate the antecedents depicted in Figure 2.

Experience and repetition

As seen in Figure 2, the first potential antecedents for pricing capability development are the often proposed underlying mechanisms for capability development; experience (see Zollo & Winter, 2002) and repetition (see Collis, 1994). Naturally, individuals’ perception and motivation are partly shaped by their previous experiences. For that reason, individual experience and repetition precedes the two other antecedents of pricing capability development. Thus, ‘experience and repetition’ *both* influence managerial perception and motivation, *and* the behavior of other individuals within the organization (i.e. those who are not formally appointed as managers, such as sales representatives), which in turn impacts the firm’s pricing capability.

The influence from ‘experience and repetition’ varies presumably both on an interval between ‘more or less experience’, and on a nominal scale depending on the type of experience. Since individuals tend to make decisions that are biased toward recent experiences (March, 1994), the type of a manager’s recent experiences will potentially influence his or her decision making. For example, if a manager has his or her practical and academic background within finance or marketing, he or she might due to his or her accumulated experiences prioritize the implementation of incentive controlling arrangements for pricing (i.e. a pricing capability element). This in turn might result in pricing capability development. Another manager with a background within product development might instead, due to a differing type of experience decide instead to prioritize allocating resources to investments in equipment and skills for product development.

As mentioned, ‘experience and repetition’ refer to the individual experience accumulation among all members of the organization, not only managers,

which in turn shapes the firm's pricing capability. Employees gain new experiences from trial and error based learning (see Zollo & Winter, 2002), through an interweaved combination of "blind' and 'deliberate' processes" (Nelson & Winter, 1982:10-11). Experiences gained through both deliberate activities with the purpose to obtain new knowledge (e.g. training sessions), and unintentionally through daily activities (e.g. experience gained from unintended mistakes), impose changes on the routines carried out on a day-to-day basis by the individuals within the organizations, such as the sales representatives' behavior when negotiating prices with customers. Hence, the mere amount of experience of the employees will potentially shape capability development. In other words, in addition to varying on a nominal scale (i.e. type of experience), the concept 'experience and repetition' could also vary on an interval between less and more. For example, the individual sales representatives' experience accumulation will presumably influence routines for handling price negotiations, dealing with customer relations, and deciding and communicating prices.

Experience and repetition are especially relevant regarding pricing capability development, considering that both the sales force's tacit know-how about customers and competitors (Dutta et al., 2003), and key employees' commercial experience (Hallberg, 2008) have been identified as essential pricing capability elements. Key employees' (e.g. sales representatives and sales managers) commercial experience (Hallberg, 2008) enable them to develop the skill to identify and quantify the products' customer value. Hence, it facilitates the development of pricing tools, such as the skill to quantify products' customer value. Consequently, experience accumulation and trial and error based learning (see Zollo & Winter, 2002) about customers, competitors and other market actors could, as suggest by both Dutta et al. (2003) and Hallberg (2008), result in changed pricing resources (e.g. pricing knowledge) and routines and, hence, lead to pricing capability development.

Researchers that advocate experience accumulation as a antecedent for capability development (e.g. Teece, 2007; Teece et al., 1997; Zollo & Winter, 2002) argue that it leads to learning based on trial and feedback and tacit knowledge accumulation, which provide individuals with emergent selection options through an undistinguishable combination of luck and deliberate efforts (Nelson & Winter, 1982:10-11). The tacitness of the knowledge gained through experience accumulation (see Zollo & Winter, 2002:341) and the partly causal ambiguous process through which it is articulated and codified (Eisenhardt & Martin, 2000; Zollo & Winter, 2002) indicates that it is very

difficult for managers to control and manage the learning process among the employees. For example, a team of sales representatives and product designers might develop routines for matching prices with customer value through their tacit experience accumulation from daily meetings with customers. Assuming that these routines are composed by the team members' tacit knowledge, gained from extensive experience of engaging in negotiations with customers, managers might face barriers if they attempt to change these routines. Zollo and Winter's (2002) argument that *deliberate* learning (i.e. knowledge articulation and knowledge codification) is preceded by individual experience accumulation illustrates that individual experience accumulation among any member of the organization could lead to changes in resources and routines without any prior deliberate managerial decision making to implement changes. Thus, the concepts of experience and repetition as an antecedent of capability development could, as illustrated in Figure 2, be separated from managers' subjective perception and individual motivation as a potential antecedent for pricing capability development.

Pricing capability development generates presumably new experiences that in turn influence individuals' experience accumulation, managerial motivation and managerial perception. In Figure 2, this relationship is illustrated by the feedback loop between 'pricing capability development' and 'experience and repetition'.

If management decides to codify the employees' experience accumulation, by for example, establishing manuals of "best practice for matching prices with the products' customer value", the outcome of the experience accumulation could result in new routines (see Zollo & Winter, 2002). Naturally, the knowledge codification and, thus, production of manuals require resources. For that reason, management might refrain from establishing new routines and instead decide to rely on the sales representatives' experiences.

The concept 'search routines' leads to experience accumulation (Zollo & Winter, 2002). For that reason, in Figure 2, the concept 'search routines' is included in 'experience and repetition'. Additionally, as elaborated in section 2.4.4, this thesis refers to the notion of dynamic capabilities as meta-routines that originate from individual experience accumulation, which enable the firm to create new resources and routines, and change existing ones in response to external changes. For that reason, the notion of dynamic capabilities is also included under 'experience and repetition'. Lastly, ad hoc problem solving (as defined by Winter, 2003) could lead to experience accumulation. As explained

in section 2.4.5, the concept ad hoc problem solving (as defined by Winter, 2003) is distinguished from the concept of managers' subjective perception and motivation. For that reason, the concept is included under 'experience and repetition'.

Managerial perception

As illustrated by Figure 2, the second potential antecedent is individual managers' perception about opportunities for pricing capability development, such as managers' individual perception about resource availability and ability to utilize resources (Penrose, 1959). Managerial perception is the mental image of managers about which resources the firm has access to, how those resources could be best utilized and, thus, the existing opportunities for capability development (Danneels, 2010). The mental image is the outcome of: 1) the information that the managers are aware of about the current situations, which is often incomplete and subjectively evaluated (March, 1994), 2) managers' subjective selection of former experience from similar situations (Levitt & March, 1988; March, 1994), in Figure 2 illustrated by the arrow between the concepts 'experience and repetition' and 'managerial perception', and 3) managers' norms and values (Tversky & Kahneman, 1981). Mental images form managers' subjective answers to questions such as "what are our resources?" and "what are the potential applications of our resources?" (Danneels, 2010:21).

Managers, due to selective perception (see Hambrick & Mason, 1984), either observe an opportunity within their field of vision or not, meaning that they are either aware of an opportunity or not. This reasoning is exemplified by Danneels' (2010) observation that management of the firm that provided the case for his study decided that the firm's brand was a valuable resource and, for that reason, invested largely in brand-leveraging activities, without ever even considering alternatives such as prioritizing manufacturing equipment. Hence, due to differences in managerial perception, managers have varying mental images of which opportunities that are available (Foss & Klein, 2012), and varying subjective beliefs regarding the expected outcome and consequence of the perceived alternatives (Cyert & March, 1963; March & Simon, 1958). For example, a manager might perceive that the firm has access to adequate resources for pricing capability development, such as pricing skills among the sales representatives. She therefore decides to invest in more pricing resources (e.g. purchases IT support for pricing and gives the sales representatives training in pricing tools for value based pricing) because she believes that the industry

where the firm acts has entered a phase in which an improved pricing capability is central in order to improve or protect profitability (e.g. a firm that produces differentiated products and acts within a mature market might face an increasing price pressure and, thus, gain from developing pricing capability that enables the firm to better match prices with the products' customer value). Another example: a manager might decide which type of pricing routines to implement (e.g. concerning incentive controlling arrangements) based on his individual perception and subjective assessment about the individual sales representatives' customer specific knowledge (e.g. whether the sales representatives possess the adequate knowledge or not in order to be delegated the pricing authority).

The concept of managerial perception about opportunities for pricing capability development is probably best described as a nominal variable, meaning that a manager either: 1) perceives that opportunities for pricing capability development exist (e.g. due to promising resource availability) and decides to initiate it, 2) is aware of a possible opportunity for pricing capability development but decides not to initiate it, either due to lack of sufficient resources, preferring to maintain the current situation due to a bias towards status quo (Samuelson & Zeckhauser, 1988), or for some other reason that motivates to prioritizing other organizational activities, or 3) is not aware of any opportunities for pricing capability development. Obviously, motivational factors could explain why a manager decides *not* to initiate pricing capability development even though she or he perceives such an opportunity.

Managerial motivation

The third potential antecedent is the motivation of individual managers (Eneroth, 1997; Simon, 1947) to engage in and achieve capability development. Individual motivation among managers will partly influence their decision making since the source of motivation differs between individuals, due to their individual subjective desires and beliefs (Coff & Kryscynski, 2011). A manager might be motivated to prioritize one project before another if he or she believes that the chance for a successful result is greater, or if he or she believes that a given project is more likely to result in his or her receiving a desired reward (such as merits that could result in promotion) (Bower, 1970), or simply because he or she, due to status quo bias, prefers to maintain the current situation (Samuelson & Zeckhauser, 1988).

The self-interest aspect of individual motivation distinguishes 'managerial motivation' from the concept 'managerial perception'. Yet, managerial

perception is presumably influenced by motivational factors and vice versa. For example, a manager who is largely motivated to initiate pricing capability development (e.g. due to career motives) might be more likely to identify what she perceives as promising opportunities for pricing capability development, simply because she is more keen to find such opportunities, spends more time searching for them and evaluates the identified opportunities as more promising. Another example, if a manager identifies what he perceives to be a promising opportunity for pricing capability development, he might be more motivated to prioritize it than another manager who has not identified such an opportunity. In Figure 2, the interdependency between the two concepts 'managerial perception' and 'motivation' is illustrated by the arrow between these two boxes.

The influence from managerial motivation on pricing capability development varies on an interval between non-existing motivation and high motivation. For example, a manager might decide to formally initiate pricing capability development, but due to a low level of motivation, or changes in motivation over time, ends up only allocating a minor amount of resources to it; this in turn might jeopardize the outcome of the pricing capability development project.

As discussed in section 2.3.2, Hallberg (2008) identified 'incentive controlling arrangements' as a key pricing capability element. His observation of how managers at the case company of his study arranged the incentives to the sales representatives and other price setters (e.g. sales managers) in order to promote profit maximization is in line with other pricing publications that recommend managers to provide the sales force with monetary incentives (Hinterhuber, 2004; Hinterhuber, 2008; Marn et al., 2004; Nagle & Hogan, 2006; Vogel et al., 2002). Thus, when these publications discuss incentive arrangements, they are primarily concerned with how to optimize the incentives provided to the sales force and how to align the goals of the sales representatives with those of management, not individual managers' subjective motivation to prioritize and achieve pricing capability development per se. Thus, managerial motivation as a potential antecedent of pricing capability development is distinguished from the pricing capability element of providing sales representatives with monetary incentives.

2.6.2. Pricing capability elements

The box 'pricing capability development' refers to changes in pricing resources and routines. Different pricing resources and routines compose, both separately and combined, different pricing capability elements. As elaborated in section 2.3.2, previous studies of pricing capabilities (i.e. Dutta et al. 2002; 2003; Hallberg, 2008) have sidestepped detailed identification of pricing resources and pricing routines and described pricing capability elements as composed by integrated, tied, bundles of assets and routines (Hallberg, 2008:54). For that reason, previous publications provide limited guidance to precisely how different pricing resources and routines construct various pricing capability elements. This explains why the different pricing capability elements are not specifically depicted in Figure 2. Yet, the 19 different pricing capability elements that have been identified in the literature review (discussed in section 2.3.2, summarized in Table 3, page 35), are indirectly included in the box 'pricing capability elements'.

Although Dutta et al. (2003) argue that a firm's pricing capability could be a source to a competitive advantage, the preliminary theoretical framework does not cover the alleged link between pricing capability and competitive advantage. Since a firm's performance relative to that of competitors is needlessly impacted by other factors besides its prices, such as the firm's manufacturing facilities, brand loyalty among customers, potential switching costs for the customers, and the competitors' offerings, the possibility to empirically measure the isolated impact of a firm's pricing capability on a potential competitive advantage appears problematic. Ray, Barney and Muhanna (2004) suggest that the effectiveness of a business process could be more accurate to measure, rather than the organization's overall performance, when examining a specific organizational capability. Drawing on Ray et al. (2004), Hallberg (2008) argued that it was more relevant to study the link between the different, individual pricing capability elements and the firm's pricing capability, not the potential link between a firm's pricing capability and financial performance. This motivates the relevance for studying pricing capability development by examining the studied embedded cases' ability to change pricing resources and routines and, thus, implement new pricing capability elements (i.e. pricing organization, pricing information systems and pricing skills) in order to realize new pricing strategies (as opposed to their ability to gain a competitive advantage through pricing capability development per se). Thus, following Hallberg (2008) and Ray et al. (2004), this thesis is

delimited to study the embedded cases' ability to develop new pricing capability elements, including their ability to realize new pricing strategies.

Depending on which pricing resource and pricing routine that is measured, different types of scales are preferable. For example, the pricing resources' 'IT support for pricing' is probably best described as varying on an ordinal scale, meaning that a firm either utilizes specific IT support for pricing or not. Similar, pricing routines such as different pricing tools can be measured on an ordinal scale, meaning that a firm either practices a given pricing tool or not, or either realizes a given pricing strategy or not. Likewise, pricing strategies can also be measured on an ordinal scale. Other pricing routines are better described as varying on a nominal scale. For example, pricing authority arrangements could be measured based on which organizational level the authority resides (e.g. among the sales representatives, sales managers, central pricing department), and a firm's incentive controlling arrangements could be measured based on the sales representatives' compensation plans (e.g. fixed salary or variable salary based on profit margin or volume contribution).

Lastly, a firm's intangible pricing resources, referred to as pricing skills in Table 3, are presumably most accurately measured on an interval, meaning that the sales representatives' tacit know-how and commercial experiences potentially differ between non-existing, large and all stages in between. As discussed in section 2.4.6, knowledge is defined as an intangible asset and, thus, possible to separate from experiences and learning. Learning, experience and knowledge are interrelated (Spender, 1996b), yet possible to separate if knowledge is seen as created through individuals' learning processes, which is the result of individuals' subjective interpretations of prior experiences, subjectively selected from their memory (see Levinthal & March, 1993; Levitt & March, 1988; March, 1991; March, 1994). For example, the knowledge required to match prices with a given product's value to an individual customer is potentially created through sales representatives' continuous interactions with customers. Through an ongoing learning process, sales representatives accumulate and interpret customer specific knowledge in order to set prices according to customer value. For that reason, in the framework, 'experience' and 'knowledge' are separated.

3. Method

This chapter starts with a presentation of the research design, a single case study. Thereafter, the choice of case company and the selection of the five embedded cases are presented. Subsequently, the process of collecting empirical material is described; this has been done from multiple sources (participating observations, semi-structured interviews and documents), in order to facilitate data triangulation. Lastly, the phase of analyzing the empirical material conducted by means of pattern-matching, as recommended by Yin (2009), is outlined.

3.1. Research design

Since the purpose of this thesis is to identify the antecedents of pricing capability development, the choice was made to conduct a case study. Case studies are particularly relevant when the purpose is to identify *what* explains a defined phenomenon (Eisenhardt & Graebner, 2007; Yin, 2009). Also, as mentioned in the first chapter, this study addresses managers' ability to design pricing capability development. For these reasons, the empirical study was designed to address the following questions: 1) *What* explains changes in pricing resources and routines and, thus, triggers pricing capability development? 2) *How* do managers attempt to influence, organize and arrange firms' price setting? 3) *How* do managerial attempts lead to potential changes in pricing capability elements, pricing resources and pricing routines? Thus, the intention has been to both extend our theoretical understanding of pricing capability development, and challenge current theoretical assumptions.

When the intention is to extend and challenge a theory, Yin (2009:47) recommends a single case study design. Thus, the reason for choosing an in-depth single case study method was due to the intention to increase our understanding of pricing capability development and of how managers might

be able to design pricing capabilities. This brings along a need for an in-depth understanding of the real problems and dilemmas faced by managers when attempting to develop and manage pricing capabilities. An in-depth case study enables the researcher to gather process data and, thus, identify and study a variety of different organizational events and other aspects (Langley, 1999) that might influence pricing capability development, such as firm-history, industrial conditions, customers' bargaining power, managements' priorities and involvement in pricing issues, as well as the nature of customer relationships. The possibility to identify and understand a rich variety of organizational events and phenomena, including the ones that are nonobvious prior to the study (Miles & Huberman, 1994), motivates the choice of selecting a case study design for this particular study. For that reason, the single case study constitutes pricing capability development within one single firm. As will be elaborated in the following section, the empirical unit of analysis is pricing capability development within five embedded cases, representing five different business units in the case company.

The choice of selecting five embedded cases within one firm also enabled cross-case comparison analysis. It provided good opportunities for comparing the phase of pricing capability development at those four embedded cases that carried out a development project (the fifth case provided the case of reference). Moreover, the embedded cases share many similarities, such as acting on mature markets, offering products that are in the mature stage of the products' lifecycle, depending on close, long-term customer relationships, and faced with the challenges of increasing price pressure and the risk of commoditization. Presumably, managers in firms acting in other industry contexts, such as service firms in more dynamic, disruptive, growing markets where radical product innovations occur frequently, are facing different challenges if deciding to design and develop pricing capabilities. Thus, the ambition to gain an in-depth understanding for pricing capability development within manufacturing firms in business-to-business settings motivated the decision to study embedded cases in one single firm.

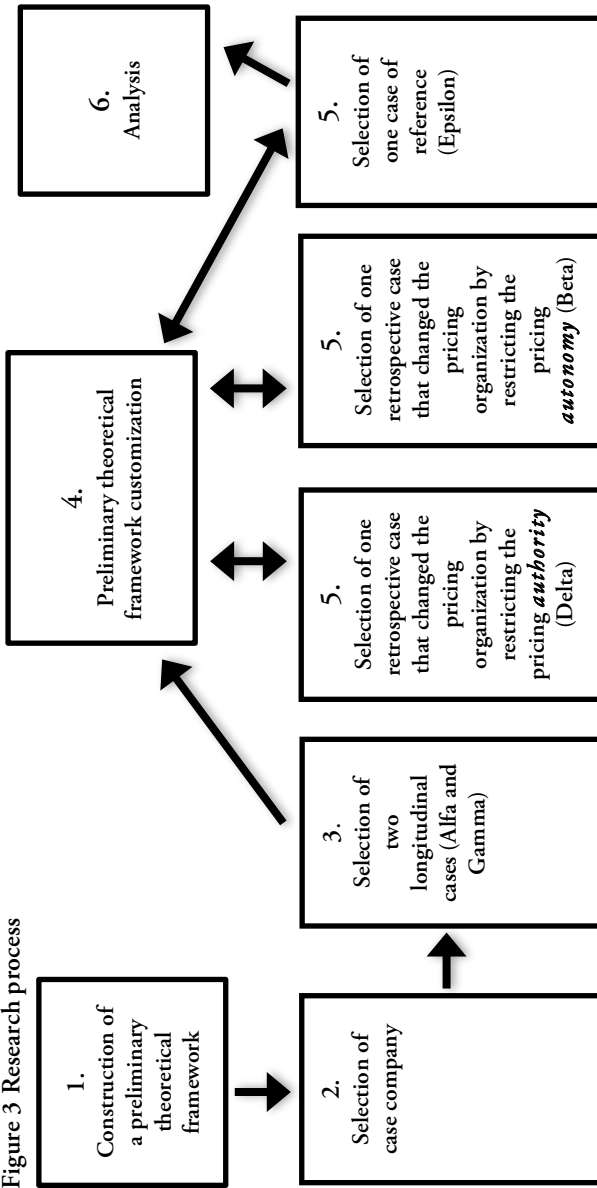
A quantitative method, for example the distribution of close-end questionnaires to several organizations, would probably be inappropriate since it might fail to capture important aspects concerning different potential antecedents for pricing capability development. Even though a quantitative study comprising a large number of firms could be useful for identifying differences between firms, it would probably not result in sufficient empirical insights into the complex and context-dependent nature of pricing capability development (Miles &

Huberman, 1994). For that reason, empirical material has been gathered from one case company only, both through participating observations, semi-structured interviews and documents in order to allow for triangulation (Yin, 2009:107).

Case study methods have been criticized for only generating results that are idiosyncratic, not allowing for any generic application. However, the results of case studies enable an analytical generalization, in contrast to statistical generalization, and, thereby, cannot be dismissed solely because it is only one case study (Yin, 2009). Also, the result from the case study gains from not being colored, at least not to any larger extent, by previous empirical evidence. For that reason, it is most appropriate to approach new areas of research which are not yet fully explored, through a case study, in order to generate new theory (Eisenhardt, 1989).

As seen in Figure 3 on the next page, which outlines the research process, the first step in the research process was the construction of a preliminary theoretical framework. Consequently, this phase was characterized by deduction since the preliminary theoretical framework was the result of prior research within these mentioned fields. The construction of the preliminary theoretical framework is further presented in section 3.5. The theoretical review and the construction of the preliminary framework motivated the second step in the research process, the selection of a case company. The choice and reasons for selecting Technologica are discussed in section 3.2. The third step in the research process was the selection of the first two embedded cases, Alfa and Gamma. These were selected since management at both cases, independently of each other, shortly before I contacted them, had decided to initiate a project with the intention to develop more advanced resources and routines for pricing. For that reason, I was able to study both these development projects at each of the two cases from the beginning until the projects were formally finalized. As will be further elaborated, the decentralized organizational structure of Technologica enables the business units (i.e. the embedded cases) to act highly independently of both each other and the corporate head office of Technologica. Management at the embedded cases has the freedom to decide over important activities such as product development, supply chain management and market expansion. Hence, management at the embedded cases had the freedom to, independently of Technologica's head office, decide to initiate pricing capability development. Thus, throughout the text, 'management' refers to management at the respectively embedded case.

Figure 3 Research process



The phase of gathering empirical material from the two first embedded cases was mainly characterized by induction. However, the preliminary theoretical framework, used as a point of reference, impacted the process of gathering empirical data. Hence, existing theory concerning the notions of pricing capability and organizational capability development were used as a point of departure. Thus, the inductive reasoning did not correspond to the more purely inductive research prescribed by, for example, Glaser and Strauss (1967).

The initial empirical findings from the first two embedded cases, which were studied longitudinally as the development projects proceeded, resulted in a theoretical customization, depicted as the fourth step in Figure 3. In this step, the preliminary theoretical framework was elaborated and refined. The empirical findings from the two longitudinally studied embedded cases and the customization of the preliminary theoretical framework resulted in the selection of two additional embedded cases (Beta and Delta), which were studied in retrospect of their respective pricing capability development projects (depicted as the fifth step in Figure 3). One of these two cases (Delta) had developed its pricing capability by developing a new pricing organization that restricted the sales representatives' pricing *authority* (in contrast to mainly restricting the sales representatives' pricing autonomy). The other one (Beta) had implemented a new pricing organization that mainly restricted the sales representatives' pricing *autonomy* (in contrast to imposed restrictions regarding the pricing authority as well). As mentioned, pricing authority refers to the sales representatives' ability to independently decide which prices to offer the customers, such as granting discounts (Homburg et al., 2012; Stephenson et al., 1979). Pricing autonomy refers to the sales representatives' ability to freely and independently decide how to calculate, communicate and negotiate prices, meaning the sales representatives' autonomy in relation to management to decide which pricing tools to use or not use and how to negotiate prices with customers.

Management at Delta and Beta, respectively, (i.e. the two embedded cases for which each pricing capability development was studied in retrospect) had, independently of each other, initiated and carried out a project with the intention to develop better resources and routines for pricing. The advantage with a combination of longitudinal and retrospective studies is that it provides the researcher with complementary data. Retrospective cases allow the researcher to identify the sequential pattern of the change-process ex-post, whereas the longitudinal study allows the researcher to observe when the patterns occur over time (Leonard-Barton, 1990).

In the fifth step, a case of reference (Epsilon) was selected in order to complement the study with an embedded case of which the price setting has evolved without any intentional, significant effort from management to develop it. The selection of the five embedded cases is elaborated in section 3.4.

The sixth and final step, the process of analyzing the empirical material has been done by using the preliminary theoretical framework and the practice of pattern matching (Yin, 2009). As indicated, this study has included both inductive and deductive phases. According to Alvesson and Sköldbberg (2008), research studies that claim to have used a purely inductive approach are often a combination of inductive and deductive reasoning. The researcher's previous experiences and accumulated theoretical knowledge will influence the research design and the choice of empirical unit of analysis (Alvesson & Sköldbberg, 2008). For that reason, it is unrealistic to believe that a study could be completely free from deductive reasoning. The phase of analysis is elaborated in section 3.8.

When intending to construct new theory, the use of abductive reasoning comprises three different phases; 1) theory generation, 2) theory development, and 3) theory appraisal. However, the phases are neither sequential, nor temporal. Instead, this type of logic demands constant moving back and forth between the different phases (Haig, 2008). This procedure provides for an iterative process of both theory as well as empirical data. Hence, abductive reasoning offers the ability for explanations and the gaining of a deeper understanding of the empirical data. Thus, both the advantages with inductive reasoning (the discovery of empirical relations) as well as those with deductive reasoning (the inclusion of existing theory) can be gained by the use of abductive reasoning (Alvesson & Sköldbberg, 2008). Consequently, abductive reasoning suits case studies, since it allows the researcher to move back and forth between theory and empirical findings, as the research process proceeds (Dubois & Gadde, 2002).

3.2. Choice of case company

For the sake of anonymity, the case company has been given the fictive name "Technologica". This firm is a large, multinational, high-technological, manufacturing company that acts within business-to-business relations. The following three reasons make Technologica a relevant case company for this

study. Firstly, the ability to appropriate value is particularly relevant for a manufacturing, business-to-business firm that acts within mature industries. Such companies are often faced with the challenge of commoditization and as a consequence under growing pressure to reduce price. Moreover, customers acting on mature markets increasingly centralize their purchasing divisions implementing more sophisticated procurement tactics in order to increase their bargaining power (Malhotra & Uslay, 2009) Due to increasing customer concentration, firms on mature markets often face increasing pressure from customers to reduce prices.

Secondly, due to the following three reasons, Technologica is a typical case of how pricing is conducted in larger, manufacturing firms acting in mature markets in business-to-business settings; 1) prices are generally calculated on a combination of the individual sales representatives' gut feelings and estimated cost of products, too often based on poor data regarding the actual cost of products, 2) no formal pricing tools are practiced on a group level (albeit the rare occurrence of some local initiatives), and 3) the pricing authority is to a large extent delegated to the individual sales representatives. In most cases, the sales representatives have the autonomy to decide how to set prices and handle customer negotiation, sometimes with the guidance of a minimum gross profit target margin and/or guidelines for discounts. Thus, a typical case like the Technologica motivates a single case study design (Yin, 2009:48).

Thirdly, pricing is a highly overlooked topic concerning business-to-business relations (Reid & Plank, 2000) and industrial goods, both in practice (Hinterhuber, 2004; Hinterhuber & Liozu, 2012) as well as in the literature (Hinterhuber, 2008; Simon et al., 2003). Thus, Technologica is interesting for this study since the organization acts within business-to-business relations.

3.3. Embedded case study design

Empirical data has been collected from five different embedded cases (Alfa, Beta, Gamma, Delta and Epsilon), all representing different business units in Technologica. The opportunity of analyzing different approaches for pricing capability-development motivated an embedded case study design. The fact that Technologica has grown largely through acquisitions has, combined with a decentralized organizational structure, resulted in heterogeneous pricing resources and routines among the different business units. Even though all the

units produce complex products based on the same core technology and act on mature markets, the lack of group-wide coordination initiatives regarding pricing capabilities has resulted in their different pricing resources and routines. Thus, the different embedded cases collectively provided a deeper and more complex insight into the study, which most likely would not have come about if a study design without embedded cases had been conducted.

The empirical unit of analysis is consequently pricing capability development at each embedded case. Regarding the business units that never initiated pricing capability development (Epsilon), the pricing setting that has evolved throughout the unit's history provides the empirical unit of analysis for this particular case.

3.4. Selection of embedded cases

The field study started shortly after top management at Technologica made the decision to initiate a group-wide "pricing excellence" project with the purpose to: 1) "create an internal global pricing reference group for exchanging best practices", and 2) "establish pricing strategy/process excellence for each operating unit". Thus, in order to create a pricing reference group, the two project leaders at the head office singled out five business units, one or two from each of the group's four business areas. The five business units were selected either because they already, independently of Technologica's head office and each other, had initiated a project with the intention to develop and implement better resources and routines for pricing; or, they were selected because the head office recognized the unit's management competence for pricing.

Eight persons representing the five selected business units joined the project team and were gathered for a kick-off meeting at the head office a Wednesday in November 2009. I took part in this meeting where each of the five present team members conducted a PowerPoint presentation of approximately 15 minutes describing the routines and resources for pricing at each business unit. Regarding the three business units that already had initiated pricing capability development, the representative from each business unit presented their respective projects. One of the business units (Delta) was in the very last phase of its pricing capability development project. The other two (Alfa and Gamma) had recently initiated their development projects. These two business units,

which recently had initiated a development project each, were, due to the following three reasons selected to be the first two embedded cases: 1) it allowed for the opportunity to study the pricing development projects of each embedded case longitudinally as the projects proceeded, 2) both had already initiated pricing capability development, meaning that neither of the development projects were initiated as a result of the group-wide pricing excellence project, and 3) as will be elaborated in Chapter 5, these two cases had decided on different approaches for achieving pricing capability development. The main difference was that management at Alfa had decided to change the pricing organization by mainly restricting the sales representatives' pricing autonomy, whereas management at Gamma had decided also to largely restrict the sales representatives' pricing authority, primarily by implementing a new IT system that calculates prices.

Through my contacts with the project leaders of the group-wide pricing excellence project, which I had on a regular basis at least every quarter, either by phone or as face-to-face meetings at the head office, I came in contact with three business units that during the autumn of 2009 had initiated pricing capability development at their respective units. The pricing capability development projects at these three business units were all a result of the group-wide pricing excellence initiative. Within a few months after these projects had been initiated in May 2009, managers at Technologica's head office decided to hire and finance management consultants who were given the task to develop and implement new pricing resources and routines at these three units. Hence, the pricing capability development projects at these three business units stand in contrast to the other three embedded cases (Alfa, Gamma and Delta) that all initiated their pricing capability development projects before the group-level initiative in May 2009. I had phone interviews with the managers at each of these three business units and was invited to study all three of them. Since the consultants' working practices were very much similar at each of these three business units, I decided to study the one that had implemented the most substantial changes regarding their pricing capability (Beta). Additionally, this case was selected since management had decided to change the pricing organization by restricting the pricing autonomy of the sales representatives, but only minor restrictions of the pricing authority (i.e. different from the changes implemented at Gamma but similar to those implemented at Alfa). This embedded case enabled me to study the project of pricing capability development retrospectively.

Additionally, the business unit (Delta) that was in the last phase of developing its pricing capability when the group-wide pricing excellence project was initiated was selected as an embedded case. This choice was made for three reasons: 1) the business unit had decided to largely restrict the pricing authority of the sales representatives, which stands in contrast to the managerial decision at Beta to mainly restrict the pricing autonomy, 2) the case allowed for a retrospective study of the pricing capability development project, and 3) the development project at this business unit had not been initiated as a result of the group-wide pricing excellence initiative (in contrast to the other embedded case that was studied retrospectively, i.e. Beta).

Table 6 summarizes the differences between the four studied pricing capability development projects that motivated the selection of each respective case.

Table 6 The four studied pricing capability development projects

Changes made in pricing organization	Studied longitudinally as the pricing development project proceeded	Studied retrospectively after the pricing capability development project was formally finished
Restricting the sales representatives' pricing autonomy	Alfa	Beta
Restricting both the sales representatives' pricing authority and autonomy	Gamma	Delta

The fifth embedded case (Epsilon) was selected to provide the case of reference. Thus, the study covers a total of five embedded cases that were selected based on replication logic (Yin, 2009), meaning that the selected cases were either predicted to: 1) show contrasting results but for predicted reasons, meaning variances due to differences in pricing governance structure, or 2) show similar results for predicted reasons, meaning similar results whether being studied longitudinally or in retrospect. Hence, the intention of using replication logic is, contrary to a sampling logic of randomly selecting cases, that each embedded case will add new insights and, thus, the possibility for theory development. Ideally, the study should include a sufficient number of embedded cases in order to gather enough empirical material to answer the purpose, but no more cases than each case adds unique findings to the study (Yin, 2009). In other words, the researcher should ideally stop gathering empirical material when

theoretical saturation is reached (Eisenhardt, 1989). As was illustrated in Figure 3, two embedded cases were selected during the early phases of the study (Alfa and Gamma). Thereafter, the three additional cases were selected throughout the research process, due to the assumption that all these three would generate new insights. Thus, as recommended by Yin (2009), additional cases were selected as long as the new cases could be expected to add new insights and, thus, allow for theory development. As mentioned, I also had the opportunity of selecting two additional embedded cases, but after a telephone interview with a manager of each of these two cases, I concluded that none of these two cases was likely to generate any new findings. Thus, the study comprises five embedded cases since the empirical material indicated that this was sufficient for reaching theoretical saturation.

The group-wide pricing excellence project never included any phase of implementation, meaning that the project members never took any action to implement any pricing tools or pricing strategies, besides sending a report to the different business units with recommendations for different pricing tools and strategies, and, thus, not any implementation of pricing capability elements. For that reason, the pricing excellence project is not included in the empirical unit of analysis. However, the project provided the starting point for the selection of the five embedded cases. Therefore, the pricing excellence project is presented in Chapter 4 in order to give the reader the background to the choice of the five embedded cases.

Table 7 on the next page lists the five embedded cases, the number of interviews that have been conducted at each case, the positions of the interviewees and the number of visits that I made to each case. As seen in Table 7, both Alfa and Gamma were visited twice. The reason was that these embedded cases were studied longitudinally as the pricing capability development projects proceeded. Both had just initiated the projects of developing their respective pricing capability during my first visit. The second visit took place once the projects at each embedded case were formally completed. The intention of the second visit was thus to follow up the results from the new, developed pricing capability. Each visit lasted two or three days. All embedded cases kindly gave me a tour round the facilities and, regarding those two cases that had a manufacturing plant at the same location (Delta and Epsilon), a guided tour of the production. Usually, I had between three and six interviews scheduled per day, which always took place in either the respondent's office or in a meeting room. Additional to the informal interviews, I had informal conversations with employees, often managers, during lunch in

the canteen, coffee breaks and dinner at the end of the day. After each of my visits, I sent a report of my findings to the person who had been my contact. These individuals always held a position equal to internal pricing specialist, sales or marketing manager. In order to get feedback on my findings, I contacted the person who received my report and asked for comments. In four of the times this contact was made by phone, in the other three cases I received the comments via e-mail. In three cases, I had one or two phone interviews with my contact person after my visit, with the purpose of gathering additional, complementary information.

Table 7 Embedded cases and interviews

Case/purpose with interview	Visited	Number of interviews	The interviewees' positions
Alfa	First visit, two days in January 2010. Second, two days in January 2012.	Three interviews first visit. Six interviews second visit. Two phone interviews.	Business unit manager Marketing manager Sales manager Sales representative
Beta	No.	Two face-to-face interviews. Four phone interviews.	Business unit President Sales manager Sales representative Management consultant (external)
Gamma	First visit, two days in February 2010. Second, three days in December 2010.	Eight interviews first visit. Nine interviews second visit. One phone interview.	Pricing specialist Product manager Sales manager Sales representative
Delta	A two days visit in February 2011.	Six face-to-face interviews. Four phone interviews.	Business unit President Marketing manager Financial director Pricing specialist Product manager Sales manager Sales representative
Epsilon	A two days visit in November 2010.	Seven face-to-face interviews. One phone interview.	Market manager Sales manager Product manager Project manager Project leader Sales representative

Table 7 Embedded cases and interviews (cont.)

Case/purpose with interview	Visited	Number of interviews	The interviewees' positions
With project leaders for pricing excellence project	Not relevant.	Two face-to-face interviews.	Strategic business development director VP of strategic development and group projects
Explorative, i.e. business unit managers in order to evaluate possible cases for study.	Not relevant. Covered different business units.	Four phone interviews.	Sales manager Business unit managers Business development director
Total number of interviews		59	

3.5. Constructing the preliminary theoretical framework

The intention to generate new theory implicates, ideally, that the research should start with as little existing theory under consideration as possible, in order to secure that the case study results in the generation of new theory, and not just tests already existing ones. Still, it is unrealistic to believe that a state completely free of any kind of theory would be possible to accomplish (Eisenhardt, 1989). The theoretical base, from which this study departs, consists of three streams of literature: 1) publications concerning the notion of pricing capability (i.e. Dutta et al. 2002; 2003; Hallberg, 2008), 2) publications addressing organizational capability development (e.g. Amit & Schoemaker, 1993; Danneels, 2010; Helfat & Peteraf, 2003; Zollo & Winter, 2002), and 3) publications addressing pricing from an individual firm perspective (in contrast to a more macro perspective), sometimes referred to as pricing literature (e.g. Dolan, 1995; Dolan & Simon, 1996; Forman & Lancioni, 2002; Hinterhuber, 2008; Marn et al., 2004; Monroe, 2003; Nagle & Hogan, 2006; Nagle & Holden, 2002). Thus, although the preliminary theoretical framework is constructed primarily based on publications specifically addressing pricing capability, the other two streams of literature were relevant for the following

two reasons. Firstly, considering that the main focus of both Dutta et al. (2003) and Hallberg (2008) was pricing capability elements, as opposed to the antecedents of pricing capability development, publications concerning organizational capability development and, thus, the antecedents of capability development provided a relevant theoretical complement. Secondly, considering that the studies conducted by both Dutta and colleagues (2003) and Hallberg (2008) comprise one single company in each study, the pricing capability elements identified by these researchers are most likely to some extent idiosyncratic for each studied firm. Thus, although other publications within the pricing literature have not specifically addressed the notion of pricing capability, they had the advantage of complementing these two studies.

The abductive reasoning enabled me to refine and extend the theoretical framework as I gained new empirical insights. Thus, the antecedents of pricing capability development in the preliminary theoretical framework were calibrated as I gained more empirical observations from the process and nature of pricing capability development within manufacturing firms that act on mature markets, offer products that are in the mature stage of the products' lifecycle, and depend on long-term, close customer relationships. For example, Winter's (2003) notion of ad hoc problem solving was initially listed as a separate, potential antecedent but throughout the process included in 'experience and repetition'.

3.6. Collection of empirical material

This study was a part of the learning partnership program between Technologica and the Institute of Economic Research at Lund University. Prior to this study, two doctoral thesis studies had been conducted as a part of this program, Henningsson (2008), which concerned information system integrations in mergers and acquisitions, and Johansson (2008), which addressed manufacturing strategies and value creation logics. The advantage with the learning partnership program is that it allows for extensive access to Technologica's different business units and, thus, valuable access to empirical material. As a part of the collaboration, the empirical material was reported back to Technologica in the shape of PowerPoint presentations. Often, these reports generated new empirical material when the recipient, who was always a person at the embedded case at hand, holding a position equal to internal

pricing specialist, sales or marketing manager, commented on the findings. Thus, this ongoing communication allowed for respondent validation.

In order to improve reliability, I have gathered data from multiple sources, mainly semi-structured interviews, but also documents and participating observations. The data collection is elaborated in the following sections.

3.6.1. Participating observations

The observations consisted of two whole day meetings with the pricing excellence team. During these meetings, the team members planned and prepared the group-wide rollout of a pricing excellence project. I sat in on these meetings and took detailed notes.

3.6.2. Document studies

The documents I studied were: 1) Reports produced by external consultants, 2) documents produced by the pricing excellence team, including the final report entitled “Handbook on pricing”, 3) e-mail correspondence between the project owners and the project members of the pricing excellence team, 4) meeting minutes from the pricing excellence project meetings, 5) project plans and other documents specifically related to either the pricing excellence project or the different pricing capability development projects at the embedded cases, 6) presentation material for internal use, 7) internal training material, 8) internally produced “pricing self-assessments”, 9) annual reports from Technologica, and, lastly, 10) annual reports and financial statements from competitors. In total, I have read and examined hundreds of pages of documents.

3.6.3. Interviews

Guided by the conceptual framework of pricing capability elements (Table 3, page 35) and the preliminary theoretical framework of pricing capability development (Figure 2, page 81), an interview guide was constructed. Thus, the interview questions covered both the pricing capability elements listed in Table 3, and the theoretical concepts in the preliminary theoretical framework. Questions regarding antecedents for pricing capability development were, for example: When were the pricing routines prior to the development project established? How were they established? For what reasons? Why did you decide

to change the pricing procedure? Why did you decide to develop new routines for pricing? Additionally, the interview guide included questions regarding other pricing-related aspects that are emphasized by the pricing literature, such as procedures for communication between marketing and manufacturing departments, and questions regarding contextual factors such as the competitive market situation and the customers' bargaining power. See Appendix III for an example of an interview guide. The interview guide consists mainly of semi-structured questions, which not only has the benefit of allowing the respondent to initiate topics that he or she finds important, but also provides the necessary structure to make sure that all theoretical concepts are covered (Bryman & Bell, 2003).

I decided to reword the theoretical concepts when writing the interview guide since the different respondents' views on theoretical concepts, such as pricing organization, pricing skills and pricing strategies most likely differed. Thus, in order to avoid misunderstandings, I decided to rephrase the interview guide into more operational questions. For example, instead of asking whether the unit practiced differential pricing, I asked if the procedure for setting prices differed depending on the different customers and if the profit margin differed between the different customers. Often, I asked several different, rephrased, questions for each theoretical concept, in order to make sure that I had an answer that covered as many aspects of the concept in question as possible. As seen in the interview guide, specific questions are listed for each theoretical concept, in order to demonstrate how I framed the questions concerning the specific concept. The interview guide was both tailored for the different embedded cases, depending on the case-specific approach for changing the pricing capability, and for the different respondents depending on his or her position.

Choice of respondents

The interviewees were selected according to my request to interview employees involved in the pricing capability development project and the day-to-day, business-as-usual procedures for handling and setting prices. The respondents held positions equal to internal pricing specialists, sales managers, sales representatives, project leaders, marketing managers, product managers, controllers and CEOs. Thus, respondents holding a variety of positions, with different areas of responsibility and different job descriptions were interviewed in order to assure an unbiased and balanced picture (Miles & Huberman, 1994). Regarding the case that had developed the pricing capability mainly

with the support of external management consultants (Beta), I interviewed two of the consultants, in addition to a selection of the employees at the unit.

In total, 47 respondents were interviewed. Two managers were interviewed twice and two managers were interviewed three times. In the case of Gamma, most of the respondents who were interviewed during my first visit were interviewed during my second visit as well. Table 8 on the next page lists the respondents, their respective positions and the number of occasions each of them was interviewed.

One of the potential pitfalls with case studies is that the researcher becomes too close to the practitioners and, because of that, loses his or her objectivity. This risk has been met by deciding to interview employees at several different levels within Technologica. In this way I was able to include a variety of interests and perceptions, not only those of management (see Svensson, Eklund, Randle, & Aronsson, 2007). Furthermore, a certain distance from the practitioners was also achieved through the practice of abductive reasoning since it required me to compare empirical findings with previous theoretical knowledge throughout the research process (see Johansson & Lindhult, 2008).

The character of the interview depended on the position of the interviewee. But, in general, the individual was first asked to give a broad account of the relationships with the customers and the market situation, including the competitive situation. My intention was to get a picture of how the interviewee considered the influence from market factors on prices and the role of the sales representative. The interviewees were then asked to talk about the use of different pricing capability elements, both regarding the ones in place prior to the development projects and the ones after. During the course of the interview, I asked the interviewee to describe more in detail and define the factors that were considered when pricing products, such as cost of product, competitors' products and prices, customer's purchasing criteria, provided customer value and discount policies.

Table 8 List of respondents

Case/ purpose with interview	Position of interviewee	Number of interviews
Alfa	Business unit manager	3
	Marketing manager	1
	Sales manager	2
	Sales representative	1
	Sales representative	1
	Sales representative	1
	Sales representative	1
	Sales representative	1
Beta	Business unit President	1
	Sales manager	1
	Sales representative	1
	Sales representative	1
	Management consultant (external)	1
	Management consultant (external)	1
Gamma	Internal pricing specialist	3
	Internal pricing specialist	2
	Sales manager	2
	Sales manager	2
	Product manager	2
	Product manager	2
	Sales representative	2
	Sales representative	1
	Sales representative	1
	Sales representative	1

Table 8 List of respondent (cont.)

Case/ purpose with interview	Position of interviewee	Number of interviews
Delta	Business unit President	1
	Marketing manager	1
	Financial director	1
	Internal pricing specialist	1
	Sales manager	1
	Product manager	1
	Sales representative	1
	Sales representative	1
	Sales representative	1
	Sales representative	1
Epsilon	Market manager	2
	Sales manager	1
	Sales manager	1
	Product manager	1
	Project leader	1
	Sales representative	1
	Sales representative	1
With project management at head office regarding the group-wide pricing excellence project	VP of strategic development and group projects	1
	Strategic business development director	1
Explorative, i.e. with business unit managers in order to evaluate possible cases for study.	Sales manager	1
	Sales manager	1
	Business development director	1
	Business unit manager	1
Total	47	59

As elaborated in section 2.5.5, pricing capability development is achieved through changes in pricing resource and pricing routines, which, in turn, constitute the firm's different pricing capability elements (this was elaborated in 2.3.2). Consequently, pricing capability development has been measured as changes in pricing capability elements. In order to identify whether the different pricing capability elements were practiced, and to what extent, both prior to and after the pricing capability development projects, different scales of measurements were utilized for the different elements. A nominal scale was used to measure incentive controlling arrangements, meaning that they were assessed based on the sales representatives' compensation plans, such as fixed salary, variable salary based on gross profit margin contribution or volume achievement. Similarly, pricing authority arrangements were assessed based on which organizational level the authority resides, for example among the sales representatives, sales managers, central pricing department. IT support for pricing was measured as varying on ordinal scale, meaning that a firm either utilizes specific IT support for pricing or not. Similarly, both pricing tools and pricing strategies were measured on an ordinal scale, meaning that a firm either practices a given pricing tool or not, and either realizes a given pricing strategy or not. Lastly, pricing skills were assessed on an interval, meaning that the sales representatives' tacit know-how and commercial experiences differ between non-existing, large and all stages in between. In order to identify whether the new pricing capability elements had resulted in any changes in either profit margin and/or volume (or prevented an expected negative change in profit margin and/or volume), I asked the respondent if the prices had changed, if gross profit margin contribution and/or volume had changed, and if they had noticed any reactions from customers or competitors.

Each interview lasted between 30 minutes and three hours and was, with the exception of eight interviews, recorded and transcribed. In general, the longer interviews were often with managers and the shorter ones with sales representatives, although there were exceptions. Eight of the interviews, all of them by telephone, were, due to technical problems, never recorded. In those cases, I took detailed notes and in two of them, after interviewing managers for explorative purposes, the respondents read and verified my notes.

Interviewing sales representatives

My interviews with the sales representatives were largely focused on understanding *how* they decided prices and *which* factors and aspects they considered when setting prices. I addressed this by the following two categories

of questions: First: Open questions, such as asking the respondent what advice he or she would give to a person who is new on the job as a sales representative, what competences are required of sales representatives, how he or she knows which prices to offer both new and old customers, handles price negotiations, communicates and motivates prices, and what he or she thinks is the most difficult element in his or her job. The intentions with these questions were; 1) to identify what factors influence the pricing decision, such as cost of product competitors' prices and offerings, the individual sales representatives' experience, and 2) to gain an understanding of how independent the sales representatives were in setting prices, both in terms of the sales representative's independence vis-à-vis management and other co-workers, such as product designers and manufacturing department, and independence in terms of the strength of the customers' bargaining power. The second category consisted of more specific questions such as which pricing tools that were practiced on a regular basis. The intention was both to understand how prices were decided, and by whom, and to identify which pricing capability elements that were possessed by each unit.

Interviewing managers

When interviewing a manager or someone specifically involved in the project of developing the pricing capability, I asked about the decision to implement new pricing capability elements and develop existing elements. I asked why and when it was made, and what the intentions and objectives had been. Moreover, I asked how the changes were implemented and achieved, if any problems were encountered, what the outcome was and how it corresponded to the expected results. Additionally, I asked the managers if they considered any other alternatives for how to carry out changes. Thus, the empirical challenge of identifying what motivated the managers of the different embedded cases to initiate pricing capability development and the different managers' perceptions regarding the opportunities for pricing capability development was met by asking the managers several, rephrased questions regarding these subjects. For example, the managers were asked about their work experience with previous employers and their thoughts about the pricing capability of the firm where they had been employed before.

3.7. The empirical presentation

The presentation of the pricing capability elements possessed by each embedded case and the phase of pricing capability development at those four embedded cases that conducted a development project is intended to provide a chronological presentation of the pricing capability development at each respective embedded case. Prior to the presentation of the development projects carried out by four of the cases, Technologica and the five embedded cases are presented. Thus, in Chapter 4, Technologica and the five embedded cases are presented, including the industry context of Technologica in general and the five embedded cases in particular. The presentations include contextual factors such as the bargaining power of the customers and the character of the competition. The intention is to set the context of each case and give the reader an overview of the industry setting of each embedded case. For the sake of anonymity, the names of the embedded cases, competitors and customers are in most situations left out.

Chapter 4 also includes a presentation of the group-wide pricing excellence project carried out by Technologica. This project is relevant for this study for the following three reasons: 1) Before the project was launched, internal business development consultants at the head office of Technologica evaluated the pricing capabilities of the group's different business units. 2) The internal consultants identified three different business units that, independent of each other, already prior to the pricing excellence initiative had initiated pricing capability development at the respective units. After attending presentations by representatives from these three business units, I asked if I could visit them and study their projects. They all agreed to that. 3) Management at one of the embedded cases (Beta) decided to hire management consultants once they, as a result of the pricing excellence project, identified that the current price setting had several areas of improvement. Hence, this project provided the starting point for the selection of the five embedded cases.

In Chapter 4, the time-lines for the four studied pricing capability development projects are presented. As will be further discussed in Chapter 4, the embedded cases decided independently of each other to initiate pricing capability development. Moreover, with the exception of one of the cases (Beta), the initiative to conduct pricing capability development was taken by management of the respective cases, not top management of Technologica.

In Chapter 5, the pricing capability elements possessed by each of the embedded cases before and after the development projects are presented. Also, the phase of pricing capability development at each case and the actions that were taken by management in order to develop and implement new pricing capability elements are described. The intention with structuring the empirical findings from the embedded cases chronologically (i.e. pricing capability elements before, the phase of development and pricing capability developments after), and not each case separately, is to highlight both the similarities and differences between the embedded cases. In all of the cases, quotes from interviews and sometimes, documents are included in the text in order to exemplify the statements from the respondents and certain empirical findings.

3.8. The phase of analysis

I started my analysis by writing what Yin (2009:122) refers to as a “chain of evidence”. This procedure facilitates validity (Yin, 2009). The write-up for each case was structured chronologically, according to: 1) pricing capability elements possessed by each embedded case prior to the phase of development and how they have evolved throughout the case’s history, 2) the stated reasons by management of each embedded case for initiating a pricing capability development project, 3) the phase of pricing capability development and the actions taken by management in order to achieve capability development, 4) the pricing capability elements possessed by each embedded case after the phase of development, and 5) the perceived outcome of the pricing capability development according to self-assessment of management by each case. This procedure allowed me to sort events and actions taken in the sequence in which new pricing capability elements were implemented and changed and, thus, how the pricing capability was developed, including the causality of the different events.

Besides being structured chronologically, each case was furthermore structured according to what Eisenhardt (1989:536) refers to as “a prior specification of construct”. The conceptual framework of pricing capability elements provided the prior specifications used in order to identify pricing capability elements both prior to the phase of the development and the ones after. As elaborated in section 2.6.2, the pricing capability elements listed in Table 3 are all indirectly included in the preliminary theoretical framework. Thus, the pricing capability

elements possessed by each embedded case, both the ones before and the ones after the phase of development, were identified according to the elements listed in Table 3. Also, the events and actions that resulted in pricing capability development at each embedded case were matched with the antecedents in the preliminary theoretical framework. Empirical observations from the fifth case (Epsilon) that never carried out any development project were only structured according to the pricing capability elements, not chronologically.

Writing up each case according to the same framework allowed me to conduct a cross-case synthesis (Yin, 2009:156). The cross-case comparison enabled me to detect differences and patterns of similarities between the cases. The identified similarities between the cases allowed for cross-case conclusions.

Once the empirical material had been structured chronologically and according to the pricing capability elements identified in Table 3, the empirical material was matched with the preliminary theoretical framework, through so-called pattern matching logic (Yin, 2009). By matching the empirical material with the theoretical concepts in the preliminary theoretical framework, discrepancies and coincidences between empirics and theoretical concepts could be identified. Thus, pattern matching logic enables the researcher to: 1) confirm existing theory when empirical findings match with the preliminary theoretical framework, 2) identify theoretical concepts that can be developed, and 3) pinpoint empirical findings that are not explained by the theoretical framework and, thus, identify where the theoretical concepts are insufficient to explain the studied case. This reasoning enabled me to both strengthen and develop existing theory regarding pricing capability development, and, by identifying empirical findings that were not explained by the preliminary theoretical framework, add new theoretical concepts that can further enhance our understanding of pricing capability. As indicated, due to the purpose of this study, the analysis was conducted through the theoretical angle of organizational capability development in general and pricing capability development in particular.

3.9. Comments on validity and reliability

As mentioned, a process of pattern matching (Yin, 2009) has been used in order to validate the empirical data. Additionally, as stressed previously, abductive logic of reasoning has been used. Hence, the method of pattern

matching provided an iterative procedure, regarding both theory and empirical material, which were needed in order to test both the preliminary theoretical framework as well as the collected empirical material. This procedure provided the possibility of not only validating the empirical findings but also to make adjustments and changes of the preliminary theoretical framework. Thus, the concern of internal validity has been met through the iterative process of comparing emerging theory, built from the empirical findings, to existing theory (Eisenhardt, 1989). The choice of selecting a fewer number of embedded cases (i.e. five) brings along the problem of generalisability. However, the intention is not, as mentioned, to reach statistical but analytical generalisability (Yin, 2009:15).

Since a qualitative case study is the setup for this thesis, the iteration of both interviews and document studies also had the function of testing the reliability of the empirical material. Thus, the use of multiple sources of evidence allows for data triangulations and, consequently, most likely an increased level of reliability (Yin, 2009).

Furthermore, the iterative process of reporting empirical findings to management at the embedded cases, which were ongoing throughout the case study, have also increased the reliability of the empirical findings. This iterative process, moreover, generated the benefit of respondent-validation.

4. The case company

The empirical study constitutes pricing capability development within five embedded cases, each representing a business unit within Technologica. As will be further elaborated, Technologica's business units are organized as profit centers and have the freedom to decide on key aspects of their overall strategy, such as strategic planning, marketing, product development and market expansions. Due to this large autonomy, management at each business unit has the freedom to independently of Technologica's top management launch pricing capability projects and, consequently, decide on changes in pricing organization, IT systems, pricing tools and pricing strategies. Thus, in the empirical description of the five embedded cases and the pricing capability development projects, 'manager' refers to management at the embedded case at hand, not top management at Technologica's head office.

Regarding four of the embedded cases, management at each case initiated and carried out pricing capability development projects. As will be further elaborated, each pricing capability development project was carried out by the respective embedded cases independently of each other and without any interaction between the management of any of the other cases.

The fifth embedded case provided the case of reference. Concerning this case, no intentional effort has been made by management to achieve pricing capability development.

In order to set the context of the empirical study, this chapter starts with a presentation of the historical background of Technologica and its current organizational structure. Subsequently, the group-wide pricing excellence project is presented. As elaborated in section 3.7, the pricing excellence project is relevant since it provided the starting point for the selection of the embedded cases. Thereafter, the five embedded cases are introduced, including the industry context of each case such as customers' bargaining power and competitive situation. Lastly, the timeline of the studied pricing capability development projects is presented.

4.1. Company background

The history of Technologica started more than 100 years ago when the founder started a small scale production of consumer products in a small Swedish town. Since then, the company has grown to become the largest firm worldwide within a range of product categories that are all based on a specific type of high-tech material constituting the core technology for which Technologica is recognized. Through its manufacturing sites and market offices, the company has a local presence in approximately 50 countries. In 2011, sales were approximately 30 000 million SEK, EBITDA margin amounted to 12 percent and the number of employees at the end of 2011 was approximately 20 000. The majority of sales was in Western Europe (50 percent of total sales), which together with North America (20 percent) are considered as mature markets by Technologica. For example, sales in Western Europe increased by two percent from 2010 to 2011, which stands in contrast to the nearly 90 percent increase in total sales between 2006 and 2011 on the markets outside North America and Western Europe (comprising a third of total turnover in 2011).

Technologica has a history of a large number of acquisitions, with the 1980's being the most notable period during which the group was "building a conglomerate" (Technologica's Centenary book, 2005). In 1987, top management expressed in an interview with a Swedish newspaper that "many believe that we just acquire companies" (Technologica's Centenary book, 2005). 40 companies were acquired during the year of 1989 alone. Mainly due to acquisitions, sales increased from 3 billion SEK in 1986 to nearly 30 billion SEK in 1989. However, following the difficult years during the 1990's when Technologica was under hard financial pressure due to the recession, the group entered a phase of concentration in 1999. A new CEO was appointed in 1999 and the new strategy was to focus on the firm's core competence within the specific type of high-tech material that constitutes the core technology of Technologica's products (Technologica's Centenary book, 2005). Nevertheless, the group today is a result of the many acquisitions, which have resulted in a decentralized organizational structure. Technologica is greatly decentralized and, as will become clear when the embedded cases are described in the following sections, highly diverse regarding the range of products offered by the different business units. The high level of independency for the different business units has resulted in a fairly low level of cross-division interaction, especially between the different business areas. The VP of Strategic

Development and Group Projects illustrated this when he described the flora of different ERP systems as a spaghetti clutter.

Product portfolio

The product portfolio is largely differentiated, comprising products such as tires for agricultural vehicles, products for offshore oil and gas extraction and printing blankets for the graphics industry. The largest product category (making up 23 percent of total sales in 2011) is precision seals for the manufacturing industry. Most of the products within the group's portfolio are differentiated relative to the competitors' products, with the exception of some spare parts. Hence, the products are not equivalent to commodities. Differentiation is achieved by means of the quality of the product material, technical competence, customized products based on engineering expertise, and the ability to offer the customers a wide product portfolio. The high quality of the products, compared with the competitors, motivates that most of the products are positioned in the high price segment. As a result of the mature market, product development concerns mainly incremental changes of older product generations.

4.2. Industry context

Despite Technologica's wide product portfolio, the different business areas are situated in largely similar industry contexts. Most of the business units act within mature industries on a mature market and, for most of them, the vast majority of total sales is within Western Europe and North America (comprising 70 percent of the group's total sales in 2011).

In addition to differentiation through product features, Technologica achieves differentiation through its customer relationships. All of the group's business units act within business-to-business relations and close customer relationships are important, mainly because several of the products are customized according to customer requests. Moreover, the close customer relationships result in barriers of entry since they enable Technologica to develop a deep understanding of customer needs, provide tailored customer-service and, thus, create value to the customer through the relationships (Kalwani & Narayandas, 1995). Due to a continuous exchange of information between the parties, the close, long-term relationships are supposedly resulting in relatively lower

transaction costs for repeated transactions, assuming that the two parties engage in transactions frequently (Bradach & Eccles, 1989; Noordewier et al., 1990). The high level of maturity of the markets in which the different business units act has resulted in a stable customer base. In many cases, the customer relationships had been established several decades ago. In general, the business units serve a combination of larger, global customers that enjoy a fairly strong bargaining position, and smaller, regional firms that are in a comparatively weaker position to negotiate prices and discounts.

Moreover, the high level of maturity of the different industries in which Technologica act has resulted in a steady increase of competition. Today, most of the business units are experiencing price pressure from the competitors, and shrinking profit margins on product innovations. The character of the competitors varies between the business areas. On the one hand, both Gamma and Delta have larger, global competitors that are able to offer similar product portfolios. On the other hand, other business units, such as Alfa, Beta and Epsilon, still enjoy the competitive advantage of being able to offer the customers relatively wider product portfolios, compared to the somewhat smaller competitors. Nevertheless, the high maturity level of the markets in which the business units act urges Technologica to constantly strive for product differentiation, in order to avoid price wars. The specific industry context for each of the five studied embedded cases is elaborated in section 4.5.

4.3. The group-wide pricing excellence project

Technologica has since 2008 carried out a handful of group-wide “excellence programs”, which have addressed various operational activities such as manufacturing and working capital. The intentions with the programs have been to “efficiently and uniformly implement improvement measures” (Technologica’s Annual Report 2011). Key challenges with these projects have, according to the VP of Strategic Development & Group Projects, been the decentralized structure of Technologica, which makes coordination and best-practice sharing difficult to achieve. The group-wide project entitled ‘manufacturing excellence’ included the sub-project ‘excellence in energy’. Actions that were taken included, for example, the installation of new ceiling lamps that were switched off automatically when the room was empty. This project was, according to the VP of Strategic Development & Group Projects,

successful and generated savings in the form of lower energy consumption. Key success factors were, according to the VP: 1) top management commitment, 2) project results linked to individual bonus programs, and 3) that fact that the results were visible and impacted financial figures within a quarter, mainly through cost savings.

In May 2009, top management of Technologica initiated a new group-wide project called “pricing excellence” with the purpose to improve the price setting across the different business units. The identification of pricing as a strong lever for profitability resulted in top management deciding to initiate the project. The project owners at the head office decided in May 2009 on the following two objectives:

1. To create an internal global pricing reference group for exchanging best-practices.
2. Establish pricing strategy/process excellence for each operating unit, for example KPIs, tools for pricing and training.

Similar to the three previously carried out group-wide excellence projects, the decision was taken by management at the head office to form a core team, a task that was delegated to the two project owners at head office who were assigned the responsibility of initiating the project and facilitating the project meetings and other administrative matters. The project owners, the VP of strategic development and group projects and the Strategic business development director, gathered eight representatives from the four different business areas. According to the project owners, when bringing the eight team members on board the key words were to look at competence as key driver, rather than function or title.

4.3.1. The first meeting with the project team

During the first kick-off meeting held at the head office on a Wednesday in November 2009, the project’s team members, representing the four different business areas within the group, agreed on pricing “as a strong lever towards increased profitability overall”, but also that “its isolated impact is difficult to measure”. The team furthermore concluded that the resources and routines for pricing at the different business units differed. These differences were identified regarding to what extent management had control over prices, or delegated the price setting to the individual sales representatives. Additionally, the business units differed in their use of pricing tools. One business unit had worked

substantially with improving their pricing capability for several years and possessed sophisticated software programs, pricing tools and other resources specifically for pricing, whereas other business units relied mainly on the individual sales representative's experiences.

When describing the price setting at his business unit, one of the members said that they possessed "no structured approach regarding pricing [and that they instead] rely on the individual salespeople and their commonsense." Another project member told the story of how he, when he joined the company two years ago, had decided to analyze product and customer profitability at his business unit and concluded that several of the products were sold with a negative profit margin. When commenting on the result from the analysis he said:

"We were selling several of our products below break-even. We were not aware of the fact that we actually lost money on the deals we made with some customers."

The project team members were all requesting activities and expertise that would help them improve their price setting. As expressed by one of the team members:

"Too often the prices are more or less in the hands of the individual salesperson, for good and for bad."

They all agreed that pricing is an important strategic tool and that many areas of improvement regarding the group's resources and routines for pricing existed. Thus, they all expressed high motivation for the project and it was decided that the team should have quarterly meetings. However, as the project progressed, it became clear that the decentralized structure of Technologica, the fact that most of the project members were lower-level managers with very limited authority within their respective business units and, lastly, that the different ways of managing pricing within Technologica caused problems in the project. The intention was to limit the project to one year, however, the actual timeline, depicted in Table 9, turned out to be longer. The team members met twice during the first six months of 2010, but then gave up on the initial ambition to meet once every quarter. Instead, they met a last time in October 2010 and decided that the final meeting was going to be held as a telephone conference, and this took place at the end of 2011.

Table 9 Timeline for the pricing excellence project

May 2009	Corporate head office initiated the project and gathered a team of eight team-members selected on “competence as key driver, rather than function or title”.
November 2009 – January 2011	The team members composed a “Handbook on pricing” consisting of guidelines for how to improve the pricing capability among the group’s business units.
February 2011 – June 2011	The business units were given the task to: 1) complete a self-assessment (provided by the “Handbook on pricing”), 2) Discuss the findings in management teams, 3) “incorporate conclusions into Strategic Plan”, 4) define KPIs and targets, suggestions were listed in the handbook, and 5) apply a “toolbox for pricing”, provided by the “Handbook on pricing”.
June 2011 – continuously	The business units were told to: 1) perform the self-assessment annually during Q1, 2) measure KPIs monthly, and 3) improve enablers to fill identified gaps in skills and or/processes.

4.3.2. Challenges encountered by the project

In November 2010, when the project members had been working on the project for one year, a project member said that he believed that the project focused “too much on technicalities and details” when it instead, according to him, should focus on gaining support from top management. He said:

“What I’ve been raising during the last meetings is that there is no way that [Technologica] could design different pricing methods and activities that are applicable for all of the different business units. What might work at [Delta] or [Gamma] and other units within [Technologica] will never be applicable at [Epsilon], since our business is so much different compared to theirs. What the project should focus on instead is to get the senior guys [i.e. top management at Epsilon] to understand the strong lever of profitability that pricing is. The project should moreover make them [i.e. top management of Epsilon] understand the importance of providing training for the sales guys on how to improve their skills regarding pricing.”

He believed that the best way would be if the project team composed a list of bullet points that are necessary and required to secure adequate prices, such as performing customer segmentation and analyzing product and customer profitability. Then, he said, top management of Technologica should order the

different business units to implement those points that were missing. He believed that this would result in management at those business units that were lacking several of the bullet points, his unit being one of them, realizing the necessity of possessing all of them. He expressed, moreover, communication issues within the group:

“I know that [the VP of Strategic Development & Group Projects] means that we are using project specific pricing, but, honestly, I really don’t know what he means by it. I think that we are using both transactional pricing and value based pricing.”

In a similar manner, another of the project members said during an interview that he lacked the time to act as an internal consultant within the group, which he believed would be necessary for the other business units to change their routines and resources for pricing. He said:

“They [the project owners] call us ‘ambassadors’. But really, I have other work to do, as you know. I don’t know when to find the time for doing this. It is really all about consultancy work, and frankly my boss doubts it too.”

A third project member shared the other two members’ pessimistic view regarding the project and said during an interview:

“When doing a change project like this, you need to put in a lot of time and work for it. It is not just about doing a single presentation and then expecting a reaction. I mean, looking at the project we’ve been dealing with during the last years [i.e. implementing a new IT system for pricing at one of Technologica’s business units]. It takes time to make changes, it is really about change management, if you like. There are no quick wins to show early when dealing with pricing.”

This project member, who represented one of those business units that had changed and developed their resources and routines for pricing during the last two years, said, furthermore, that his business area no longer had anything to gain from the project:

“Maybe I was a bit naïve initially, that we should be able to improve. But we already do a lot of work on pricing. We have a global pricing team, we evaluate each month, we do all those things whereas the other units have completely different businesses and have completely different requirements. I mean, you can always improve and always get better. But with the current project that we have been running for one and a half

years, I think that if we get that going we will have enough. It would simply be too much to add more things to it.”

In December 2010, the Strategic Business Development director said that the most important matter at the moment was to make sure that the project members were to feel “commitment to the pricing excellence project” and make them realize that they, not she herself or anyone else from Technologica’s head office, was the one that should do the actual rollout and implementation of it in the wider organization. She said:

“Most obviously we will support and facilitate the organizational matters, but at the end of the day, they are the ones actually doing the job.”

4.4. Results of the pricing excellence project

As mentioned, the initial purpose of the group-wide project was to improve the price setting across all of Technologica’s business units, by implementing tools for pricing and providing price setters with training. However, as the project continued, the ambition was lowered to instead produce a pricing report that could be distributed to the different business units. The idea with the report was to encourage management at the different business units to take action in order to improve the price setting. This report was called “Handbook on pricing” and the project members finalized it in January 2011. The handbook, which was based on Excel sheets and PowerPoint slides, comprised a template for how to analyze prices, such as product and customer profitability. Additionally, it provided a number of recommendations regarding pricing tools and strategies.

The “Handbook on pricing” was constructed as a PowerPoint presentation, consisting of: 1) A self-assessment, 2) a “toolbox” for pricing, and 3) key performing indexes for pricing.

The self-assessment

The self-assessment was an Excel file listing a total of 47 statements, divided into five different blocks that each consisted of between three and fourteen statements. The statements had a strong managerial focus and concerned

managerial efforts to structure and organize the price setting. Below are examples of the statements:

- Pricing structure
 - The ownership for pricing rules and objectives is clearly defined, documented and communicated.
 - Senior management is fully involved and committed in all pricing aspects.
 - Pricing strategy and pricing objectives exist and are clearly documented and communicated.

- Pricing competence
 - You have specific training material with regard to pricing.
 - All relevant employees have been trained on this pricing material and the pricing modules are part of frequent training for employees.
 - All new employees receive formal training in pricing materials and modules.

- Pricing tools
 - You have a well-defined process and tools, or use external support, to collect market intelligence frequently.
 - You have clearly defined rules and tools to identify and act on currency fluctuations.
 - You have segmented your markets/customers and you have clear and documented rules on how this is done.

- Support system
 - You are using software for price optimization.
 - You have a consistent ERP system landscape.
 - You use business intelligence software to measure pricing, KPIs and to track their development monthly.

The toolbox and key performing index

The 'toolbox for pricing' consisted of guidelines for how to perform customer segmentation, analyze product and customer profitability, and customer value map analysis. Listed key performing indexes for pricing were; 1) revenue leakage analysis, 2) price comparison analysis across sales regions and relative to competitors, and 3) win-lost ratio regarding customer orders.

The toolbox, moreover, contained material that was to convince the reader that pricing is an important lever for profitability. It was mainly based on material from a report produced by a management consultant firm and stated the following: 1) a minor increase in price results in a relatively larger increase in profit, and 2) "pricing is often seen as hard to manage".

The implementation of the handbook

In January 2011, the handbook was presented to top management of Technologica who, according to the recommendations of the project team, decided that all of the business units should perform the self-assessment by June 2011, at the latest. Thereafter, each business unit should complete the self-assessment annually during the first quarter of each year.

It was, moreover, delegated to the business units to select a minimum of three KPIs, one from each of those categories that were listed (i.e. leakage efficiency, price comparison and quoting efficiency). The selected three KPIs were to be measured monthly. The business units were also informed by the project owners the following: "The long-term goal is to establish a continuous improvement process with focus on pricing in your business."

Top management decided that a handful of questions from the self-assessment should be selected for each business, preferably re-written in order to suit the individual business unit, and incorporated into the audit report which all the business units are required to submit to the head office by the end of each month. Besides financial KPIs, the audit report, moreover, comprises process related questions, such as manufacturing procedures.

Two out of Technologica's four business areas, Gamma and Delta, already had everything the handbook asked for in place, since during the last two years they had developed and implemented a range of different pricing capability elements. Consequently, they both provided the good examples when the handbook in pricing was composed. Thus, the group-wide pricing excellence project had no practical implications for these two units.

Management at the business that previously had worked the least with pricing decided to hire management consultants and assign them the task of fulfilling the requirements stated by the self-assessment and the handbook. The two representatives from this business unit supported the decision to hire management consultants. One of them said the following:

“What I been telling [the manager of the business area] is that the further rollout should be performed as a [management consultant firm] study. As a business unit manager for [Alfa], they can’t use me as an ambassador to the wider rollout. I don’t have the time to do it. Also, my manager said no to that. It is a fulltime job to coordinate this. Okey, to create awareness I can do a presentation, but that is about all.”

This project member also said that as the pricing excellence project had proceeded, the extremely different approach to pricing among the different business units within Technologica had surprised him. He had not expected to see such large differences. He considers it to be standard procedure within any business to provide sales representatives with training in pricing tools and negotiation tactics. Thus, he said, 60-70 percent of what the self-assessment asks for is already in place at his unit.

Technologica’s fourth business area was, during 2011, occupied with a larger joint venture and was, thus, granted respite regarding the self-assessment.

In April 2011, the VP of Strategic Development & Group Projects said that top management had decided to hand over the handbook to the business units and delegate to management at each respective business unit to decide if any parts of it should be implemented at their business unit. In other words, the business units were not required to implement any parts of the handbook if they decided not to.

In summary, two years after the project was initiated by the head office, the concrete implication from the project was the decision to include a handful of questions concerning pricing in the self-evaluation form that each business unit was required to fill in every month and submit to the head office, along with financial figures. In addition, management at the business area that previously had worked the least with developing resources and routines for pricing had recognized that they had substantially less sophisticated routines and resources for pricing than Gamma and Delta. As a consequence, they decided to hire management consultants with the purpose to develop and implement more advanced tools for pricing. Thus, awareness of pricing as a strong lever for

profit was created within this business area. Lastly, the members of the pricing excellence team said that they personally had gained from being a part of the team, in the sense that they had learnt from each other and, most importantly, got in contact with people outside their own business unit. Nevertheless, the pricing excellence project had not resulted in any noticeable changes regarding the pricing capability within those units that were represented in the project's core team. However, substantial changes were made with the support of management consultants at three of the group's total of approximately 25 business units.

The group-wide pricing excellence project never included any phase of implementation, meaning that the project members never took any action to implement any pricing tools or pricing strategies, besides sending a report to the different business units with recommendations for different pricing tools and strategies. There was, thus, no implementation of pricing capability elements, so the project is not included in the empirical unit of analysis.

The five embedded cases are introduced in the following section.

4.5. The five embedded cases

Due to confidentiality, the five embedded cases are referred to as Alfa, Beta, Gamma, Delta and Epsilon. Table 10 on the next page provides an overview of the five embedded cases.

Table 10 The five embedded cases

	Alfa	Beta	Gamma	Delta	Epsilon
Industry	Construction, infrastructure, agriculture.	Transportation, military, industrial.	Industrial, automotive, aerospace.	Agricultural vehicles, transportation.	Offshore oil-rigs, gas industry.
Geographical coverage	Focused on the European market	Focused on the North American market	Worldwide	Worldwide	Worldwide
Turnover	Euro 30 million (2010)	USD 60 million (2009)	SEK 6 650 million (2011)	SEK 4 000 million (2011)	Euro 300 million (2009)
Number of employees	200	240	5100	1800	1200
Profitability	Good compared to industry average (EBIT margin 13% in 2010)	Good compared to industry average	Good compared to industry average (EBITDA margin 23%)	Good compared to industry average (EBITDA margin 13 %)	Very good compared to industry average
Price segment	High end	High end	High end	High end	High end
Market position	Market leader in Europe	Market leader in North America	Market leader worldwide	2 nd on the European market (25 % market share)	Market leader worldwide

Table 10 The five embedded cases (cont.)

	Alfa	Beta	Gamma	Delta	Epsilon
Customer base	A mix of larger, international firms and smaller, regional players	Mainly smaller firms purchasing smaller amounts	A mix of large, global firms and smaller regional players	A mix of large OEM's and smaller, regional retailers	Mainly larger firms purchasing large amounts
Competitor characteristics	Smaller firms that compete within relatively smaller geographical regions	Smaller firms that offer relatively smaller product portfolios	Large, international or national firms	Large, international or national firms	Smaller firms that offer relatively smaller product portfolios
Customers' bargaining power	Relatively high, since the market is mature and cost for changing to a competitor is low.	Relatively weak since cost for changing to a competitor is high.	Relatively high regarding the large customers and weak for the smaller ones.	Relatively weak, due to a reluctance among competitors to engage in price wars	Relatively weak, due to the limited number of competitors
Barriers of entry	Low	Relatively high, due to high technical competence	Low	Relatively high, due to high technical competence	Very high, due to high technical competence

As seen in Table 10, the size of the different cases, both in terms of annual turnover and number of employees differs. Also, the geographical coverage differs between the cases. Yet, common for the five cases is that they price their products in the highest price segment. Moreover, all the embedded cases are market leaders in their respective markets, except Delta which is number two in its main, the European, market. A notable difference between the cases is the character of the customer base. Three of the embedded cases (Alfa, Gamma and Delta) have a mix of larger, often international customers and smaller, regional players. This stands in contrast to both Beta, which serves mainly smaller firms, and Epsilon which chiefly handles larger customers. The cases differ in terms of the character of the product portfolio. Alfa and Beta produce mainly products that are customized for each individual customer, whereas Gamma and Delta produce non-customized products¹³. ‘Non-customized’ means that these products are not adjusted for each individual customer, in contrast to the purely customized ones. However, the products are still differentiated from those of the competitors and are thus not to be confused with commodities. For the sake of simplicity, products that are not adjusted for individual customers are referred to as “non-customized”.

As seen in Table 10, the bargaining power of the customers differs between the cases. Regarding the larger, often international, customers of Alfa and Gamma, their bargaining power is relatively high, which is partly due to the mature market and the low switching costs if changing to a competitor. On the contrary, the bargaining power of Beta, Delta and Epsilon’s customers is, compared with Alfa and Gamma’s larger customers, low. However, all five cases act on mature markets and the competitors are offering similar products. For that reason, all five cases are faced with the challenge of commoditization and, consequently, a growing pressure to reduce price. In the following sections, each individual case is presented.

¹³ Gamma has customized products in its product portfolio. However, the pricing capability development project did not concern the customized products.

4.5.1. Alfa

Alfa produces sealing compounds for the construction and infrastructure industry. Similar to the other studied embedded cases, the products are sold in the highest price segment, at prices 10 to 20 percent higher relative to competition. Alfa is the market leader on the West European market, with a market share between 30 and 40 percent and, just like the other four cases, Alfa acts on a mature market.

The product portfolio consists of approximately 650 non-customized products and 1200 customized ones. Similar to the other embedded cases, Alfa differentiates its products relative to competitors through technical service, R&D, the ability to offer a wide product portfolio, long-term customer relationships and, lastly, the quality of the product material.

Alfa employs approximately 200 people, and consists of three sites located in the same geographical region in central Europe. The three sites were formally independent and competing actors, but were brought together by Technologica as the shared owner in 1997. The sales force consists of six outdoor sales representatives and approximately the same number of indoor sales representatives. Sales in 2010 were nearly 30 million Euros and profitability is good compare to industry average with an EBIT margin of 13 percent in 2010.

Roughly 3000 inquiries are handled each year. 80 percent of the customer base is within the construction sector and the remaining customers are found within the transportation and agriculture industry. The customer base, consisting of approximately 700 firms, is a mix of larger, international firms and smaller, regional players. The customers have a relatively high bargaining power, since the market is mature and the cost for changing to a competitor is low. For that reason, the pressure to reduce prices is high. Since 60 to 70 percent of the total product cost is raw material, highly volatile raw material prices are one of the main challenges for Alfa. For example, raw material costs increased by 38 percent in 2011. Considering that no official raw material index exists, profitability in long-term contracts is difficult to secure.

The competitors are generally smaller players competing within somewhat smaller geographical regions, and offering relatively smaller product portfolios. As a result of the customers' strong bargaining position, several competitors have, during the last couple of years, been either acquired or forced to close down.

4.5.2. Beta

Beta is located in North America and produces engineered fabrics for the military, transportation, aerospace and industrial sectors. Each year 1500 products are sold to between 800 and 1000 customers in North America, making the company the market leaders on the North American market. Between 20 and 25 percent of the products are non-customized, mainly spare parts, and the remaining products are customized.

Similar to the other embedded cases, Beta prices its products in the high-end price segment. According to the sales manager, Beta is considered by the customers to have both the highest quality but also the highest prices. The sales manager explains the business idea as:

“Our part of the business is the high-end engineered products. People come to us when they can’t find anything else off the shelf that works. Our market is the most expensive parts. Things where the customers don’t have alternatives.”

Beta has an annual growth of between one and two percent, which, due to the mature market, generally is the result of market shares being taken from competitors. The turnover is 60 million USD (2009) and the profitability is good compared with industry average. The unit was, prior to the acquisition by Technologica in 2007, owned by private equity for 15 years. Since Beta has been in the control of different private equity firms throughout several years there has, the sales manager says, historically been a large focus on cost cutting and rationalization.

The number of employees is approximately 240, all located in North America, and the sales force consists of six sales representatives. Each sales representative is responsible for a different customer segment consisting of between 100 and 200 customers, and each one is selling for approximately 10 million USD per year. Working together with the sales representatives are, also, four product developers, who are all involved in the process of setting prices. The sales representatives all hold a Master of Science in either business or engineering.

Beta’s key customer is the US military, which purchases for approximately seven million USD annually. Besides the military, the customer base consists of many smaller players purchasing for less than a million USD each year.

There are not many competitors in the same high-end premium product segment as Beta and most of them are smaller, family-owned businesses with an

annual turnover of between one and two million dollars. According to the sales representatives, due to the small size of the competitors, Beta is experiencing fairly low pressure for price reductions, at least concerning the customized products. Thus, the smaller size of the competitors makes it difficult for them to compete on price. The sales representative said:

“There are a couple of items that we have competition on, that they [the competitors] are making what they would call a direct-replacement item. For these items, we have essentially got in with a price-matching strategy. But, for the most part there isn’t [pressure to reduce prices from competitors]. [...] With the limited amount of competition on the market place, the advantages of our material outweigh the cost, so they [the customers] do buy [despite price increases].”

However, the pressure for price reductions is instead coming from the US military. The downside with supplying them is the maximum profit margin restriction of 30 percent, enforced by the US government. If the US military suspects that Beta is making more than 30 percent profit, they have, as a part of the purchasing contract, the authority to impose financial audits. This might prevent costly, radical innovations. One of the sales representatives explains:

“If you have some cutting-edge technology and are trying to make 50 percent. As the government has the ability to do so, they will either copy it and not necessarily pay for it, for the common good of the country. Or there will be some very strong pressure to reduce your margin.”

Beneficial from a competition point of view for Beta are the heavy transactions costs the customers are facing if they decide to shift to a competitor, since that might force the customer to make costly changes in their manufacturing facilities, which could amount to several hundred thousand dollars. Typically, a price reduction of at least 10 percent is required in order to motivate a customer to change to a new supplier.

The manager of the business area to which Beta belongs admitted that, prior to the development project, he was not aware of the customers’ weak bargaining power due to the heavy switching costs and, thus, the possibility to increase prices without losing customers. He told the story of how they previously had tried, without any success, to attract new customers by offering them lower prices than those of their competitors. The wake-up call, he said, was when they realized that the customers’ main reason for not changing supplier was the switching cost this would cause, not the prices per se.

Due to the niche products that Beta offers, the customers are often unable to find market data and similar information about the products. The sales manager explained:

“There isn’t data for the niche end of the market and we try to avoid that also. We work very hard to make sure that there isn’t any index for our kinds of materials, so that a commodity buyer can come in and say; ‘Well the index for this material is this and you’re up here, this is where you are supposed to be because this is the index’. There is no index. They can’t compare us with an industry standard.”

Due to the high level of maturity of the industry, the frequency of new products being launched is limited to once or twice per year. The majority of the products sold are based on technology that has been around for several years.

4.5.3. Gamma

Gamma is the global market leader within its specific product segment. Nearly 60 percent of total sales are in Europe (2011), 20 percent in North America and the remaining in Asia. Gamma produces sealing compounds for the industrial, aerospace and automotive industries. Similar to the other embedded cases, the industries in which Gamma acts are mature and the products are priced in the highest price segment.

In comparison to both Alfa and Beta, Gamma is much larger both in terms of turnover, number of employees, geographical cover, and range of products. In 2011, turnover was approximately 6 650 million SEK and the EBITDA margin was 23 percent, which is high relative to industry standard. Gamma employs approximately 5300 (end of 2011), of which 400 are employed at the head office in central Europe. The number of national market offices is approximately 50 and the number of manufacturing sites is 23, located in Europe, North America and Asia.

The product portfolio consists of more than 350 000 items. Celling compounds sold to the manufacturing industry are the largest product category, constituting nearly 60 percent of total sales. The transportation and vehicle industry makes up for approximately 25 percent of total sales, the aerospace industry stands for approximately 10 percent and the remaining are divided between agriculture and offshore oil and gas. Approximately 70 percent of the

products are own manufacturing, the remaining is resale from suppliers. Roughly 50 percent of the products are customized.

Contrary to the other embedded cases, the sales force at Gamma consists of mainly indoor sales representatives, each responsible for a certain number of customers depending on the volume each customer purchases annually. The sales representatives are placed desk-to-desk with technical expertise, in order to facilitate quicker responses to inquiries from customers. Product managers are functioning as the link between the sales representatives and manufacturing and, thus, coordinate the information between the market offices and the manufacturing sites. The customers range from smaller, regional manufacturing firms that purchase celling compounds for less than 100 Euro annually to bigger, global firms within the manufacturing industry that purchase for large amounts each year. The sales representatives usually visit their biggest customers once or twice each year, sometimes together with a product engineer.

The character of the customer relationships differs. Some customers, mainly those purchasing the customized products but also some of those who buy non-customized products, have been loyal to Gamma for many years, sometimes for several decades. The price sensitivity among the customers depends on their industry. For example, the customers within the aerospace industry are less price sensitive than the kitchen supply manufacturers. However, generally speaking, the customers are relatively price insensitive, partly because the cost of Gamma's products comprise a small fraction of the customer's total cost of production. Additionally, the potential consequences if one of the products that Gamma offers breaks might be severe and costly since it might cause a complete standstill in production. Since Gamma offers high-quality products that are less likely to break, than the competitors' products, Gamma is able to achieve relatively high gross profit margins, often around 30 percent. Yet, bigger customers purchasing larger volume are in a stronger bargaining power position than the small customers. Due to the high maturity level of the market, the customers are able to quite easily benchmark the prices and the products with the competitors. Also, Gamma are experiencing that increasingly more customers are concentrating and centralizing their purchasing department, in order to improve their bargaining power.

Similar to Delta, the competitors are generally larger global, firms. For example, three of the biggest competitors declared a turnover in the range of six to ten billion Euros (2011). All three sell their products worldwide and have operations in 35 to 60 countries.

4.5.4. Delta

Delta is a global producer of tires and wheel systems for agricultural and forest machinery. Similar to the other embedded cases, Delta acts within a mature industry. Western Europe is the largest market, accounting for nearly 70 percent, North America corresponds to approximately 15 percent and the remaining is divided worldwide. Delta is the second biggest player on the European market for larger tires for agricultural machines, with a market share of 25 percent.

Delta has a staff of approximately 2500 (end of 2011), of which most are employed in Southern Europe where the head office is located. The turnover was approximately 4 000 million SEK in 2011 and EBITDA margin is good compared to the industry average, nearly 13 percent in 2011.

The product portfolio consists of approximately 300 articles and the products are priced in the high-end price segment. The most profitable product segment is tires for agricultural machines. The highest priced tires, sold at 200 Euro per piece, are also the largest tires with a diameter of two meters.

Delta uses two sales channels: 1) individual sales representatives at the head office responsible for the contracts with the twelve global, own equipment manufacturers (OEMs), and 2) national market offices responsible for selling spare parts to regional dealers. Also, the sales force consists of two different categories of sales representatives; the first comprising those sales representatives that visit the customers with the intention to provide after-sale support and to give them reasons for asking for just Delta's products from their dealers. These sales representatives usually have their background within engineering. The second category of sales representatives consists of those responsible for the contacts with the dealers. They usually have their background within sales.

Fifty-five percent of the tires are sold to OEMs that produce tractors, forestry machines and forklifts. Even though some tires are developed jointly with the OEMs, none of the products are customized for individual customers. The limited number of OEMs, the large turnover each OEM constitutes and the long-term customer relationships motivate that an individual sales representative at the head office is assigned to dealing with each OEM. The remaining 45 percent of the products are spare parts sold to dealers. The dealers are generally smaller, local players that sell within a limited regional area. Often, the regional dealers are a part of a national chain. National market offices are responsible for serving the dealers.

The OEMs are generally less price sensitive, partly because the tires constitute a relatively smaller cost of the total machinery and partly because the functionality of the tires is a key buying criterion for the customers. On the contrary, the dealers are quite price sensitive since they often benchmark the prices with competitors. Due to the high maturity level of the market, the competitors offer similar products. Yet, the small volumes purchased by each dealer and the general reluctance among the competitors in the highest price segment to engage in price wars means that the bargaining power of the dealers is relatively weak.

The main competitor is a global manufacturer of tires, with a market share of approximately 30 percent. Two other global tire manufacturers each answer for approximately 15 percent of the market. Thus, similar to Gamma, Delta's competitors are bigger, intentional players.

4.5.5. Epsilon

Epsilon is the global market leader within the market of high-technological products to the offshore oil and gas industry. Total sales amounts to 300 million Euro, the profitability is high compare to industry average and the number of employees is approximately 1 200 people, divided between the organization's five different sites in North America and Western Europe.

A large share of the products, approximately 80 percent, is more or less purely customized, albeit that the core technology is the same and modules are used to a different extent. Similar to the other embedded cases, Epsilon sells its products in the high-end price segment. The prices are approximately five to ten percent higher than those of the competitors. According to the sales representatives, the customers pay extra because of the high customer value and the extra service as well as convenient service in the sense that the company fulfills the functions of a one-stop shop. Ninety percent of total sales are to the oil and gas industry and the rest are divided over a variety of other markets such as renewable energy, marine and aerospace. Approximately 4000 inquires are handled each year.

Roughly 90 percent of the total turnover stem from a handful of big customers, whereas the remaining 10 percent are derived from a large number of small players. Since the industry is mature, the customer base is relatively stable. If a customer's customer specifically asks for Epsilon's products, the bargaining power of the customer is weak. Since situations like these often occur, the

customers are in a weak bargaining position, despite the small numbers of customers. Generally, the customers are less price sensitive, partly because there is a lot of money in their business and partly because lower quality involves big risks in the oil business. However, due to the recession in 2008-2009, Epsilon has experienced an increased price sensitivity among the customers. The sales representatives believe that the previous low price sensitivity resulted from the customers being confident that they were able to pass on their costs to their customers and, thus, secure a good profitability. During the recession, the following two factors affected the market: Firstly, the oil price, which was very low, and, secondly, smaller companies were not able to get the funding needed to explore or develop oil fields. These two factors combined resulted in a heavy decline in demand. The situation of a shrinking inflow of orders resulted in management making the decision to lower prices, with the intention that it would keep the production running. Epsilon is now in the situation of increased competition, since the customers are more easily able to benchmark the prices with other suppliers.

The competitors are all smaller players offering a relatively limited product category within a more restricted geographical region. One competitive advantage for Epsilon is, thus, its comparatively wide product portfolio and greater geographical coverage.

In summary, the five embedded cases differ in terms of type of products they offer, how strong, or weak, their bargaining power is compared to their customers, which type of competition they face, size of customer base, the number of employees, total annual sales, number of articles, geographical coverage and which country the head office is located in (although they are all situated in either Western Europe or North America). However, common to all five embedded cases is that they act on mature markets in mainly Western Europe or North America, depend on close, long-term customer relationships, are positioned in the highest price segment, offer products that are in the mature stage of their lifecycle, are experiencing a growing pressure to reduce prices and are faced with the challenge of commoditization.

The following section presents the timeline for the studied pricing capability development projects.

4.5.6. Timeline for the studied pricing capability development projects

Figure 4 highlights the dates when pricing capability development was initiated at each embedded case and when the project was formally completed. The figure also includes the timeline for the group-wide pricing-excellence project.

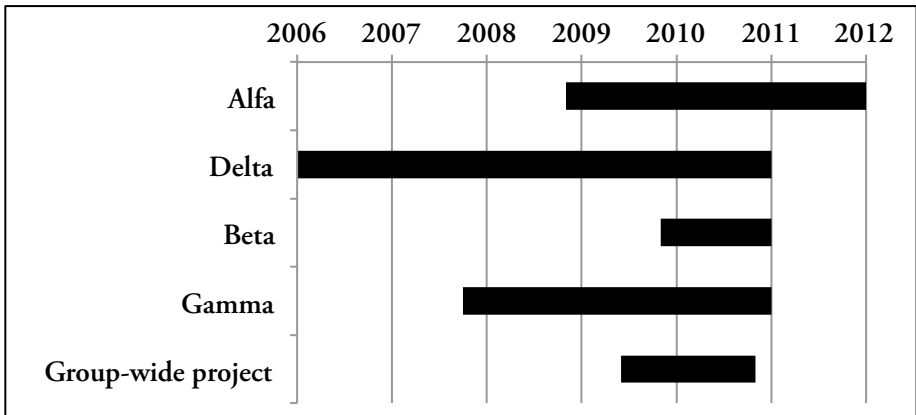


Figure 4 Timeline for the studied pricing capability development projects

As illustrated in Figure 4, three of the embedded cases (Alfa, Gamma and Delta) all had prior to the group-wide pricing excellence project independently initiated pricing capability development. Hence, prior to May 2009, these three embedded cases had individually and independently of each other decided to initiate pricing capability development. When the group-wide pricing excellence project was initiated in May 2009, Delta was in the final phase of their pricing development project, whereas Alfa and Gamma had just recently initiated the process of developing their pricing capabilities. As will be further elaborated in the following chapter, management at these three embedded cases had different reasons for initiating their respectively pricing development projects. According to management at these three cases, no communication had taken place between these three business units.

Beta was one of the business units for which the project leaders of the group-wide pricing excellence project decided to hire management consultants in order to develop and implement better resources and routines for pricing. In other words, the pricing capability development project at this particular unit was initiated in October 2009 as a result of the group-wide pricing excellence

project. As mentioned, the fifth embedded case (Epsilon) provided the case of reference. At Epsilon, management never initiated any pricing capability development project. For that reason, Epsilon is not included in the figure.

5. Pricing capability development at the embedded cases

The intention with this chapter is to provide a chronological presentation of the phase of pricing capability development at each embedded case. The ambition is to give the reader an overview of: 1) the pricing capability elements possessed by the embedded cases prior to each development project, 2) the reasons for initiating pricing capability development at each case, 3) the project of developing and implementing new pricing capability elements at each embedded case and the managerial actions that were taken in order to achieve pricing capability development, and 4) the pricing capability elements possessed by the embedded cases after the development projects.

The chapter starts with a section presenting the different reasons for initiating pricing capability development at each case. Thereafter, the pricing capability elements possessed by the embedded cases prior to the pricing capability development projects are presented. The empirical presentation of the pricing capability elements possessed before and after the development projects at each case follows the structure that was outlined in Table 3 (page 35). Yet, as the reader will note, the decision by management at each embedded case to implement new IT systems for pricing was a prerequisite for restricting the pricing authority (at Gamma and Delta), and the pricing autonomy (at Alfa and Beta), respectively. In other words, the decision to implement new IT systems led to substantial changes in the pricing organization. Also, the new IT systems enabled management at two of the embedded cases (Alfa and Delta) to implement new incentive controlling arrangements. Due to the close link between changes in the pricing organization and in the pricing information system, these two pricing elements are presented in the same sections. Consequently, the empirical presentations of the embedded cases' pricing capability elements are structured according to the following three building

blocks: 1) Pricing organization and pricing information system, 2) pricing skills, and 3) pricing strategy.

In the third section, the phase of pricing capability development at those four cases that decided to initiate pricing capability development is presented. As mentioned, pricing strategy is defined as the outcome of the firm's pricing skills, pricing information system and pricing organization. For that reason, the section presenting the phase of pricing capability development includes those actions that were taken by management in order to develop and implement a new pricing organization, new pricing information systems and new pricing skills, not a section specifically concerning the pricing strategy.

In the fourth section, the pricing capability elements possessed by the cases after the development projects are presented. Lastly, the perceived performance outcome from the pricing capability development projects according to management and sales representatives is presented.

5.1. Stated reasons for initiating pricing capability development

Table 11 summarizes the stated reasons for initiating pricing capability development and the individual(s) who initiated the project at each case. As seen in Table 11, the initial reason at all of the embedded cases, except Delta, was the assumption by management that the current resources and routines for pricing could be improved, which in turn could lead to improved profitability. In the case of Delta, management had identified the risk that the customers' willingness to pay would decrease as a consequence of the change of brand. For that reason, management decided to initiate pricing capability development in order to prevent price decreases. The following sections elaborate on the different reasons for initiating pricing capability development at Alfa, Beta, Gamma and Delta.

Table 11 Reasons for initiating pricing capability development

Case	Initiator	Reason(s) for initiating the project
Group-wide project	Top management	Top management's belief that improved pricing resources and routines would improve profitability. The project owners at the head office decided on two objectives: 1) Create an internal global pricing reference group for exchanging best practices. 2) Establish pricing strategy/process excellence for each operating unit, for example KPIs, tools for pricing and training.
Alfa	Business unit manager	The newly appointed business unit manager identified several weaknesses regarding the current pricing routines and resources, such as lack of product and customer profitability analysis, inconsistent prices between sales rep., prices that were not optimized for different customers and weak pricing skills.
Beta	Product area manager (equivalent to CEO)	The reasons were three: 1) Due to the group-wide project, management at the head office identified that Beta's current pricing routines and pricing strategy had areas of improvement. 2) Management at head office believed that there was a potential for improved gross profit margins. 3) The market manager at Beta was positive to the project and had experience of value based pricing from previous employers.
Gamma	Business area manager (equivalent to CEO)	The reasons were two: 1) The business area manager believed that new pricing resources and routines would allow Gamma to better handle the increasing bargaining power of the customers. 2) The project team, appointed by the business area manager, identified several weaknesses, such as inconsistent prices between different sales representatives and prices that were not optimized for different customers.
Delta	Business area manager (equivalent to CEO)	The reasons were two: 1) Management saw the risk that an upcoming change in brand would result in customers changing to competitors or demanding lower prices. 2) The business area manager decided to focus on competitive price positioning and value based pricing in order to protect market share and profitability.

5.1.1. Alfa

In October 2008, a new business unit manager with an academic and professional background in sales and marketing joined the company. The first decision by him was to analyze the price setting, the product profitability, the customer profitability, the sales force organization and the character of the customer relationships. He found that several of the products were sold at a very low profit margin, some even below break-even. This was new information to management who never had analyzed product profitability and was thus not aware that some products were actually sold at a negative profit margin.

Thus, the first thing the new business unit manager concluded was that the Alfa had weak control over product and customer profitability. For that reason, management's main goal with the pricing capability development project was to establish better procedures for identifying and monitoring gross profit margins, through new routines and resources for product and customer profitability analysis. Additionally, the new business unit manager observed that the employees in general and the sales force in particular had, in his eyes, a poor understanding of "what [Alfa] stands for and offers to the customers". He said:

"All companies say: 'We have know-how'. But, what does 'know-how' mean? In which specific area? Which specific know-how? What does it mean to a customer? How can we benefit from that? This we had to figure out."

For that reason, he decided to evaluate the routines and resources for pricing at Alfa and, subsequently, initiate a pricing capability development project.

5.1.2. Beta

During the autumn of 2009, management at Technologica's head office decided to hire management consultants to carry out pricing capability development projects at three selected business units, Beta being one of them. As a result of the group-wide pricing excellence project, management had realized that Beta's current routines and resources for pricing could be substantially improved and developed. Contrary to the other embedded cases, the management consultants were financed by Technologica's head office, not Beta. Thus, in contrast to the other embedded cases, the initiative to perform a

pricing capability development project at Beta came from the head office of Technologica, not from management at Beta.

According to the manager of the business area to which Beta belongs, the decision to initiate pricing capability development was made for the following three reasons: 1) Beta was considered suitable for value based pricing, 2) management believed that Beta had potential for improved gross profit margins, and 3) the sales manager at Beta was positive to the project and had experience of value based pricing from previous employers in North America. Thus, management at Beta agreed to support the project since at that time they were having difficulties with profitability and believed that the implementation of value based pricing could be the key to improved profitability. Consequently management's main ambition with the pricing capability development project was to implement value based pricing and, thus, improve profitability.

5.1.3. Gamma

During the summer of 2007, the business area manager of Gamma decided to initiate a project with the purpose of evaluating the resources and routines for pricing. As a result of the mature market, Gamma was experiencing that the customers, especially the larger, global ones, were gaining an increasingly stronger bargaining position. A growing number of the global customers were centralizing their purchasing departments in order to enhance their bargaining power. Also, due to intensive competition and a more mature market, Gamma faced the challenge of commoditization. The business area manager, who had been employed by Gamma for more than 30 years, believed that the current practice for pricing had several areas for improvement. Improved routines and resources for pricing would, management believed, enable Gamma to protect and improve the profit margins. When evaluating the prices, management observed that the prices for identical offerings to similar customers differed substantially between sales representatives. For that reason, the main goal of the pricing capability development project was to establish more consistent prices and, thus, improve profitability.

At Gamma, the pricing capability development project concerned only the non-customized products, which corresponds to approximately 50 percent of total turnover, not the customized ones. As mentioned, Gamma had a total turnover of approximately 6 650 million SEK (2011), a product portfolio that consisted of approximately 350 000 items, 5300 employees and a local presence

in 49 countries. Hence, the fact that Gamma was much bigger than the other embedded cases, both in terms of turnover, number of employees, geographical cover, and range of products meant that the pricing capability development project at Gamma, compared with the other cases, involved more people, more products, more customers and more departments even though it did not cover the customized products.

5.1.4. Delta

In 2001, Technologica acquired Delta by taking over a division of a competitor. A part of the acquisition agreement was that Technologica was given the permission to license the competitor's brand until 2010. For that reason, management at Delta launched in 2006 a brand switch project with the purpose of rebranding the products. In 2009, all of the products had been rebranded and at the end of 2010, when the license expired, the project was finished.

According to the business unit President, the competitor from which Delta was acquired was recognized as a premium brand, whereas the brand 'Technologica' was more or less unknown within Delta's product segment. Thus, before the brand switch project was launched, management at Delta had identified the risk that the customers would request price reductions, as a consequence of the change of brand. For that reason, the purpose of the rebranding project was, in addition to changing the logo, to protect the market share and to maintain the price levels. Hence, in order to maintain profit margin and sales volume, management initiated a project with the purpose of developing Delta's resources and routines for pricing. The purpose of the pricing capability development project was consequently twofold: 1) to protect the market share, which in 2006 was 12 percent on the European market, and 2) to maintain the price level, which on average was 8 percent below the competitor in the highest price segment. As a result of management's strong focus on using prices as a means to signal to the customers that 'Technologica' was a premium brand, their main ambition with the pricing capability development project was to achieve competitive price positioning, thereby protecting the profit margin.

The following section presents the pricing capability elements possessed by the five embedded cases, prior to the development projects.

5.2. Pricing capability elements prior to development projects

This section presents the pricing organization, pricing information systems, pricing skills and pricing strategy of each embedded case prior to the development projects. As the reader will note, at this stage, all cases delegated the pricing authority to the individual sales representatives who had considerable autonomy to decide how to calculate, decide and communicate the prices. Few or no formal pricing tools were practiced; the pricing strategy at each case was a tradition of cost based pricing, and cost control was in general poor. When deciding and communicating the prices, the sales representatives relied largely on their individual experience, customer history and customer response, sometimes with the guidance of gross profit margin targets.

5.2.1. Pricing organization and pricing information system

As mentioned, all cases delegated both the pricing authority and the pricing autonomy to the individual sales representatives. None of the cases had any specific IT support for pricing. Two of the cases (Beta and Gamma) rewarded the sales representatives based on gross profit margin contribution. These two cases also provided their sales representatives with guidelines for minimum and maximum gross profit margin. Regarding the other three cases (Alfa, Delta and Epsilon), the sales representatives were neither assessed nor rewarded based on gross profit margin contribution. The following sections present the pricing organization at each case prior to the development projects.

Alfa

The pricing authority was delegated to the individual sales representatives who were assigned different selected parts of Alfa's product portfolio. The sales representatives had considerable autonomy to decide how to calculate prices and handle the customer negotiations. When deciding prices, the individual sales representatives were guided by guidelines regarding the minimum gross profit target margin and estimated product cost. Identical guidelines regarding target margin were used for all products and customers. Usually, the sales representatives relied on their individual experience, customer history and customer response.

Prices were not coordinated between sales representatives and sales regions. Often, prices for identical offerings to similar customers within identical market settings differed substantially between the individual sales representatives. This enabled some of the bigger customers to play different sales representatives and market offices against each other and make them compete on price without the sales representatives, nor their managers, realizing it.

According to the business unit manager, the sales representatives placed too much focus on volume and to little on profit margin. He believed that this was partly explained by the fact that the sales representatives were not paid any bonus based on their individual gross profit margin achievement. All the employees received instead the same annual bonus calculated on Alfa's overall financial result.

Prices were changed once a year when they were all increased with an identical percentage, estimated according to the total increase in production costs. Since raw material prices are historically volatile (the 38 percent increase that occurred in 2011 was not an exception), one of the main challenges for Alfa was to handle the volatile raw material prices. Thus, the static prices, up-dated only once a year, resulted in many products being sold at very low, sometimes even negative, profit margins. Hence, as indicated, product profitability was not analyzed at this stage, neither was customer profitability. Additionally, management identified that customer profitability differed greatly between the customers.

Despite the annual increase in prices according to the average increase in production cost, many of the long-term customers enjoyed unchanged prices for several years. According to management and the sales representatives, the close, long-term relationships were the reason why prices often remained unchanged. When the sales manager, hired by the business unit manager as a part of the pricing capability development project, joined the company he identified the risk that the close relationships were going on without being evaluated in terms of profitability. He explained:

“The first thing I saw [when joining the company] was that we have some very, very old relationships. We have also colleagues that have been with [Alfa] for 20, 30 years. They have only seen one company in their whole life; they do not know what has happened outside. The problem with these long relationships, as I see it, is that nobody is asking, in a continuous way; ‘is this the right kind of partnership?’ Because it is totally different if I know somebody a long time [...] I always ask the

question; ‘why they are buying from our company? Could it be that we are the cheapest, *too* cheap?’ The problem was, in the past they never talked about price increases, for years sometimes, and this is a big, big mistake.”

Beta

The pricing authority for the customized products, which correspond to approximately 80 percent of total turnover, was delegated to the individual sales representatives who used their experience and gut feeling when setting the prices, guided by a gross profit margin target. The pricing authority regarding the non-customized products was centralized to the sales manager who controlled the list prices. This ensured that all customers were offered the same prices for the non-customized products, with discounts based on order volume.

The individual sales representatives decided on the prices for the customized products based on a combination of individual experience, gut feeling, customer history, customer response, gross profit target margin and estimated product cost. They were assessed and rewarded based on individual gross profit margin achievement. However, according to the sales manager, the sales representatives often put too much focus on sales volume rather than profit margin.

According to the sales manager, beneficial for Beta is the fact that no such thing as a raw material index exists. In other words, the customers are not able to request lower prices by pointing at a raw material index that says that the price should be at a certain level. One of the sales representatives explained that since the customers have limited insight in the products’ cost structure, they often find it difficult to motivate price reductions:

“This is not a very sophisticated market when it comes to our buyers, our customers don’t have a great ability to forecast and they really don’t have the sophistication that I have encountered with other business. [Customers in other business] have purchasing agents walking in and really knowing as much about your product’s manufacturing cost as they know about their own. We get a lot of people who come in and say; ‘we just have to have a lower price’. And when you start asking them to justify why it should be lower they really don’t have the ability to do this.”

Hence, when management at Alfa complained about the lack of a raw material index, arguing that it makes it difficult to raise prices when raw material costs

increases, is management at Beta instead benefiting from the lack of raw material index. Presumably, the reason is that Alfa's customer is in a better bargaining position in comparison with the situation of Beta's customers.

Gamma

Prior to the pricing capability development project, the pricing authority was delegated to the individual sales representatives who, when setting prices, were guided by a gross profit margin target and estimated cost of product. The sales representatives, who had considerable autonomy to decide how to set prices and handle the customer negotiations, were assessed and rewarded according to individual gross profit margin achievement. Similar to the other cases, Gamma handles close, long-term customer relationships. At this stage, management relied on the sales representatives' ability to match prices with individual customers' willingness to pay based on insights gained through repeated customer interactions. One of the internal pricing experts explained how the sales representatives were expected to be able to set prices according to individual experiences and gut feelings:

“[As a sales representative] you need more or less two years to get really involved in a customer relationship. We don't have price lists, so they can only learn when they go through a historic learning process.”

Prices differed substantially between sales representatives and sales regions. As expressed by one of the sales representatives, if a customer would ask ten different sales representatives for the price of one particular product he or she could get ten different answers. This enabled some of the bigger customers to play different sales representatives and market offices against each other, making them compete on price, without the sales representatives realizing it.

Even though there are advantages with the close long-term customer relationships that Gamma often handles, such as a deep understanding for the customer's needs, Gamma also has some experience of disadvantages in terms of customer profitability. One of the sales managers said:

“The disadvantages with the long-term relationships are the sometimes 'gentlemen agreements' that are settled.”

Delta

As mentioned, Delta has two different sales channels, dealers, through which spare parts are sold, and own equipment manufacturers (OEM). The pricing organization and, thus, the sales representatives' pricing authority and

autonomy differ between these two sales channels. The prices to the OEMs are negotiated for each customer and agreement. Individual sales representatives at the head office are assigned for each OEM. The pricing authority for the OEMs is delegated to these sales representatives who, prior to the pricing capability development project, had the autonomy to decide how to calculate the price. The regional dealers are given price lists that, prior to the pricing capability development project, were issued by the regional market offices.

Since the different regional market offices prior to the development project issued their individual price lists, they had considerable autonomy to decide how to calculate prices and handle the customer negotiations. Guided by the product cost and a target margin, the prices were set based on customer history, customer response and the individual sales representatives' experience and gut feeling. Likewise, the individual sales representatives responsible for the OEMs used his or her experience when setting prices, meaning that the prices were largely based on customer history.

According to the marketing manager at Delta, one problem was that the individual sales representatives placed too much focus on revenue and competitors' prices rather than profit margin and customer value. The marketing manager explained:

“The salespeople always think of a market price, but the problem is that they cannot define the market price and they cannot determine the willingness of the customer to pay it. They are not capable of doing that. It is not easy and probably they are much more driven by the short-term so they want the product to be sold right away. So it's more difficult to understand. My opinion is that you have to be someone who says: 'You do that. It is not a question, you do that. If it doesn't work then come back to me and say that it doesn't work but first you do that'.”

The price levels between the different regional market offices and sales representatives were not monitored; neither were their performance in terms of gross profit margin achievement evaluated. Often, prices for identical products to similar customers were inconsistent both between different customers and different sales regions.

Nevertheless, the organizational culture was already prior to the pricing capability development project characterized by an awareness of pricing as a strong lever for profitability. This is illustrated by the following words from one of the sales managers who joined the company in 2005:

“When I landed here I found already a good pricing culture, it was already something that was in the company’s walls. It was a little less structured but already here. So it was easy to go further and implement all the tools we have today because the organization was ready for it.”

The organizational awareness and commitment to pricing is moreover captured in the words from another of the sales managers:

“There is a focus [on pricing] that comes from the top, no doubt about that. That is the only way because pricing needs time and resources. So if the support is not coming, the commitment from top management, you cannot have resources. That means money and people. The time that you dedicate to prices means that you cannot dedicate to something else. So if it is not the priority of the company, it cannot be the priority of the employee. I think it is quite easy to understand.”

Epsilon

The pricing authority at Epsilon is delegated to the individual sales representatives who have the autonomy to decide how to calculate prices. Similar to the other cases, prices for identical offerings to similar customers in similar market settings differ often among the sales representatives. One of the sales representatives, who is working with the customized products, explains the price setting as:

“Setting the price is a trial and error thing and it is also the ability to understand what’s been going on previously with the customer.”

In a similar manner, one of the sales representatives for the customized products says:

“There is really no rhyme or reason for how we price our work, it is a lot of experience based. [...] We know the cost basis and we just add a margin to it.”

The non-customized products, constituting 20 percent of the product portfolio, are sold by indoor sales. These products have over the years become closer to resemble commoditize, mainly because the industry has matured. Since the products have become more like commoditize, the intention has been to achieve prices that are more consistent across customers. As a result, price lists for the non-customized products were introduced a few years ago, with the intention to simplify the price setting for the sales representatives. The non-customized products are generally sold for much lower amounts than the

customized ones, in the price range between 200 and 400 GBP. The intention with implementing price lists for the non-customized products was both to provide the customers with fixed prices, and to make it easier for the sales representatives to set a price on these offerings.

The prices regarding the customized products are set based on customer history and guidelines regarding target margins and volume discounts. Since the prices of the customized products are negotiated for each customer order, the pricing authority is delegated to the individual sales representatives, who rely on customer history, estimated cost of product and their gut feeling. Problems evolve when a customer happens to talk to a sales representative other than the one he or she usually talks to, and is given another price compared with that for previous orders.

The sales representatives are organized according to geographical regions, not customer or product segments. The benefit with this is that each sales representative knows their specific region and what the norms are for doing sales in their assigned region. However, the problem is that most of the customers are global. Thus, sometimes the customers get confused since they are not given one single interface with Epsilon, but instead many different ones depending on product and which region where the product at hand is purchased.

The sales representatives' individual performances are not assessed. Instead, all the employees are given the same bonus, which is calculated annually based on overall profitability, safety achievement, on time delivery and cash flow.

5.2.2. Pricing skills

The following sections present the pricing skills of each embedded case prior to the development projects. As will be elaborated, the cases practiced only a limited number of formal pricing tools prior to the pricing capability development project. As a substitute for using pricing tools, the individual sales representatives relied on historical prices, customer history, customer response and his or her experience and gut feeling when setting prices.

Alfa

When calculating the prices, the sales representatives added a target profit margin to the estimated product cost. Since Alfa at this stage had poor ability to estimate product costs, the sales representatives described how they often felt unsecure when setting prices since they were not able to trust the information they had regarding the cost of the products. In the situation of a customer asking for a customized product, the sales representative handed over the customer inquiry to the product designers who suggested a product design. The sales representative then calculated a price by adding a gross profit margin, based on a combination of a target margin and his or her gut feeling, to the cost of the product suggested by the designer. When asked how they were able to decide which profit margin to add for a given customer, one of the sales representatives, who has been with the company for 35 years, answered:

“From my point of view, we didn’t have the feeling for which price was OK. Sometimes it worked and sometimes it didn’t work.”

If the customer asked for lower prices, the sales representative either reduced the price or contacted the product designers with a request for a product with a lower production cost. According to the sales representatives, the result of this practice was that the discussions with the customers mainly evolved around the price and not the product design, nor the choice of material per se.

Additionally, the sales representatives’ skills for calculating prices and handling customer negotiations were relatively weak. They lacked sufficient training in how to explain the customer value. The business unit manager observed how the employees were unable to sufficiently communicate and motivate the customer value of Alfa’s products. He explained:

“Just an example, in the crisis situation 2008 and 2009, a salesman comes to a customer, the customer says: ‘You are providing me all the time with the highest prices so I will never order from you’. He [the customer] didn’t say what is important, the price or being a safe delivery resource. During the crisis you need a financially strong partner to develop the right material, the right [product and material], at the right time. This is long-term added value. This, maybe simple thing that I am describing, has not been used by the salespeople because they are not trained, not coached, not asked to use it. I guarantee, many salespeople would say to the customer: ‘Yeah, I know the price is too high, what is the price you need?’ This is my experience, I can’t say everybody is like

this, of course not, but some people work like that. To eliminate the weaknesses and make people more convinced and more self-confident to present [Alfa], I am saying; '[Alfa] stands for something'. When you go through the people in the organization and you ask them: 'Why are you working for [Alfa]?' You will receive a lot of answers. Probably you will receive the answer: 'No I don't really know why I'm here. OK, it pays my salary but that's it.' There is sometimes no spirit, no enthusiasm, no: 'I'm proud to be working for [Alfa]. This is the awareness you have to create, otherwise you will fail to sell the concept, the package at a better price. [...] It is about making the salesperson himself convinced in what [Alfa] stands for and the added value that is provided. The salespeople need the self-confidence in order to know what [Alfa] stands for, they need to be proud of working for [Alfa] and stand behind the values of what they are selling."

According to the business unit manager, besides weak knowledge of the customer value offered, the sales representatives placed too much focus on revenue and volume rather than profit margin. The sales manager explained how this could be problematic in customer negotiations:

"[When the customer is offered a price] the customers say normally; 'No it's too expensive', and then the question arises: 'Oh, what can we do?' and everything is always moving round this price, nobody is talking about quality, or added value. We have to point that out and show it to the customers."

Beta

The sales representatives at Beta relied on their experience and gut feeling when setting prices. No formal pricing tools were practiced. However, contrary to the management at Alfa, the sales manager at Beta believed that the sales representatives were already, previous to the pricing capability development project, relatively good at pricing, due to the experience they had gained from working many years, often several decades, within the industry. Moreover, the sales representatives possessed deep knowledge about both the products and the needs of the customer, due to long-term customer relations. The long-term relationships are especially true for the larger, customized products that are offered to the US military or, more often, the military's suppliers, since only a few customers demand these applications. Hence, contrary to Alfa's large customer base, Beta's is somewhat small. For example, there are only two manufacturers of a particular type of military vehicle in the US, and they both

purchase from Beta. Consequently, the competitors are also handling long-term customer relationships. According to the sales manager, this can cause problems since the customers are often very familiar with the prices of the competitors and can use that knowledge in negotiations.

Gamma

Similar to the other embedded cases, Gamma's prices were to a large extent based on the individual sales representatives' experience and customer history. When asked what they based the prices on, the sales representatives responded "experience" or "feeling" and "market price". When asked to define "market prices", the answers were the following:

- "What I believe the customer is willing to pay."
- "What I feel the product will be sold at."
- "The price for which I can get the order from the customer."
- "The price that the competitors are selling at."

In addition to providing the sales representatives with guidelines regarding gross profit target margins, Gamma practiced customer segmentation. Thus, Gamma categorized its customers into A, B and C segments, depending on profitability and annually purchased volume.

As mentioned, Gamma has, relative to industry standard, a high profit margin. Internal transfer prices are, according to one of Gamma's two internal pricing specialists, one of the reasons for their historically high level of profitability. Both the market offices, responsible for sales, as well as the manufacturing offices are organized as profit centers. They are both assessed on profit margin achievement and none of them are aware of the exact margin of the other. Besides motivating the market office to compete for a high profit margin, and encouraging the manufacturing sites to cut costs, the benefit of the internal prices is, according to the pricing specialist, that the sales representatives never see the profit margin achieved by the manufacturing sites. According to the pricing specialist, this creates a mind-set among the sales representatives of not ripping off their customers with unethical high margins, since the sales representatives only see the profit margin that is appropriated by their market office. Hence, they are not ashamed of taking out the "double margin", since they are simply not aware of its size. The negative side of this, according to the pricing specialist, is the tension that it creates between marketing and manufacturing, both being aware of the fact that the other one takes out

margins, and with none of them able to influence the margin of the other. Furthermore, there is also the risk of losing potential customers. This could happen if the market office tells the customer that they are unable to lower their price, because a price deduction will erase their margin. In some situation, some declined larger customer orders would had been profitable if also the manufacturing division had lowered their margins and the customer, as a result, had accepted the price.

Delta

Delta practiced two pricing tools prior to the development project: product profitability was analyzed for each different product category and customer profitability was analyzed for the larger, global customers. However, the price levels between the different regional market offices and sales representatives were not monitored. The national market offices had the autonomy to decide how to calculate the prices in their individual regions. According to management, no pricing tools were to their knowledge practiced by any of the national market offices. Similar to the other embedded cases, the prices were decided on a combination of customer history, the sales representatives' individual experience and customer response.

Epsilon

Epsilon is not using any specific pricing tools, not at least in any formalized way. The prices are set based on product cost and the experience of the sales representatives, guided by restrictions regarding discounts and profit margin. The sales representatives have not been given any formal training in how to communicate the product value to the customers and are thus using their experience when handling customer negotiations.

When deciding prices, the sales representatives consider first the cost of the product and the price the customer at hand paid for previous orders. In the next step, the sales representative estimates the reliability of the historical data, mainly according to when the last purchase was made, and whether the customer is likely to expect the price level to rise, for example, due to inflation. One of the sales representatives explains:

“Maybe we have information about jobs that we lost and that we were given feedback about. Or the competitors' prices, which we can use when setting the price. Or whether they consider other competitors or are just talking to us, which decides if we can act more relaxed or not. Most often, we offer them the same price as the last time, because we

don't want to create problems. Sometimes mistakes happen, when a salesperson not used to dealing with the customer offers a different price from what the customer is used to get from the salesperson that the customer normally talks to."

As illustrated by the quotation above, in order to avoid price discussions with the customers, the sales representatives stick to the price that the individual customers have paid for similar, previous orders.

If the customer is new, the sales representatives are guided by both gross profit margin targets and price floors policies, which differ depending on product type. Thus, when handling a new customer or the situation of a customer buying a product that is different from previous purchases, the prices are set based on a combination of the sales representative's gut feeling, target margin and customer response. As expressed by one of the sales representatives:

"If we have no customer history, we don't know what their expectations are, then really we haven't got anything to go on. You might have a general feeling that maybe a certain region is a market where you have to be really competitive. Or you might have a feeling that it's a new market and maybe you can be quite relaxed with your pricing. But usually at that point, you come back to the cost plus the margin and we use the margin to regulate whether we going relatively high or relatively low compared to an average margin figure."

Epsilon does not perform any customer segmentation or structured approach to analyze customer profitability. One of the sales managers expressed it as:

"For every customer, we have different profitability for sure. I mean, it's historic. But we've got no way of tracking it either because we haven't got a sophisticated enough system to do that for us."

The market manager explains that the close and long-term customer relations have resulted in good know-how about the customers' needs. One of the sales representatives explains:

"It is all about knowing the customer, the individual buyer and how he works. The potential risk is that the buyer moves on."

Some of the employees are on their own initiative gathering information about competitors from web pages, trade shows and customers. However, no formal procedure exists on any organizational level. Thus, one risk is that a competitor

launches a competing product at a low price, without Epsilon being aware that they might risk losing market shares. One of the sales representatives explains:

“In terms of competition, we absolutely need to understand what our competition are doing, not so much their strategy, but what they are doing in terms of new products and in terms of developing products that match our products. Because historically, we had a really strong range of products and we found what we call ‘me-too-competitors’ entering the market place and then starting to make a similar range of products to ours. The danger is that these competitors coming in to the market place making a similar product range are starting to develop them faster than us in which case they gain an advantage, a technical advantage.”

Due to the recession, management at Epsilon decided to lower the prices in order to maintain volume. The current challenge for Epsilon is consequently to get the prices back to the same level as before the recession. When asked how to act in order to raise the price level, the sales representatives answered that the challenges were to both explain the higher costs to the customers, for which some customers demand evidence, and to also explain that the lowered prices were temporary and that they are not able to keep them in the long run. According to the sales representatives, some customers accept the arguments for price increases since they were in the same position themselves and are also trying to get back to the previous price levels.

When more or less all of the customers considered the price to be the most important factor during the recession in 2008-2009, many of them afterwards have instead mainly focused on time for delivery. As time for delivery has become the most important buying criterion, the customers are, according to the sales representatives, willing to pay premiums for this. Management relies on the sales representatives to be able to identify this premium and have not taken any initiative to estimate and quantify it.

Having Technologica as the parent company was an advantage during the credit crunch in 2008 and 2009 since that made Epsilon “the least risky solution” compared to competitors that had no parent company to back them up financially if they were ending up in a severe financial situation. However, no price premium was added for this customer value (with the exception of potential individual initiatives among sales representatives).

5.2.3. Pricing strategy

Prior to the pricing capability development projects, at all the cases there was a tradition of a cost based pricing strategy. Considering that only one out of the five cases (i.e. Delta) analyzed product profitability, the cost control was relatively poor. In other words, the embedded cases lacked the ability to ensure that the cost of the products was covered (Delta being the exception). For that reason, it would be incorrect to say that they practiced a proper cost based pricing strategy, since its purpose is to ensure that the cost of the products is covered (see Guilding, Drury, & Tayles, 2005). Thus, the pricing strategy at the studied units at this stage is described as a *tradition* of cost based pricing.

5.3. The phase of pricing capability development

This section is intended to provide a chronological presentation of the different actions that were taken by management of each embedded case in order to develop and implement new pricing capability elements. Contrary to the previous case descriptions, the empirical presentation in this section is not divided according to pricing organization, pricing information systems and pricing skills. The reason is that many of the observed managerial actions resulted in changes regarding more than one pricing capability element. For example, all cases implemented new software for pricing. This enabled management to assess and reward the sales representatives on gross profit margin contribution, as well as to implement customer and product profitability analysis. Thus, in order to avoid repetition, the phase of pricing capability development of each case is presented chronologically and not according to pricing capability elements. Each case description starts with a table summarizing the pricing organization, pricing information system and the pricing skills before and after the development project, and the managerial actions that were taken in order to achieve changes.

5.3.1. Two different approaches for changing the pricing organization

Management at each of the embedded cases decided on different approaches for changing the pricing organization. Two of the cases (Gamma and Delta) changed the behavior of the sales representatives when calculating,

communicating and negotiating prices by restricting the sales representatives' pricing authority, whereas the other two cases (Alfa and Beta) changed the behavior through a restriction of the sales representatives' pricing autonomy. Pricing autonomy refers to the sales representatives' ability to freely and independently decide how to calculate, communicate and negotiate prices. This means the sales representatives' autonomy relative to management to decide which pricing tools to use or not to use and how to negotiate prices with customers. Pricing authority refers to the sales representatives' ability to independently decide which prices to offer the customers, such as granting discounts. Thus, a restriction of the pricing authority usually also results in a restriction of the pricing autonomy, whereas a restricted pricing autonomy does not necessarily include a restriction of the pricing authority.

As seen in Table 12, which illustrates changes in pricing organization at each case before and after the pricing capability development projects, all four cases restricted the sales representatives' pricing autonomy. However, management at each case made different decisions regarding pricing authority arrangements. Management at Alfa and Beta, respectively, decided to restrict the sales representatives' pricing autonomy, but only impose relatively smaller restrictions regarding their pricing authority. This was done by providing the sales representatives with training in specific pricing tools for how to calculate the price, such as tools for identifying and quantifying the customer value and analyzing competitors' prices, which they have to comply with when calculating prices, instead of relying on their subjective perception. Thus, the sales representatives at Beta have an extensive pricing authority (relative to the other three cases) also after the development project. Their pricing authority is only restricted regarding the non-customized products, which correspond to 20 percent of total turnover, and the price ceilings and price floors concerning customized products decided on by management. Similarly, the sales representatives at Alfa have a relatively extensive pricing authority also after the development project. Their pricing authority regarding the non-customized products, which correspond to 35 percent of total turnover, is restricted. Contrary to the sales representatives at Beta, their authority to allow discounts is relatively small. As mentioned, these two cases produce products that are often customized in close interaction with the customers. Since the prices of the customized products are negotiated for each customer and agreement, management decided that sales representatives at these two cases would still be responsible for the prices of these products.

Table 12 Organizational control systems before and after development projects (adapted from Eisenhardt, 1985)

	Behavior control		Outcome control	
	Before	After	Before	After
Alfa (customized products)		Sales reps.' autonomy to decide how to calculate prices and handle the customer negotiations restricted. Sales reps.' pricing authority restricted regarding the non-customized products and by new guidelines for gross profit margin.		Sales rep. assessed on profit margin achievement.
Beta (customized products)	Guidelines for min. profit margin	Sales reps.' autonomy to decide how to calculate the prices and handle the customer negotiations was restricted. Sales reps.' pricing authority restricted by the price floors and ceilings decided on by management.	Sales rep. assessed on profit margin achievement.	Sales rep. assessed on profit margin achievement.
Gamma (non-customized products)	Guidelines for min. profit margin	Sales reps.' pricing authority restricted, i.e. the pricing authority concerning the non-customized products was centralized and a restricted discount policy was implemented.	Sales rep. assessed on profit margin achievement.	Sales rep. assessed on profit margin achievement.
Delta (non-customized products)		Sales reps.' pricing authority restricted, i.e. the pricing authority concerning the non-customized products was centralized and a restricted discount policy was implemented. Sales representatives' autonomy to decide how to handle the customer negotiations restricted, i.e. pricing tools for how to communicate the customer value were implemented.		Sales rep. assessed on profit margin achievement.

The decision by management at Alfa and Beta, respectively, not to impose any greater restrictions regarding the sales representatives' pricing authority stands in contrast with the decision by the respective managements at Gamma and Delta. As illustrated by Table 12 on the next page, these two latter managements decided to restrict the sales representatives' pricing authority by centralizing the price setting and greatly restrict the sales representatives' ability to grant discounts. Thus, they decided to restrict both the pricing autonomy and the pricing authority of the sales representatives. As mentioned, these two cases, Gamma and Delta, offer non-customized products, in the sense that they are not adjusted for each individual customer. (To simplify, products that differentiated from competitors, but not adjusted for individual customers are referred to as "non-customized".) Consequently, the different character of the cases' respective products (i.e. customized versus non-customized) explained the decision by management of each respective case to either restrict both the pricing authority and the pricing autonomy, or only the pricing autonomy.

According to Eisenhardt (1985), behavior control is achieved by linking a reward system to the employees' behavior. In this study, no explicit reward system regarding the behavior of the sales representatives when calculating prices was implemented by any of the embedded cases. Moreover, the term pricing autonomy concerns the individual sales representatives' behavior in the actual pricing decision and negotiation situation. It is, thus, distinguished from the type of behavioral control that Eisenhardt (1985) discusses, and that has inspired several publications addressing sales force management (e.g. Anderson & Oliver, 1987; Challagalla & Shervani, 1997; Oliver & Anderson, 1994), such as monitoring and rewarding sales representatives based on the number of customer visits, customer meetings and customer calls. Thus, in Table 12, behavior control refers to the decision by management at the embedded cases to develop and implement new pricing routines that the employees had to comply with.

The following section presents the phase of pricing capability development at Alfa and Beta.

5.3.2. Restricting the sales representatives' pricing autonomy

As mentioned, 65 percent of Alfa's products and 80 percent of Beta's are customized. This motivated the decision not to implement any greater restrictions on the sales representatives' pricing authority. Only smaller

restrictions were implemented, such as guidelines regarding gross profit margin. However, the sales representatives' pricing autonomy was restricted.

The phase of pricing capability development at Alfa

Table 13 on page 168 summarizes the actions that were taken by management at Alfa in order to develop and implement new pricing capability elements.

The first steps towards pricing capability development were taken in 2009. As mentioned, at this stage, the business unit manager had identified that the sales representatives' skills in terms of communicating the products' customer value and negotiating prices were, in his eyes, weak. Additionally, he had identified poor cost control and prices that were not coordinated, nor optimized for different customers and orders. In order to address the weak cost control and the inability to monitor the profitability of different product and customers, the first step in the project was to implement a new customer relation management (CRM) system. The system allows the user to track historic data, such as profitability, regarding different customers, products and orders. Additionally, as a consequence of the identified poor profitability of several customers, an overall price increase was imposed on those customers that were identified as unprofitable. The marketing manager explained the benefits with implementing the new CRM system:

“We can see what the overall GP [gross profit] is for each customer by year, by month, by article. We can select immediately the articles where we are below our company interest, we access articlewise, and we can access immediately the customer and the price discussion with the customer. We are aware of the products: ‘Which are the articles are poor? Which are the articles that are giving us good margins?’ Also, we have the possibility to look at the history and how the customers perform. You can, for example, see that with this customer between 2008 and 2009 we improved [the profit margin] with more than 20 percent. We improved within one year our gross profit margin by more than 20 percent by the different price discussions we made with our customer.”

Since the new CRM system displays the gross profit margin for each customer and product, guidelines regarding minimum gross profit margin were introduced. Furthermore, the new CRM system allows for customer segmentation. Consequently, Alfa's customers have been categorized in A, B and C segments based on turnover, profitability and by management estimated future potential. The categorization of the customers is partly deciding the price

that they are offered. Also, at the end of 2011, a new IT tool that allows for revenue leakage analysis was implemented, with the support of management consultants.

Secondly, for better handling of the volatile raw material prices, the business unit manager decided to develop a raw materials price index. Since the index is unique for Alfa and not an industry standard (there is no such thing as an industry standard), it is consequently not providing the customers with arguments for price decreases once the raw material prices decline. The business unit manager believed that a raw material index was a key success factor for ensuring that no prices were sold below break-even.

Additionally, management decided to change the reward system for the sales representatives. New procedures for calculating each individual sales representative's gross profit margin achievement were implemented, so that bonuses were set according to individual achievements. The business unit manager explained the reason for implementing a new reward system:

“With the new techniques, with the new [CRM system] and all the data that we generate, it is possible. In the past it wasn't really possible. In [the new CRM system], which we developed during 2009, I wanted to have all the colleagues in sales linked to that system. So now you can have targets, individual targets.

Also, new price lists were introduced regarding the non-customized products. The intentions were both to centralize the pricing authority for these products to the business unit manager, and to make it easier for the customer to find its negotiated, fixed prices for the different products.

Table 13 Action taken by management at Alfa in order to implement a new pricing organization and new pricing skills

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
Pricing organization	Pricing authority delegated to the individual sales representative.	<p>A general restriction of the sales representatives' pricing authority (guidelines regarding min. gross profit margin) and autonomy to set prices (rules regarding how to decide and communicate prices).</p> <p>New price lists regarding the non-customized items.</p> <p>Sales representatives' authority to give discounts restricted.</p> <p>Re-organization with the purpose of coordinating the price setting.</p> <p>Layoffs.</p> <p>Sales representatives' responsibility increased to cover the entire product portfolio, instead of only a limited range.</p> <p>Top management focus on pricing.</p>	<p>A formalized procedure for how to identify and communicate the customer value, and, thus motivate the prices.</p> <p>Sales rep. rewarded on gross profit margin.</p> <p>Price lists regarding the non-customized products (i.e. a centralized price setting).</p> <p>A centralized pricing authority towards the larger customers.</p> <p>Guidelines regarding min. gross profit margin.</p> <p>Price setting coordinated by having cross-functional team of indoor sales rep, designer and technicians sitting desk-to-desk.</p>

Table 13 Action taken by management at Alfa in order to implement a new pricing organization and new pricing skills (cont.)

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
Pricing information system	<p>No specific IT support for pricing</p>	<p>New CRM-system allowing better information management and information sharing.</p>	<p>IT support for pricing.</p>
Pricing skills	<p>Prices based on historical prices and customer history. Cost of product plus mark-up. Individual sales representatives' experience and gut feeling.</p>	<p>New CRM-system enabling customer profitability analysis, product profitability analysis, revenue leakage analysis and improved cost control. An overall increase in profit margins for identified unprofitable customers. Sales rep. given training in value based pricing tools and how to communicate the customer value to the customers. Management consultant hired. Improved cost control through an own developed raw material-index.</p>	<p>Customer profitability analysis. Customer segmentation. Product profitability analysis. Identify and quantify customer value. Revenue leakage analysis.</p>

The next step was to overcome the sales representatives' focus on volume rather than profit margin and customer value. In order to achieve this, the sales representatives, together with an external management consultant, were gathered for workshops with the purpose of clarifying the value Alfa's products offer to the customers. According to the business unit manager, the key challenge was to get the employees to accept the concept of value based pricing and change their way of thinking about pricing. In order to change the employees' working procedures when setting prices, the business unit manager hired a consultant who conducted workshops with the sales representatives in which they used real cases when explaining the concept of value based pricing. The workshops resulted, according to the documents written by the business unit manager, in ten selling arguments, such as "strong economic power by conglomerate", "global player with worldwide presence" and "variety of products for objective advice and synergies". Each of the ten arguments was defined in four different specifications, which in turn were explained and exemplified in one to three specifications, targeting specific customer needs. For example, "Innovation for competitive advantages" was specified in "material development, service and ecological innovation".

Training sessions have, besides workshops, been arranged for the employees. During these training sessions, they were given practice in techniques for quantifying the customer value. Moreover, they were coached to provide the right selling argument for different customers. The business unit manager emphasized the need to use different selling arguments to match the specific customer:

"Customers are not equal, customers are different so you need different arguments to different customers. This is very important to understand. A door manufacturer has different requirements than a guy dealing with hoses for the car industry. For all this you need different approaches."

Thus, the sales representatives have been trained in identifying the needs for the different customers and match them with the corresponding arguments that are given by the ten selling-arguments. According to the sales representatives, the new selling-arguments have improved their negotiation skills, improved their ability to communicate the products' customer value and, thus, given them stronger arguments when meeting customers, which has increased their confidence in such situations.

Additionally, the sales representatives were given guidelines for discounts and minimum gross profit margins. When asked about the employees' reaction to this new approach, the business unit manager said:

“Let me say like this first, people are not so familiar in [Alfa] with all this external training and teaching and coaching. At first, the colleagues, especially the ones at [one of those two locations which is not the head office] said: ‘Oh, there is someone external coming in and [the new business unit manager] wants to select the good employees from the bad employees and then make decisions based on, who will work in sales and who will not.’ So they were a bit resistant and cautious first. But then I saw, after the first day, many people said: ‘Oh, it’s different to what we thought it would be. There is really some benefit with what you are telling to me that I can use in my daily work’.”

However, some sales representatives have left the company and some have been asked to resign as a consequence of their not getting on board with the changes.

The business unit manager, moreover, stressed the importance of assuring that this new practice becomes a part of the daily work. He explained:

“As it is with the human nature, if you really would like to have long-term impact, you have to repeat it. So far, I’ve had two sessions and the next session I will have in February and it is up to us, me, [the marketing manager] and [the sales manager], to remind everybody.”

In the same matter, the sales manager stressed the need to be physically present at the site with the employees, in order to be able to answer all the questions from the employees about the new approach regarding pricing. He said:

“I’m very, very often at this operation, nearly every week for three or four days and now they have the possibility to ask me: ‘What do you mean with this kind of restructuring? What should I do with this price? What argument do we have?’”

As a part of the pricing capability development project, the business unit manager decided to centralize everything that concerned sales and marketing to one of the three sites. As a result, the remaining two now only have the function of production plants. Some employees were reluctant to relocate and decided to resign. Besides moving everyone within sales and marketing to the same office, the employees' office positions have furthermore been reorganized. Prior to the reorganization, the designers were placed in their own department, separated from the indoor sales representatives who had their own office space.

As a result of the reorganization, the employees are instead grouped into teams consisting of both designs and indoor sales representatives. According to the sales representatives, the reorganization has resulted in their getting better and faster technical support from the designers. The replacement of the designers, desk-to-desk with the indoor sales representatives so they could physically share the same office space, has according to the sales manager, improved the customer relations in two ways; Firstly, it has shortened the internal time for decision making and secondly, it enables Alfa to provide the customers with one single interface, as opposed to the previously several different ones when customer contacts in the different sales regions were uncoordinated. Before the reorganization, the customer inquiries (approximately 3000 are handled each year) were sent back and forth between the different departments and more than once the customer could be told: "I don't know, the matter is being taken care of by the designers". The reorganization has not only resulted in shorter time for information sharing between sales representatives and designers but, also, the mere amount of information that is shared has increased. The reorganization was, according to the sales manager, necessary for changing the way the employees think about pricing. It was a wake-up call that was needed, he said, and it gave the employees the clear message that the changed approach to pricing was seriously meant.

Additionally, the reorganization has resulted in each sales representative being responsible for selling all of the articles, instead of only a limited range of the product portfolio. In order to assure that the sales representatives would have adequate technical knowledge about all the articles, they were given four training sessions. Thus, each outdoor sales representative is offering, within his or her sales region the entire product catalog to the customers. Five of the outdoor sales representatives were assigned an individual regional area, in which he or she is responsible for selling all the articles. In order to prevent the bigger customers from pitching the sales representatives against each other, the same sales representative is, as a consequence of the reorganization, responsible for these customers.

The phase of pricing capability development at Beta

Table 14 on page 174 summarizes the actions taken by management at Beta in order to develop and implement new pricing capability elements. As mentioned, management at Beta decided during the autumn of 2009 to accept the offer from Technologica's head office to initiate a pricing capability development project. The head office sponsored the hiring of a team of

management consultants, which included one consultant functioning as the project leader and three working full-time during two months at Beta's office.

The consultant started the project by analyzing the historical prices. When the consultants performed their ten week analysis, they revealed that several of the non-customized products, for which there are list prices, were sold at very low margins, some of them even below break-even. The consultant, furthermore, found large differences in profitability between different customers. Lastly, they concluded that several of the products were underpriced relative to their customer value.

The large share of customized products (80 percent of the product portfolio) motivated, according to the consultants' analyses, the decision to implement a value based pricing strategy. By evaluating the customer value of the competitors' products, the consultants came to the conclusion that the customer value of Beta's products was substantially higher than that of the competitors' products (i.e. the customers' next best alternative). The consultants recommended management to implement the following pricing tools: revenue leakage analysis, customer profitability analyses, customer segmentation and quantification of customer key buying criteria compared to next best alternative competitor.

Based on the recommendations of the consultants, management at Beta decided to implement value based pricing tools and IT support that enabled customer profitability and product profitability analysis. In order to take advantage of the experience and customer specific knowledge among the sales representatives, management decided that the individual sales representatives should be the ones to perform the value based pricing tools in preparation for customer meetings. The fact that most of the products are customized and that prices, for that reason, are negotiated for each customer and agreement, further motivated the decision to train the sales representatives in techniques for quantifying the customer value, rather than centralizing the price setting.

Table 14 Action taken by management at Beta in order to implement a new pricing organization and new pricing skills

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
<p>Pricing organization</p>	<ul style="list-style-type: none"> • Pricing authority delegated to the individual sales rep. • Guidelines regarding min. gross profit margin. • Individual bonus based on gross profit margin. • Centralized pricing authority for non-customized products (price lists issued). 	<ul style="list-style-type: none"> • A general restriction of the sales representatives' pricing authority (price ceilings and price floors implemented) and autonomy to set prices (rules regarding which specific pricing tools to use). • Price lists for non-customized products up-dated by means of weighted customer value analysis and revenue leakage analysis in collaboration with the sales rep. 	<ul style="list-style-type: none"> • Pricing authority delegated to the individual sales rep. • A formalized procedure for identifying and communicating the customer value, and, thus motivate the prices. • Sales rep. given restrictions regarding min. and max. price. • Centralized pricing authority for the non-customized products. • Price lists for the non-customized products that are updated every third month (instead of once per year) in order to address volatile raw material prices. • Individual bonus based on gross profit margin.

Table 14 Action taken by management at Beta in order to implement a new pricing organization and new pricing skills (cont.)

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
Pricing information system	<ul style="list-style-type: none"> No specific IT support for pricing 	<ul style="list-style-type: none"> New IT tool allowing better information management and price analysis. 	<ul style="list-style-type: none"> IT support for pricing.
Pricing skills	<ul style="list-style-type: none"> Cost of product plus mark-up. Individual sales representatives' experience and gut feeling. Prices based on historical prices and customer history. Order volume based discounts. 	<ul style="list-style-type: none"> Management consultants hired. Sales rep. given training in value based pricing tools and how to communicate the customer value to the customers. New IT tool allowing better customer and product profitability analysis. Top management focus on pricing. 	<ul style="list-style-type: none"> Customers' value map position analysis. Quantification of customer value. Weighted customer buying criteria. Customer profitability analysis. Customer segmentation. Revenue leakage analysis. Product profitability. Identify and analyze competitors' prices. Discounts based on order-volume.

The next step in the pricing capability development project was to develop a new IT tool and to train the sales representatives in value based pricing tools. The key challenge, according to the consultants, was to get the employees to accept the tools for value based pricing and change their way of thinking about pricing. Changing the individual sales representatives' routines for pricing was by far the greatest challenge, the consultants said. In order to overcome this, the consultants held workshops with the managers and the sales representatives where they used real cases when explaining the concept of value based pricing. In order to be able to use real cases during the training sessions and be able to quantify the customer value and the customer key buying criteria compared to the next best alternative competitor, the consultants asked for a list of customers to contact. When contacting the customers, the consultants asked for one of the engineers, rather than someone from the purchasing department since they believed that a purchaser would be more selective in which information to share and which not.

Both the sales representatives and the managers at Beta assumed that the customers would provide little or no information, besides complaining that the products were too expensive. Assumptions like these are, according to the experience of the consultants, very common. However, when asking the customers open questions about Beta's products and their strength and weaknesses in relation to the competitors' products, the customers gave open and detailed information, such as that regarding specific product features. The consultants stressed that when making the customer calls, they informed them that they were conducting this customer survey on behalf of Beta. Yet, they did not explicitly tell the customer that they were analyzing the prices. Instead, they framed it as a customer survey and how Beta could improve their products according to the customers' needs.

When commenting on the information the consultants were able to get from the customers, one of the sales representatives said:

“One of the great things that came out of this [the project] was that the customers weren't put off by this [the consultants contacting them on phone]. They were actually really open. They told flat out that I was 15 percent lower in price than my competitors. I was absolutely floored and shocked by this. These are customers that I have talked to for years and they would never tell me anything like this. I don't know if it was the accent [of the Swedish consultants that contacted Beta's American

customers] or what it was but they were completely open [to the consultant].”

The sales representative, moreover, said that since he was used to working with value based pricing at his previous job as a distributor within the industrial manufacturing industry, the new value based pricing tools was something he appreciated. However, according to the sales manager, the general first reaction among the sales representatives, when presented with the new pricing tools for value based pricing, was that they felt that it was a waste of time. They argued, he said, that it was nothing new to them since they believed that were already familiar with most of it and were able to match prices with customer value by using their gut feeling and experience. Nevertheless, by means of workshops and coaching from the consultants, they were trained in how to analyze weighted customer value compared to the next best alternative, customers' value map position analysis and revenue leakage analysis. Thus, the sales representatives' previous autonomy to decide how to calculate and negotiate prices was restricted. Instead, they were provided with specific pricing tools to comply with when calculating the prices and handling customer meetings.

Parallel to the training session with the employees, an IT tool allowing for price analysis was implemented. The customer value is estimated and quantified in Excel and PowerPoint linked to the IT tool. However, the intention is to incorporate the data into the CRM system, since the current practice is inconvenient. Once the new IT tool is incorporated into the CRM system, it will be able to provide the user with all the information needed when making the customer propositions, such as customer purchasing criteria and the products' customer value. Moreover, the intention is to systemize the data about the competitors. Currently, information about the competitors is held by the individual sales representatives, who get access to it through their communication with customers, but not codified through any organized procedures.

Additionally, the prices of the non-customized products, approximately 450 products, were analyzed by weighted customer value and revenue leakage analysis, both in order to identify unprofitable products and provide the sales manager with better data when constructing the price lists. The sales representatives and the product development team were involved when analyzing the prices, since they were the ones who had the information and the know-how about the specific products and customers.

5.3.3. Restricting the sales representatives' pricing authority

As mentioned, the pricing capability development projects at both Gamma and Delta concerned non-customized products. This motivated the decision by the respective managers at Gamma and Delta to restrict both the pricing authority and, as a consequence, the pricing autonomy of the sales representatives.

The following sections present the phase of pricing capability development at Gamma and Delta.

The phase of pricing capability development at Gamma

Table 15 on page 180 summarizes the actions taken by management at Gamma in order to develop and implement new pricing capability elements.

The first steps towards pricing capability development were taken in 2007 when the CEO of Gamma decided to initiate a project with the purpose of evaluating the current pricing practice at Gamma. A cross-functional team was established and the work with unfolding weaknesses and areas of improvements with the existing pricing capability elements began. The cross-functional team identified the following problems:

- Inconsistent prices across both products and customers.
- Prices were not optimized for specific customers and transactions.
- The sales representatives were provided with little guidance for how to optimize prices for different customers.
- Prices were often based on estimated cost of product, or on artificial transfer price.
- No analysis tools to give better understanding of prices and pricing were used.
- Pricing knowledge was dispersed and easily lost.
- The quotation processes were slow.
- No benchmarking of competitors' prices or pricing strategies were conducted.
- No tools to promptly reflect economic and competitive changes were used.

The findings resulted in the cross-functional team gathering for a meeting in Copenhagen in the autumn of 2007, with the purpose to take action regarding the identified problems with the current pricing practice. An international management consultancy firm recognized for its experience and competence in

pricing was invited together with and three different suppliers of IT systems specific for pricing. The presentations by the consultancy firm and the three IT system suppliers resulted in top management deciding, in December 2007, to go with one of the IT systems. The intention with the purchase of the IT system, which provides price recommendations, was as follows: 1) to improve gross profit margin, 2) achieve globally consistent prices, and 3) ensure prices that are based on customers' willingness to pay, not on product cost. In addition to purchasing an IT system for pricing, a team of internal pricing specialists was established, comprising two employees working full-time with analyzing and improving Gamma's resources and routines for pricing. These two employees, who both have an academic and professional background within marketing and sales, worked as sales managers at Gamma prior to being appointed as pricing specialists. They are both placed in the head office and report to top management at Gamma.

The pricing specialists explained that when designing the IT system, the sales representatives were asked which information they used when setting price. Besides cost of product and target margin, the sales representatives answered that they relied on customer history, the prices the product had been sold for before to other customers, and prices for similar products. Accordingly, the IT system uses historical data when calculating price recommendations and provides optimized price recommendations for specific transactions and customers based on historical data. The historical data used by the system comprises historical prices regarding the product at hand, similar products, the customer in question and other customers within the same industry and/or sales region. By combining all existing historical data, the system is able to calculate the optimal price for a specific customer transaction and provide the user with a price floor, a price target and a price ceiling. Consequently, the intentions with the system were both to decrease the individual sales representative's subjective influence on the prices, and create more consistent prices, both between sales representatives and across sales regions. When asked about the price paid for the system, one of the pricing specialists said:

“The price for [the IT system] was three million Euros, because the guys from [the company that provides the IT system] know to use value based pricing.”

Table 15 Action taken by management at Gamma in order to implement a new pricing organization and new pricing skills

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
<p>Pricing organization</p>	<ul style="list-style-type: none"> • Pricing authority delegated to the individual sales rep. • Guidelines regarding min. gross profit margin. • Sales representatives rewarded on gross profit margin and volume. • Internal pricing specialist dedicated to working with pricing. • Internal transfer-prices. 	<ul style="list-style-type: none"> • A cross-functional team was established and given the task to evaluate the current pricing practice. • A global pricing team dedicated to working with pricing was appointed. • A general restriction of the sales representatives' pricing authority (due to the new IT system) was implemented. • Sales representatives' authority to give discounts was restricted (due to the new IT system). • Top management focus on pricing. 	<ul style="list-style-type: none"> • A centralized pricing authority towards the bigger (usually global) customers. • A centralized pricing authority of the non-customized products (IT system providing the price-recommendations). • Guidelines regarding min. gross profit margin. • Sales rep. rewarded on gross profit margin and volume achievement. • Internal pricing specialist dedicated to working with pricing. • Inter-country price comparison analysis. • Internal transfer-prices.

Table 15 Action taken by management at Gamma in order to implement a new pricing organization and new pricing skills (cont.)

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
Pricing information system	<ul style="list-style-type: none"> No specific IT support for pricing 	<ul style="list-style-type: none"> A new IT system specifically designed to provide price recommendations, including price floor and price ceiling, was implemented. 	<ul style="list-style-type: none"> IT system providing price recommendations and analyzing customer- and product profitability.
Pricing skills	<ul style="list-style-type: none"> Cost of product plus mark-up. Individual sales representatives' experience and gut feeling. Prices based on historical prices and customer history. Customer segmentation. 	<ul style="list-style-type: none"> The ability to perform product- and customer profitability analysis was implemented as a result of the new IT system. Management consultants were hired. Training sessions with employees using the new IT system were performed. 	<ul style="list-style-type: none"> Customer profitability analysis. Customer segmentation. Product profitability analysis.

The work with implementing the IT system was carried out during 2008 at all of Gamma's 49 market offices. Simultaneously, management consultants were hired to evaluate the pricing practice at Gamma and suggest ways for improvement. The new IT system was rolled out globally in 2009 and by April 2009, the training sessions with the employees using the IT system were completed. The employees at the market offices in Europe were given one full day of training whereas selected employees outside Europe were appointed as "trainers", provided with training and given the task to train their colleagues.

Before the recession in 2008, the intention was to implement a new ERP system that was compatible with the IT system. However, this was postponed due to the recession. Thus, the employees in general and the sales representatives in particular complained about the extra workload caused from working with two systems simultaneously. They complained that they too often had to go back and forth between the CRM system and the new IT system to find information needed when placing orders. As a consequence, the employees stated in February 2010 that they were not going to use the system for every quotation, because they considered it to be time consuming.

Problems with lack of trust for the new system among the sales representatives

Besides the extra workload, the sales representatives' reluctance over using the IT system also originated in their not trusting the system and the information it provided. The pricing specialists believed that the solution would be to get them to use the system more frequently so that their trust in it would grow. According to one of the pricing specialists, the fact that the current CRM system had been around for many years had resulted in the employees associating the information provided by the system as specific for just CRM, and not something that could be obtained elsewhere, such as from the new IT system. Thus, he said, it is a matter of convincing the sales representatives that they are able to get the same information from the new IT system as from the old CRM one.

The double workload from working with two systems simultaneously, combined with the fact that the IT system provided reliable price recommendation in only 80 to 90 percent of the cases due to a lack of sufficient historical data, led to resistance against the system among the employees. They did not trust it sufficiently to rely on the price recommendations provided by the system. Thus, by February 2010, the employees were still mainly relying on the old way of setting the price, which meant either using list-prices or looking

at previous transactions regarding the same product or customer. Since the tradition at Gamma is a cost based pricing strategy, this approach was consequently what the employees turned to, besides historical figures, when setting prices.

In order to handle the sales representatives' resistance to the new IT system, the system was up-graded in July 2010. Information within the CRM system was, in order to reduce the double workload of using two systems, migrated to the IT system. Thus, a larger share of the information that was stored in the CRM system was also made available in the IT system, such as minimum order value. Additionally, an application allowing the user to migrate information from the IT system to the CRM system was added.

The upgrading of the IT system, moreover, included the decision to rename "price target" with "price average". Management believed that the sales representatives interpreted the label "price target" as unrealistic, whereas "price average" would, management assumed, be interpreted as a realistic price, since the sales representative would interpret it as the price that their fellow sales representatives were able to achieve. One of the pricing specialists explained that the decision was made not only because the new label, "price average", better reflected reality, since it displayed the actual price average, but furthermore since sales representatives complained that the "price target" was too high. He explained:

"People always argue: well the target is too high. [...] That's why we said; 'We call it now the average', and the idea behind it is; 'who wants to be below average?'. Being below target is like, 'well the target is too high so it's fine for me to be below target'. But if you say 'I'm below average', it is simply saying, well the majority [of the sales representatives] are pricing higher than you are, so that's why we changed the names."

The main challenge at this stage was that the sales representatives had little or no trust in the IT system. This problem was addressed in the following two ways; 1) the sales representatives were provided with additional training sessions, and 2) the IT-system was adjusted in two different ways. Firstly, the concept of "reliable recommendations" was introduced, meaning that only those price recommendations that were in the "plus/minus two quantity break" were considered as reliable. In other words, if the quoted quantity for a given product was much higher or lower compared to the quantity of previous orders, which the system based the price recommendation on, the user was notified

that the recommendation was considered as unreliable. The reason, the pricing specialist explained, was to limit the number of situations when the sales representatives were given inaccurate recommendations by the system and, as a consequence, were losing faith in the system's ability to provide reliable recommendations.

Secondly, the IT system's user-face was adjusted in order to disclose more of the data that the system uses when calculating the price recommendations, such as the profit margin, cost of product and historical data. Management believed that this transparency would increase the sales representatives' trust in the system.

Despite the up-dates of the system, in December 2010, both sales representatives and sales managers kept getting back to the initial implementation problem with the IT system. It was crucial that the system was used often enough and that sufficient historical data would be fed into it in order to provide accurate price-recommendations. They believed that the system would need several additional years, two to four years were mentioned, in order to provide accurate price recommendations. However, since it was not compulsory for the employees to use the system, the sales representatives were not using it for every single order and were, thus, still inexperienced in using the system. Hence, the sales representatives were still more inclined to trust their gut feeling rather than the IT system when setting prices.

When commenting on the employees' concern that the system lacked sufficient historical data, one of the pricing specialists said that the employees' concern about insufficient data was a matter of getting them to trust the system. According to him, the historical numbers used by the system when calculating price recommendations were based on the latest months figures, not prices set several years ago. Consequently, additional training sessions remained to be carried out, teaching the users how to use the upgraded version and convince them to use the system more frequently.

The product managers, responsible for different product categories, were concerned that the IT system would not take the product cost sufficiently into consideration. Instead of having the IT system to calculate a price for each given transaction, they would have preferred fixed prices allowing them to fully control the prices and, thus, ensure that the cost of the products was covered. The sales representatives, on the other hand, were more concerned about the IT system not providing price recommendations that were consistent with the "market price", which, as mentioned above, was defined by the sales

representatives as “what I feel I can get the customer to pay”, or similar formulations that expressed subjective perceptions.

Nevertheless, the general opinion among the employees in December 2010 was that the system had potential and will, “once there is sufficient historical data in the system” be beneficial for them. When commenting on the response from the sales managers, product managers and sales representatives, the pricing specialist wrote the following:

“[It] clearly shows that not everything is bad and that people see positive signals, but also that we still have a lot to do. Also, it seems that many still do not really understand how it works and what [the IT system] can do (e.g. price lists are possible).”

Problems with changing the sales representatives’ pricing routines

When asked about the experience of implementing the new IT system, one of the members of the global pricing management team talked about “difficulties of changing people’s mindset”. According to her, the employees had been resistant to making changes in their pricing routines. She explained:

“Pricing is really a topic that people are afraid of: ‘Don’t talk about prices, don’t talk about money’. Even in sales, it is a topic that is not really openly discussed. When changing the procedures for pricing, it is really about changing mind-sets. It is often a sensitive matter since pricing is not something that you should talk about. It is like money, money and price are not something that you talk about.”

Her colleague, the other pricing specialist, had the same experience of difficulties with “changing people’s mindset for pricing” and also pointed at the cost based pricing strategy as deeply rooted in the minds of people and, for that reason, something that is difficult to change.

The next challenges, the pricing specialists said, was to make people use the system more frequently, to identify those areas where prices are below average and take action on it. Additionally, in order to address the employees’ complaints about double workloads, a new CRM system that was compatible with the IT system was implemented at the first market office in July 2011 and rolled out to all the other market offices during the second half of 2011.

The phase of pricing capability development at Delta

Table 16 on page 188 summarizes the actions taken by management at Delta in order to develop and implement the new pricing capability elements.

As mentioned, management at Delta launched in 2006 a brand switch project with the purpose to rebrand the products. In 2009, all the products had been re-branded and at the end of 2010, when the license expired, the project was completed. Management at Delta had identified the risk that the customers would request price reductions or turn to competitors as a consequence of the change of brand. Hence, in order to maintain the profit margin and the sales volume, management at Delta initiated a pricing capability development project.

Before any new pricing capability elements were implemented, an information campaign addressing both employees as well as customers was launched. Communication with the employees started one year before any changes were implemented, with the purpose of bringing them on board with the new pricing strategy. Approximately ten percent of the employees within sales did not, according to management, accept the new pricing strategy. They were for this reason laid off.

Since management saw the risk that the customers, as a consequence of the change of brand, would request lower prices, the purpose with the information campaign was to assure them that the product and quality remained the same. Thus, according to the business unit President, the decision was made to launch the new Technologica brand at an initially “very high price” in order to send the message to the customer that “this is a premium brand”. The main ambition was to assure that Delta’s products were priced in the highest price segment throughout all sales regions. Thus, the next step in the pricing capability development project was the decision to centralize the pricing authority to the head office in order to secure that the products were sold at a premium price through all sales regions. The ambition to create consistent prices throughout sales regions also resulted in management deciding to restrict the sales representatives’ authority to give discounts.

According to the business unit President, competitive price positioning (i.e. matching prices with the product’s customer value relative to the customer value of competitors’ products) is essential both in order to signal the customer value of the product to the customer and to prevent internal predatory pricing which, in the long run, will lower the average price. Hence, the pricing

authority was centralized to the head office for all customers, including the local dealers. The business unit President explained:

“At the end of the day you need to be consistent [in price], you need to make sure that you can control the pricing system all over the world and we are quite centralized when you talk about pricing because we know that inconsistent prices will reduce the average price level instantly. We allow extensive freedom of thought for the subsidiaries, but when we talk about pricing, we would like to keep everything under control because we need to coordinate and we need to make sure that we are coherent in our image all over the world. That is basic for our pricing strategy today. Next to value positioning and making sure that the prices are consistent all over the world, the tools are mandatory instruments to be utilized in order to keep the strategy effective.”

According to the marketing manager, the decision to centralize the pricing authority furthermore allowed management to address the problem among the sales representatives of focusing on revenue and competitors' prices rather than profit margin and customer value. For this reason, the next step was to provide the sales representatives with training in pricing tools for value based pricing, such as how to quantify customer value and how to explain the customer value of the products. For the same reason, training material explaining the new pricing tools and strategies was published on the Intranet. This included, for example, the logic of analyzing price elasticity of demand and the concept of customer value map position analysis. Additionally, when hiring new employees within sales, skills and knowledge regarding pricing were looked for.

Moreover, a new IT tool was introduced in 2006 allowing better information management and price analysis. This includes pricing tools such as price elasticity of demand analysis, revenue leakage analysis, customers' value map position analysis and inter-country price coherency reports. The marketing manager said:

“We built up a lot of more sophisticated, advanced tools, but also, as I said, what we did is not only the toolbox that we put together, that today is, I would say, pretty much advanced. But it is also the way we have used these tools, not only for control, but also to communicate to people, the results and the missions of the tools. This is I think the most powerful part of the job.”

Table 16 Action taken by management at Delta in order to implement a new pricing organization and new pricing skills

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
Pricing organization	<ul style="list-style-type: none"> • Pricing authority regarding the larger, global customers delegated to the individual sales rep. at the head office. • Pricing authority regarding the lists prices given to the dealers delegated to the regional market offices. • Pricing specialist working dedicated with pricing. 	<ul style="list-style-type: none"> • Internal communication campaign. • Lay-offs (approx. 10 percent of the sales force). • Communication campaign towards the customers. • Pricing lists issued by head office instead of regional market offices. • Centralized pricing authority vis-à-vis all customers. • Sales representatives' authority to give discounts restricted. • Top management focus on pricing. 	<ul style="list-style-type: none"> • A centralized pricing authority for all customers. • Strict restrictions for the sales rep. regarding discounts. • Sales rep. rewarded on gross profit margin. • Pricing specialist working dedicated with pricing. • Inter-country price comparison analysis. • IT support for pricing.
Pricing information system	<ul style="list-style-type: none"> • No specific IT support for pricing. 	<ul style="list-style-type: none"> • New IT tool enabling the pricing specialist to monitor the prices in different sales regions, perform price elasticity of demand analysis, customer and product profitability analysis. 	

Table 16 Action taken by management at Delta in order to implement a new pricing organization and new pricing skills (cont.)

	Pricing capability elements before	Actions taken during the phase of pricing capability development	Pricing capability elements after
Pricing skills	<ul style="list-style-type: none"> • Individual sales representatives' experience and gut feeling. • Prices based on historical prices and customer history. • Customer profitability analysis regarding OEMs. • Product profitability analyzed for the different product categories on an aggregated firm level. • Cost of product plus mark-up. 	<ul style="list-style-type: none"> • Sales rep. given training in value based pricing tools and how to communicate customer value to the customers. • Employees hired based on their pricing skills. 	<ul style="list-style-type: none"> • Customers' value map position analysis. • Quantification of customer value. • Customer and product profitability analysis. • Customer segmentation. • Revenue leakage analysis. • Analyze price elasticity of demand. • Competitors' prices identified and analyzed.

The following section summarizes the actions that were taken by management at each embedded case in order to develop and implement new pricing capability elements.

5.3.4. Summary of managerial actions taken in order to achieve pricing capability development

Table 17 summarizes the actions taken by management at the four business cases throughout each respective pricing capability development project. Epsilon is not included since they never undertook any changes. The symbol (✓) pinpoints the actions that were taken by management at each case.

As seen in Table 17, the employees at all of the four cases were given training in pricing tools and pricing strategies. Additionally, management at all four cases imposed general restrictions on the sales representatives' autonomy to set prices, but decided differently on restrictions regarding pricing authority. With the exception of Beta, the embedded cases decided to centralize the pricing authority for the non-customized products and the products sold to the bigger, often global customers.

Table 17 Summary of managerial actions

Action	Alfa	Beta	Gamma	Delta
Pricing organization				
Increased managerial control of prices regarding the non-customized products	✓	✓	✓	✓
Sales reps.' pricing autonomy restricted	✓	✓	✓	✓
Sales reps.' authority to give discounts restricted	✓		✓	✓
Centralized pricing authority vis-à-vis bigger (often global) customers	✓		✓	✓
Pricing specialist working dedicated to pricing			✓	✓
Centralized pricing authority vis-à-vis all customers				✓
Sales reps.' pricing authority restricted by price floors and price ceilings.		✓		
Organizational re-structuring	✓			
Overall price increases issued	✓			✓
Layoffs	✓			✓
Internal communication campaign				✓
Communication campaign addressing the customers				✓
Individual sales rep.'s product portfolio expanded	✓			
Pricing information system				
New IT support for pricing implemented	✓	✓	✓	✓
Pricing skills (including pricing skills)				
Employees given training in pricing	✓	✓	✓	✓
Management consultants hired	✓	✓	✓	
Employees hired based on their pricing skills				✓
Improved cost control implemented	✓	✓	✓	✓
New pricing tools implemented	✓	✓	✓	✓
Pricing strategies				
Competitor based pricing implemented		✓		✓
Value based pricing implemented	✓	✓		✓
Differential pricing implemented	✓	✓	✓	✓

5.3.5. Changes made in pricing resources

Table 18 summarizes the investments made in pricing resources by each of the four embedded cases. The symbol (✓) pinpoints those changes that were made by management at each case. As seen in the table, all four cases decided to invest in IT support and the individual sales representatives' pricing skills.

Table 18 Changes made in resources

Resource		Alfa	Beta	Gamma	Delta
Tangible resources	IT support for pricing	✓	✓	✓	✓
Intangible resources	Employees given training in pricing	✓	✓	✓	✓
	Employees hired based on pricing skills				✓
	Management consultants hired	✓	✓	✓	

5.3.6. Changes made regarding pricing routines

Table 19 summarizes the changes made in pricing routines by the four cases. As seen in Table 19, the cases decided to make changes in between 9 (Gamma) and 13 (Alfa) pricing routines.

Table 19 Changes made in routines

Routines	Alfa	Beta	Gamma	Delta
Pricing organization				
New routines that restrict the sales rep's pricing authority	✓	✓	✓	✓
New routines that restrict the sales rep's pricing autonomy	✓	✓	✓	✓
New routines regarding incentives for sales rep.	✓			✓
New routines for an increased managerial control of prices regarding the non-customized products	✓	✓	✓	✓
New routines for a centralized pricing authority towards the larger (often global) customers	✓		✓	✓
New routines regarding guidelines for gross profit margin	✓			✓
New routines regarding the individual sales representatives' product portfolio	✓			
New routines for monitoring inter-country price coherence			✓	✓
Pricing tool kit				
New routines for an increased cost control	✓	✓	✓	✓
New routines for identifying and quantifying customer value	✓	✓	✓	✓
New routines for customer profitability analysis	✓	✓	✓	
New routines for customer segmentation	✓	✓		✓
New routines for product profitability analysis	✓	✓	✓	
New routines for analyzing competitors' prices		✓		✓
New routines for revenue-leakage analysis	✓	✓		✓

Note: The symbol (✓) pinpoints those changes that were made by management at each case.

5.4. Pricing capability elements after development projects

The following sections present the pricing organization, pricing information system, pricing skills and pricing strategy of each case after the pricing capability development projects.

5.4.1. Pricing organization and pricing information system

Table 20 summarizes the changes in pricing organization and pricing information system at the embedded cases. The statements in the left hand column are true for those cells that are marked with the symbol “✓”. In order to cover as many practical observations as possible, the following four pricing organization elements have been added to this table compared to the conceptual framework of pricing capability elements that was depicted in Table 3 (see section 2.3.2): 1) guideline regarding minimum gross profit margin, 2) pricing specialist working dedicated to pricing, 3) sales representatives have the autonomy to decide how to calculate, and 4) negotiate prices and inter-country price comparison analysis.

Since Epsilon never conducted any project with the intention to develop and implement new pricing capability elements, Table 20 lists the pricing capability elements that have evolved at Epsilon throughout its history.

As seen in Table 20, management at all cases decided to impose restrictions regarding the sales representatives' autonomy to calculate, communicate and negotiate prices. Additional to restricting the sales representatives' pricing autonomy, Gamma and Delta decided to fully restrict the sales representatives' authority to set prices by centralizing the pricing authority to the head office/high-level management.

Table 20 Changes regarding pricing organization and pricing information system after development projects

Pricing organization and information system elements	Alfa		Beta		Gamma		Delta		Epsilon
	Before	After	Before	After	Before	After	Before	After	
Pricing authority delegated to the sales rep.	✓		✓	✓	✓		✓		✓
Centralized pricing authority vis-à-vis all customers								✓	
Centralized pricing authority vis-à-vis the larger (often global) customers		✓	Not relevant		✓		✓	✓	
Centralized pricing authority for non-customized products		✓	✓	✓			✓	✓	✓
Guidelines regarding gross profit margin		✓	✓	✓	✓		✓	✓	
Sales reps. rewarded on gross profit margin.		✓	✓	✓	✓		✓	✓	
Sales reps. have the autonomy to decide how to set prices	✓		✓		✓		✓		✓
Pricing specialist working dedicated to pricing					✓		✓	✓	
Inter-country price comparison analysis			Not relevant		✓		✓	✓	
IT support for pricing		✓		✓			✓	✓	

Also, three of the cases have centralized the pricing authority for the bigger, often international customers, in order to prevent these from playing different market offices and sales representatives against each other. The fourth case (Beta) acts only on the North American market and has not experienced any bigger customers trying these tactics. The reason might be that the customer base mainly consists of relatively smaller players that annually purchase for less than a million. Hence, Beta is not like the other three cases handling customers that are being acquired by global market actors with a centralized purchasing department that scans the international market for the lowest prices.

Lastly, those two cases that, prior to the pricing capability development projects, did not assess and reward their sales representatives based on gross profit margin contribution (i.e. Alfa and Delta), have as a result of the new pricing organization introduced such a reward system. The following sections elaborate on the pricing organization and pricing information system of the respective cases after the development projects.

Pricing organization and pricing information system at Alfa after development project

Due to the large share of customized products (65 percent of the product portfolio), management decided to keep the decentralized pricing authority. However, restrictions regarding minimum gross profit margin have been imposed and the sales representatives' authority to allow discounts have, consequently, been restricted. Also, the sales representatives' skills in setting and communicating the prices have been improved through four training sessions with management consultants. The prices are now less based on the individual sales representatives' gut feeling and more set according to profit margin target and customer value. Also, new price lists for the non-customized products have been implemented in order to handle the previous poor cost control. Additionally, the decision to centralize the pricing authority regarding the bigger customers to Alfa's head office has resulted in coordinated prices and thus prevented the customers from playing different sales representatives against each other.

The sales representatives appreciate the new incentives system with bonuses calculated on their gross profit margin achievement. Firstly because it gives them feedback on their actual gross profit achievement, and secondly, because it has benefited them since the overall gross profit margin has improved as a result of the new pricing capability.

Some of sales representatives complain about their reduced authority to grant discounts. They argue that some prices are too high in relation to competition and that there is a risk that they will lose customers as a consequence. However, no customers have, according to the sales representatives, been lost as a direct consequence of the price increases, albeit some unprofitable ones that were intentionally lost. On the contrary, some sales representatives request the authority to raise prices for the unprofitable customers, even if it might be at the cost of losing these customers, since a low gross profit margin contribution weighs down their average gross profit margin achievement. Yet, even though most of the unprofitable customers have been reduced in number, management believes that some of the unprofitable ones will be profitable in the future and have thus decided to maintain the lower prices for these customers.

As a result of the pricing capability development project, all sales representatives are responsible for offering the entire product portfolio, instead of a limited selection. This enables them to offer cheaper products when the customers ask for lower prices, instead of lowering the profit margin. When the customers ask for lower prices, the sales representatives are, instead of immediately entering into a discussion about discounts, suggesting other different products with lower customer value and, thus, lower prices, rather than lowering the price. According to the sales representatives, this has resulted in less focus on price during the discussions with the customers and more focus on the different products and what value they have to offer to the customer. One of the sales representatives who has been with the company for 35 years, described the difference in the discussions with the customer:

“[Before the value selling practice] there was no discussion about different products. It was just about pricing. Today I tell them; ‘we are the market leader, this is our complete portfolio, these are our prices and you decide which is the right one. It is up to you, what do you want?’”

Pricing organization and pricing information system at Beta after the development project

The fact that most of Beta’s products (80 percent) are customized motivated the decision to maintain a decentralized pricing authority, albeit slightly restricted by the price floors and price ceilings set by the sales manager. Instead, management decided to restrict the individual sales representative’s pricing autonomy. The six sales representatives and the four product developers have all been given training in specific pricing tools, primarily tools for value based pricing, which they are required to follow when calculating prices and handling

customer negotiations. This has, according to the sales manager, added structure to the pricing process. Even though the information used when matching prices according to customer value to some extent is based on the sales representatives' experience, they say that the tool helps them in their discussions with the customers. One sales representative explained:

“The value based pricing tool is a different way of presenting information to the customer than just going straight into a customer and saying; ‘I know that our products last 20 percent longer than our competitors’ products, so we can raise our prices by X’. The argument would typically have been; ‘We’ve recognized that our material is a better product so we are going to raise our price’. But using the value based pricing helps you explain to the customer the rationale for the way the pricing is structured.”

Thus, the new pricing capability has allowed the sales representatives to present better and sharper arguments for why the customers should buy their products. One of the sales representatives explained the new pricing routines:

“I don’t use the cost plus mentality anymore [when deciding the prices]. I try to look at the next best alternative [i.e. the second-best product that the customer could get from a competitor]. So I really don’t follow what my margin is that closely because I really view, especially after the training, I view that independently. I don’t spend nearly as much time looking at the margin or profitability as I did before. [...] With the tool, with the value based pricing, it really has given us an ability to get in and justify why our pricing is what it is.”

The new IT tools for product profitability analysis enable the sales manager to provide his sales representatives with price floors and price ceilings. Hence, he can avoid sales below break-even and prevent the situation of some customer being over-priced and, as a result, upset. The price ceiling is calculated according to product cost, customer history, competitors' prices and the maximum profit margin restriction of 30 percent enforced by the US government for products sold to the US military. One of the sales representatives explained why a price ceiling was necessary in order to reduce the risk of losing market shares to competitors that are offering lower prices:

“I think there is some fear in our group, and I share it, that we might invite competition into the market place. We want to have a technologically advanced product but if we out-price ourselves, if we

really go too high, I think there is some fear that we're going to invite competitors into the market. Even if you get high prices, if you lose volume, our profit in dollars is smaller. [...] I feel like I can probably charge maybe another five or ten percent more, that the market could bear that, but then again there is this fear of whether additional price-increases would invite competitors.”

Yet, besides the price ceiling, the pricing authority is largely delegated to the sales representatives. The sales manager has a high trust to his sales representatives and cannot see any other way of acting as a manager. One of the sales representatives explained his authority to set prices as:

“If we talk about orders that are for 15 to 20 000 dollars, yes I set pricing for these by myself. I don't run that by [the sales manager]. But I guess there is a break hole and in my mind that would probably be 100 000 dollars and more, I run such larger orders by [the sales manager]. [...] But, I'm trying to think if I've ever had [the sales manager] come back and say; 'no, that pricing is not ok'. I don't think I have. I guess I mostly have the [pricing] authority.”

The non-customized products are still given list prices. Hence, all the customers are quoted the same prices for these products, with discounts based on order volume. This is partly because of legal issues, the sales manager explains, but moreover due to the products not being customized and, consequently, more difficult to sell at prices higher than those of the competitors. If the customers find out that they are paying different prices, and that they will for sure, the sales manager claims, they might be upset. In order to handle volatile raw material prices, the price lists are now updated every third month instead of once per year, as was the case prior to the pricing capability development project.

The limited amount of competition has, according to the sales representatives, resulted in retaining customers despite price increases. This is exemplified by the following remarks by one of them:

“I would say that I probably lost one customer which I'm okey with. Which tells me, when I think about it, that I probably haven't raised my prices high enough. But I think there is some fear in our group, and I share it, that if we raise our prices too much, we might invite competition into the market place”

Pricing organization and pricing information system at Gamma after the development project

The new IT system for pricing implemented at Gamma has resulted in a substantial restriction of the sales representatives' pricing authority. The system calculates the optimal price for a specific customer transaction, based on historical data, and provides the user with a price floor, a price target and a price ceiling. Assuming that new products are not differing substantially from existing ones, price recommendations for those are given by the system as well. Since the system calculates the prices, the sales representatives' pricing autonomy has consequently been restricted.

The sales representatives said that their subjective influence on the prices has decreased as a result of the new IT system. This is illustrated by the following citation of one of the sales representatives:

“The big advantage with [the IT system] is to move away from the individual way of calculating [prices] and instead get the prices from the system. The old way of calculating prices based on individual feelings can be improved by the system.”

The sales representatives also said that the price recommendations provided by the IT system are helpful when they are in the situation of pricing an order which differs from previous orders, such as another in product type, customer or quantity. One of the sales representatives remarked:

“To get a feeling for the article, what kind of price, [the IT system] is helpful. We have directions for pricing.”

One of the sales representatives also explained how the system encouraged him to go for higher prices. He said:

“The system gives you self-confidence to quote the higher price. Previously to [the new system] you often calculated like; ‘okey, a factor two is enough money’. But now, [the IT system] says ‘okey, try 6 Euros’. This gives you the confidence to say; ‘okey I will try the 6 Euros’.”

According to the sales representatives, the customers have accepted the higher prices and no customers have, at least to their knowledge, been lost. The customers' acceptance of the higher prices is exemplified in this remark from one of the sales representatives:

“The customers don't know the prices, they have no real feelings for the prices.”

On the same matter, another of the sales representatives said:

“There haven’t been any reactions from the customers since they haven’t taken any notice. The customers don’t know that we are using a new pricing tool.”

This indicates that the prices prior to the implementation of the IT system in general were below the level of the customers’ willingness to pay, since they accepted higher prices. It indicates that the prices calculated by the IT system are closer to the customers’ willingness to pay and better match the customer value.

One of the sales managers was convinced that the IT system had reduced the number of low price quotations and prevented the sales representatives from lowering the prices, at least significantly, during the recession. He said:

“The system helped us to keep the margins during the credit crunch. For new salespeople, the system gives them a starting point for negotiation. They know not to go below the price floor. So we don’t waste margin and we don’t calculate stupid prices. We know the system gives us a realistic price and this is very, very helpful and absolutely necessary.”

The sales managers also appreciated the statistics they could get from the system. One of them said:

“We can identify lost-makers [i.e. unprofitable customer orders] quite fast and, by talking to the responsible sales guys, we can analyze it.”

The IT system also includes a “preferred/not preferred” column, which tells the sales representatives whether he or she should try to avoid a certain article or not. Currently, Gamma deals with more than 350 000 different products globally and the pricing management team would prefer to reduce that number, especially considering that the same article is sometimes purchased from different suppliers.

An additional advantage with the new IT system is the global overview that it provides and the global transparency it creates by displaying all previously made transactions. Consequently, an international customer with a presence in more than one country will no longer be able to get different prices depending on which national market office the customer decides to purchase from. Thus, the detailed, global statistic that the IT system provides allows management to take action on identified price deviations between different geographical markets. One of the pricing specialists spoke of one example of how he had identified

one product category to be sold for a substantially lower price in Bulgaria relative to other countries, for no apparent reason. When describing the discussion he had with the general manager in Bulgaria, he said the following:

“I remember when I spoke to the Bulgarian [General Manager] and we had this discussion, he was saying: ‘The system is not working, I am already at a 50 percent margin and the system tells me I’m below floor. This is my normal customer and my 50 percent is not bad and what’s your problem?’ In that case it was simply telling him: ‘You are taking 50 percent margin, but in fact, everybody else has 70 or 80 percent’. You could look at history and it was true, other people had like 70 or 80 percent and he was taking 50 percent. He was of the clear opinion: ‘50 percent is good’ and it is a good margin, I mean, but the thing is, in this specific scenario, everybody else took more and he didn’t see that. And these are the cases. I mean, we have lots of low margin items, low margin customers and we have reports on that. We monitor this on a monthly basis. Every marketing company has procedures and processes in place for low margin customers and low margin items, addressing this really on a monthly basis, we do that. But this example, where the margin is 50 percent, on an item level, that would fall through all nets, I mean it’s not critical, it’s 50 percent, it’s only that we could take more.”

Moreover, the IT system has reduced the tension between the manufacturing sites and the market offices, stemming from both sites organized as profit center and thus with the incentive to fight for the own margin. This sometimes led to conflicts when the departments accused each other for charging too high margins. Management believes that the departments consider the prices from the IT system as objective and optimal. Naturally, the IT system has no bias towards any department’s profit margin. Also, the IT system is not disclosing the profit margin added by the manufacturing sites to the sales representatives. Thus, the global pricing team believes that the IT system has started to reduce the tension between the divisions.

Pricing organization and pricing information system at Delta after the development project

As a result of the pricing capability development project, management at Delta decided to restrict the sales representatives’ pricing authority and pricing autonomy. The price lists to the regional dealers (through which Delta sells spare parts) are issued centrally by the head office, instead of by the regional

market offices, as was the case before the change. The business unit President explains the new pricing organization as:

“This [pricing] is the only activity that we have fully centralized. We give them [the sales representatives] the possibility to at least negotiate something but the frame is very, very small. Actually, it is more a frame up than it is down, meaning that the price has to be 100, then if you are able to get 102, that is fine, but not 98, that is very important.”

This centralized pricing authority enables Delta to maintain consistent prices through different sales regions, which both prevent internal predatory pricing and enable customers' value map position analysis. When conducting the monthly inter-country price comparison analyses, the employee responsible for analyzing prices (i.e. the internal pricing specialist at the head office) compares the average price level for each product category within each sales region with the average price of the competitors' products sold in the respective regions. The competitors' prices are obtained from product catalogs and the information the sales representatives receive from the customers. According to the sales representatives, they are able to get valid information from the customers about the competitors' prices and discounts due to their long-term customer relationships. The sales representatives are responsible for reporting this information to the regional market office.

The monthly inter-country price comparison analyses enable the pricing specialist to detect any price differences between sales regions and also gives him the actual price positioning for each product category relative to the competitors' products. The sales representatives believe that knowing the prices of the competitors gives them an advantage in the meetings with the customers, since they are able to tell when the customers try to trick them to believe that they can get lower prices from the competitors. According to the sales representatives, knowing the prices of the competitors, furthermore, gives them more self-esteem when going into the customer meetings because they are confident that the prices they offer are correct and accurate. For that reason, the sales representatives believe that the time spent reporting information about the competitors is motivated by the benefits they gain from knowing the products' competitive positioning.

The business unit President believes that the key success factor to a successful price strategy is price positioning. Therefore, he has a strong focus on inter-country price consistency. Since Delta produces high premium products, a position in the highest price segment throughout different sales regions in

different countries is essential for two reasons: 1) it signals the customer value of the products relative to the competitors by means of the price level to the customers, and 2) it prevents parallel trade and, thus, internal predatory pricing. The business unit President explained:

“Pricing is about positioning. That is why we have decided since the beginning to position ourselves at the top and be the price leader. Then of course, whenever you decide to be the price leader, what happens is that you need to be consistent, you need to deliver the value and you need to meet the expectations. Any time that we position ourselves on the market in this company, we know that we should be price leader; we should be at the top. This is mandatory in this company. Then of course you need to be consistent. You cannot have countries where your position is low because this is a global market. Your premium price position needs to be coherent with the rest of the world. In every country we have someone working on pricing, meaning monitoring prices. For example, I can see our prices compare to our competitors and break them down in detail country by country. Position is very important in order to position yourself, you need to know exactly where you are, market by market, so that is why we have people in all the markets who are doing this job daily, just collecting information about prices. They produce a lot of instruments that tell me exactly in any segment and product category where we stand. There is a lot of details to follow-up, but this very detailed chart that is done in any single market is quite important at the end of the day to get a final picture, to make sure that you are coherent all over the world with your pricing strategy. For example, I know [Competitor C] are inconsistent in price, I should not follow [Competitor C] country by country, because otherwise I risk making exactly the same mistake as [Competitor C] is making.”

As a consequence of the changed pricing organization, the sales representatives' authority to give discounts has been restricted to, in most of the cases, a maximum of a 2 percent price discount that they are allowed to give each year. They can decide to give the 2 percent of their turnover to one customer or distribute it across several customers. Hence, discounting decisions have been almost fully centralized, leaving only a small range for the sales representatives to negotiate. Additionally, in order to facilitate a focus among the sales representatives on profit margin, they are assessed and rewarded according to the gross profit margin they achieve.

The limited possibility to give discount has meant that the sales representatives are experiencing lower pressure from the customers to reduce the prices. The sales representatives state that the practice of issuing price lists centrally has facilitated their contacts with the customers. Since the dealers are often a part of larger chains with central purchasing departments that negotiate prices with Delta, the sales representatives are, as a consequence of the centralized discount policy, experiencing reduced pressure from their customers to grant discounts. The sales representatives are, as a consequence of this new practice, able to justify the prices by referring to the centrally negotiated discounts. When asked about how this limited possibility for discounts affects the character of the negotiations with the customers, one of the sales representatives said:

“[In the discussions with the customers,] it is always about the price, that’s always what the customer wants to talk about. The challenge is to convince the customer that the added value that [Delta] sells is worth paying extra for. The restricted discounts make it easier because we simply can’t go lower in price, even if the customer asks us to.”

Similarly, the marketing manager believes that the restricted pricing authority has made it easier for the sales representatives to handle price discussions with the customers. According to him, the restricted authority to grant discounts has created a healthy distance between the sales representatives and the customers. He said:

“I understand that it is very difficult for a salesman going to someone that they spend time with [to request price increases]. They have dinner with them, they have a relationship with them, they are sometimes friends and to go to them and ask for a price increase is sometimes like going to your brother and asking for money. So there are some dynamics that are dangerous sometimes, because sometimes you have the salesmen disclose [confidential information] to the customer and then the company. Pricing is about establishing a kind of distance to the customer. You know; ‘this is our money, you are the customer and important to us but this is our profit and loss’. And sometimes you get confusion, not because the salesman is stupid but because it is a part of his life and because his life is bound up in the relationships [with the customers]. Also, pricing is not something nice to ask somebody else because you ask for money. The feelings are a part of the customer relationships. The role of the emotions in a price negotiation has an influence. You have the responsibility, as a manager of the company, to

make clear where the fence of the company is, because our goal is to provide our stockholders with money. So pricing is an extremely powerful tool to communicate to people; 'which are the rules and which is the fence, where is our mission, where is our target, our goal'. Our target is to make money so if we have to sell less and price more, we do that because that is our mission."

As a substitute for using discounts as a tool in customer negotiations, the sales representatives are instead each year given training sessions in pricing tools for value based pricing, such as how to quantify the customer value, how to perform customers' value map position analysis and how to communicate the customer value to the customers. According to the sales representatives, the discussions with the customers are, as consequence of the new pricing capability, less about the prices and more about the customer value of the products. When asked to lower the prices, the sales representatives either motivate the prices with the products' customer value, or offer a product with a lower customer value and, thus, price. Or, if the sales representative believes that the customer has a promising future potential, he or she offers a discount that is within his or her limited discount authority. One of the sales representatives said that he only allows discount if he knows for sure that the customer's saving actually stays with the customers, instead of being passed on to the customer's customer, since if the discount is passed on the competitive price positioning would be lost.

The sales representatives have not experienced that any customers have been lost due to the new restricted discount policy. This, they believe, is explained by the competitive price positioning analysis. In other words, the customers are usually not able to buy a similar product from a competitor at a lower price.

The business unit President believes that Delta's pricing capability is sophisticated in comparison with industry standard, partly because the reports from the pricing specialist reveal that the competitors' prices are largely inconsistent between different sales regions. The main difference between the pricing capability of Delta and those of the competitors is, according to him, that the competitors practice a decentralized pricing authority where the control of the prices is delegated to local subsidiaries. He believes that Delta's doubled market share, compared to the market share before the pricing capability development project, is explained by a coherent price level throughout the sales regions. He said:

“I have the perception that we are really advanced in this business [in terms of pricing]. You see that from the coherence. If our competitors had exactly the same marketing intelligence, they probably wouldn’t have this kind of lack of coherence [i.e. price-differences across different countries]. I think that our competitors leave the pricing to the local subsidiaries, which is stupid in my opinion. So I think we are quite advanced in our business in this. Then you can say; ‘How do you know your strategies are good, and how do you know their strategy is the bad one?’ The answer is market share, we monitor market share every month. When we were [the competitor from which Delta was acquired], our market share was 12 percent, today we are at 25, so we have doubled our market share since [the change of brand]. So I think our price coherence is rewarded also by an increase of market, sales and margin. Our profit was 6 percent [prior to change of brand], today we are on average at 12. So we also doubled our profit margin.”

The internal awareness of the strategic importance of pricing is facilitated by marketing meetings being held two or three times each year, during which there is always a session dedicated to pricing. Additionally, during the monthly meetings with the highest management level, where all the departments such as sales, marketing, manufacturing, finance, are represented, the first hour of the meeting is always dedicated to pricing. The pricing review for the last month is discussed, including raw material trends, competitive scenario, and KPIs for pricing, such as inter-country price consistency, profitability, and gross profit margin. The marketing manager explained:

“I don’t even remember one meeting without these discussions [about pricing] and there is an enormous value in that. It is not just about having the tools, it is what you are doing with the tools. Then you need people who are there and talk about it and try to challenge, in one way or another, the organization, saying raw material is increasing by 4 percent, this market is 3, this market is 2, this market are 5, why? Is this because the competitive scenario is different or is it just because you’re not following up the pricing issue? Most often, it is the latter, because simply you didn’t follow up, but losing one point of pricing there is one point of margin, so that’s why it is the point number one.”

5.4.2. Pricing skills

Table 21 summarizes the pricing tools used by the embedded cases and if any changes were made. The pricing tools listed in the left hand column were/are practiced by each case before and after the pricing capability development projects if the corresponding cell contains the symbol “✓”.

As seen in Table 21, the cases practiced only a limited number of formal pricing tools prior to each pricing capability development project. As a substitute, the individual sales representatives relied mainly on historical prices, customer history, customer response and his or her experience and gut feeling when setting prices.

The following three pricing tools have been implemented by all four cases: customer profitability, product profitability and customer segmentation. A notable difference between the different cases is the relatively large number of pricing tools implemented by Delta and Beta compared to the other two cases. This is mainly explained by the differences in managerial decision making regarding which pricing capability elements should be implemented and how. Management at Beta decided to follow the recommendations given by the normative pricing literature concerning how to implement value based pricing, and management at Delta was mainly focused on implementing competitive pricing positioning through customers' value map analysis. This stands in contrast with management at Gamma that decided to focus primarily on achieving consistent prices across sales regions and sales representatives by implementing a new IT system for pricing. Concerning Alfa, management was mainly concerned with implementing better methods for monitoring gross profit margin achievements. Moreover, management at Alfa decided to implement a limited number of pricing tools due to resource constraints. Hence, Alfa is to some extent quantifying the customer value provided, but is not conducting the same extensive analysis for quantifying customer value as Beta, or the same ambitious analysis of competitors' prices and products as Delta. The following sections elaborate pricing skills of the embedded cases after the development projects.

Table 21 Changes regarding pricing tools

Pricing tools	Alfa		Beta		Gamma		Delta		Epsilon
	Before	After	Before	After	Before	After	Before	After	
Customers' value map position analysis				✓					✓
Quantify customer value		✓		✓					✓
Revenue leakage analysis		✓		✓					✓
Customer profitability analysis		✓		✓		✓	✓		✓
Customer segmentation		✓		✓		✓			✓
Product profitability analysis		✓		✓			✓		✓
Price elasticity of demand									✓
Identify and analyze competitors' prices				✓					✓
Internal transfer-prices						✓			
Order-volume based discounts			✓						
Software providing price recommendations									✓

Pricing skills at Alfa after the development project

The following pricing tools have been implemented at Alfa: quantification of the customer value provided, revenue leakage analysis, product and customer profitability analysis and customer segmentation. The training provided for the sales representatives in how to calculate prices that correspond to the customer value and how to communicate this to the customers, enables them to set prices according to customer value. Hence, the sales representatives are no longer relying purely on customer history, customer responses and their gut feeling when setting prices. Instead, they are practicing value based pricing tools for identifying and convincing the customers of the customer value of the products delivered. The sales representatives' ability to define and estimate the products' customer value is facilitated by the long-term relationships with the customers. Once close relationships are established, the customers often provide them with the real figures concerning the value the product at hand provides. Also, the sales representatives get most of the information about the competitors from the customers, such as the competitors' prices and the customer value of the competitors' products. Thus, the close relationships with the customers, combined with the establishment of cross-functional teams of indoor sales representatives, designers and technicians sitting desk-to-desk, enable the sales representatives to get access to information required in order to quantify the products' customer value.

The sales representatives believe that the training they have been given has improved their negotiation skills, provided them with stronger sales arguments and enabled them to better explain the customer value. The decision to make every sales representative responsible for selling all the products in the portfolio (as opposed to only a limited range which was the arrangement prior the development project) has, according to the sales representatives, decreased the pressure on them from the customers to lower the prices.

Moreover, the sales representatives are now able to provide the customers with price estimations for customized products without having to depend on the product designers. Before, the sales representatives contacted the product designers every time a customer was asking for customized products. The product designer then delivered a product design including the cost of the product, which the sales representatives used when estimating a price. Now, the sales representatives are able to estimate a price without the involvement of the product designers (with the exception of very large, complex inquiries). These new procedures have resulted in the customer getting quicker responses. Also, it

has reduced the workload of the product designers with 25 percent and, thus, resulted in cost savings.

Some sales representatives complain about insufficient support from the technicians regarding newer products. But most of them are pleased with their new responsibility and prefer being able to offer the entire product range to the customers. Furthermore, the sales representatives appreciate the new and improved cost control and information management. Previously, they more or less had to guess the profitability of the different customers and articles, whereas the new IT tool provides them with accurate data regarding cost structure, product profitability and customer profitability.

Pricing skills at Beta after the development project

The following five pricing tools have been implemented at Beta: quantification of customer value and customer buying criteria, customers' value map position analysis, revenue leakage analysis, customer and product profitability analysis, and customer segmentation. These pricing tools, which are all in line with the recommendations provided by the management consultants, allow the user to quantify the customer value for a specific customer and, thus, set prices that match the value of the product for this customer. Hence, the sales representatives are no longer relying purely on their experience based negotiation skills. Instead, they are performing value based pricing tools for identifying and convincing the customers of the products' delivered customer value. Before the meetings with the customers, the sales representatives gather information about the customers' products and the end-products. This information enables them to better pinpoint the product's value to the customers. For example, one important buying criterion for the customer's customers might be the end-product's fuel consumption. Assuming that Beta's products result in lower consumption than competing products, the sales representatives quantify the reduction in fuel consumption relative to the customer's next best alternative.

Even though the sales representatives have many years of experience and, thus, a fairly good gut feeling for the customer value, the new pricing tools for value based pricing have, according to the product area manager, encouraged them to go one step further in terms of price increases. According to the sales manager, the value based pricing strategy is considered common procedure within this industry and practiced by competitors, suppliers as well as customers. The fact that they too sell their products in the highest price segment might be one reason.

The sales representatives conduct the thorough value based pricing analyses in preparation for all larger sales. A smaller sale for around 10 000 USD is not considered worth spending time on a thorough value based price analysis, whereas one in the range of 500 000 USD always motivates a value based analysis. Similarly, new customers are generally considered to be worth the work with a price analysis. The sales manager explained:

“You are going to get the most value when you’re first launching the product. Or with a customer about whom you have no history. But all of this [the new pricing tools for value based pricing] is good even with an existing customer. For example, entering your fifth price negotiation in two years and fighting for pennies pays off because you can justify why you need two or three cents more, and showing them [the customer] the value that they are getting. According to my experience, it’s best to try to develop all of these value-parameters with the customer.”

The sales manager, moreover, stressed the importance of practicing value based pricing on those customers that tend to be more price sensitive and, thus, give relatively smaller profit margins:

“It [value based pricing tools] is more important for something that you’re not making incredible margins on, because those one or two percent extra will be the difference whether that business can support itself or not. The more things, the more data, that you can include in hard negotiations, the better off you are.”

The new pricing tools for value based pricing have enhanced the customer relationships since the customers now provide the sales representatives with the data required to match prices with the products’ customer value. Typically, the sales representatives quantify the value-adding features according to their estimates, and then show the figures to the customers who correct those figures that are wrong. The result is that the quantification of the product’s value-adding features matches the real customer savings.

Pricing skills at Gamma after the development project

As mentioned, management at Gamma was primarily concerned with reducing the large price differences between the sales representatives and decided that this was best done by implementing a new IT system that restricted of the sales representatives’ pricing authority and pricing autonomy. In comparison with the other three cases, Gamma implemented relatively few new pricing tools (see Table 21), but made substantial changes in its pricing organizations. Also, the

new IT system for pricing enables Gamma to analyze customer and product profitability. Consequently, Gamma is now able identify and take action on unprofitable products and customers.

Additionally, since the new IT system presents a clear overview of customer profitability and product profitability, it presents more reliable customer classifications (i.e. A, B and C customers depending on profitability) and allows management to adjust their offerings depending on customer size and profitability. However, the system does not calculate the value provided for a certain customer, neither does it include data on the solvency of the customers, payment agreements and other similar factors that might impact the pricing decision. Nevertheless, according to the internal pricing specialists, once the prices become coherent between sales representatives and sales regions, the prices will reflect more closely the customer value. Thus, even though no value based pricing tools are practiced, the new IT system will, the pricing specialists believe, result in prices that reflect the customer value.

Pricing skills at Delta after the development project

The following six pricing tools have been implemented at Delta: customers' value map position analysis, quantification of customer value, revenue leakage analysis, product profitability analysis, customer profitability and inter-country price comparison analysis.

The employee responsible for analyzing prices (i.e. the internal pricing specialist) monitors the actual prices charged by each customer in order to conduct revenue leakage analysis for each product category. Additionally, every month he identifies the average price level for each product category by monitoring the prices given to each customer. By dividing changes in the average price level with changes in sales volume, he is able to perform price elasticity of demand analysis for each product category within each sales region. Based on these analyses, he is able to quickly detect changes in volume due to price changes and respond accordingly. The business unit president explained the importance if price elasticity of demand analysis:

“We do a lot of studies in price volume elasticity, to understand exactly what impact we can expect on volume from a price increase. We are actually at the moment doing a study because we need to raise the price and we might lose some volume, we might lose a lot. But again, the gross contribution that we are going to get from the price increase is much

higher than the additional volume we may get if don't increase the prices to the desired level.”

The sales representatives responsible for the OEMs are obligated to perform customers' value map position analysis when setting prices, whereas the pricing specialist at the head office, responsible for producing the price lists for the spare parts, performs customers' value map position analysis for a selection of the spare parts. Management believes that it would be too time consuming to perform customers' value map position analysis on all the spare parts. Thus, rather than quantify the customer value according to the logic used for the OEMs, the pricing specialist relies on price elasticity of demand analysis when adjusting the price levels for the non-customized products. Hence, even though the prices of the non-customized products are not set according to the pricing tool for quantifying the products' customer value, the prices are by means of the price elasticity of demand analysis still adjusted according to customers' willingness to pay.

When launching new products, both customer buying criteria analysis and customer value map position analysis are performed. Since the key buying criteria for the customers are the fuel consumption and the impact of the tire on the soil, the tires are tested and benchmarked with competing products according to these parameters. For new product launches, an external organization, such as a university of agricultural science, is often asked to perform certified tests. These test results in combination with cost for maintenance and length of product life are benchmarked with competing products and used when calculating prices based on customer value.

5.4.3. Pricing strategy

Table 22 summarizes changes in the embedded cases different pricing strategies. The pricing strategies listed in the left hand column were/are practiced by each case before and after the pricing capability development projects if the corresponding cell contains the symbol “✓”.

Table 22 Changes regarding the pricing strategy

	Alfa		Beta		Gamma		Delta		Epsilon
	Before	After	Before	After	Before	After	Before	After	
Cost based	✓	✓	✓	✓	✓	✓	✓	✓	✓
Competitor based				✓				✓	
Value based		✓		✓				✓	
New product pricing				✓		✓		✓	
Product-line pricing									
Differential		✓		✓	✓	✓		✓	

As seen in Table 22, all cases had, prior to the pricing capability development projects, a tradition of a cost based pricing strategy. Since management at all the cases concluded that the practice for monitoring product cost prior to the development projects was insufficient, resulting in some products being sold below break-even, better routines and resources for monitoring product costs were implemented as a result of the development projects. The cost based pricing strategy is, for that reason, still practiced at all the cases, which is especially relevant regarding the non-customized products. However, as depicted in Table 22, all cases have complemented the cost based pricing strategy with other pricing strategies.

Both Delta and Beta have implemented competitor based pricing, in the light of their decision to implement value map position analysis. Thus, these two cases compare the customer value relative to the price of their own products with the same analysis for the competitors' products. Management at Alfa was positive to a competitor based pricing strategy but claimed to be unable to collect all data needed due to lack of resources. Gamma has, just like Alfa, not implemented competitor based pricing, the main reason being that the new IT system for pricing does not provide the requirements for the practice of this strategy. Additionally, one of the pricing specialists at Gamma expressed concern about the legal aspect of systematically collecting information about the competitors' prices.

Value based pricing has been implemented by all the cases apart from Gamma. The reason is again that the new IT system is not designed for this type of pricing strategy. Nevertheless, the sales representatives at Gamma were, just like the other cases, struggling with defining the products' customer value. This might be one reason why the prices differed substantially between the different sales representatives. According to one of the pricing specialists at Gamma, once the prices become more consistent between sales representatives, they will more closely reflect the customer value.

As seen in Table 22, new product pricing has been implemented at three of the four cases. However, these three cases have chosen different procedures for new product pricing. When the IT system implemented at Gamma allows for new product pricing do Delta and Beta perform new product pricing by conducting customers' value map position analysis. The reason why Alfa never implemented new product pricing is, again, resource constraints.

As seen in Table 22, product line pricing is not practiced by any of the four embedded cases. On the contrary, differential pricing has been implemented by

them all in the sense that they have all started to perform customer segmentation and, consequently, set different prices for different customer segments.

5.5. Perceived performance outcome from the new pricing capability according to self-assessment

The following sections present the outcome of the pricing capability development projects according to evaluations by management at each case. At each of the four cases, management believes that the new pricing capability has resulted in an improved profit margin. Generally, improvements in profit margin were achieved through a combination of general price increases for all products and a substantial increase in price for unprofitable products (identified as a result of the development projects). The following sections elaborate the perceived performance outcome for each case.

5.5.1. Perceived performance outcome at Alfa

According to the business unit manager, the new routines and resources for pricing were the main reason why both EBIT margin increased from 12.2 percent in 2008 to 22.8 percent in 2009, and return on sales increased from 2.5 percent to 9.3 percent¹⁴. The improvement in EBIT margin is, according to the business unit manager, in the first place due to a general increase in prices, especially concerning those products and customers that had been identified as unprofitable. Secondly, it is derived from an increased focus on profit margins,

¹⁴ During the same year, two of the biggest competitors experienced a decrease in profitability (regarding the competitors' equivalent product segments). Competitor A reported a decrease in EBIT margin from 14.5 to 10.1 percent (competitor's annual report 2009). Regarding Competitor B, EBIT margin decreased from 10.2 to 5.9 percent (competitor's annual report 2009). I have not been able to get access to any financial figures for the other, generally smaller, competitors.

instead of volume, among the sales representatives. Additionally, due to the long-term customer relationships and the long history of the organization, Alfa had, according to the business unit manager, a competitive advantage during the financial crisis in 2008 and 2009 since the customers considered the company to be a reliable and safe supplier. Thus, the customers turned to Alfa in order to secure deliveries on time. The marketing manager explained the improved financial results:

“In 2008 we had an average profit margin of 12.2 percent. If I go to year 2009, we had 22.8. That is more than 10 percent improvement in our gross profit margin and this was done by the different strategies I mentioned [increased focus on customer value provided and customer and product profitability analysis]. Sometimes we made an overall price increase, but very often we entered into detailed price discussions and that was the most effective improvement in our profitability.”

The decision to increase prices for the unprofitable customers resulted in losing a limited number of customers. However, nearly all customers stayed and the ones that were lost were mainly the unprofitable ones, which were lost on purpose. The marketing manager, who has been with the company since 1995, said that the new pricing organization and pricing tools have resulted in a change of mindset among the employees. She explained:

“In the past all focus was on the prices, now it is about selling added value.”

Lastly, according to the sales representatives, the new pricing capability has resulted in their feeling more confident when entering a customer meeting. Since they are able to provide stronger selling arguments and, thus, motivate the prices better, they believe that they have strengthened their bargaining position.

5.5.2. Perceived performance outcome at Beta

Between 2009 up to the end of 2010, when the pricing capability development project was formally finished, Beta's EBIT-margin had doubled¹⁵. According to the manager of the business area to which Beta belongs, this improvement corresponded to their expectations with the project. The manager believed that the increase was due to the new resources and routines for pricing, combined with a general increase in demand and improvements in the production efficiency. It should be noted, however, that Beta had relatively poor profitability prior to the development project, which was the major reason why management at Technologica's head office decided to hire management consultation and give them the task to analyze and improve Beta's resources and routines for pricing. Moreover, the new pricing organization and pricing tools have enabled Beta to better handle volatile raw material prices. The product area manager said that this enabled them to maintain the profit margins during 2011, despite increases in raw material costs. Additionally, Beta has taken advantage of the increase in raw material prices during 2009 and 2010, and the customers' greater acceptance of price increases that followed. For example, if raw material costs increased with 2 percent, Beta increased the price with 3 percent.

The new pricing capability elements have, thus, resulted in an increase in average price level. The sales manager said:

“Resultwise, we weren't bad to begin with so we didn't change our margins by 10, 20 percent. We were planning, before the project, to achieve pricing increases of between 2 to 2.5 percent. After the project, we figured out and determined we actually increased our average price by about 4 percent. So the tools [for value based pricing] didn't make us huge amounts of money, but a difference between 2.5 and 4 percent is

¹⁵ During the same year, one of the competitors reported a minor increase (1.4 percentage points) in EBIT margin (7.2 percent in 2010 compared to 5.8 percent in 2009). I have not been able to get access to financial figures of any other competitors. The fact that the competitors are mainly privately owned American businesses of a relatively smaller size (in terms of turnover) makes it difficult to get access to their annual reports.

still a healthy value coming out of that project. A percentage and a half on 60 million more than paid for the project the first year.”

On a similar theme, one of the sales representatives said:

“For the non-military products, absolutely we have increased our pricing and even for the military stuff we have pushed it to the limit, we have pushed it to the edge. I think what it [the value based pricing tool] has done for us is that it has allowed us to really push it [the profit margins] to the limit. If we were at, let’s say 15, 18 percent margin on [a product category], I think that we pushed it now to 25.”

The general increase in prices is exemplified in the story of how Beta calculated the price for a new material that was launched in 2011. The sales manager said:

“We had a working price when we were just starting to invent the new material, thinking that this should be 87 dollars and figured out through the value based process that it’s actually 96.5. Our pricing coming in now for this is 93-94 dollars a yard.”

Additionally, the sales representatives have improved their skills for communicating, motivating and justifying prices, since they now are able to quantify the customer value and set prices accordingly. Since the sales representatives are provided with restrictions regarding price floor and price ceiling, the price coherency regarding the non-customized products has improved, resulting in fewer customers getting upset because of finding out that they have been overcharged.

5.5.3. Perceived performance outcome at Gamma

Before Gamma decided to invest in a new IT system for pricing, the estimated payback was calculated based on an expected increase in revenue, resulting from an average increase in price, multiplied with the number of quotations made each year. According to one of Gamma’s two internal pricing specialists, the financial figures in December 2010 revealed that the estimated payback was

close to the actual figures and the system appeared to be a good financial investment. In other words, the average price level had increased twice as much as the material cost, resulting in an increased EBITDA¹⁶.

In December 2010, the financial figures showed that the average price level had increased and the total number of orders sold at low profit margins had decreased, while both the volume as well as the lost-won rate (i.e. the number of customer inquiries that result in transactions relative the number of inquires that is not) had remained unchanged. The increase in the average price level is, according to one of the pricing specialists, not only explained by a decrease in profit margin leakage from inexperienced sales representatives, but also by a general increase in prices among the experienced sales representatives. When commenting on results, he said:

“It is clear that it [the target achievement] has increased, which tells us that we have become better, which indicates that people [sales representatives] achieve higher prices. The prices that they quote are going up, because otherwise the target achievement wouldn’t go up. [...] The number of cases that we find below the floor price is going down. The same is true for prices below the average price. The number of cases, percentage-wise, below the average price is also dropping. [...] If you look at the target achievement, we’re doing something good, I mean, it seems that we have more cases where we increase price.”

Thus, the prices are becoming more consistent and the spread between the highest and the lowest prices is diminishing. However, the win-lost tracking is

¹⁶ EBITDA margin improved for each consecutive year between 2007 and 2011 (17.4 in 2007, 18.5 in 2010, and 23.3 in 2011), with the exception of decline in 2009 (10.6). This stands in contrast with one of the largest competitors that instead reported a decline in gross margin in percent of sales each consecutive year from 2007 to 2009 (regarding the equivalent product segment), hitting 2.2 percent in 2009 (down from 7.8 in 2007). Similar to Gamma, the competitor’s gross margin in percent of sales recovered in 2010 (making it 10.1 percent). However, the competitor reported only a minor increase (one percentage point improvement in gross margin in percent of sales) between 2010 and 2011. I have not been able to get access the financial figures of any other competitor’s equivalent product segment.

currently unreliable, since it is hard to get the users to register their win-lost track record. The employees do not believe that the benefits from registering the win and lost rate are motivated by the extra work, since they consider themselves capable of estimating their individual win and lost rate. Until management succeeds in convincing the sales representatives to report win-lost rate, the market offices submit their win-rate to the pricing specialists. According to these reports, there has not been any drop in the overall win-rate.

The pricing specialists believe that even though the sales representatives are not obligated to register the win and lost rate, the figures that show an increase in average price level remain trustworthy. One of the pricing specialists explained:

“If we ask ourselves: ‘What’s the impact [of the IT system], is it working and what’s the benefit?’ The answer is; ‘It seems to work’. I mean the prices are going up, unless everybody is deceiving us, I mean if people say; ‘Okey, I’ll only put in the good ones and I don’t put in the bad ones anymore.’ Then of course, we wouldn’t see the same. Maybe you have some people doing that, but I can’t see that every single salesperson is doing that. Which means, even if some people are doing it, then it should be less in reality. But, we are doing this globally, we’re talking about 19 different marketing companies, I just don’t see how 19 different marketing companies and all their employees, can all deceive us at the same time and in the same way. Which means it [the IT system] seems to work.”

Hence, even though the statistics are to some extent vague, the pricing specialists are still convinced that the IT system has had a positive impact. In December 2010, the average price level increased with 5 percent, in March 2011 there was another increase of 5 percent, which was followed by an additional price increase of 5 percent in June 2011. The price increases were twice as much as the costs for increased material costs. According to the pricing specialists, the price increases were partly explained by a general increase in demand. However, the IT system was the tool that enabled the price increases. According to them, the price increase would not have been so significant without the system.

When commenting on the role of the system in relation to the increase in return on sales and the increase in EBITDA, one of the pricing specialists said:

“It [the project] is definitely made visible in the numbers [the financial figures]. [The IT system] was the tool that was needed to achieve this,

but I am not giving the system the credit. It was the decision to focus on pricing and to achieve this organizational change that is now paying off.”

5.5.4. Perceived performance outcome at Delta

When the pricing capability development project at Delta was formally finished in 2010, the results from the project exceeded the targets, meaning that the market share in Europe was more than doubled (from 12 to 25 percent), and the average price level increased to the same level as that of the leading competitor, making Delta one of the two actors on the European market in the highest price segment. Perhaps most importantly, the EBITDA margin doubled from 6 to 12 percent¹⁷.

When commenting on the results from the project, the marketing manager said that maintaining the premium price positioning was the key success factor in ensuring that the customers would understand the value of the products:

“I wouldn’t believe it and I also think that [the BA president], [the BU president agriculture] and [the CEO of Technologica] they didn’t even consider the possibility to increase the market share and to reduce the price gap [between Delta and the competitor in the highest price segment]. Probably they just wanted to keep the gap and retain the position but the results were exceeding the expectations. There are a lot of reasons why, we have been analyzing why it was good. For sure, one of the reasons, one part of the success is because of the focus on pricing. So I think it’s been really a pillar in the brand switch project and I will take that with me in the future in the sense that when one wants to run a brand switch it is really risky not prioritizing pricing first. It is extremely

¹⁷ Delta had a steady annual increase in EBITDA margin from 6 to 12 percent between 2006 and 2010. This stands in contrast to the largest competitor that reported a steady annual EBIT margin of approximately 18 percent (regarding the equivalent product segment) in 2007, 2008 and 2010. In 2006 and 2009, the competitor’s EBIT margin dropped to approximately 13 percent, but recovered to 18 percent in 2010. I have not been able to access the financial figures of the other competitor’s equivalent product segment.

important because pricing has an enormous effect on the perception of the value, enormous.”

The marketing manager believes that the successful outcome is the result of the decision to centralize the pricing authority. According to him, the sales representatives would not have been able to maintain a premium price level throughout the change of brand if they had possessed the authority to allow discounts. He explained:

“One of the risks of the brand switch was that the customer, whenever the salesmen would have proposed a product under another brand, would ask for a discount, then you can understand the mechanism. So the marketing project that concerned the brand switch was also considering strategically the pricing as a part of this. There was the risk of losing market shares because when you change the brand people automatically start to think of an alternative because they do not believe in the second brand that you use. That was the first threat, and the second one is that the customer says: ‘Okey, I accept your product under another brand but you have to give me a discount’.”

Hence, the results from the pricing capability development project show that the sales representatives, as a result of the new pricing organization and pricing tools, are able to explain the value of the products to the customers and, thus, get them to accept premium prices. As a consequence of the new pricing capability, the prices are based on profit margin and customer value, rather than the gut feeling of the individual sales representatives.

According to the sales representatives, the restriction of their authority to reduce discounts makes it easier in the discussions with the customers, since the customers know that discounts are out of the question.

Lastly, the ability to maintain consistent prices throughout all the sales regions allows Delta to position the products relative to the competitors.

6. Analysis

In this chapter, the empirical findings are compared with the preliminary theoretical framework (depicted in Figure 2, page 81). The concepts in the preliminary framework are matched with empirical observations regarding both the pricing capability elements¹⁸ that have evolved at each embedded case prior to the pricing capability development project, and the pricing capability development projects carried out by four of the embedded cases. As the reader will notice, the chapter is not limited to and, thus, not structured according to the three potential antecedents of pricing capability development that were listed in the preliminary theoretical framework. The reasons for this are: 1) The empirical findings show that the three antecedents in the preliminary theoretical framework are insufficient for a full explanation of pricing capability development. In other words, they need to be complemented with two additional antecedents: managerial pricing governance choices and sales representatives' perception and motivation. 2) The empirical observations add to the findings by Dutta et al. (2003) and Hallberg (2008) and, thus, elaborate the concept of pricing capability elements outlined by these two publications. Consequently, this chapter includes the following three categories of empirical observations: 1) Empirical findings regarding the three antecedents that in the

¹⁸ As described in Chapter 5, prior to the pricing capability development project at respectively embedded case, the cases possessed few pricing capability elements. More important, management at all four cases that performed a development project claim (according to self-assessment) that it resulted in an increase in gross profit margin. For that reason, it is likely to assume that the embedded cases did not possess a pricing capability as defined by Dutta et al. (2003) prior to the development projects at respectively unit. Yet, even though the units possessed relative ineffective pricing capabilities prior to the pricing capability development projects (compared with the ones they developed), the term "pricing capability elements" is still used in order to avoid confusing terms.

preliminary theoretical framework are listed as possible causes for capability development (i.e. managerial perception about opportunities for capability-development, analyzed in section 6.1, managerial motivation to achieve capability-development, analyzed in section 6.2, and, lastly experience and repetition, analyzed section 6.5). 2) Empirical findings that point at the following two additional notable antecedents of pricing capability development; a) managerial choices regarding different forms of pricing governance structure (discussed in section 6.4), and b) sales representatives' perception and motivation (discussed in section 6.3). 3) Empirical findings regarding pricing resources and routines that add to findings from previous studies of pricing capability elements (presented in section 6.6). In the last section, a revised theoretical framework is presented.

As will be elaborated in this chapter, the empirical findings challenge the notion that the sales representatives', and other price setters' such as sales manager, commercial experience (Hallberg, 2008) and tacit know-how regarding customers and competitors (Dutta et al., 2003) are key antecedents of pricing capability development. This study shows that relying on the sales representatives' tacit know-how (as suggested by Dutta et al., 2003) and individual, commercial experiences (as suggested by Hallberg, 2008) could negatively influence pricing capability development. This observation is elaborated in section 6.5. Contrary to Dutta et al.'s (2003) slightly contradicting description of managers' ability to design pricing capabilities, this study shows how managers' decision making regarding pricing governance structures is the key to their ability to design pricing capabilities. The empirical findings indicate that managerial pricing governance choices, originating from individual managers' subjective perception concerning which pricing governance structure they perceive to be the most efficient and profitable, are key antecedents of pricing capability development. Hence, this study introduces the concept of pricing governance structure. Hence, this study introduces the concept of pricing governance structure.

Pricing governance structure refers to the organizational framework (e.g. decentralization versus centralization of pricing decision, incentives, managerial monitoring and control of pricing routines and resources) in which the firm realizes its prices. Pricing governance structure comprises the governance structure that management chooses regarding the firm's sales representatives and other potential price setters (e.g. sales managers), such as organizing the sales force according to a governance structure that resembles market contracting (e.g. a control system mainly based on outcome control, such as

hiring external sales agent) or hierarchies (e.g. a control system mainly based on behavior control, such as internal sales representatives with a limited pricing authority and autonomy).

The empirical findings show that a firm's pricing governance structure could be designed to address possible risks that are associated with close customer relationships, such as if the relationships between customers and sales representatives grow to resemble friendship and the sales representatives as a consequence become too loyal to the customer at the expense of the firm's goals. This is elaborated in section 6.4. The definition applied in the present thesis of pricing governance is in line with Williamson's definition of governance structure as "the institutional framework within which the integrity of a transaction is decided" (1979:235). Thus, following Williamson (1985), in this thesis, 'governance' is not limited to the concept 'corporate governance', which instead primarily serves the purpose of a "safeguard between the firm and owners of equity capital and secondarily as a way by which to safeguard the contractual relation between the firm and its management" (Williamson, 1985:298). 'Governance choices' refer to the alternatives management chooses between (e.g. hierarchies, market contracting, hybrids) when organizing transactions, whereas the concept 'corporate governance' is limited to: "[w]hat governance needs, if any, are served by creating a board of directors" (1985:298).

6.1. Managerial perception about opportunities for pricing capability development

In contrast with conceptual papers arguing that different managers' subjective decision making plays an influential role in organizational capability development (Amit & Schoemaker, 1993; Felin & Foss, 2011; Helfat & Peteraf, 2003), this study provides empirical evidence of the role that managers' subjective perception (defined as the mental image of managers about which resources the firm has access to and how those resources could be best utilized, see Danneels, 2010) and individual motivation plays in pricing capability development. Primarily, the empirical findings show that managerial perception regarding what pricing governance structure they perceive to be the most

efficient and profitable is a key antecedent of pricing capability development. This observation is elaborated in section 6.4. Moreover, the empirical findings also indicate that managerial perception about resource deployment is central to pricing capability development. The most significant empirical example of this is the observation that managers exercise judgment (cf. Foss & Klein, 2012) early on in a pricing capability development project regarding what they perceive as *the* key problem with the firm's current price setting, *which* pricing resources and routines they believe are the most important to develop in order to address this identified key problem, and then place most focus on tackling this identified key problem through the pricing capability development project.

Table 23 summarizes the identified cause(s) that triggered management to initiate pricing capability development, and managements' perception of the aspect that was the most important to address when developing new pricing capability elements. As seen in Table 23, the identified causes that resulted in management initiating pricing capability development were either derived from the external or the internal context of the respective embedded cases. This observation is interesting since it indicates that pricing capability development is not necessarily the result of external changes or signals. This is relevant since it challenges the notion that capabilities evolve continuously "according to signals from the environment" (Nelson & Winter, 1982:134), with "market prices" being potential "environmental signals" (Augier & Teece, 2009:415). The empirical findings indicate that the managerial perception that an opportunity for pricing capability development exists might result in the decision to initiate pricing capability development, without necessarily being preceded by any external influence, such as changes in market prices. For example, management at Gamma explained that they had the perception that more advanced pricing skills would improve profitability. This resulted in them deciding to evaluate the current pricing capability elements. This, in turn, resulted in management concluding that, contrary to their previous assumptions, the sales representatives were not able to fully match prices with customer value, even though many of them had several years of experience (decades of industry experience were not uncommon). Thus, management concluded that the current pricing governance structure was suboptimal and decided to initiate pricing capability development, primarily by imposing a more hierarchical pricing governance structure that restricted the sales representatives' pricing authority or autonomy.

Table 23 Role of managerial perception the pricing capability development projects

Case	Identified cause(s) for managerial decision to initiate pricing capability development	Managements' perception of the key aspect that was the most important to address	Causes(s) derived from sources internal or external of the embedded case
Alfa	A new business unit manager recruited with experience from other industries.	Better routines for monitoring product and customer profitability.	External
	The new manager was dissatisfied with the pricing routines and resources.		Internal
Beta	Due to the group-wide pricing project, management at Technologica's head office identified that Beta's pricing routines and resources had several areas of improvement.	Prices that better correspond to the products' customer value.	External
	A new sales manager with experience from other industries was recruited.		External
Gamma	Management believed that new pricing routines and resources would allow Gamma to better handle the increasing price pressure and, thus, improve profitability.	More consistent prices between sales representatives and sales regions.	Internal
Delta	A general urge for change in order to prevent a potential decline in profitability and volume (due to the change of brand).	Prices that are better positioned relative the competitors' prices (according to the products' customer value).	External

As described in section 3.6, in addition to asking the managers why they decided to carry out the development projects, I also asked them if they ever considered prioritizing other projects or other activities. According to the answers I got, management at each case claimed that they at the time of the decision to initiate capability development never considered alternative projects. Once they identified what they believed to be either an urgent need (Alfa, Gamma and Delta) or a good opportunity (Beta) to change pricing routines and resources, they stated that they were determined to proceed. The observation that the managers expressed a strong commitment towards achieving what they initially set out to do, without any obvious deliberations regarding alternatives for resource allocation is in line with Danneels' (2010) findings. In his longitudinal case study of a large manufacturing firm, Danneel (2010) concluded that once management decided that the firm's brand and understanding of customer needs were key resources, they focused solely on developing these resources without ever even considering prioritizing investments in other resources instead. The following remark from the business unit manager at Alfa, who had a professional and academic background in marketing, exemplifies how, once he had been recruited by Technologica, within a few months both identified what he believed to be an urgent need for new routines and resources for pricing, and subsequently decided to initiate pricing capability development because he believed it to be self-evident to prioritize this:

“When I came to [Alfa], I was surprised to see the lack of tools and techniques for sales and pricing. To train salespeople in argumentation and sales techniques and coach them to use available data and statistics are something that I consider to be common procedure in all businesses.”

Unsurprisingly, management at all four embedded cases said that their ambition with their respective pricing capability development projects was to improve profitability, or, in the case of Delta, protect the existing profit margin throughout the process of changing brand. More interesting is that the main focus for how profitability should be either improved, or protected, shifted between management at the four cases. In all four cases, management identified during the initial phase of each pricing capability development project a unique key aspect that they perceived to be the most important aspect to address when implementing new resources and routines for pricing. As seen in Table 23, management at each case differed in what they believed to be the most important aspect to address in the pricing capability development project. This observation is in line with Foss and Klein's (2012) reasoning regarding how

individual managerial judgment explains capability heterogeneity between firms. According to Foss and Klein (2012), due to differences in judgment, managers differ in their ability to make decisions under uncertainty regarding the use of the firm's existing or new resources and, thus, the ability to estimate the future outcome of current decisions. Through experiential learning, individuals develop the skill to identify opportunities, estimate future outcomes of today's decisions concerning resource deployment and the confidence to deal with uncertainty (Foss & Klein, 2012). In the context of pricing capability development, managerial judgment concerns, for example, the ability to estimate return on investment of a pricing capability development project, evaluate potential impact on profit margins, foresee possible consequences for the firm's customer relationships, predict likely responses from competitors, and anticipate thinkable reactions from sales representatives and other internal stakeholders. As summarized in the third column from left in Table 23, the empirical findings show that managers at the four cases differed in their individual judgment (cf. Foss & Klein, 2012) concerning which key aspect of the firm's current price setting they perceived to be the most important one to address and, consequently, which pricing resource and routine they believed to be most relevant to develop. Despite the similarities between the cases, such as acting on mature markets in mainly Western Europe or North America, offering products that are in the mature stage of the product's lifecycle, depending on close, long-term customer relationships, belonging to the same group, being positioned in the highest price segment, and faced with the challenge of commoditization and shrinking profit margins, management differed in their judgment regarding which pricing resources and routines to focus primarily on throughout their respective pricing capability development projects.

In the case of Alfa, the newly hired business unit manager emphasized that the first thing he noticed when joining the company was that Alfa had a poor overview of product and customer profitability. He concluded that Alfa lacked reliable data, such as information about actual product cost and revenue leakages, in order to identify and analyze profit margins. The business unit manager was surprised to see this since he was of the clear opinion that it was standard procedure within any business to gather and analyze this type of data. For these reasons, the main focus of the business unit manager throughout the development project was to address this problem, which he did by investing time and effort in constructing a raw-material index (in order to tackle the volatile raw-material prices), and purchasing a new CRM system for better

information management. Even if management at Alfa also gave the sales representatives training sessions in pricing and negotiation techniques, the main focus of management was to assure better control of product and customer profitability. This is illustrated by the following quotation from his answer to what his expectations with the group-wide pricing excellence project were:

“I would like to see top management support for a raw-material index, that [the head office of Technologica] develops one. The best case would be that it becomes a standard [within the industry], like with the oil price [index].”

Naturally, managerial attention is limited and they have to prioritize (Simon, 1947). Probably, the newly hired manager's strong focus on customer and product profitability is partly explained by his subjective selection of previous experiences (cf. the argument that managers' decision making is biased towards recent and successful experiences [March, 1994]). Thus, management at Alfa decided to focus on information management regarding customer and product profitability since this was the problem that they, in their view, judged to be the most urgent problem to address. Considering that the prices and, thus profit margins, for similar products to similar customers differed greatly across different sales representatives at Alfa, one could argue that the manager at Alfa also had the option to instead focus primarily on the price differences between sales representatives and, thus, different profit margin achievements for identical offerings to similar products. If the manager at Alfa had decided to focus on the problems with inconsistent prices, his focus could have been on implementing routines and resources that facilitate more consistent prices, such as a IT system that provides price recommendations, rather than focusing primarily on implementing IT support that enables better and more reliable information regarding product and customer profitability.

Management at Gamma also, just like management at Alfa, concluded that they 1) lacked reliable data regarding product and customer profitability, and 2) that prices and, thus, profit margins, for identical offerings to similar customers differed largely across sales representatives. However, they decided to focus primarily on reducing price differences between sales representatives. Because management perceived price differences between sales representatives to be the key problem, they decided to invest three million Euros in a new IT system that provided the sales representatives with price recommendations. Thereafter, they spent more than three years implementing the new IT system and training the sales representatives to use the new IT system. Presumably, management at

Gamma could instead have decided to primarily focus their attention on developing the ability to analyze product and customer profitability. However, management at Gamma believed that a key problem with the price setting prior to the development project was that the prices of identical offerings to similar customers differed substantially between the sales representatives.

Similar to Gamma, Delta also produces non-customized products and distributes its products worldwide. Naturally, management at Delta is also concerned with profitability. However, the business unit president at Delta has a strong focus on competitive price position, which is exemplified in the following citation from his interview:

“Pricing is about positioning. That is why we have decided since the beginning to position ourselves at the top and be the price leader. Then of course, whenever you decide to be the price leader, what happens is that you need to be consistent, you need to deliver the value and you need to meet the expectations. Any time that we position ourselves on the market in this company, we know that we should be price leader; we should be at the top. This is mandatory in this company. Then of course you need to be consistent. You cannot have countries where your position is low because this is a global market. Your premium price position needs to be coherent with the rest of the world. In every country we have someone working on pricing, meaning monitoring prices. [...] In order to position yourself, you need to know exactly where you are, market by market, so that is why we have people in all the markets who are doing this job daily, just collecting information about prices.”

The business unit president strongly believed that pricing was the means to “signal” the products’ value to customers, especially how it differed from that of the competitors’ products. For that reason, when developing new pricing capability elements, management was focusing on implementing pricing tools that enabled competitive price positioning (i.e. tools for analyzing competitors’ prices, the customer value of both Delta’s products and the competitors’ products, inter-country price comparison analysis, and price elasticity of demand analysis) and designing a pricing governance structure that facilitated competitive price positioning (i.e. centralizing the price setting to the head office and appointing a pricing manager to be responsible for assuring competitive price positioning throughout all sales regions). Thus, even though management at the other cases also had an ambition to price their products in the high-end segment, management at Delta were the only among the four

cases to select competitive price positioning as the main ambition with the pricing capability development project.

Lastly, even though management at all four cases agreed on value based pricing as the superior pricing strategy (compared to a cost based pricing strategy that was the tradition within all cases prior to each pricing capability development project), it was management at Beta that perceived value based pricing to be the main ambition with the pricing capability development project. Presumably, the reason is that Beta is the only case that started their pricing capability development project with hiring consultants from one of the world's largest management consultancy firms. Contrary to the other three cases, the initiative for a pricing capability development project at Beta came from Technologica's head office that also financed the management consultants. Hence, although both Alfa and Gamma hired management consultants, these were hired later in the process and on the initiative of their respective managements. In other words, in the case of Alfa, the management consultants (hired from a small, German firm, not the large, global firm that was hired by Technologica's head office on behalf of Beta) entered the scene once management decided to also train the sales representatives in pricing and negotiating techniques. Concerning Gamma, the management consultants came from the German firm that sold the new IT system for pricing and were, consequently, a part of the package deal with the IT system. According to the management consultants who were hired by Beta, they concluded early on that Beta's products were suitable for value based pricing, a conclusion that management at Beta agreed on. For that reason, the pricing capability development at Beta centered around training the sales representatives and management in value based pricing and providing the sales representatives with different tools for value based pricing, which they had to comply with when deciding, communicating and negotiating prices.

As shown by the examples above, the managers differed in their perception of how to best achieve pricing capability development and, consequently, their individual judgment (cf. Foss & Klein, 2012) regarding the deployment and development of the firm's pricing resources. Thus, it is reasonable to assume that managers' subjective perception about the opportunities for capability development provided by the firm's internal and external context (Penrose, 1959) and the expected consequences and outcomes of the perceived alternatives (Cyert & March, 1963; March & Simon, 1958) partly explains the managers' differing decisions regarding which pricing capability elements to develop and implement.

The column on the far right in Table 23 illustrates that an external event might indeed precede the managerial decision to initiate pricing capability development. However, it will not alone determine it. As seen in Table 23, in the case of Delta, management explained that the reason for initiating pricing capability development was their perception that it was their best chance to prevent the change of brand from leading to a decline in profitability. Thus, even though an external event (i.e. the decision made by Technologica's head office that Delta should re-brand its products) preceded the managerial decision, it was the perception among Delta's management that a more hierarchical pricing governance structure was the best way to tackle risks associated with the re-branding of the products that determined the design of the new pricing organization and, thus, essentially the development of the new pricing capability elements. Management at Delta explained that they, as a result of the challenge of re-branding the products, decided that a more hierarchical pricing governance structure according to their perception was the most optimal choice (as opposed to the governance structure prior to the development project which provided the sales representatives' with a considerable pricing autonomy), both in terms of achieving the highest possible gross profit margin, and assuring that the products were positioned in the highest price segment.

6.2. Managerial motivation to achieve pricing capability development

The empirical findings are in line with the assumption that managerial motivation is one factor explaining which capabilities a firm develops (Bower, 1970; Eneroth, 1997; Simon, 1947). According to Bower (1970), managers' motivation to prioritize a project is explained by a combination of the manager's beliefs about the outcome of the project at hand, his or her beliefs about other projects competing for the same resources and what the manager believes that the firm expects from him or her. Considering the resources that the embedded cases allocated to each development project, such as investments in new software programs for pricing (Gamma being the most notable one of the cases, considering that they invested three million Euros in a new IT program), management consultants (Delta being the exception), training sessions for employees, managerial time for planning and executing the project,

management was undoubtedly motivated to prioritize the projects. In the case of Epsilon, management never decided to prioritize pricing capability development; the main reason, they argued, was that their managers did not ask for it. This might be an example of status quo bias in decision making (Samuelson & Zeckhauser, 1988), referring to individuals' tendency to avoid changes and choose to maintain the current situation (e.g. due to cognitive sunk costs or uncertainty avoidance). Naturally, different managers will prioritize differently due to their subjective desires and beliefs (Bower, 1970; Coff & Kruscynski, 2011).

As elaborated above, although management of each embedded case all expressed an ambition to either improve or protect profitability, they differed in their judgment regarding what they believed to be the best way to achieve pricing capability development and which main focus areas to address. If managers, due to differences in judgment about resource deployment (Foss & Klein, 2012), differ in their perception about the expected outcome of pricing capability development and, thus, make different estimations regarding the expected impact on desired rewards (e.g. bonuses tied to the business unit's financial performance), individual motivation will impact whether a manager decides to prioritize pricing capability development or not. Hence, managers' perception about the expected influence on desired rewards and judgment to estimate outcomes from pricing capability development will presumably influence their motivation to engage in pricing capability development.

6.3. Sales representatives' perception and motivation

Clearly, the individual sales representatives' subjective perceptions and motivation also influence the firm's pricing capability. For example, prior to the pricing capability development projects at the embedded cases, the individual sales representatives explained that they set the prices either according to what they perceived to be the "market prices" (defined by the sales representatives as "what I believe the customer is willing to pay" and similar statements referring to individual perception), or historical prices that, also, had once been set according to the sales representatives' perception of "market price". Thus, prior to the pricing capability development projects, the embedded cases' prices were largely based on the individual sales representatives' subjective perception regarding "market prices". Considering that different sales representatives had

different perceptions about “the market price”, they priced similar products to similar customers differently.

Individuals tend to avoid uncertainty in decision making and stick to already established procedures (Cyert & March, 1963). This could partly explain why the sales representatives often relied on historical prices. However, this is not the only explanation. The fact that different sales representatives decided on different prices for similar products and customers illustrates that historical prices are not the only explanation for the sales representative’s pricing decision. The individual sales representative’s subjective perception *in the actual pricing decision* also has an influence. This argument is supported by previous studies that have demonstrated that individuals are inclined to set prices according to the amount they perceive to be “fair” (Kahneman et al., 1986). Naturally, the individual sales representative could perceive historical prices as “fair”, simply because both parties have accepted this price previously. Nevertheless, it is presumably the individual sales representative’s individual perception that most accurately determines the actual price decision, not the historical prices per se. The influence from the sales representatives’ prior experiences on their pricing decision is further discussed in section 6.5.

Naturally, sales representatives’ motivation also shapes the effectiveness of pricing capabilities. Often, managers are recommended to provide the sales representatives with monetary incentives in order to align the goals of the firms with those of the sales representatives (Hinterhuber, 2004; Hinterhuber, 2008; Marn et al., 2004; Nagle & Hogan, 2006; Vogel et al., 2002). However, the empirical findings show that in addition to extrinsic motives, sales representatives’ pricing decisions are also largely influenced by hedonic intrinsic incentives.

6.3.1. The influence of sales representatives’ hedonic intrinsic motives on pricing decisions

As mentioned, the embedded cases handle close, long-term customer relationships and individual sales representatives are usually assigned to the individual customers. This facilitates a deep understanding for the needs of each individual customer and enables the sales representatives to get access to information about the competitors (e.g. net prices), information that is not publically disclosed by the competitors. An additional advantage with assigning individual sales representatives to the different customers is that it enables close

personal relationships with each of them (Bradford & Weitz, 2009; Narayandas & Rangan, 2004), which increases the chance of loyal customers, since they are more likely to develop loyalty toward an individual (e.g. a sales representative), rather than a selling firm (Jap, 2001; Palmatier et al., 2007). However, the empirical findings show that the close customer relationships often develop into something that resembles friendship between the sales representatives and the customers' representatives, which in turn sometimes results in the sales representative granting discounts as a sympathetic gesture, and deliberately avoiding discussions about price increases. Due hedonic intrinsic motives (Lindenberg, 2001), the sales representatives are sometimes inclined to prioritize a nice, pleasant, friendly meeting with the customer, rather than getting into an unpleasant price discussion. The empirical findings show that the tendency among sales representatives to avoid price discussions, grant discount as a friendly gesture and prioritize pleasant customer meetings has a potentially negative impact on the firm's ability to maximize the profit margin. The following citation from the marketing manager at Delta exemplifies the problem that might arise if a sales representative becomes too close to a customer and, as a result, downplays profit maximization in favor of a pleasant, friendly customer relationship:

“I understand that it is very difficult for a salesman going to someone that they spend time with [to request price increases]. They have dinner with them, they have a relationship with them, they are sometimes friends and to go to them and ask for a price increase is sometimes like going to your brother and asking for money. So there is some dynamics that is dangerous sometimes, because sometimes you have the salesmen disclose [confidential information] to the customer and then the company.”

In addition to prioritizing friendly relationships (i.e. hedonic intrinsic motives) over profit maximization, the closeness of the individual sales representatives and the customers also carried the risk that the sales representatives sometimes became more loyal to the customer than to Technologica. This risk is exemplified in the following citation one from one of the sales representatives:

“The disadvantages with the long-term relationships are the sometimes ‘gentlemen agreements’ that are settled.”

Anderson (1985) argues that one risk with using external sales agents (as opposed to employed sales representatives) is that the external sales agent becomes more loyal towards the buyer, at the expense of the seller's interests.

The empirical findings from this study indicate that also employed sales representatives in some situations might be more loyal towards the customers, due to the close relationship that is established between the sales representatives and the customer. One of the sales managers, employed by Alfa as a part of the pricing capability development project, observed the risk with the close relationships between the sales representatives and some of the customers. He saw the risk that the sales representatives avoided price discussions with these customers in order to keep clear of conflicts. He said:

“The first thing I saw [when joining the company] was that we have some very, very old relationships. [...] The problem with these long relationships, as I see it, is that nobody is asking, in a continuous way; ‘is this the right kind of partnership?’ Because it is totally different if I know somebody a long time [...] I always ask the question; ‘why they are buying from our company? Could it be that we are the cheapest, too cheap?’ The problem was, in the past they never talked about price increases, over years sometimes, and this is a big, big mistake.”

According to the sales representatives, one of the reasons why prices remained unchanged for several years, sometimes decades, prior to the pricing capability development projects was their reluctance to get into price discussions. The willingness among the sales representatives to avoid price discussions with long-term, close customers is exemplified by the following citation of a sales representative describing how he decides the price for these customers:

“Most often, we offer them the same price as the last time, because we don’t want to create problems.”

Indeed, the sales representatives could rely on historical prices for the sake of convenience. But, the empirical findings also indicate that the sales representatives deliberately avoided a price discussion because they preferred a pleasant, friendly customer meeting (i.e. hedonic intrinsic rewards) rather than profit maximization.

6.3.2. Hedonic intrinsic motives versus extrinsic motives

Two of the embedded cases (Beta and Gamma) provided their sales representatives with monetary incentives prior to the pricing capability development projects. However, despite the fact that the sales representatives at both Beta and Gamma were monitored and rewarded based on gross profit margin contribution, management decided to restrict the sales representatives’

pricing authority (Gamma) and pricing autonomy (Beta). If monetary rewards had been enough in order to align the goals of the sales representatives with the goals of management (i.e. profit maximization), the sales representatives would have behaved according to the goals of management (i.e. maximized gross profit margin contribution for each customer order), regardless of whether they were monitored or not. Yet, the empirical findings indicate that due to hedonic intrinsic motives, the sales representatives might decide to avoid price discussions and instead choose to grant discounts, even though this has a negative impact on both their monetary reward (e.g. Christmas bonus) and firm goals (i.e. profit maximization). Hence, extrinsic incentives were insufficient for ensuring that the sales representatives, when setting and communicating prices, prioritized profit maximization over hedonic intrinsic motives.

The other two embedded cases (Alfa and Delta), had no system of monitoring and rewarding the sales representatives' gross profit margin contribution prior to each pricing capability development project, but both decided to implement such a system as a part of the development project. Moreover, just like Beta and Gamma, management at both Alfa and Delta also decided to restrict the sales representatives' pricing autonomy (Alfa) and pricing authority (Delta). Thus, management believed that linking monetary rewards to the sales representatives' gross profit margin contribution was not enough to achieve prices that better matched the customer value. On the one hand, providing monetary rewards might encourage the sales representatives to work harder in order to get the highest possible gross profit margin. On the other hand, one of the most important job tasks of the sales representatives is to sell Technologica's products at the highest possible gross profit margin. Thus, their task is to prioritize the interest of the firm (i.e. profit maximization), not self-interest such as hedonic intrinsic rewards. For that reason, even though monetary incentives presumably encourage the sales representatives' to walk the extra mile in order to maximize the gross profit margin contribution, it is still their duty to contribute to the firm's profitability, even if they are paid a fixed monthly salary (compared to a variable one, adjusted for gross profit margin contribution). Hence, the tendency among sales representatives' to prioritize hedonic intrinsic rewards over the firm's goals (i.e. profit maximization) was a problem both at the embedded cases that already provided monetary rewards and those that paid their employees a fixed salary.

Naturally, hedonic intrinsic motives most likely also influence managers in their decision making. Moreover, as discussed in section 6.2, the empirical findings

showed that managerial motivation, which could be derived from both intrinsic and extrinsic incentives, is a potential antecedent of pricing capability development. Yet, although I recognize that hedonic intrinsic motives can influence individuals' behavior (Lindenberg, 2001), the empirical findings regarding managerial motivation to prioritize pricing capability development did not show any evidence in this respect. With that said, although no empirical findings pointed at managerial hedonic intrinsic motives as an isolated antecedent of pricing capability development, it is presumably playing a role in managers' day-to-day actions and decision making. The following section discusses how managerial perception regarding which pricing governance structure individual managers consider to be the most efficient and profitable plays a key role in pricing capability development.

6.4. Managerial pricing governance choices

As mentioned in the introduction of this chapter, the empirical findings show that the key antecedent of pricing capability development at each case was when the respective managements changed their view on which pricing governance structure they perceived to be most efficient and profitable. This finding is elaborated in this section.

Williamson (1979) argues that hierarchies and market contracting are the two main governance alternatives that managers can choose between. Hierarchies comprise the existence of authority relations, such as the one between management and subordinated, whereas market contracting is the situation comprising two independent parties, such as two firms, engaging in "hard bargaining". These two alternatives represent two corresponding ends of a continuum. In other words, a party could be in a stronger or weaker authority position relative to the other party, and be more or less independent of the other one. Thus, the degree of autonomy of both parties decides where to place a given governance structure on the spectrum between 'hierarchies' and 'markets' (Williamson, 1985). Naturally, managers could decide on different types of governance structures that are hybrids of market contracting and hierarchies (see Williamson, 1991). Such hybrids could both take the form of inter-firm arrangements, such as joint ventures, and intra-organizational arrangements, such as decentralized decision making within the organization. If a manager gives the firm's departments and employees a large degree of

autonomy, the governance structure might be better described as market contracting than a hierarchy (see Williamson, 1975:117). The practice of introducing features of market contraction into hierarchies, such as organizing a firm's different departments as profit centers (Bradach & Eccles, 1989; Eccles & White, 1988), has been labeled "quasi-market decentralization" (Rosen, 1988). The opposite, when firms engage in long-term, close collaboration without being formally integrated has been referred to as "inside contracting within the quasifirm" (Eccles, 1981).

According to the empirical findings, prior to the pricing capability development projects at each embedded case, the respective managements assumed that the individual sales representatives were in the best position to decide prices, due to a presumed information advantage over management regarding individual customers. For that reason, they delegated the pricing authority and autonomy to the individual sales representatives with the assumption that this resulted in not only prices that better matched the products' idiosyncratic value to different customers but, also, lower bureaucratic costs and, consequently, a more efficient use of resources. By delegating the pricing authority to the individual sales representatives, frequent price changes could presumably be made at a relatively lower menu cost (i.e. administrative costs for changing prices, see Bergen et al., 2003) and the prices could more easily be adjusted for individual customers, than if the pricing authority was centralized (assuming that prices were negotiated for each individual customer). Also, management at the studied cases assumed that the delegated pricing authority and autonomy allowed for quicker price adjustments in response to changes in the market place (e.g. changes in demand and/or competitors' prices). Indeed, this presumes that prices are negotiated with each individual customer. If all customers, or at least all customers within a given segment, are given identical prices the prices could indeed be managed centrally.

However, despite the managerial assumption that the individual sales representatives were in a relatively better position to decide and negotiate prices, the embedded cases had a vertically integrated sales force (as opposed to hiring external sales agents). Anderson and Schmittlein (1984) concluded in their empirical study that firms often chose the alternative 'hierarchy' regarding their sales force (i.e. integrated, employed sales representatives as opposed to independent sales agents) if information uncertainty regarding the individual sales representatives/sales agents' performance is high. Thus, in this context, 'uncertainty' refers to *internal* uncertainty (e.g., uncertainty concerning the employees' individual performance is high if their performance to management

is ambiguous) as opposed to the type of uncertainty that managers might face when writing contracts in the presence of a changing environment (see Williamson, 1981). As mentioned, the embedded cases handle many close, long-term customer relationships and two of them (Alfa and Beta) offer customized products. Often, the sales representatives have an information advantage over management regarding the individual customers. Also, the sales processes at the embedded cases usually involve several individuals in addition to the sales representative, such as product designers, which creates more obstacles to measuring individual performance (see Alchian & Demsetz, 1972). Presumably, this is one key explanation for why the embedded cases have an integrated, employed sales force. Moreover, employed sales representatives are more likely to adopt knowledge that is specific to his or her employer, such as regarding product specific features, assuming that the products are differentiated from the competitors' (i.e. equivalent to human asset specificity, see Anderson, 1985), and perform non-selling activities (e.g. documentation and participating in internal training) compared to external sales agents (Anderson, 1985). Also, by assigning individual sales representatives to the different customers, the firm can presumably reduce the cost for information required to match product features and product design with specific customer needs, since the individual sales representatives accumulate both tacit and explicit knowledge about specific customers' needs. In other words, the practice of assigning individual sales representatives to the different customers results in relatively lower transaction costs (Bradach & Eccles, 1989; Noordewier et al., 1990). Consequently, employed sales representatives are more common among firms that offer highly differentiated products, especially when the products are technically complex (Anderson & Coughlan, 1987). This further motivates the choice of internal, employed sales representatives at Technologica.

Several studies have recommended delegation of pricing authority to the individual sales representatives if they have an information advantage about customers over management (Hinterhuber, 2004; Hinterhuber, 2008; Homburg et al., 2012; Joseph, 2001; Marn et al., 2004; Mishra & Prasad, 2005; Nagle & Hogan, 2006; Vogel et al., 2002). Usually, these studies also recommend management to provide the sales representatives with monetary incentives in order to align the goals of the sales representatives with those of management (e.g. profit maximization). In other words, managers are often recommended to organize the sales force as "quasi-market decentralization" (Rosen, 1988). Indeed, two of the embedded cases (Beta and Gamma)

provided, prior to each pricing capability development project, the sales representatives with monetary incentives.

The embedded cases' pricing governance structures prior to the development projects followed the general recommendation of delegating the pricing authority and autonomy to internal sales representatives if they have an information advantage over management about customers. In line with these recommendations, this was combined with monetary incentives for gross profit margin contribution. Even so, management at each embedded case concluded throughout the pricing capability development projects that the current pricing governance structure (i.e. one that resembled market contracting) was suboptimal and needed to be replaced with a more hierarchical one. The change in managerial perception is illustrated by the following remark from the marketing manager at Delta when he explained why management decided on a more hierarchical pricing governance structure:

“What happened then in the story is that management recognized that they needed to have a significant control and overview on the pricing, especially because the brand switch was entering.”

The following citation from the interview with the business unit manager at Delta exemplifies how management now, after the pricing capability development project, believes that a more hierarchical pricing governance structure is the most optimal one:

“We allow extensive freedom of thought for the subsidiaries but when we talk about pricing, we would like to keep everything under control because we need to coordinate and we need to make sure that we are coherent in our image all over the world. That is basic for our pricing strategy today.”

Thus, the empirical findings show that the pricing governance structure possessed by the studied cases prior to the pricing capability development projects actually resulted in both a *less* efficient use of resources and *lower* profit, than with the new, more hierarchical governance structure. This was due to the following two identified obstacles for efficient value appropriation: 1) the influence of sales representatives' hedonic intrinsic motives on pricing decisions, and 2) the influence from myopic behavior among sales representatives on pricing decisions. These two identified obstacles are elaborated in the following sections.

6.4.1. Handling the influence from sales representatives' hedonic intrinsic motives on prices

As discussed in section 6.3.1, management at the embedded cases observed that the close, customer relationships sometimes caused sales representatives to become too loyal to the customers. The problem was that the sales representatives in these situations were too inclined to grant discounts, both as a gesture of friendship, and due to a desire to avoid a price discussion and close a deal as quickly as possible. In other words, the sales representatives had to deal with a conflict of interests. On the one hand, the sales representatives were, due to close, personal customer relationships, acting loyally to the customer by granting discounts and avoiding price increases. On the other hand, the sales representatives are paid to act in the interests of Technologica and, thus, maximize profit margin. Management at the studied cases decided to tackle this conflict by designing a new pricing governance structure that addressed the risks with too close customer relationships. The following quote from the marketing manager at Delta illustrates the managerial decision to restrict the sales representatives' pricing authority and autonomy:

“Pricing is about establishing a kind of distance to the customer. You know; ‘this is our money, you are the customer and important to us but this is our profit and loss’. And sometimes you have the confusion, not because the salesman is stupid but it is because it is a part of his life and because his life is the relationships [with the customers]. Also, pricing is not something nice to ask somebody else because you ask for money. The feelings are a part of the customer relationships. The role of the [sales representative’s] emotions in a price negotiation is influencing. You have the responsibility, as a manager of the company, to make clear where the fence of the company is, because our goal is to provide our stockholders with money. So pricing is an extremely powerful tool to communicate to people: ‘which are the rules and which is the fence, where is our mission, where is our target, our goal?’. Our target is to make money so if we have to sell less and price more, we do that because that is our mission.”

This citation also illustrates how sales representatives actually might feel uncomfortable to talk about prices with customers. The reluctance among some sales representatives to talk about prices and price increases is illustrated by the following quotation from an internal pricing expert at Gamma:

“Pricing is really a topic that people are afraid of: ‘Don’t talk about prices, don’t talk about money’. Even in sales, it is a topic that is not really openly discussed. When changing the procedures for pricing, it is really about changing mind-sets. It is often a sensitive matter since pricing is not something that you should talk about. It is like money, money and price are not something that you talk about.”

Thus, the identification of the sales representatives’ reluctance to engage in price discussions was a key reason for why management at the embedded cases decided to implement a new pricing governance structure that restricted the sales representatives’ pricing authority and pricing autonomy, even though the close, long-term customer relationships had enabled the individual sales representatives to gain a deep understanding of the individual customers. According to the sales representatives, the decision to restrict their pricing authority and autonomy has resulted in less focus on prices during the discussions with the customers. Instead, the customer meetings are more focused on product features, customer needs and the value of the products to the individual customer. Both the sales representatives of the cases that produce customized products, (Alfa and Beta) as well as those of the ones producing non-customized products (Gamma and Delta) have experienced this.

The decision to restrict the pricing authority of the sales representatives responsible for non-customized products (i.e. those at Gamma and Delta) has, according to the sales representatives, resulted in reduced pressure from the customers to grant discounts. When the customers are now asking for lower prices, the sales representatives are instead offering them different products with lower customer value and, thus, lower prices. One sales representative described the difference in the discussions with the customer:

“[Before the pricing capability development project] there was no discussion about different products. It was just about pricing. Today I tell them: ‘We are the market leader, this is our complete portfolio, these are our prices and you decide which is the right one. It is up to you, what do you want?’”

As a result of the restricted pricing authority, the sales representatives have experienced that some of the customers have become more open about which product features they consider to be most important, since they are more forced to make priorities, instead of only haggling over the price per se. Since the customers know that discounts are not an option, they are less inclined to push

for these. This is illustrated by the following quotation from one of the sales representatives at Delta:

“[In the discussions with the customers,] it is always about the price, that’s always what the customer want to talk about. [...] The restricted discounts make it easier because we simply can’t go lower in price, even if the customer asks us to.”

The shift in focus from discounts to the products’ customer value in the meetings with the customers has resulted in a general price increases. Presumably, if the customer’s representative and the sales representative know that discount is one option, both representatives will focus their attention on the money that is on the table (i.e. the discount). The sales representative might, due to hedonic intrinsic motivation and a willingness to please the customer, consider discounts as the most convenient and pleasant means to close a deal. If the customer’s representative knows that the sales representative has the authority to grant discounts, he or she will probably direct his or her attention towards the money that is on the table. As a consequence, both parties might implicitly decide to share the money that is on the table (i.e. the discount) by splitting it in half and thus achieve the goals of both of the parties, closing the deal.¹⁹

Regarding the two cases that produce customized products (Alfa and Beta) and, thus, restricted the sales representatives’ pricing autonomy, the sales representatives are more confident when entering a meeting with a customer due to the training they have received. They are no longer relying purely on their experiences in negotiation but are, instead, prior to the customer meeting, defining and quantifying the customer value in order to convince the customer of the products’ customer value. One of sales representatives at Beta described it as:

“...a different way of presenting information to the customer than just going straight into a customer and saying: ‘We have recognized that our [product] is a better one, so we are going to raise our price’. But using

¹⁹ This argument builds on Hallberg and Andersson (2012)

the value based pricing helps you explain to the customer the rationale for the way the pricing is structured.”

Contrary to the assumption that sales representatives are motivated by a full pricing authority (e.g. Dolan & Simon, 1996), they might actually be more motivated by a restricted pricing autonomy and authority, since the discussions with the customers are less about haggling over price and more about product features. In other words, the role of the sales representative becomes closer to that of a technical consultant who assists the customer in the selection of which products to purchase, and less of the stereotype sales representative who only haggles about prices. Thus, contrary to what one might have expected, the new, more hierarchical pricing governance structure did not, according to the sales representatives, have any negative influence on the customer relationships. The sales representatives’ reduced ability to grant discounts and give “special prices” did not have a negative impact on the individual sales representatives’ customer relationships; instead it reduced the pressure on the sales representatives to lower prices.

In their empirical study, Dutta et al. (2003) conclude that in addition to value appropriation, a firm’s pricing capability serves the purpose of balancing competing interests within the organization. According to Dutta et al. (2003), competing interests concern organizational conflicts between those advocating price changes and those promoting unchanged prices due to the costs associated with price changes (see Bergen et al., 2003). For example, the sales manager might call for price increases in order to boost profit margin, whereas the marketing department might be reluctant to raise prices since this generates costs, such as those for distributing catalogs with new prices. Thus, Dutta et al. (2003) are concerned with conflicting goals between departments. The empirical findings provide support for this reasoning. For example, the decision by management at Gamma to centralize the price setting for the non-customized products by implementing an IT system that provides price recommendations enabled them to better handle the ongoing conflict between the market offices and the manufacturing plants, resulting from both departments fighting about “their” share of the profit margin.

Moreover, this study adds to the reasoning of Dutta et al. (2003) by suggesting that managers might be able to balance subjective, individual motives of the sales representatives with the goals of management. In other words, if the goals of the sales representatives (e.g. hedonic intrinsic motives) are misaligned with the goals of management (i.e. profit maximization), a pricing governance

structure that restricts the individual sales representatives' pricing authority and pricing autonomy could enable management to handle the negative influence of the individual sales representatives' motives.

The following section discusses how management at the embedded cases designed a pricing governance structure that, in addition to addressing the impact of hedonic intrinsic motives, also addressed myopic behavior among the sales representatives.

6.4.2. The influence of myopic behavior on pricing decisions

Like most other individuals, sales representatives prioritize short-term gains over long-sightedness and overlook the bigger picture in favor of what is closer at hand, simply because that is human nature (Cyert & March, 1963; Levinthal & March, 1993). Therefore, they are inclined to close a deal today instead of waiting until tomorrow, even if it means accepting a lower price. The following statement of the marketing manager at Delta illustrates the short-term focus among the sales representatives:

“The sales people always think of a market price, but the problem is that they cannot define the market price and they cannot determine the willingness of the customer to pay for that. They are not capable of doing that. It is not easy and probably they are much more short-term driven so they want the product to be sold right now.”

As illustrated by the citation above, management at the embedded cases believed that the tendency among the sales representatives to focus on discounts in order to close a deal as soon as possible, was one reason why the customer meetings were centered around discounts, not product features and the products' customer value. This tendency among the sales representatives to focus on discounts is also illustrated by the following citation from the business unit manager of Alfa:

“[When the customer is offered a price] the customers say normally; ‘No it's too expensive’, and then the question arises: ‘Oh, what can we do?’ and everything is always moving round this price, nobody is talking about quality, or added value. We have to point that out and show it to the customers.”

Zbaracki, Ritson, Levy, Dutta and Bergen (2004) criticize the presumption that firms adjust their prices instantly in response to changes in the market place

and argue that, instead, prices are most often rigid due to firms' costly and complex organizational procedures for price adjustments. I propose that another possible explanation for price rigidity stems from difficulties with changing the individual sales representatives' subjective perception in the actual pricing decision, such as their tendency to avoid price discussions and prioritize hedonic intrinsic motives and quick deals over gross profit maximization. In other words, the sales representatives often turned to historic prices in order to avoid price discussions with the customers. Hence, the sales representatives' individual motives might create price rigidity.

Researchers have argued that "market prices" are equivalent to "environmental signals" (Augier & Teece, 2009:415), which cause organizations to change and, thus, survive in the long run (Nelson & Winter, 1982:134). However, the empirical findings indicate that the assumption that the pricing authority should be delegated to the individual sales representatives, in order to facilitate quick responses to changes in the market (see Dolan & Simon, 1996), might have a negative impact on the value appropriation ability of firms acting on mature markets. Considering that the customers of firms within mature industries are buying products that have reached the maturity stage of the product life cycle, several of the customers are also often acting on mature markets. Therefore, the competitors, customers, suppliers and other market actors are seldom undertaking any quick changes (compared to more dynamic markets). Thus, rather than handling a largely dynamic market situation, the main challenge for firms acting on this type of mature markets is instead the increasing level of commoditization and, thus, increasing price pressure. Also, customers acting on mature markets are increasingly centralizing their purchasing divisions and implementing more sophisticated procurement tactics in order to increase their bargaining power (Malhotra & Uslay, 2009). For that reason, prioritizing quick deals over prices that sufficiently match customer value might be problematic for the following two reasons; 1) the firm is missing out on potential value appropriation, and 2) the firm is at risk of starting to compete on prices rather than product features and may, thus, end up practicing a low cost strategy, rather than the desired differentiation strategy.

Naturally, myopic behavior shapes managerial decision making. For example, myopic behavior is one potential explanation for why management at Epsilon never decided to initiate pricing capability development. One of the project leaders of the group wide pricing excellence project explained that one key success factor with the previous group wide projects (e.g. a project that had the purpose of lowering energy consumption) was that those projects had generated

cost savings within a quarter. As was illustrated in Figure 4 (page 141), the pricing capability development projects took between 1.5 and five years. Hence, reluctance to prioritize a project that requires several years before the results are visible in the financial figures could be one explanation for why management at Epsilon never decided to prioritize pricing capability development. However, although I recognize that myopic behavior shapes managerial decision making, no empirical evidence shows that it played a significant role in explaining managerial decision making regarding pricing capability development (although it presumably had an implicit impact).

The following section discusses how managers are able to design pricing capabilities through their choices regarding pricing governance structure.

6.4.3. The designability of pricing capability through governance

As mentioned, the empirical findings challenge Dutta et al.'s (2003) and Hallberg's (2008) description of pricing capabilities as protected by isolating mechanisms. Contrary to Dutta et al. (2003) and Hallberg (2008), this study indicates that relying on the sales representatives' tacit know-how (as suggested by Dutta et al., 2003) and individual, commercial experiences (as suggested by Hallberg, 2008) might be contra-productive and negatively influence a firm's ability to develop an effective pricing capability (this observation is elaborated in section 6.5). Instead, empirical findings from this case study indicate that managers are able to design a pricing capability within a relatively shorter period of time (the embedded cases used between 1.5 and five years, see Figure 4, page 141) by implementing a pricing governance structure that addresses the risks with too close customer relations.

Management at the embedded cases claim that, according to self-assessment, the project of developing the pricing capability at the respective embedded cases resulted in a more efficient use of their respective resources. The following two examples illustrate this. Firstly, management at both Alfa and Gamma identified during the initial phase of each pricing capability development project that several of the products were sold below break-even. The reason was that the prices were seldom adjusted according to the volatile raw material costs. The decision to implement a new pricing governance structure (including better IT support for analyzing product profitability) enabled management to ensure that no products were sold at a negative profit margin. In other words, prior to the development project, two of the embedded cases were actually

giving away value to some of their customers for free, a highly inefficient use of their resources. Secondly, the improved ability to set prices that better matched customer value resulted in an average increase in gross profit margins and, thus, presumably, in a more efficient use of the embedded cases' resources. Even though a new, more hierarchical pricing governance structure resulted in both initial costs, such as new IT systems for pricing, and more bureaucratic costs, such as those for monitoring the sales representatives and for calculating prices centrally, management of each embedded case believed that these costs were justified by a general increase in gross profit margin. Thus, the outcome (i.e. a more efficient resource utilization through a better ability to appropriate value) of the developed pricing capability at each embedded case appears to follow the notion presented by Dutta et al. (2003) of a pricing capability.

As indicated, the empirical findings in this study differ from Salvato's (2009) observation that organizational capability development is primarily driven by the daily activities carried out by the individuals exercising the capability in question. Presumably, the employees' daily experimentation is a central source for knowledge development, as suggested by Salvato (2009). Adding to Salvato's (2009) insights, this study suggests that the firm's governance structure is a central explanation for organizational capability development. The empirical finding from this study shows that managers at the studied units decided to develop the firm's pricing capability by controlling *which* knowledge the sales representatives deployed when setting and communicating prices. As suggested by Rosen (1988), hierarchical governance has the advantage that the firm can better control the actors' time and, thus, when and how often they deploy their individual knowledge. In other words, management believed that the practice of purely relying on the sales representatives' individual experience accumulation according to customer responses and subjective perception of customer feedback was not only insufficient in order to match prices with the products' customer value, but was actually hindering pricing capability development.

6.5. Experience and repetition

Naturally, managerial perception and motivation is shaped by prior experience. Yet, as elaborated in section 2.6, the concept 'experience and repetition' refers to the notion that capabilities evolve primarily as a result of experience

accumulation (Zollo & Winter, 2002). Researchers that advocate experience accumulation as an antecedent of capability development (Tece, 2007; Zollo & Winter, 2002) argue that it leads to learning based on trial and feedback through an interweaved combination of “‘blind’ and ‘deliberate’ processes” (Nelson & Winter, 1982:10-11), which in turn impose changes on the routines carried out on a day-to-day basis by the individuals within the organizations. Hence, the concept of experience and repetition as a potential antecedent of capability development refers to the notion that individual experience accumulation by all members of the organization, *both* managers and subordinates (e.g. sales representatives), leads to capability development.

The empirical findings show that prior to the pricing capability development projects at the embedded cases, the individual sales representatives decided and calculated prices largely based on their individual experience and perception, often referred to as “gut feeling” by the sales representatives. For example, when asked how they decided prices, the sales representatives responded “experience”, “feeling” or “market price”. “Market prices”, in turn, were defined as “what I believe the customer is willing to pay”, “what I feel the product will be sold at”, “the competitors’ prices”, and similar formulations. The considerable influence on the prices from the sales representatives’ individual perception and subjective interpretation of customer feedback was possible since the sales representatives at this stage possessed the full pricing authority and autonomy. Written instructions regarding pricing were not provided at any of the embedded cases, with the exception of data on the estimated product cost and, at three of the five embedded cases (i.e. Beta, Gamma and Epsilon), minimum gross profit target margin. Consequently, in the absence of specific pricing tools and IT support for pricing, the sales representatives had to rely on individual experience, customer responses and customer history, and management relied in turn on the sales representatives’ ability to match prices with individual customers’ willingness to pay based on insights gained through repeated customer interactions. One of the internal pricing experts at Gamma explained how the sales representatives at this stage were expected to be able to set prices according to individual experience:

“[As a sales representative] you need more or less two years to get really involved in customer relationship. We don’t have price lists, so they only can learn when they go through a historic learning process.”

The empirical observation that prices were set largely based on the individual sales representatives’ experience and tacit knowledge is in line with both

Hallberg's (2008) identification of "commercial experience" as central to the firm's pricing capability, and Dutta et al.'s (2003) argument that pricing capabilities are partly founded on the sales representatives' tacit know-how. Considering that the pricing knowledge was both tacit and diffused among the individual sales representatives, barriers for knowledge codification were created.

The sales representatives' extensive pricing autonomy resulted in considerable price differences in between. In some cases, the price variations between sales representatives were explained by the fact that some of them offered different products to different customers with different bargain power in different markets with varying levels of competition. However, often, such variations in price could not be explained by differences in products, customers, markets or competitive situation. Although they were selling identical products, serving similar customers and had equivalent backgrounds, the sales representatives were offering prices that differed substantially. One of the internal pricing experts at Gamma believed that the price differences were partly explained by the sales representatives' differing perception of "market price". She said:

"The market price that everyone speaks of is really the sales history with the customer. It is the price that the customer has paid previously."

Even though the sales representatives experienced similar day-to-day interactions with customers, served similar customers and, regarding most of them, had several years of industry experience, their perception of "market prices" and, consequently, which prices to offer customers differed substantially. This indicates that the sales representatives develop different perceptions regarding prices, causing them to set different prices for identical offers, despite being exposed to similar experience. Presumably, one explanation for this is that the experience used by the individual sales representatives in the price setting decision is a subjective selection of former experience, bias toward recent and successful experience (Levitt & March, 1988; March, 1994), with 'successful' probably often defined as a closed deal.

The sales representatives' bias towards recent customer experiences is exemplified by their description of the price setting at this stage (i.e. prior to the pricing capability development projects) as a trial and error based decision process. This is illustrated by the following citation of one sales representative's description of his practice for deciding prices:

“Setting the price is a trial and error thing and it is also the ability to understand what’s been going on previously with the customer.”

In a similar manner, one of the sales representatives explained the price setting as:

“There is really no rhyme or reason for how we price our work, it is a lot of experience based. [...] We know the cost-bases and we just add a margin to it.”

The trial and error practice for price setting is furthermore illustrated by the following citation from one of the sales representatives, who has been with the company for 35 years, she described the price setting as:

“From my point of view, we didn’t have the feeling for which price was okay. Sometimes it worked and sometimes it didn’t work.”

As indicated, new situations, such as that of a new customer, or a customer requesting an order that differ from previous ones, were largely handled on a trial and error basis according to customer responses. This is exemplified by the following citation from one of the sales representatives:

“If we have no customer history, we don’t know what their expectations are, then really we haven’t got anything to go on. You might have a general feeling that maybe a certain region is a market where you have to be really competitive. Or you might have a feeling that it’s a new market and maybe you can be quite relaxed with your pricing. But usually at that point, you come back to the cost plus the margin and we use the margin to regulate whether we going relatively high or relatively low compared to an average margin figure.”

Presumably, individual trial and error learning is one of the most effective ways for individual learning, due to its strong impact on individual cognition and behavior (Gavetti & Levinthal, 2000). Also, it ensures local, contextual learning, such as customer specific know-how for example. If the ambition of the firm, like the one of embedded cases, is to match prices with the products’ often idiosyncratic customer value to different customers, the practice of relying on the sales representatives’ trial and error learning and tacit experience accumulation regarding individual customers might appear promising. However, the managerial dilemma with relying on individual sales representatives’ experience accumulation as an antecedent of capability development is that individuals recall a subjective selection of former experience. For example, empirical findings indicate that the strong impact

from the individual customers on the individual sales representatives' pricing decisions might be problematic and actually prevent the firm from developing an effective pricing capability (the risks with too close customer relationships combined with allowing the sales representatives an extensive pricing autonomy and authority were discussed in section 6.4).

Thus, the risk with relying on the individual sales representatives' subjective selection of previous experiences as a antecedent of pricing capability development is that there is little or no way for management to ensure that the sales representatives are using the "right" experience. Hence, this study supports the argument of Felin and Foss (2011) that it might be problematic to rely on trial and error learning when intending to develop organizational capabilities, since it is unclear what kind of experience is needed. When the prices were set according to the individual sales representatives' experience, management had little control over the prices, apart from the guidelines for minimum gross profit margin (which were often identical for all products) that three of the embedded cases (Beta, Gamma and Epsilon) provided their sales representatives with. Additionally, tacit knowledge accumulation is by nature difficult to articulate. As pointed out by Zollo and Winter (2002), accumulated tacit knowledge is often difficult to manage. Indeed, the sales representatives often referred to their gut feeling (or similar) when asked to describe how they decided prices.

Clearly, *some* experience accumulation by the sales representatives is relevant and valuable. For example, the sales representatives might be able to please individual customers' preferences, by, for example, knowing that a customer prefers to be contacted on a certain day in the week, or prefers a certain restaurant for meetings. Also, the sales representatives' knowledge about the often complex, high-technological products and the process through which many of Technologica's products (approx. 50 percent) are customized to meet individual customers' needs are central requirements for the sales representatives' ability to convincingly communicate the products' customer value. However, relying on individual experience as the primary antecedent of the actual pricing decision and the price negotiations with the customers has, according to the empirical findings, a negative impact on firms' ability to appropriate value. Thus, contrary to both Dutta et al.'s (2003) argument that the sales representatives' tacit know-how regarding customers and competitors are key elements of pricing capabilities, and Hallberg's (2008) strong emphasis on key employees' commercial experience, the empirical findings indicated that when the embedded cases relied on the sales representatives' experience and

individual knowledge accumulation, relatively less potential value was appropriated (compared with when management decided to restrict the sales representatives' pricing authority and autonomy).

Furthermore, despite the sales representatives' assumed "closeness" to the market (cf. Dolan & Simon, 1996), management at the respective studied cases concluded that the sales representatives lacked the ability to change the prices sufficiently to match changes in the market, primarily regarding changes in raw material costs (which constitute a substantial part of Technologica's product costs, sometimes more than 70 percent). Instead, the sales representatives set the prices mainly according to what the customers claimed that they were willing to pay, not according to actual customer value, nor to actual product cost. This is illustrated by the following citation from the business unit manager of Alfa, describing how the sales representatives handled the price negotiations with the customers prior to the pricing capability development project:

"I guarantee, many sales people would say to the customer: 'Yeah, I know the price is too high, what is the price you need?'"

Managers' experiences and repetition is a potential antecedent of pricing capability development. Naturally, managers' previous experiences will impact their perception about opportunities for pricing capability development (this was elaborated in section 6.1). However, no empirical observations of managers' trial and error learning as an antecedent of pricing capability development have been made. But, again, the reason might be that management at each embedded case prior to the pricing capability development projects were of the opinion that the best way to match prices with the products' customer value was to delegate the price setting to the individual sales representatives.

The following section discusses the changes in pricing resources and routines that were imposed by management of each embedded case as a result of the pricing capability development projects.

6.6. Implement or change resource and routines

Researchers have argued that capability development is most accurately explained by path dependent learning processes and historical resource accumulation (Jacobides & Winter, 2005; Winter, 1988). However, explaining

capability development solely with path dependency neglects managers' subjective selection regarding which experience to encode into routines (Levinthal & Rerup, 2006; Salvato, 2009), which experience to maintain and which to discard (Eggers & Kaplan, 2013). Thus, it provides no explanation for how capabilities are established in the first place (Argyres et al., 2012). The empirical findings show how management at the embedded cases escaped unfavorable path dependencies by developing and implementing new resources and routines for pricing. For example, at both Beta and Alfa, management was able to change the sales representatives' focus on volume, and practice of using discounts as the means for closing a deal, to instead focus on gross profit margin and the products' customer value. With the help of five to ten training sessions with management consultants (spanning one to two years), the sales representatives were provided with training in pricing tools for customer value identification and customer value communications. By restricting the sales representatives' pricing autonomy, management ensured that the sales representatives had to comply with the assigned pricing tools when setting and communicating prices. This enabled management to overcome the unfavorable dimensions of the pricing capability elements in place prior to the development projects, which was a result of the individual sales representatives relying on their subjective selection of previous experiences. Thus, this study supports the argument of Argyres et al. (2012) that it is problematic to explain capability development and capability heterogeneity between firms with only path dependency (cf. Jacobides & Winter, 2005; Winter, 1988) since it neglects managers' deliberate efforts to escape unfavorable path dependencies.

Obviously, individual knowledge is one key factor for pricing capability development (Dutta et al. 2003; Hallberg, 2008). However, "only" investing in new human capital by providing the sales representatives with training in new pricing skills was not enough in order to achieve pricing capability development at the embedded cases. For example, the sales representatives at Beta were already, prior to the pricing capability development project, thoroughly acquainted with value based pricing tools (either from using them at a former employer or learning about them at university courses), although they had not formally used them at Beta. Both management and the sales representatives believed that the sales representatives had good technical knowledge about the products and were able to identify and communicate the customer value. However, the problem was that the sales representatives relied on their gut feeling and tacit knowledge in the meetings with the customers and during price negotiations. They never practiced the pricing tools in any structured,

formal way since they believed it to be a waste of time. For that reason, management at Beta decided to restrict the sales representatives' pricing autonomy by introducing pricing tools for value based pricing which the sales representatives had to comply with when making pricing decisions and motivating the prices to the customers; only smaller orders at prices below 10 000 USD were excepted from this rule.

According to management and the sales representatives at Beta, the restricted pricing autonomy resulted in prices that better matched the products' customer value. This indicates that the sales representatives exaggerated their ability to estimate and convincingly communicate the products' customer value based on their individual experience. As suggested by Rosen (1988), hierarchical governance has the advantage that the firm can better control the actors' time and, thus, when and how often they deploy their individual knowledge and share it with their co-workers. Drawing on Rosen (1988), Grant (1996) argues that hierarchies are more likely to facilitate tacit knowledge transfer (e.g. from a senior to a more junior employee), relative to market contracting. Thus, the new, more hierarchical governance structure enabled management at the respective embedded cases to better control when and how the sales representatives' deployed their individual knowledge.

The decision by management at Gamma to achieve pricing capability development by implementing a new IT system for pricing, in which the IT system calculate the price recommendations based on historical data, resembles to some extent Zollo and Winter's (2002) argument that knowledge codification is one out of three learning mechanisms for capability development. However, the intention with the new IT system was to restrict the individual sales representatives' subjective influence on prices and enhance management ability to influence prices. The new IT system coordinates the pricing knowledge of all individual sales representatives and provides price recommendations based on the sales representatives' combined knowledge. Zollo and Winter (2002) explain capability development as evolving through experience accumulation stemming from search routines, trial and error based learning, knowledge articulation, and knowledge codification. In contrast, management at Gamma decided to design the pricing capability by implementing a new, more hierarchical pricing governance structure that restricted the subjective influence from the individual sales representatives on the prices. Hence, management at Gamma decided that the prices should *not* be primarily decided by the individual sales representatives' tacit knowledge, but instead by management controlled knowledge concerning the products'

customer value. Thus, management at Gamma decided to restrict the individual sales representatives' influence on the firm's pricing capability.

As discussed in section 2.3.2, both Dutta et al. (2003) and Hallberg (2008) are slightly unclear regarding how a firm's pricing capability elements are composed by resources, routines or their combination. Hallberg (2008:54) address this unclarity by considering routines and resources as "integrated bundles tied together by their common function". This type of definition might be problematic when intending to define the antecedents of pricing capability development and managers' ability to design pricing capabilities since it is unclear *which* resources and routines, and how they are interrelated, must be changed in order to achieve pricing capability development. This study identifies the different pricing resources and routines that management at the studied cases changed and/or invested in with the intention to achieve pricing capability development (the changes in resources and routines for each individual embedded case were discussed in sections 5.3.5 and 5.3.6, respectively). Thus, adding to the findings by Dutta et al. (2003) and Hallberg (2008), this study has empirically clarified how pricing capability elements are composed by pricing resources and routines, and how managers are able to change these.

Table 24 summarizes the identified changes regarding pricing resources and routines and sorts them according to the pricing capability elements depicted in the conceptual framework of pricing capability development (Table 3, page 35). As illustrated in Table 24, the decision to invest in a new IT system that enabled the implementation of new pricing tools was a key success factor at all the embedded cases. This is especially the case for Gamma, which restricted the sales representatives' pricing authority and autonomy by implementing a new IT system that provides pricing recommendation. Thus, this study supports previous studies that have stressed the importance of IT support for pricing (Dutta et al., 2003; Hallberg, 2008).

Additionally, as mentioned, management at each embedded case changed existing pricing routines (i.e. regarding both incentives provided to the sales representatives, and the sales representatives' pricing authority and pricing autonomy), and also established new routines (i.e. routines for how to calculate prices, also referred to as the "pricing tool kit") when designing the new pricing capability of respectively embedded case. Thus, this study supports the argument that capability development is interrelated with changes in routines (Dutta et al., 2003).

Table 24 Pricing resources and routines

	Pricing organization	Pricing information system	Pricing skills
Tangible resources		<ul style="list-style-type: none"> IT support for pricing (Hallberg, 2008; Dutta et al., 2003) 	
Intangible resources			<ul style="list-style-type: none"> Sales rep's knowledge (Dutta et al. 2003)
Pricing routines	<ul style="list-style-type: none"> Pricing authority structure (Hallberg, 2008) Pricing autonomy structure Incentive controlling arrangements (Hallberg, 2008) 		<p>Pricing tool kit (Dutta et al. 2003)</p> <ul style="list-style-type: none"> Customer's value map position analysis Identify and quantify the products' customer value Analyze customer profitability vs. sales volume Customer segmentation Revenue leakage analysis Product profitability analysis Price elasticity of demand analysis Identify and analyze competitors' prices

6.7. Revised theoretical framework

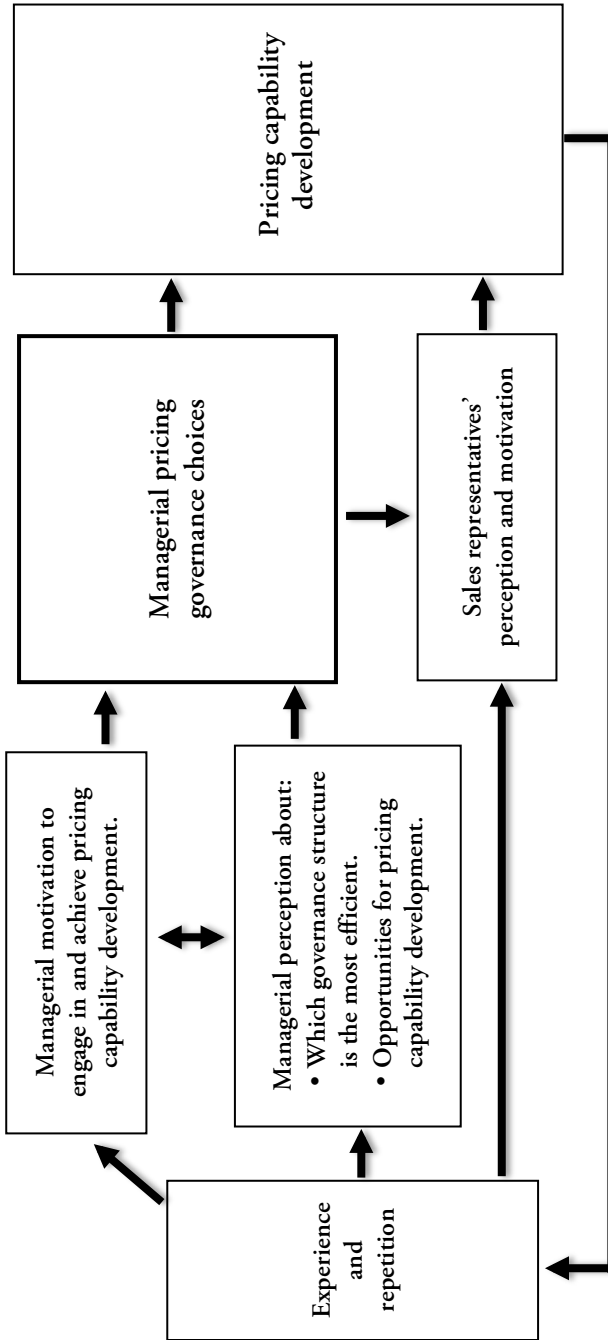
Figure 5 outlines the suggested revised theoretical framework for pricing capability development. Just like the preliminary theoretical framework (depicted in Figure 2, page 81), the revised theoretical framework is not delimited to the initial phase during which a completely new capability is initiated. Instead, it depicts the antecedents that explain *both* the initiation of a completely new capability *and* the development of an established one.

Compared to the preliminary theoretical framework, the following two changes have been made to the revised theoretical framework: 1) Two more potential antecedents of pricing capability development have been added, 2) the content of pricing capabilities has been modified, meaning that changes have been made to the pricing capability elements.

Consequently, this study contributes to our understanding of pricing capabilities in two ways. Firstly, the empirical findings from this study challenge the notion that the sales representatives', and other potential price setters such as sales managers', commercial experience (Hallberg, 2008) and tacit know-how regarding customers and competitors (Dutta et al., 2003) are key antecedents of pricing capability development. Thus, the empirical findings challenge Dutta et al.'s (2003) and Hallberg's (2008) description of pricing capabilities as protected by isolating mechanisms. By building on Dutta et al.'s (2003) and Hallberg's (2008) to some extent unclear and contradicting arguments regarding managers' ability to design pricing capabilities (i.e. these researchers' argument that pricing capabilities are protected by isolating mechanisms such as tacit know-how, time compression diseconomies and nested routines), this study provides empirical evidence of how managers are able to develop pricing capabilities through their choices regarding pricing governance structure. Thus, when the primary focus of both Dutta et al. (2003) and Hallberg (2008) was to understand the content of pricing capability (i.e. identify the different elements of pricing capabilities), this study specifically addresses the antecedents of pricing capability development. This thesis' contributions regarding antecedents of pricing capability development are elaborated in section 6.7.1.

Secondly, adding to the findings of Dutta et al. (2003) and Hallberg (2008), this study enhances our understanding of how pricing capability elements are composed by pricing resources and routines. This study's contributions regarding pricing capability development are elaborated in section 6.7.2.

Figure 5 Revised theoretical framework



6.7.1. Antecedents of pricing capability development

The preliminary theoretical framework listed “managerial perception about opportunities for capability development” and “managerial motivation to achieve capability-development” as two potential antecedents of capability development. As elaborated in earlier sections, the empirical observations confirmed that individual managers’ perception (defined as the mental image of managers about which resources the firm has access to and how those resources could be best utilized, see Danneels, 2010) of opportunities for pricing capability development and individual motivation to engage in and achieve pricing capability development (see section 6.2) are two potential antecedents. Hence, these are both included in Figure 5. In addition to these, the empirical findings revealed the following two notable antecedents of pricing capability development: 1) managerial pricing governance choices, and 2) sales representatives’ perception and motivation. The four observed antecedents of pricing capability development are discussed in the following sections.

Managerial pricing governance choices

The empirical findings showed that managers’ pricing governance choices are key antecedents of pricing capability development. Since managerial pricing governance choices were not included in the preliminary theoretical framework, it has been added to the revised one. As indicated, the concept ‘managerial governance choices’ is a nominal variable, meaning that it differs between the following three coordination forms; 1) market contracting, 2) hierarchies, and 3) different types of hybrids of market contracting and hierarchies.

As illustrated by the arrow in Figure 5 between ‘managerial perception’ and ‘managerial pricing governance choices’, individual managers’ choices about pricing governance structures are shaped by managers’ perception of the coordination form that is the most effective. As was elaborated in section 6.4, the key antecedent of pricing capability development at each embedded case was the change in managerial perception regarding what pricing governance structure they perceived be the most efficient and profitable one. Prior to the pricing capability development projects, management at each case perceived that a delegated pricing authority and autonomy was optimal in order to best match prices with customer value and, thus, maximize profit margin. The managers changed their perception when they concluded that the practice of delegating the pricing authority and autonomy to the individual sales

representatives actually resulted in a less efficient use of the firm's resources (relative to a more hierarchical pricing governance structure). Management observed that the potential value that the firm failed to appropriate due to an inability to address unwanted behavior among the sales representatives (e.g. prioritizing hedonic intrinsic motives over profit maximization, which also sales representatives who were given monetary incentives for gross profit margin achievement were inclined to do, and behaving myopically at the expense of profit maximization) exceeded the bureaucratic costs and the cost for information that the firm might save by delegating the pricing authority. Examples of such costs are those for gathering information and for calculating prices for each individual customer offer by means of a central pricing function.

Managerial perception

As proposed in the preliminary theoretical framework, and supported by the empirical findings, the influence from managerial perception about opportunities for pricing capability development could be described as a nominal variable, meaning that a manager either; 1) perceives that opportunities for pricing capability development exist (e.g. due to promising resource availability) and decides to initiate it, 2) are aware of a possible opportunity for pricing capability development but decide not to initiate it, or 3) are not aware of any opportunities for pricing capability development (e.g. due to selective perception, see Hambrick & Mason, 1984).

The empirical findings indicate that managers also differ in their individual judgments (cf. Foss & Klein, 2012) regarding the deployment and development of the firm's pricing resources. Even though managers at the embedded cases perceived identical opportunities (i.e. for achieving pricing capability development), and shared the ambition to improve, or protect, profitability, through pricing capability development, they differed in their individual judgment regarding which key aspects to address, and which resources to develop in order to achieve pricing capability development. In other words, when the new manager at Alfa was primarily concerned with developing the ability to analyze product and customer profitability, management at Beta was focusing on ensuring that the sales representatives practiced tools for value based pricing. Another example, management at Delta focused on implementing competitive price positioning, which differed from the managerial focus at Gamma to achieve consistent prices across sales representatives. Considering that individual judgment about resource deployment could be seen as a skill that people develop (see Foss & Klein,

2012), managerial perception about capability development could also vary on an interval scale, such as “poor judgment skills”, “excellent judgment skills”, and, naturally, all stages in between. Consequently, this study supports Foss and Klein’s (2012) notion of managerial judgment and proposes that managerial perception of opportunities for pricing capability development also could differ on an interval (in addition to the nominal scale suggested in the preliminary theoretical framework).

Managerial motivation

As suggested in the preliminary theoretical framework, and supported by the empirical findings, managerial motivation is an antecedent for pricing capability development. Its influence on pricing capability development varies along an interval between non-existing motivation and high motivation.

Experience and repetition

Naturally, prior experience will influence managers’ governance choices, perception of opportunities for capability development, and motivation to achieve it. Consequently, ‘experience and repetition’ is an antecedent for pricing capability development. The influence from experience and repetition on pricing capability development varies both along an interval between “more or less experience”, and on a nominal scale depending on the *type* of experience. Since individuals tend to only consider subjectively selected parts of prior experience and make decisions that are biased toward recent and successful experience (March, 1994), the type of managers’ recent experience (e.g. from product development projects or pricing capability development projects) will potentially influence their decision making. Thus, managers’ prior experience will to a lesser or greater extent *influence* managerial perception and motivation, *but* not necessarily determine it. Depending on the situation and the information that the manager is aware of about the current situation, a manager’s prior experience might have either an almost negligible or substantial influence on his or her decision making.

Indeed, prior experience will also influence the sales representatives’ perception and motivation. Therefore, the experience of sales representatives is an antecedent of pricing capability development. The role of sales representatives’ prior experience in pricing capability development is elaborated in the following section.

Sales representatives' perception and motivation

The empirical findings indicate that sales representatives' motivation and perception regarding which prices to offer customers are antecedents to pricing capability development. Since 'sales representatives' perception and motivation' was not included as a potential antecedent in the preliminary theoretical framework, it has been added to the revised one. The empirical observation that prices often differed between sales representatives illustrates that, from an objective point of view, similar prior experience often results in varying perceptions among sales representatives regarding which prices to offer customers. Even though the sales representatives were offering identical products, served similar customers, experienced similar day-to-day interactions with customers, and, regarding most of them, had several years of experience in industry, the prices often differed substantially between them. In some cases, the price variations between sales representatives were explained by the fact that some of them offered different products to different customers with different bargain power in different markets with varying levels of competition. However, often, the price differences between the sales representatives could not be explained by differences in products, customers, markets or competitive situation. This indicates that sales representatives develop different views on prices, causing them to set different prices for identical offers, despite being exposed to similar experiences. Since individuals focus on subjective selections of former experience, interpret similar experiences differently and are inclined to confuse luck with competence (Levitt & March, 1988; March, 1994), similar experiences will influence individuals differently, resulting in different learning processes between individuals and, thus, differences in individual knowledge. Naturally, learning, experience and knowledge are interrelated (Spender, 1996b), yet possible to separate if knowledge is seen as created through individuals' learning processes, which is the result of individuals' subjective interpretations of prior experiences, subjectively selected from their memory (see Levinthal & March, 1993; Levitt & March, 1988; March, 1991; March, 1994).

Studies have pointed at the influence from extrinsic motives on sales representatives' pricing decisions (Hinterhuber, 2004; Hinterhuber, 2008; Marn et al., 2004; Nagle & Hogan, 2006; Vogel et al., 2002). The empirical findings from this study showed that sales representatives' pricing decisions are also largely influenced by hedonic intrinsic motives (e.g. prioritizing a friendly, pleasant customer meeting over profit maximization). Consequently, in the revised theoretical framework, sales representatives' motives comprise both

hedonic intrinsic rewards and extrinsic rewards, in addition to other forms of intrinsic rewards that presumably have an influence (although no such empirical observations have been made in this study).

As illustrated in Figure 5 by the arrow between ‘managerial governance choices’ and ‘sales representatives’ perception and motivation’, the empirical findings indicate that the influence on the prices from individual sales representatives’ perception and motivation could be regulated through managerial pricing governance choices. As the empirical findings showed, the managerial decision to limit the sales representatives’ pricing autonomy or pricing authority restricted the individual sales representatives’ subjective influence on the prices and facilitated that they were set mainly according to specific pricing tools, not according to the individual sales representatives’ subjective perception. Consequently, as this study has shown, a firm’s pricing governance structure could be designed to address; 1) risks that hedonic intrinsic motives among price setters have a negative impact on profit maximization (see section 6.3.1), and 2) negative impacts from myopic behavior among the sales force on pricing decisions (see section 6.4.2). As discussed in section 6.4, if managers fail to design a pricing governance structure that tackles these two behavioral aspects among sales representatives, the influence from the behavioral aspects on prices might prevent the development of an effective pricing capability.

6.7.2. Pricing capability elements

The empirical findings support the argument presented by Dutta et al. (2003) and by Hallberg (2008) that pricing capabilities consist of resources and routines for pricing. Adding to the findings by Dutta et al. (2003) and Hallberg (2008), this study has identified those pricing routines and resources that managers’ implement and change when designing pricing capabilities. (The embedded cases’ pricing resources and pricing routines before and after each pricing capability development project, respectively, are listed in Table 18 and Table 19. Table 24 summarized the empirically identified pricing resources and routines.)

As seen in Table 25, which depicts a revised conceptual framework of pricing capability elements (in comparison with the conceptual framework in Table 3, page 35), I suggest that pricing capabilities consist of the following four building blocks: 1) Pricing governance structure, 2) pricing tools, 3) sales representatives’ knowledge, and 4) pricing strategy.

Table 25 Revised conceptual framework of pricing capability elements

Pricing capability elements	<p>Pricing governance structure (i.e. a combination of pricing routines and pricing resources):</p> <ul style="list-style-type: none"> • Arrangements regarding the sales representatives': <ul style="list-style-type: none"> ○ Pricing authority ○ Pricing autonomy • Incentive controlling arrangements • Pricing information systems
	Pricing tools (i.e. pricing routines)
	Sales representatives' knowledge (i.e. pricing resources)
	Pricing strategies (i.e. the outcome of the firm's pricing resources and routines)

Pricing governance structure

As discussed in section 6.4, managers' differing perceptions concerning what pricing governance structure they perceive to be most efficient and profitable play a key role in pricing capability development. Hence, this thesis introduces the concept of pricing governance structure and proposes that it provides the foundation of a firm's pricing capability. Pricing governance structure comprises the governance structure that management chooses regarding the firm's sales representatives and other potential price setters (e.g. sales and marketing managers). Managers choose to either organize the sales force according to a structure that resembles market contracting (e.g. a control system mainly based on outcome-control, such as hiring an external sales agent), or hierarchies (e.g. a control system mainly based on behavior control, such as internal sales representatives with a limited pricing authority and autonomy), or a hybrid of market contracting and hierarchies. Thus, the firm's governance structure is the organizational framework (e.g. decentralization versus centralization of pricing decisions, incentives, managerial monitoring and control of pricing routines and resources) in which the firm realizes its prices and, thus, appropriates value. As mentioned, Hallberg (2008) concluded that organizational control, referring to managerial control over the firm's price setting, was a key aspect of the firm's pricing capability. This study adds to Hallberg's (2008) observation by suggesting that managers choose different modes of pricing governance structure depending on their individual perception concerning the one that is the most resource efficient. This is in line

with Williamson's description of governance as: "an exercise in assessing the efficacy of alternative modes (means) of organization" (1996:11). Hence, I suggest that 'pricing governance structure' explains more accurately the founding premises of pricing capabilities, as opposed to 'pricing organization'.

Moreover, this study adds to Hallberg's (2008) conclusion that pricing authority is a central pricing capability element. As mentioned, Hallberg's (2008:263) definition of pricing authority (i.e. "the organizational level or function at which pricing decisions are made") implies that he is primarily concerned with the organizational level where the pricing authority resides, as opposed to definitions that explicitly recognize that the sales representatives' pricing authority could vary on a scale from full to non-existing (Homburg et al., 2012). The empirical findings have illustrated how managers could partly restrict the sales representatives' pricing authority, such as imposing price floors, price ceilings or gross profit margin guidelines (i.e. restrictions imposed by management at Alfa respectively Beta), or fully restrict their pricing authority by either transferring it to a central pricing function (i.e. restrictions imposed at Delta), or to an IT system that provides price recommendations (i.e. restrictions imposed at Gamma). Moreover, the empirical study has illustrated how managers might decide to restrict the sales representatives' pricing autonomy by implementing pricing tools which the sales representatives have to comply with when deciding prices, instead of relying on their individual experience and gut feeling. Thus, this study adds to Hallberg's (2008) conclusion regarding pricing authority by suggesting that managers choose between several options when designing the firm's pricing authority and autonomy structure, in addition to deciding the organizational level at which the pricing authority should reside.

As mentioned, a firm's pricing governance structure can be designed to address the sales representatives' motivation by providing monetary incentives. This argument is in line with Hallberg's (2008) identification of incentive control arrangements as a pricing capability element. Yet, this thesis extends Hallberg's (2008) reasoning in this respect by suggesting that the sales representatives' behavior when deciding and negotiating prices is significantly influenced by hedonic intrinsic motives, in addition to extrinsic ones.

The empirical findings show that the IT system for pricing has the function of either providing the sales representatives with price recommendations (i.e. restricting their pricing authority) or providing the sales representatives with specific pricing tools that they are required to use when calculating prices (i.e. restricting their pricing autonomy). Hence, management at the studied cases

used IT support for pricing as a means to control prices and/or facilitate various pricing tools. For that reason, I propose that the pricing information system is one element of the firm's pricing governance structure. The observation that management could use the IT system as a means for organizational control is in line with that of Hallberg (2008). In Hallberg's (2008:220) study, the primary role of the IT system was to both "provide and structure information", and to align "different interests and incentives across the organization". According to Hallberg (2008), this included restricting the sales representatives' and other price setters' (e.g. sales managers) pricing authority. Thus, this study supports Hallberg's (2008) conclusion concerning the pricing information system.

Pricing tools

The empirical findings showed that management at each embedded case were able to successfully implement several pricing tools through their design of pricing governance structures. Different pricing tools (see section 5.4.2) were required in order to realize the desired pricing strategies. Consequently, in line with both Dutta et al. (2003) and Hallberg (2008), this study showed that 'pricing tools' is a pricing capability element.

Sales representatives' knowledge

Indeed, the sales representatives' knowledge influences the performance of different pricing tools. Management at each embedded case invested in the sales representatives' knowledge about pricing tools and pricing strategies (i.e. created new resources) when developing the pricing capability. Thus, the sales representatives' knowledge is a pricing capability element. Yet, the firm's governance structure could be a means for management to control when the sales representatives deploy their individual knowledge (cf. Rosen, 1988), which in turn influences the performance of various pricing tools.

Pricing strategies

It is likely to assume that management, when deciding on pricing capability development, decides first which specific pricing strategy to achieve. Yet, the empirical findings indicate that pricing strategies, such as the value based pricing strategy, is the outcome of the firm's pricing governance structure, pricing tools and pricing skills. For that reason, a given pricing strategy is not realized until an accurate governance structure and relevant pricing tools and skills are developed and implemented.

6.7.3. Comments about contribution and validity

Both Dutta et al. (2003) and Hallberg (2008) presented comprehensive, in-depth, qualitative case studies of the notion of pricing capability and illuminated the different elements of pricing capabilities. This study has the advantage of being designed as a longitudinal study of pricing capability development at four embedded cases and, thus, complements the findings by Dutta et al. (2003) and Hallberg (2008). Consequently, when both Dutta et al. (2003) and Hallberg (2008) focused on the content of pricing capabilities, the longitudinal dimension of this study has the advantage of studying the chronological process through which pricing capabilities are developed, including the measures that were taken by management in order to change the pricing resources, routines and, thus, pricing capability elements at each embedded case.

As mentioned, the main contribution of this study relative to Dutta et al. (2003) and Hallberg (2008) is the identification of the antecedents of pricing capability development in general, and the observation that managerial pricing governance choices are a key antecedent in particular. Additionally, this thesis challenges Dutta et al.'s (2003) and Hallberg's (2008) description of pricing capabilities as protected by isolating mechanisms. I propose that a pricing capability is designable and, thus, not protected by any isolating mechanism. Lastly, adding to the findings of Dutta et al. (2003) and Hallberg (2008) regarding pricing capability elements, the empirical findings from this study increase our understanding of the content of pricing capabilities, particularly by proposing 'pricing governance structure' as the central pillar and organizational framework in which the firm realizes its prices. Table 26 on page 174 summarizes the difference between this thesis, Dutta et al. (2003) and Hallberg (2008).

The idea of applying a resource-based view on firms' price setting was introduced by Dutta et al. (2003) and elaborated by Hallberg (2008). The insights from these two studies provided the conceptual framework of pricing capability elements and, thus, a framework for studying changes in the embedded cases' pricing capabilities prior to and after the development projects, respectively. However, although the empirical analysis, especially regarding pricing capability elements possessed before and after the phase of pricing capability development, relied largely on the pricing capability elements identified by Dutta et al. (2003) and Hallberg (2008), respectively, the empirically identified antecedents of pricing capability development were also

analyzed according to insights provided by publications addressing organizational capability development in general (as opposed to pricing capability elements per se). Thus, the integration of insights from studies on the phase of capability development in general and antecedent of capability development in particular, illuminated potential and relevant antecedents that were not identified by Dutta et al. (2003) or Hallberg (2008).

Publications that address how firms organize their price setting have provided important insights into the often complex, organizational arrangements that surround pricing decisions (e.g. pricing decisions often involve several departments in addition to sales and marketing, which might have conflicting interests), and also recommended several useful methods for better pricing (e.g. customer value map analysis). However, these publications are usually mainly concerned with the pricing decision per se, such as methods for calculating prices according to customer value and optimizing prices according to competitors' prices and customer demand (e.g. price elasticity of demand analysis), and pros and cons of different forms of sales force arrangements (e.g. pricing authority delegation vs. centralization), not those aspects of individual behavioral and decision making that create obstacles for managers when intending to implement new pricing tools and strategies. Although some of these publications might recognize difficulties with changing "the mindset for pricing" among sales representatives when implementing new pricing strategies (e.g. Lancioni, 2005), they seldom elaborate on this observation. To the extent that this matter is addressed, it usually concerns recommendations to provide the sales representatives with monetary incentives. Thus, this study adds to our understanding of firms' price setting by identifying different aspects of individual behavior among sales representatives that create potential obstacles for managers when intending to change the firm's pricing tools and strategies. Consequently, this study contributes to the general pricing literature by suggesting that the following three behavioral aspects have a stronger impact on firms' price setting than what is traditionally recognized in publications addressing firms' price setting; 1) myopic behavior in the actual pricing decision, such as using discounts as a means to quickly close a deal even though it might negatively influence profit margin contribution, 2) uncertainty avoidance in decision processes, causing individuals to turn to historical prices even though they might be unprofitable, and 3) influence from hedonic intrinsic motives, causing individuals to sometimes prioritize such motives over extrinsic ones, preferring a friendly, pleasant customer relation at the expense of profit maximization.

Table 26 Differences between this study, Dutta et al. (2003) and Hallberg (2008)

	Dutta et al. (2003)	Hallberg (2008)	This study
Antecedents of pricing capability development	<ul style="list-style-type: none"> • Sales rep.'s tacit know-how. • Investments in pricing resources. 	<ul style="list-style-type: none"> • Not focus of study. 	<ul style="list-style-type: none"> • Managerial motivation • Managerial perception • Managerial governance choices • Experience and repetition • Sales rep.'s motivation and perception
Isolating mechanisms	<ul style="list-style-type: none"> • Time compression diseconomies. • Sales rep.'s tacit know-how. • Nested routines, coordination mechanisms and other complementary resources. 	<ul style="list-style-type: none"> • Co-specialization between the different pricing capability elements. • Path-dependency. 	<ul style="list-style-type: none"> • A pricing capability is designable and, due to the tradeoff between imitability and manageability (see Schoemaker and Amit, 1994), imitable.

Table 26 Differences between this study, Dutta et al. (2003) and Hallberg (2008) (cont.)

	Dutta et al. (2003)	Hallberg (2008)	This study
Pricing capability elements	<ul style="list-style-type: none"> • Pricing routines. • Pricing skills and know-how. • Coordinating mechanisms. 	<ul style="list-style-type: none"> • Pricing organization <ul style="list-style-type: none"> ○ Pricing authority ○ Incentive controlling arrangements • Pricing information systems <ul style="list-style-type: none"> ○ IT based systems ○ Price parameters • Commercial experience 	<ul style="list-style-type: none"> • Pricing governance (a combination of pricing routines and resources). <ul style="list-style-type: none"> ○ Pricing autonomy and authority arrangements. ○ Incentive controlling arrangements. ○ Pricing information systems. • Pricing tool kit (pricing routines). • Sales rep.'s individual knowledge (pricing resources). • Pricing strategies (the outcome of the firm's pricing resources and routines).
Performance outcome	<ul style="list-style-type: none"> • Value appropriation 	<ul style="list-style-type: none"> • Value appropriation through: <ul style="list-style-type: none"> ○ Price discrimination ○ Price elasticity leverage ○ Operating leverage 	

Moreover, previous studies of risks with long-term relationships (e.g. Biong & Selnes, 1997; Bradford & Weitz, 2009) have mainly been concerned with risks for opportunistic behavior by either the selling or buying party, often referred to as “conflicts in buyer-seller relations”. This study has identified the goal conflicts between management and sales representatives that might arise in long-term customer relationships when sales representatives get too close to the customer. The empirical findings showed that in such situations, intrinsic rewards could be a strong source of motivation for sales representatives, causing them to prioritize a nice, friendly customer meeting, free from price discussions, over profit maximization. As shown by the empirical findings, providing monetary incentives does not always solve goal conflicts between management and sales representatives. Also, this study has identified the potential risks with relying on the sales representatives’ individual experiences and how this might negatively influence the firm’s pricing capability. Thus, this study has the advantage of providing a broad picture of those aspects of individual behavior that influence sales representatives when setting and negotiating prices.

In terms of relevance, the observation that individual sales representatives’ subjective preferences have a strong influence on their behavior when setting prices and handling customer negotiations, sometimes at the expense of management’s goal, is presumably relevant regarding the individual behavior of employees within other organizations, acting within other industrial and market contexts. Likewise, the observation that managers choose the pricing governance structure that according to their perception is the most efficient and profitable one is most likely also relevant within other organizations. However, the particular design of the governance structures observed in this study is mainly valid for other firms in similar industrial settings (i.e. manufacturing firms acting in business-to-business relations in mature markets). Thus, the design of different firms’ pricing governance structure will appear different depending on the type of industry, character of customer relationships, customers’ bargaining power, product offerings, competitive situations and so forth. This is further discussed in section 7.5.

7. Conclusion and discussion

The purpose of this thesis has been to identify the antecedents of pricing capability development. In section 0, a revised theoretical framework of pricing capability development was outlined and the purpose of the thesis answered. As discussed in Chapter 6, the main finding of this thesis is the empirical observation that managerial pricing governance choices, originating from what each individual manager perceives to be the most efficient and profitable pricing governance structure, is a key antecedent of pricing capability development. I propose that pricing governance choices within firms that produce complex, customized offerings, and handle close, long-term customer relationships, comprise aspects of both market contracting and hierarchies. On the one hand, due to the sales representatives' information advantage over management about individual customers, they often have considerable autonomy to decide how to calculate, communicate and negotiate prices, resulting in a pricing governance structure that comprises features of market contracting (see Rosen's [1988] reasoning regarding 'quasi-market decentralization', and Williamson's [1975:117] argument that if a manager gives the firm's departments and employees considerable autonomy, the governance structure might be better described as market contracting than a hierarchy). On the other hand, due to difficulties in assessing the performance of individual sales representatives, these are organized as internal sales representatives, as opposed to external sales agents.

I argue that managerial decision making about where on the hybrid-continuum between pure market contracting and pure hierarchies the firm's pricing governance structure is situated is largely influenced by the following two factors: 1) Managerial awareness of behavioral aspects among sales representatives that might negatively influence firm goals, such as prioritizing hedonic intrinsic incentives (e.g. a pleasant and friendly meeting) at the expense of profit maximization in customer negotiations, and acting myopically by using discounts in order to quickly close a deal at the expense of profit maximization. 2) Managerial perception regarding the tradeoff between, on the

one hand, the cost of customer specific information, referring to costs for gathering information about individual customers' willingness to pay, and, on the other hand, agency costs²⁰, such as those for monitoring sales representatives that are given the full pricing autonomy and authority.

As was discussed in Chapter 6, this study has shown that managers are able to design pricing capabilities by first and foremost addressing the firm's pricing governance structure, meaning: 1) managing the pricing authority and autonomy of individual sales representatives by taking into account both the nature of the customer relationships, such as close, long-term customer relationships, and the character of the products (e.g. products that are customized in close collaboration with the customers, non-standardized products, commodities), 2) coordinating prices across market segments in order to prevent customers from taking advantage of price differences between sales regions, and 3) addressing risks with too close relationships between the sales representatives and the customers' representatives.

In addition to addressing the antecedents of pricing capability development, this study also makes a contribution to our understanding of pricing capability elements by introducing the concept 'pricing governance', and suggesting that pricing governance structure is the fundamental building block of the firm's pricing capability. Building on the empirical findings regarding pricing governance structures, I propose that a better understanding for managers' ability to develop organizational capabilities could be gained by shedding more light on the link between managers' choices regarding capability governance structures and the designability of different types of organizational capabilities. Managerial governance choices concern arrangements regarding; 1) decentralization versus centralization of decision making, 2) managerial monitoring and control of resources and routines that comprise the capability at hand, 3) managerial choices about firm boundaries and, lastly, 4) incentives provided to price setters. Thus, I propose that managerial choices regarding capability governance play a greater role in explaining differences in development paths of organizational capabilities within different firms than has

²⁰ In this context, 'agents' refer to the sales representatives, whereas managers are the principals.

been recognized within research on organizational capabilities. Consequently, this thesis provides empirical support to conceptual papers (Argyres, 2011; Argyres et al., 2012; Argyres & Zenger, 2012; Langlois & Foss, 1999) that have emphasized the role of managerial governance choices in explaining capability heterogeneity between firms. This argument is elaborated in the following section.

Lastly, this study makes a general contribution to the ongoing debate whether managers are able to develop organizational capabilities by suggesting that researchers should take more interest in the hierarchy between different organizational capabilities, created as a result of differing designability, durability and appropriability (Schoemaker & Amit, 1994) between different organizational capabilities, partly due to differences in operational activities and outcomes. I suggest that different types of organizational capabilities vary in their relevance for different firms depending on the industry conditions of the individual firm, such as the maturity of the market, the customers' bargaining position and the nature of the competition. This reasoning is elaborated in the second section.

7.1. Pricing capability governance

Sales force management in the type of industrial settings that this study concerns is traditionally seen as a form of quasi-market decentralization, meaning that the sales representatives are formally a part of the organization, as opposed to external, independent sales agents. But, the sales representatives are often given considerable autonomy to decide over not only prices but also how to handle customer relationships and customer interactions, including price negotiations. Often, the individual sales representatives accumulate extensive and exclusive knowledge about individual customers. This knowledge can be divided into two parts; 1) the sales representatives' product specific knowledge about the firm's products and their features, knowledge that is often also known by other members of the firm, and 2) the sales representatives' customer specific knowledge about individual customers' needs and demands, knowledge that is often partly tacit, or for other reasons, such as costs for codifying it, *not* fully known by other members of the organization, including management. Given that customer specific knowledge is a central pricing capability element, the sales representatives possess information that is highly valuable to the firm.

For that reason, the sales representatives are, through their close customer relationships, enabling the firm to reduce costs for customer specific information, which is especially relevant for firms that produce customized offerings. This motivates a delegation of the pricing authority to the sales representatives.

In situations where there is large information asymmetry between management and the sales representatives regarding individual customers, management might be able to save costs, such as for gathering information and calculating prices for each individual customer offer by means of a central pricing department instead of the individual sales representatives, by delegating the pricing authority and autonomy to the individual sales representatives (assuming that prices are negotiated for each individual customer). Also, if management believes that frequent price changes are necessary, due to shifts in demand or competitors' prices, for example, they might seek to save administrative costs, such as those for changing prices, sometimes referred to as "menu costs" (see Bergen et al., 2003), by choosing a pricing governance structure that resembles market contracting. Flexibility in the transaction cost economic view refers traditionally to firms' ability to easily change factors of production by switching suppliers. Although the administrative costs for changing prices might be smaller relative to the costs of changing to a new manufacturing-line, they are nevertheless analogous to the administrative costs that management might save by choosing market contracting before firm organization. However, the practice of delegating the pricing authority to the sales representatives is more likely to generate agency costs, than if the pricing authority is centralized.

As this study has shown, providing sales representatives with the full pricing authority combined with an extensive pricing autonomy also provides the possibility to prioritize hedonic intrinsic motives over profit maximization in interactions with customers, such as granting discount as a gesture of friendship and avoiding price negotiations in order to maintain a friendly atmosphere, and behaving myopically in the actual pricing decision, such as using discounts as a means to quickly close a deal. Additionally, considerable pricing autonomy and authority increases the risks of negative consequences from individuals' tendency to avoid uncertainty in decision making and stick to already established procedures (Cyert & March, 1963), which might cause sales representatives to turn to historical prices instead of engaging in price negotiations. As discussed in Chapter 6, the empirical findings show that despite monetary incentives for profit maximization, the sales representatives

were inclined to sometimes avoid price discussions and instead grant discounts. Hence, providing extrinsic incentives are no guarantee for ensuring that the goals of management and those of the sales representatives' are aligned. This could motivate a more hierarchical pricing governance structure that enables management to address these potential risks.

The empirical findings from this study also indicate that the use of employed sales representatives does not ensure that the sales representatives always prioritize the firm's goals (e.g. profit maximization) over the customers' interest (e.g. discounts). In other words, sales representatives that develop close customer relationships and also have considerable pricing authority and autonomy might end up in a conflict of interests between that of the firm in profit maximization and the individual customers' interest in discounts. Hence, risks with sales representatives becoming too loyal to the buyer are not only real for firms that use external, independent sales representatives, as identified by Anderson (1985), but also, as shown by this study, for firms that sell through internal sales representatives.

Due to the sales representatives' information advantage over management regarding the products' value to different customers and individual customers' willingness to pay, managerial uncertainty regarding the sales representatives' behavior is presumably high (i.e. in this context, 'uncertainty' refers to *internal* uncertainty as opposed to the type of uncertainty that managers' might face when writing contracts in the presence of a changing environment, see Anderson & Schmittlein, 1984; Williamson, 1981). As the empirical study has shown, due to information asymmetry regarding individual customers between management and the sales representatives, managers differ both between, and over time, regarding individual awareness of potential behavioral aspects among sales representatives that might negatively influence firm goals.

In conclusion, I propose that pricing governance within firms that produce complex, customized offerings and handle close, long-term customer relationships, comprise aspects of both market contracting and hierarchies. Managerial perception regarding the tradeoff between cost of customer specific information and agency cost influence largely where on the hybrid continuum between pure market contracting and pure hierarchies the firm's pricing governance structure is situated. The following section discusses governance choices in relation to different types of organizational capabilities.

7.2. Capability governance and different types of organizational capabilities

It is likely that managerial choices regarding capability governance are not limited only to influencing pricing capability development, but can have an effect also on other types of organizational capabilities with other types of operational activities and outcomes. For example, managerial choices regarding capability governance presumably shape R&D capabilities, considering that handling the balance between hierarchical control and the employees' autonomy is often proclaimed to be one of the main challenges for managers when promoting new product developments (see Feldman, 1989). Presumably, managers in manufacturing firms struggle with uncertainty when deciding whether to impose a highly hierarchical R&D capability governance structure in order to be able to monitor costs and resource deployment, at the expense of greater administrative costs. Or, choosing a less hierarchical capability governance structure with the intention to provide the employees with greater autonomy and, also, save managerial time and other administrative costs. Or, lastly, purchase the product components from a supplier. Since managers differ in terms of their individual motives (Bower, 1970; Coff & Kryscynski, 2011; Gottschalg & Zollo, 2007), their views on alternative measures (Cyert & March, 1963) and, thus, perception regarding firm boundaries and the governance structure that is the most efficient, managers' subjective choices regarding capability governance presumably partly explain capability heterogeneity between firms. Thus, I argue that insights and ideas developed within transaction economics (e.g. managerial choices regarding governance structures and firm boundaries) could further improve our understanding of organizational capabilities in general and capability heterogeneity between firms in particular.

Schreyögg and Kliesch-Eberl's (2007) notion about capability monitoring is related to the proposition that managers make different capability governance choices depending on their individual perception and motivation. According to Schreyögg and Kliesch-Eberl (2007) managers have the choice of either allowing a capability to adjust "automatically" in response to external changes, or establishing a separate function with the task of monitoring and controlling the capability. Their description of capability monitoring implies a hierarchical capability governance structure, compared to a decentralized capability governance structure that resembles quasi-market contracting. Indeed, the

capability monitoring suggested by Schreyögg and Kliesch-Eberl (2007) requires that management is able to fully identify and understand the organizational capability at hand in order to control its composition. Thus, capability monitoring presumably comprises the tradeoff between manageability and imitability (see Schoemaker & Amit, 1994). The following section discusses this issue and outlines the argument that an increased understanding of how this tradeoff appears different for different types of organizational capabilities would both contribute to our understanding of how firms develop organizational capabilities (e.g. if different firms develop different organizational capabilities with different operational activities and outcomes depending on the industry), and provide guidance to managers when deciding on organizational capability development.

7.3. Capability heterogeneity and managerial governance choices

Helfat et al. (2007:27-29) argue that organizational capabilities are best understood by studying firms' ability to select, combine and coordinate assets, not by considering governance choices per se. Drawing on Teece et al. (1997), Helfat et al. (2007) argue that the key to maximizing profitability is the ability to readily and quickly develop and reconfigure its resources in response to a changing business environment, not governance choices per se. Traditionally, research within the organizational capability and resource-based tradition has avoided considering managerial governance choice due to an ambition to create a theory of the firm that assumes that opportunistic behavior will not occur (Conner & Prahalad, 1996). However, even if a theory of firm behavior is delimited from the possibility of opportunistic behavior, the empirical finding indicates that managerial governance choices are central to capability development since managers choose the governance structure they perceive to be the most efficient measure for managing the firm's capabilities, and coordinating capability specific routines and resources. As illustrated by this study, different types of pricing capability governance structures differ in terms of the extent to which the firm's resources are utilized. If similar causal relationships between capability governance structure and resource utilization are valid for organizational capabilities that perform other operational activities than pricing, managers' different choices regarding organizational capability

governance structure result in variations in resource utilization between firms, and differing abilities to deploy resources efficiently. Additionally, managers' governance choices most likely impact the acquisition of resources required for new capability development, especially if the resources acquired are combined and integrated with the firm's existing capability specific ones. Thus, as proposed by Argyres (2011) in his conceptual paper, firms' ability to acquire resources required to build a unique capability is presumably impacted by managers' choices regarding governance structures for resource acquisition.

The argument that managers' different governance choices partly explain why different firms develop heterogeneous capabilities is supported by Schreyögg and Kliesch-Eberl's (2007) critique of Winter's (2003) argument that ad hoc problem solving is a potential antecedent for organizational capability development. According to Schreyögg and Kliesch-Eberl (2007), Winter (2003) fails to recognize that managers create hierarchies because they believe them to be more effective than market contracting. The assumption that instant responses to external changes (i.e. Winter's [2003] notion of ad hoc problem solving) determine organizational behavior sidesteps the fact that managers create hierarchies (i.e. organizations) because they perceive them to be a more efficient form of coordination. Thus, managerial perception about firm boundaries plays a central role in explaining organizational capabilities.

The following section discusses the tradeoff between capability manageability and imitability, and the relevance of this for different firms acting within different market phases and industrial contexts.

7.4. The tradeoff between capability manageability and imitability

Previous empirical studies addressing managers' ability to develop pricing capabilities (Dutta et al., 2003; Hallberg, 2008) and other types of organizational capabilities (e.g. Ethiraj et al., 2005; Frost et al., 2002; Macher & Mowery, 2009; Maritan, 2001; Montealegre, 2002; Narayanan et al., 2009) have emphasized isolating mechanisms as one central aspect that distinguishes organizational capabilities from other non firm specific business processes. For example, these publications describe organizational capabilities as socially complex (Dutta et al., 2003; Maritan, 2001; Montealegre, 2002), causal

ambiguous (Montealegre, 2002) founded on tacit know-how (Dutta et al., 2003; Ethiraj et al., 2005; Frost et al., 2002; Macher & Mowery, 2009; Narayanan et al., 2009), composed by individual experience (Hallberg, 2008), and impossible to imitate due to both co-specialization between different resources and routines (Hallberg, 2008) and time compression diseconomies (Dutta et al., 2003; Frost et al., 2002; Narayanan et al., 2009). Thus, on the one hand, these publications argue that the organizational capabilities that provided the case for the respective studies was protected by isolating mechanisms and, thus, a source of sustained competitive advantage. On the other hand, they also argue that management of the studied firms indeed was able to design the organizational capability in question. If management was able to develop and design an organizational capability, are the allegedly isolating mechanisms strong enough to prevent competitors from imitating the capability at hand? Due to the tradeoff between manageability and imitability (see Schoemaker & Amit, 1994), an organizational capability that is designed by management is presumably not protected by any isolating mechanisms. Even though time compression diseconomies might be a means to deliberately create an isolating mechanism, a manager will most likely not consider it to be a particularly helpful advice to persistently invest in a capability over several decades in order to *possibly* achieve a competitive advantage, hoping that a competitor is not undertaking similar investments. Thus, the question that remains is: are designable organizational capabilities of any relevance to firms, assuming that competitors are able to imitate them? This question is addressed in the following two sections.

7.4.1. The designability and relevance of a pricing capability

Considering that management at the embedded cases were able to achieve pricing capability development within a relatively short period of time, it is likely to assume that management of the competitors also would be able to develop an effective pricing capability and, thus, imitate the embedded cases' pricing capabilities. Hence, these findings indicate that even though a pricing capability could be a source for competitive advantage, this is likely to last only a short time due to the lack of isolating mechanisms. However, it is also likely to assume that the competitors of the embedded cases will need a similar number of years for pricing capability development, considering the firm specific pricing resources and pricing routines that were developed by each embedded case. The embedded cases had to develop pricing skills and pricing

governance structures that were adjusted for the firm specific products and the specific nature of the customer relationships.

Thus, the empirical findings indicate that pricing capabilities are manageable. However, the manageability of a pricing capability indicates that it is also imitable by competitors. Presumably, pricing capabilities are more designable than other types of organizational capabilities, such as Rolls-Royce's innovation capability regarding turbo engines (see Lazonick & Prencipe, 2005), but also less durable in terms of the period of time during which the competitive advantage lasts. With that said, as mentioned, the embedded cases act within mature markets. Thus, the products are generally in the maturity stage of the products' life cycle and product development generally concerns incremental changes of existing products (in contrast with radical product innovations). Also, the embedded cases face the challenge of commoditization and, thus, shrinking premiums on product innovations. I argue that managers' ability to design pricing capabilities are particularly relevant for manufacturing firms acting on mature markets for the following two reasons: 1) Due to the increasing price pressure, the ability to identify, estimate and communicate the products' customer value relative to the competitors' products is especially important for maintaining a differentiation strategy and not start competing on prices and, thus, slip into an unwanted low-cost strategy. 2) Due to the mature market conditions, it is less likely that the firm will be able to develop new organizational capabilities for radical product innovations, since the products are often in the late stage of the product life cycles. For these reasons, the ability to create short-term competitive advantages is particularly relevant for firms on mature markets.

Thus, the relevance of a pricing capability differs depending on the industry conditions, such as the maturity of the market, the customers' bargaining position and the nature of the competition. The following section discusses differences in designability between various types of organizational capabilities.

7.4.2. Designability and relevance of different types of organizational capabilities

Dutta et al. (2003) advocate that strategy researchers should take more interest in how firms develop a portfolio of different organizational capabilities with both value creating and value appropriation functionalities. Drawing on Schoemaker and Amit (1994), I argue that researchers should not only consider

firms' ability to develop a collection of different capabilities with different operational activities and outcomes, but also the hierarchy of different capabilities in terms of different capabilities' designability, durability and appropriability. This is relevant since recent publications have suggested that very few firms are able to maintain a competitive advantage over time based on a single, unique capability or resource (D'Aveni et al., 2010; Jansson, 2012; Sirmon et al., 2010; Wiggins & Ruefli, 2002). Instead, most firms are more likely to achieve temporary competitive advantages by continuously investing in multiple manageable organizational capabilities. I propose that the ability to create short-term competitive advantages is more relevant for firms acting on mature markets, since the likelihood is relatively small that the firm acting on these markets will develop a radical new organizational capability (e.g. a capability that enables radical product innovation), given that the products are in the late stage of the products' life cycles. Since organizational capabilities might either erode or be replaced (see Collis, 1994) more quickly in more dynamic markets, an organizational capability that has a shorter durability within a firm acting in more dynamic markets could have a longer durability in more mature markets (i.e. a market where the firms face a more stable demand and supply situation). For that reason, capabilities with a relatively shorter durability in dynamic markets might be more durable and, thus, valuable over a longer period for firms within mature markets. Consequently, even if a pricing capability is designable and, if so, has a relatively shorter durability than capabilities with different operational outcomes, especially within dynamic markets, the durability and appropriability of a pricing capability to firms within mature markets might still motivate the investments required to design one.

The idea that the designability of a particular organizational capability defines both the boundaries for managers' ability to develop one, and the competitive advantage that it generates, is distinguished from the notion of dynamic capabilities (e.g. Eisenhardt & Martin, 2000; Teece et al., 1997; Zollo & Winter, 2002). As elaborated in Chapter 2, dynamic capabilities are often described as originating from individual, cumulative, tacit experience accumulation through trial and error based learning (Eisenhardt & Martin, 2000; Teece et al., 1997). Through largely causal ambiguous processes, some parts of the accumulated knowledge are articulated and codified (Eisenhardt & Martin, 2000; Zollo & Winter, 2002). Difficulties with codifying (Teece et al., 1997) and transferring tacit knowledge (Szulanski, 1996), and managing causal ambiguous processes (Collis, 1994; King & Zeithaml, 2001; Szulanski et al.,

2004) will most likely create barriers for managers when intending to design dynamic capabilities. As expressed by Eisenhardt and Martin (2000:1114), sometimes “even the managers themselves do not know why their dynamic capabilities are successful”. This indicates that managers presumably have a limited ability to control the firm’s dynamic capabilities, and even less influence the capabilities’ development paths. Hence, contrary to organizational capabilities, which according to Winter (2000:983) are always known to management, including the capabilities’ “control levers [and] intended effects”, dynamic capabilities are described as “emergent” (see Mintzberg & McHugh, 1985; Mintzberg & Waters, 1985) routines that, due to their nature, presumably are difficult to foresee, and even less manage. Thus, if they are relying on dynamic capabilities, managers are left to hope that good luck will cause “the right” capability to emerge. Consequently, I propose that an increased understanding of the designability, durability and appropriability of different organizational capabilities, and the relevance of different designable organizational capabilities to different firms depending on industry context, would both contribute to our understanding of organizational capability development, and provide guidance to managers when deciding on the firm’s resources.

In summary, this study contributes to our understanding of organizational capabilities by suggesting that it might be fruitful to shed light on the hierarchy of different capabilities. Different organizational capabilities, with different operational activities and outcomes, vary presumably with regard to manageability and imitability. Also, different types of organizational capabilities differ presumably in their relevance for different firms depending on the industry conditions of the individual firm. Considering that one of the main tasks for managers is to handle resource limitation, the designability and the expected return on investment for different organizational capabilities are relevant for managers when intending to develop organizational capabilities.

7.5. Limitations and future research

The ambition with this study has been to contribute to our understanding of pricing capability development and the purpose has been to identify the antecedents of pricing capability development. Yet, the conclusions are to some extent limited to manufacturing firms that act in business-to-business relations

on mature markets, produce customized, complex, high-technological products, handle close, long-term customer relationships and assign individual sales representatives to their customers. Consequently, future studies could further enhance our understanding of pricing capability development by studying it in firms that act in other market conditions and produce other types of offerings. For example, pricing capability development in firms acting in more dynamic, disruptive, growing markets where radical product innovations occur frequently, might differ from the pricing capability development observed in this study. Presumably, if a firm frequently launches new product innovations and the nature of the competition limits the firm's ability to achieve product innovation price premiums for a longer period of time (e.g. the consumer electronic industry), the main challenge for firms might be new product pricing, as opposed to value based pricing. This in turn might demand a pricing capability with other qualities relative to the one that is optimal for manufacturing firms acting on mature markets.

Moreover, future research could further clarify the development path of the different pricing capability elements. I argue that firms that act in mature industries, handle close, long-term customer relationships and promote close, personal relationships between the sales representatives and the customers, benefit from designing a pricing governance structure that addresses the problems that might arise due to close relationships between the sales representatives and the individual customers. However, the impact of other external factors, such as the behavior of competitors or suppliers, on the development of specific pricing capability elements has not been discussed in this thesis. For example, if the firm's suppliers are in a strong bargaining position, a cost based pricing strategy might be favorable in order to ensure product profitability. If so, a pricing governance structure that assures that customer contracts that are adjusted according to cost increases might be optimal.

Additionally, this study has proposed that a firm's pricing governance structure provides the foundations of pricing capabilities. The sales representatives' pricing authority and pricing autonomy were identified as the central elements of a firm's pricing governance structure. Thus, future studies could further develop our understanding of the relationship between a firm's pricing governance structure and managers' ability to develop and design pricing capabilities.

Lastly, although a growing stream of conceptual papers (Argyres, 2011; Argyres et al., 2012; Argyres & Zenger, 2012; Langlois & Foss, 1999) have argued that managerial governance choices play a greater role in explaining capability heterogeneity between firms than has been acknowledged within research on organizational capability development, empirical studies of this proposition are limited. Thus, future empirical research of how individual managers' decision making regarding capability governance impact on organizational capability development, and explains differences in organizational capability development between firms, could further improve our understanding of both managers' ability to design organizational capabilities as well as capability-heterogeneity between firms.

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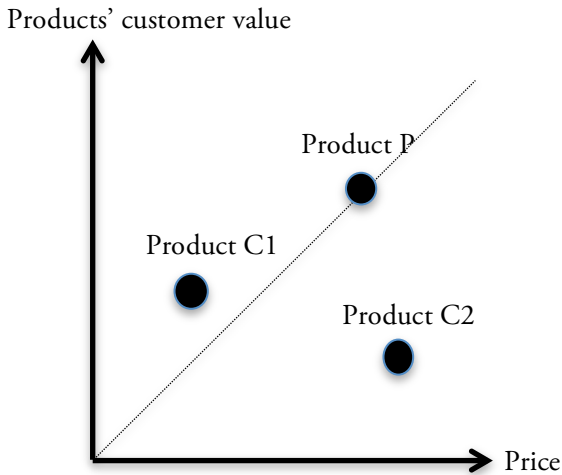
Appendix I: Pricing tools

The largely normative pricing literature (e.g. Dolan & Simon, 1996; Marn et al., 2004; Monroe & Della Bitta, 1978; Nagle & Hogan, 2006; Nagle & Holden, 2002) recommends various pricing tools. Often, management consultants use these pricing tools when they provide their services to their customers. Those pricing tools advocated by this literature are presented in this section.

Customers' value map position analysis

The method of customers' value map analysis (CVMA) is often recommended in the normative pricing literature (e.g. Dolan & Simon, 1996; Marn et al., 2004; Monroe, 2003). It is advocated as a useful tool for the competitive positioning of products and as a method for calculating prices that correspond to the customers' value of the product in question. See Figure 6 on the next page for an illustration of CVMA.

Figure 6 Illustration of CVMA



“Product P” symbolizes the product that is the object of the analysis, C1 and C2 symbolize competitors’ products and the dotted line marks where the products’ customer value equals the price (i.e. $y=x$). The product that is the object of analysis is plotted in a two-dimensional chart according to the customer value of the product (y-axis) and the product’s price (x-axis). Thus, if the price equals the customer value, the product will be plotted where x is equal to y. After the same analysis has been performed for the competing products, the chart displays the customer value of the different products and their corresponding prices.

A prerequisite for CVMA is the pricing tool for quantifying the customer value of the product at hand.

Quantify the customer value of a product

The first step when quantifying the customer value of a product is to identify the customer value. This might appear as self-evident. However, customer value is often defined as the difference between the benefits received and the sacrifices made by the customer (Lapierre, 2000; Marn et al., 2004; Menon, Homburg, & Beutin, 2005; Shapiro & Jackson, 1978; Teas & Agarwal, 2000). Sacrifices refer to what the customer gives up when acquiring the product, such as price and time, whereas customer benefits are linked to the customer’s perception of the received value of acquiring and using the product. Marn et al. (2004:44)

define customer value relative to the sacrifices the customer makes when purchasing the product:

”The real essence of ‘value’ revolves around the tradeoff between the benefits a customer receives from a product and the price paid for it – or, more accurately, the perceived benefits received and the perceived price paid.”

In a similar vein, when estimating the customer value, Shapiro and Jackson (1978) propose a cost-benefit tradeoff analysis, referring to the customer’s process of evaluating a given product before purchasing. However, as mentioned, limiting the definition of customer value to the difference between benefits and price paid might be problematic when practicing value based pricing, since customers’ willingness to pay should be estimated according to the customers’ total benefit from possessing the product, not adjusted from sacrifices (Monroe, 2003). Thus, as mentioned, a product’s value to a customer is defined as the customer’s total benefit in monetary terms from possessing the product, including but not limited to the product’s technical benefits and the service that the selling firm might provide additional to the physical product. Naturally, a product’s customer value to a customer might be both idiosyncratic and subjective, making it difficult to identify and quantify. Thus, the second step is to quantify the customer value.

Forbis and Mehta (1981) suggest a method for evaluating the economic value of the product to the customer (EVC). According to EVC, the maximum amount the customer is assumed to be willing to pay is equivalent to the price of the reference product plus or minus the aggregated difference in value provided by the differentiating features of the focal product. The product’s different characteristics are tested and the results are compared with the test results from the competing products’ performances. Differences in performance characteristics (e.g. productivity, cost for maintenance, energy consumption, payback time or return on investment) provide the difference in customer value between the product in question and competing products. The concept of a product’s estimated EVC is, according to Forbis and Mehta (1981) intended to be applied for different customer groups and product applications. Thus, performing customer segmentation in relation to the different customer group’s product preferences is necessary when applying the concept. Consequently, firms offering purely or partly customized products may encounter difficulties if applying this concept since the customer value might be co-created, which in turn results in a lack of a relevant reference product (Johansson & Andersson,

2012). Nevertheless, recommendations provided by management consultants regarding methods for conducting value based pricing and thus estimating a product's customer value often follow the logic of EVC (see Marn et al., 2004; Monroe, 2003).

Customer profitability versus sales volume

This pricing tool is used for identifying the profitability of the firm's different customers in relation to the volume sold to each individual customer. The customers are plotted in a chart where the y-axis represents the total volume purchased and the x-axis illustrates the average profit margin gained from each individual customer. This pricing tool not only allows the firm to identify the unprofitable customers, it, moreover, displays the profitability in relation to sales volume for each individual customer.

Customer segmentation

Customer segmentation (Bernstein & Macias, 2002; Morris & Calantone, 1990; Shapiro & Jackson, 1978) is a prerequisite for those pricing tools and strategies (e.g. value based pricing, differential pricing and customers' value map position) where the underlying intention is to set different prices for different customer groups according to the scale of their willingness to pay.

Revenue leakage analysis

The purpose with this method is to calculate the actual revenue gained from a certain customer order (Marn et al., 2004). The premise is that different discounts (e.g. volume discounts and payment term discounts) and other transaction specific cost for the seller (e.g. transportation costs and performance penalties) impact the revenue. These factors of subtraction are called revenue leakages and the actual end-price, what is left when the leakages have been subtracted, is sometimes referred to as the "pocket price" (Marn et al., 2004).

Product profitability analysis

This pricing tool is closely related to revenue leakage analysis, but with the difference that each specific revenue leakage is not identified. Instead, the gross profit margin for a given product is identified once the product is sold, without any specific attention given concerning the different determinants that have caused the revenue leakage. This pricing tool is recommended as a useful tool when identifying if any products are sold at an unprofitable price (Marn et al., 2004).

Price elasticity of demand

This pricing tool is advocated as a useful tool for understanding customers' price sensitivity (Dolan & Jeuland, 1981; Monroe, 2003; Nagle, 1984; Vogel et al., 2002). The logic is to measure the percentages that are lost in sales due to a certain percentage increase in price, and vice versa.

Identify and analyze competitors' prices

This is a prerequisite for both customers' value map position analysis and competitor based pricing.

Appendix II: Pricing strategies

Table 27 on the next page summarizes a selection of publications that discuss different pricing strategies. As illustrated by the number of publications addressing the pricing strategies listed in the table, the six main categories that researchers in general are able to agree on are: 1) Cost based pricing, 2) Competition based pricing and 3) Customer value based pricing, 4) New product pricing, 5) Product line pricing, and 6) Differential pricing. Each one of these pricing strategies is elaborated in the following sections.

The cost based pricing strategy

The cost based approach is the practice of setting prices according to the cost of the product. Thus, the price is calculated based on cost of the product plus a given profit margin. This approach is sometimes called target pricing, referring to the practice of setting price based on the cost of the product plus a targeted profit margin. Firms acting within industries where the customers are in the position to more or less fully decide prices, for example, due to high transparency regarding the cost structure, or a market with a distinct low cost strategy (as opposed to differentiation strategy), could benefit from a cost based strategy (Guilding et al., 2005).

The cost based approach is often practiced, partly for the sake of convenience (Shipley & Jobber, 2001; Simon et al., 2003), and partly since it brings along a sense of a “fair” and “objective” pricing (Marn et al., 2004). However, the downside with this practice is twofold: 1) companies are often facing difficulties when analyzing the costs of production for a certain product in question (Marn et al., 2004), and 2) the cost of the product is seldom equivalent to the value of the customer (Dolan & Simon, 1996).

Table 27 Different pricing strategies

Pricing strategy	Publications
Cost based pricing	Akintoye and Skitmore, (1992); Chia and Noble, (1999); Cannon and Morgan, (1990); Dolan, (1995); Dolan and Simon, (1996); Forman and Lancioni, (2002); Forman and Hunt, (2005); Hinterhuber, (2008); Hinterhuber and Bertini (2011); Ingenbleek et al. (2003); Marn et al. (2004); Morris and Calantone (1990); Monroe, (2003); Nagle and Hogan, (2006); Nagle and Holden (2002); Noble and Gruca, (1999); Shipley and Jobber (2001).
Competitor based pricing	Akintoye and Skitmore, (1992); Chia and Noble, (1999); Dolan and Simon, (1996); Forman and Lancioni, (2002); Hinterhuber, (2008); Hinterhuber and Bertini (2011); Ingenbleek et al. (2003); Monroe, (2003); Morris and Calantone (1990); Nagle and Hogan, (2006); Nagle and Holden (2002); Noble and Gruca, (1999); Shipley and Jobber (2001); Tellis (1986).
Value based pricing	Akintoye and Skitmore, (1992); Anderson and Narus, (1998); Cannon and Morgan, (1990); Chia and Noble, (1999); Dolan, (1995); Hallberg (2008) Hinterhuber, (2008); Hinterhuber and Bertini (2011); Ingenbleek et al. (2003); Kortge and Okonkwo (1993); Lancioni et al. (2005); Marn et al. (2004); Monroe, (2003); Morris and Calantone (1990); Nagle and Hogan, (2006); Nagle and Holden (2002); Noble and Gruca, (1999); Shipley and Jobber (2001); Thompson and Coe (1997).
New product pricing	Cannon and Morgan, (1990); Chia and Noble, (1999); Dolan and Simon, (1996); Monroe, (2003); Marn et al. (2004); Monroe, (2003); Monroe and Della Bitta (1978); Noble and Gruca, (1999); Shipley and Jobber (2001).
Product line pricing	Cannon and Morgan, (1990); Chia and Noble, (Chia & Noble, 1999); Dolan and Simon, (1996); Duke (1994); Forman and Hunt, (2005); Morris and Calantone (1990); Monroe, (2003); Marn et al. (2004); Monroe and Della Bitta (1978); Nagle, (1984); Noble and Gruca, (1999); Tellis (1986).
Differential pricing	Cannon and Morgan, (1990); Duke (1994); Forman and Hunt, (2005); Nagle, (1984).

The competition-based pricing strategy

Competition based pricing carries the benefit of knowing the prices of the competitors, which is necessary when aiming to position own products in relation to those of the competitors. It may also lead to new market shares, at

least in the short run, if pricing below the competitors, a strategy often referred to as penetration pricing (Duke, 1994; Morris & Calantone, 1990; Tellis, 1986). However, the risk is that the firm will get into a price war resulting in diminishing returns (Nagle & Hogan, 2006). Furthermore, when acting too much according to the competitors' prices, there might be the risk of encountering legal issues, such as being subject of taking part in cartel formation or the abusing of a dominant position if, for example, the prices are set lower than the marginal cost.

The value based pricing strategy

The value based pricing strategy has been claimed to be the most profitable pricing strategy (Anderson & Narus, 1998; Cannon & Morgan, 1990; Hinterhuber, 2008; Hinterhuber & Bertini, 2011). Ingenbleek et al. (2003) demonstrated in their study of 77 companies within the Belgian manufacturing business-to-business industry that a value based pricing approach enhances the chances for new product success. No such connection was found for cost based approaches. The value based pricing strategy is defined by Hinterhuber (2008:42) as:

“Customer value-based pricing approaches use the value a product or service delivers to a predefined segment of customers as the main factor for setting prices.”

This definition is distinguished from the one offered by Noble and Gruca (1999:442):

“Customer value pricing [...] involves pricing one version of the product at very competitive levels, offering fewer features than are available for other versions.”

Thus, Noble and Gruca (1999) are in contrast to Hinterhuber (2008) associating customer value pricing with low price and budget products. However, as illustrated by the different definitions summarized in Table 28 on the next page, there seems to be a general agreement among scholars that value based pricing is the practice of matching prices with the product's customer value. Hence, Noble and Gruca's (1999) definition is an exception and most publications addressing value based pricing offer definitions that are in line with the one Hinterhuber (2008), among others, suggests.

Table 28 Definition of value based pricing strategy

Publication	Definition of value based pricing strategy
Anderson and Narus (1998:54)	“Customer value models are based on assessments of the costs and benefits of a given market offering in a particular customer application.”
Cannon and Morgan (1990:22)	“[Value based pricing] is a demand-oriented method which assumes that a firm can determine what people are willing to pay for a product and its various forms.”
Hinterhuber (2008:42)	“Customer value-based pricing approaches use the value a product or service delivers to a predefined segment of customers as the main factor for setting prices.”
Hinterhuber and Bertini (2011:46)	“Value-based pricing uses information on customer willingness to pay and on customer price elasticity as primary bases for pricing decisions.”
Kortge and Okonkwo (1993:133)	“In perceived value pricing, the vendor assesses the value of the product to each customer and charges a price based upon the customer’s perceived value of the attributes of the product offering that each receives.”
Monroe (2003:192-193)	“...a value orientation means that the firm’s pricing is driven by measurable value provided to customers and not by customers’ expressed willingness to pay.”
Morris and Calantone (1990:324)	“Different prices are set for different market segments based on the value each segment receives from the product or service.”
Shipley and Jobber (2001:311)	“Demand based pricing methods [...] involve forming estimates of how highly customers value the offering and customer price sensitivities and then setting prices according to what the traffic will bear.“
Thompson and Coe (1997:71)	“The perceived value of a product is the price the customer is willing to pay for the total bundle the product delivers.”

As indicated, the ability of estimating the products’ value to the customers is the focal point when practicing value based pricing. However, firms often struggle with this due to difficulties of collecting and interpreting data needed when identifying the customer value (Anderson & Narus, 1998). Also, many firms find it difficult to communicate the value of their products (Hinterhuber & Bertini, 2011). Additionally, the perception among employees that cost based prices are “fairer” (Kahneman et al., 1986) and easier to justify to

customers (Urbany, 2001) could create organizational barriers for value based pricing. Hence, companies seldom practice value based pricing (Hinterhuber, 2008; Hinterhuber & Bertini, 2011; Kortge & Okonkwo, 1993) and instead more often rely on competition based pricing (Hinterhuber, 2008) or, for the sake of convenience, the cost based pricing approach (Shipley & Jobber, 2001; Simon et al., 2003).

New product pricing

New product pricing is the practice of pricing the product for which the ability to compare to other similar products is limited. Sometimes, value based pricing alternatives are recommended (Dolan & Simon, 1996; Marn et al., 2004). In those situations, the recommendations usually follow the logic of the EVC method with the difference that there is an obvious reference product. However, the following two different pricing strategies for new products are in general advocated: 1) skimming pricing, and 2) penetration pricing (Dean, 1969; Dolan & Jeuland, 1981; Duke, 1994; Forman & Lancioni, 2002; Hinterhuber, 2004; Monroe, 2003; Morris & Calantone, 1990; Nagle & Holden, 2002; Noble & Gruca, 1999; Shipley & Jobber, 2001).

Skimming pricing is the practice of launching new products at a high price relative to the products' customer value, with the purpose of gaining an initial high profit margin at the expense of a low sales volume. The objective with skim prices is thus to gain a short term high profit (Hinterhuber, 2004). Since the customer value of a certain product often differs between different customers, this pricing strategy is recommended when intending to appropriate the maximum price from each individual customer. Thus, this pricing strategy applies better to products with a low price elasticity of demand. Logically, the initial higher price is lowered once those customers expected to accept a higher price have made their purchases. This practice of pricing a certain product at different prices throughout the product's life cycle is sometimes referred to as life cycle pricing (Forman & Lancioni, 2002; Smith & Nagle, 1995).

Penetration pricing is the practice of starting with an initial low price relative to the products' customer value, with the purpose of achieving an initial large sales volume at the expense of a high profit margin. The objective is, thus, to gain a large market share in the short run (Hinterhuber, 2004). Hence, this pricing strategy is most suitable for products with a high price elasticity of demand.

Product line pricing strategy

The logic with the product line pricing strategy is to take advantage of the interrelationship between different products when setting prices. Thus, it is sometimes referred to as the razor-razorblade pricing strategy (Nagle, 1984) or complementary pricing (Duke, 1994). One product is sold at a fairly low price whereas the complementary product, on which the functionality of the first one is dependent, is priced higher. Thus, a low profit margin from one of the products is compensated with a relatively higher profit margin from the complementary product.

The pricing strategy of selling more than one product in a “package”, regardless of whether there is an interdependency between the different products or not, is sometimes also referred to as product bundling (Forman & Lancioni, 2002; Morris & Calantone, 1990).

Differential pricing strategy

Differential pricing, sometimes referred to as price discrimination (Monroe & Lee, 1999; Nagle, 1984), is the practice of pricing the same product differently for different customers or customer segments. The premise is that the product’s price sensitivity of demand and/or customer value is different for different customer segments. Thus, different customer segments are identified and given different prices that correspond to the different customer segments’ willingness to pay. Consequently, the revenue is spread unevenly to different customer segments, where those willing to pay a higher price contribute with a larger share, compared to those who want to pay less. Hence, the relative and average profit margins are divided unequally between different customers (Tellis, 1986).

Appendix III: Interview guide

Formal details of interviewee

- Position
- Responsibilities
- Background, such as time with the company, previous positions within the firm and previous employers, professional background and education.

Mapping the pricing capability elements before and after the pricing capability development projects

The table below lists the questions asked with the intention to map the pricing capability elements. The questions are sorted according to pricing organization, pricing information systems, pricing skills and pricing strategy. The same questions were used in order to map the pricing capability elements before and after the development project. The last row lists questions asked in order to identify the historical background and antecedents of the pricing capability elements practiced prior to the development project.

Pricing organization

Incentive controlling arrangements

How are the sales representatives evaluated and rewarded? How is compensation and variable salary calculated for management and the sales representatives? How are the sales representatives and/or management assessed and rewarded in terms of pricing performance?

Pricing authority delegation

Who is responsible for setting prices? Who makes the decision regarding the prices? Which procedures have to be followed when setting prices? What are the restrictions for the sales representatives when setting price (e.g. target margin, minimum profit margin, maximum profit margin, price ceiling, price floor, discount restrictions)? What is the discount policy? Are any guidelines

regarding target margin used?

Salesforce management

How are the sales representatives organized (e.g. according to customer segment, product category, sales region)? Do the prices differ between the sales representatives? If so, why?

Management involvement on pricing decisions

How is pricing considered in the overall strategy? What are the pricing strategy and the pricing objectives? How is pricing discussed during strategy meetings? Who are responsible for pricing? Are the prices set by the individual sales representatives or coordinated on a central level? Who has formal and informal influence on the end price (e.g. sales representatives, marketing department, managers)?

Management involvement when price changes are imposed and when new products are priced

Who (which management level) is involved when price changes are made? When new products are priced?

Communication between higher level management and lower level

How are pricing objectives and strategies communicated to the employees? How are price changes communicated? How is the information about the customers gained by the sales representatives shared within the organization?

Communication between different departments/functions/divisions regarding pricing

How is information about pricing coordinated and shared between different departments/functions? What kind of information is exchanged?

Handling price changes

When and why are price changes made? When and why are general price changes across product segments made? Who is involved in that process? How are changes in production costs handled? Is any material index or similar used? Are expected financial implications on price changes analyzed (e.g. price elasticity of demand)?

Pricing information system

Information management

How is historical data used when setting prices (e.g. customer purchase history and customer profitability)?

Software support for pricing

Are any IT systems or software programs for pricing used? Is information about customer history stored digitally?

Pricing skills

Pricing skills among the employees

What skills are required of sales representatives and other price setters? Are the sales representatives and other price setters provided with training in specific pricing tools and/or strategies? Regarding how to handle customer negotiations? Regarding how to identify, quantify and explain customer value?

Hiring of pricing talent

Is expertise regarding pricing considered when hiring managers or other positions related to pricing?

Tools for price setting

Which methods are used when setting prices? For example; customer and product profitability, customer segmentation, price elasticity calculations, target price, customer prices history, identification of customers' buying criteria, customer value map analysis, pricing target volume vs. margin, life cycle pricing, revenue leakages analysis. Which data are used to calculate the prices (e.g. cost, customer assessment, customer history, competitors' prices)? How is the products' cost base calculated?

Information about the products

How do the sales representatives get the (technical) information about the products?

Coordination of information about the customers

How is the information that the different sales representatives possess about the different customers shared with the wider organization (e.g. manufacturing and R&D)?

Customers

Can you describe the relationships with the different customers (long-term, short-term, business partners, etc.)? Can you describe a bargaining situation with a customer? How and to what extent are the customers able to influence prices? Are the customers treated differently in any way? For example, are they offered different prices depending on predefined customer segments? How and to what extent are data concerning customer history used? How do you know which price to give for each respective customer?

Customer feedback

Who gets the feedback from the customers? How is it shared within the organization and/or between departments? Are customer surveys conducted? How is the feedback evaluated?

Customer buying criteria

What are the determinants of the customers' purchasing decision? Can you

describe the meetings with the customers? What are the negotiation procedures like? What are the customers primarily focusing on (e.g. product functionality, product features, proven track record, prices)? If mentioned by respondent: How do you define “product quality” and “market price”?

Delivered customer value

What is the reason why your customers select your products and not the competitors? What are your selling arguments? What are the competitive advantages of your products? Is the delivered customer value analyzed in any way (e.g. pricing of service, spare-parts, after sales procedures, extra value-added quantification)?

Different price setting depending on different customers and/or markets

Are the different customers treated in any different way when given prices? How do the procedures differ for setting prices between the customers? Are customer segmentations conducted?

Handling bigger (international) customers

How are bigger customers handled? Are they provided with a central interface? Who is involved in the meetings/negotiation processes with the customers? What is the procedure concerning negotiations?

Know-how about transaction costs for customers if changing to a competitor

What information do you have about the competitors' products? How is that information handled and shared within the organization?

Communicating versus not communicating price changes to the customers

How are price changes communicated to the customers? How are they motivated (e.g. raw material price increase)?

The role of the customer's customer

How is the role of customers' customers considered?

Competitors

Can you describe the competition you have? Who are your competitors? What is the maturity level of the market? What are you mainly competing with your competitors on (price, functionality, e.g.)? When customers change to any of your competitors, do you know the reason ?

Information about competitors

How is information about competitors gained and used? How is the information about the competitors' prices gained? Is it gathered in any formal way? Is it accessible for others in the organization? Is it the individual sales representatives' knowledge about the competitors coordinated centrally and/or shared within the organization?

Knowledge about competitors' products

What information do you have about the competitors' products? How is that

information handled and shared within the organization?

Communication between sales force and the wider organization concerning information about the competitors

How is the communication between the sales force and the wider organization handled concerning the competitors?

Pricing strategy

Can you tell me about your procedures for deciding which price to set on a given product? Who decides the prices? How does the procedure differ regarding pricing of different products (e.g. standardized versus customized)? What are the formal and informal guidelines for pricing? What are the prices based on (e.g. historical figures, competitors' prices and target margin)? When a person is new on the job as a price setter, is he or she given any training or coaching? How do newly appointed price setters learn how to do their job? What skills are needed for setting prices? Are the employees provided with training in customer negotiations and setting prices? What are the general, the educational and professional backgrounds of the employees working with pricing?

The antecedents of the pricing capability elements prior to the development project

Why did you use these procedures for setting prices? When and how were the pricing routines prior to the development project established and for what reasons? Was there any time in history when these procedures were decided upon? If so, why and when was that? Were there any problems with the previous procedures for price setting? If so, what kind of problems?

The project of changing the pricing capability

The questions below were asked in order to map the project of changing the pricing capability.

The decision to develop new pricing capability elements

Who made the decision to change the practice for price setting? Why was it made? What were the reasons? Did you consider any other options? Did you evaluate any other alternatives? Was expected return on investment estimated in any way (e.g. payback period)? Does the estimated outcome from the realized results differ? If so, in what way? Do you have any previous experience of changing the firm's practice for price setting? Have you any previous experience from other practices for price setting (e.g. former employers)?

The project of developing and implementing new pricing capability elements

Who was responsible? When did it start? When was it finished? How was it carried out? Who was involved? Was there a project plan? What did it look like? Were any new IT tools implemented? Were the employees provided with training sessions? What were the reactions from the employees? Did you hire any external consultants?

The results

Meeting management expectations

Did the result of the project meet the initial expectations? Which changes have been made? Have there been any changes regarding prices? Have there been any changes in the financial figures? Which pricing methods and activities are new? Any new IT tools? Have there been any organizational changes? Have there been any changes in terms of sales force management? Have there been any changes in the selling arguments? Have there been any changes regarding the monetary incentives or bonus agreements for the sales representatives and other employees? Have there been any lay-offs? Has anyone resigned? Any new employees hired? Have there been any reactions from the customers, competitors and/or suppliers?

The price setters experience and thoughts about the new pricing capability

What are your thoughts about the new pricing strategy? What are your thoughts about the new pricing activities? Can you describe how the prices were calculated prior to the change? Have there been any changes in prices? Have the processes for calculating the prices changed? Are you targeting any new customer segment and/or new sales region after the change? Have you met any reaction from customers? Have the new procedures implicated changes in your work as a sales representative? Are you handling the customers differently now? Have you noticed any changes in the customer relationships? Have your selling arguments changed in any way? Has your pricing authority changed since the new pricing capability was implemented?

The questions below were asked in order to map the pricing excellence project.

The pricing excellence project

Expectations with the project

What were your expectations with the pricing excellence project? Have these been met?

General reflections

What are your general reflections about the project?

Encountered challenges

What have been the challenges?

The outcome of the work with the project

What's your opinion on the outcome of the project?

Lessons learned

Do you believe that anything could have been done better? In a different way?

Practical implications of the project

Have you gained anything from the project? Both in terms of you personally and your unit. If so, how? In what way?
