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Micro-foundations of value-based pricing and selling

Mario Kienzler

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Department of Management and Engineering
Linköping University, SE-581 83 Linköping, Sweden

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To my parents

Abstract

Enabling customer value creation is central to marketing theory and practice. Yet, doing so does not ensure that supplier firms profit from it. Value-based pricing and selling come with the prospect of translating customer value creation into greater profits for suppliers. However, despite sustained interest, only a limited number of firms emphasize value-based pricing and selling. Existing research has highlighted organizational challenges as potential reasons. Unfortunately, this focus on organizational challenges obscures the role of individuals within organizations (i.e., its micro-foundations), such as the fact that managers and salespeople determine and realize prices. The purpose of this thesis is thus to describe and analyze the micro-foundations of value-based pricing and selling in business markets.

The thesis' conceptual framework introduces bounded rationality and heterogeneity—two overlooked forces—to investigate the affective, cognitive, and motivational micro-foundations of value-based pricing and selling. The thesis' empirical foundation consists of five papers that investigate the micro-foundations suggested by the framework.

The findings indicate that research would benefit from a wider variety of research approaches. Currently, insights into micro-foundations are lacking, in part due to the focus on research designs and theories aimed at the organizational level; experimental designs and theories from psychology would allow amendments to prior research. Furthermore, individual rationality and individual differences play a role. In this regard, managers' cognitive biases impact upon the extent to which firms focus on value-based pricing. Moreover, price presentation impacts managers' value perception and purchase intention. The findings also suggest that managers' personalities and salespeople's experience and learning orientation are important individual differences affecting the emphasis on value-based pricing and selling. Consequently, affective, cognitive and motivational micro-foundations—arising due to bounded rationality and heterogeneity—explain some of the challenges associated with value-based pricing and selling.

This thesis contributes with insights into several micro-foundations affecting value-based pricing and selling. In so doing, the thesis belongs to a growing stream of research that is shifting the focus from organizational processes to the individual foundations of value-based pricing and selling. The thesis also provides suggestions on how managers can use micro-foundations to the advantage of their firms.

Sammanfattning

Att möjliggöra värdeskapande för kunder är centralt för marknadsföringsteori och -praktik. Detta är dock ingen garanti för att leverantörsföretaget kommer att kunna få del av värdet. Värdebaserad prissättning och försäljning ses i detta sammanhang som sätt på vilka leverantörer kan ta del av kundens ökade värdeskapande. Trots ett ökat intresse för koncepten i näringslivet är antalet företag som systematiskt arbetar med värdebaserad prissättning och försäljning begränsat. Anledningen till detta tillskrivs ofta de organisatoriska utmaningar som företagen ställs inför. Fokus på de organisatoriska utmaningarna skymmer dessvärre individens roll inom organisationen (dvs. dess mikrofundament), såsom att chefer och säljare bestämmer och realiserar priser. Syftet med denna avhandling är således att beskriva och analysera mikrofundamenten av värdebaserad prissättning och försäljning på företagsmarknader.

Avhandlingens konceptuella ramverk introducerar begränsad rationalitet och heterogenitet—två förbisedda faktorer—för att undersöka affektiva, kognitiva och motiverande mikrofundament av värdebaserad prissättning och försäljning. Avhandlingens empiriska grund består av fem papper som undersöker mikrofundamenten som föreslås av ramverket.

Resultaten tyder på att fortsatt forskning skulle gynnas av en bredare mängd olika forskningsmetoder. För närvarande saknas insikter om mikrofundament delvis på grund av fokus på metoder och teorier som huvudsakligen undersöker organisationsnivån. Genom mer forskning som bygger på teorier hämtade från psykologi samt experimentella metoder skulle forskningsfältet kunna utvecklas. Dessutom spelar individuell rationalitet och individuella skillnader en roll. I detta avseende påverkar beslutsfattarens kognitiva biaser i vilken utsträckning företaget fokuserar på värdebaserad prissättning. Vidare påverkar prispresentation beslutsfattarens värdeuppfattning och köpintention. Resultaten visar även att chefers personlighet och säljares erfarenhet och inlärningsorientering är viktiga individuella skillnader som påverkar företagets fokus på värdebaserad prissättning och försäljning. Affektiva, kognitiva och motiverande mikrofundament som har sin grund i begränsad rationalitet och heterogenitet kan därmed förklara några av de utmaningar som är förknippade med värdebaserad prissättning och försäljning.

Avhandlingen bidrar med insikter kring flera av de mikrofundament som påverkar värdebaserad prissättning och försäljning. Den sällar sig således till den växande forskningsström som skiftar fokus från organisationsprocesser till

individnivå för att bättre förstå värdebaserad prissättning och försäljning. Avhandlingen ger även ett praktiskt bidrag genom förslag på hur beslutsfattare kan använda mikrofundament till fördel för sina företag.

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Surprisingly, five years of research do not feel like a very long time in retrospect. Looking back, it also seems all too obvious what this thesis would be about. But then, hindsight is always 20/20. Thus, I would like to acknowledge the people who helped me to make—what were at the time—not so obvious decisions.

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Linköping, June 2018

Mario Kienzler

Appended papers

Paper I

Kienzler, M., & Kowalkowski, C. (2017). Pricing strategy: a review of 22 years of marketing research. *Journal of Business Research*, 78, 101–110.

M.K. designed the study and wrote the first draft; C.K. provided critical input. M.K. collected and analyzed the data with input from C.K. Both authors jointly revised and rewrote the manuscript.

Paper II

Kienzler, M. (2017). Does managerial personality influence pricing practices under uncertainty? *Journal of Product & Brand Management*, 26(7), 771–784.

Paper III

Kienzler, M. (2018). Value-based pricing and cognitive biases: an overview for business markets. *Industrial Marketing Management*, 68(January), 86–94.

Paper IV

Kienzler, M., Kindström, D., & Brashear Alejandro, T. (accepted). Value-based selling: a multi-component exploration. *Journal of Business & Industrial Marketing*.

M.K. designed the study and wrote the first draft; D.K. and T.B.A. provided critical input. M.K. and D.K. collected the data with input from T.B.A. M.K. analyzed the data with help from T.B.A. and D.K. All authors jointly revised and rewrote the manuscript.

Paper V

Kienzler, M., Kindström, D., & Kowalkowski, C. (2018). The effect of price partitioning on customer perceived value. *Working paper*.

M.K. designed the study and wrote the first draft; D.K. and C.K. provided critical input. M.K. collected and analyzed the data with input from D.K. and C.K. All authors revised and rewrote the manuscript.

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1

Introduction

*“A product is not a product unless it sells.
Otherwise it is merely a museum piece.”* — Theodore Levitt [1]

Value is defined as the trade-off between perceived benefits and perceived sacrifices (Monroe, 2003; Zeithaml, 1988). In marketing, enabling the creation of customer value is central (e.g., Payne, Storbacka, & Frow, 2008; Slater, 1997; Woodruff, 1997). It is achieved through the application of skills, processes, and competences to fulfill distinct customer needs (see Vargo & Lusch, 2004). Yet, enabling customer value creation does not ensure a firm’s success (Mizik & Jacobson, 2003). A range of empirical evidence substantiates this claim. EMI Ltd. enabled considerable customer value creation through the invention of the CT scanner but failed to profit from its invention (Mizik & Jacobson, 2003). In particular, the CT scanner enabled more effective tumor treatment (Unknown, 2014) but, instead of profiting from this medical advancement, EMI Ltd. was pushed out of the market by imitating rivals (Teece, 1986). When Audi introduced the Q7 in 2006, customers’ value perception was high, but the SUV was seriously underpriced, which resulted in 210 million Euros in potential

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revenue being foregone (Ramanujam & Tacke, 2016b). Wang Laboratory pioneered the market for word processors but failed to translate its market dominance into enough profit once rivals entered the market due to its poor pricing practices (Nagle & Holden, 2002).

The bottom line in all these examples is that it is not enough to enable customer value creation, firms also have to take value capture seriously. Value capture is defined as the processes that allow firms to claim some of the value created in exchange relationships. For supplier firms, value capture means making a profit from enabling customer value creation. More importantly, supplier firms that both enable customer value creation and capture a reasonable amount of value do exist. For example, Cardea connects business clients and consulting firms but since business clients are often reluctant to pay the match-making fees, Cardea learned that it can make more profit by selling its services to the consulting firms instead (Michel, 2014). Dräger Safety, a manufacturer of industrial goods, is customer-driven rather than technology-driven—that is, the firm focuses on providing trimmed offerings that fulfill customers' needs without having unnecessary attributes—and is thus able to ask higher prices than direct competitors (Ramanujam & Tacke, 2016a). Likewise, Bossard, a producer of fasteners, understood that customers could save a great deal of time through pre-lubricated fasteners and that they could achieve a higher price and a greater profit margin by selling them (Michel, 2014). As these later examples highlight, business is not necessarily a zero-sum game; supplier firms can enable more customer value creation and capture more value in the form of profits.

In marketing, two processes are commonly linked to value capture on the supply side: pricing and selling (see Blocker, Cannon, Panagopoulos, & Sager, 2012; Burkert, Ivens, Henneberg, & Schradi, 2016; Matthyssens, Vandenbempt, & Goubau, 2009; Nagle & Holden, 2002; Smith & Nagle, 2006; Töytäri, Keränen, & Rajala, 2017; Töytäri & Rajala, 2015). In this regard, Dutta, Zbaracki, and Bergen (2003, p. 616) note that “pricing is an important means by which a firm appropriates [i.e., captures] value through market-based exchange” and Blocker et al. (2012, p. 16) argue that “salespeople are in a prime position to [...] help their firms appropriate [i.e., capture] greater value.” In particular, value-based pricing and selling have emerged as two specific processes that focus explicitly on value capture (Nagle & Holden, 2002) since both focus on customers' value perception to determine and realize prices (see also Hinterhuber & Liozu, 2012).

Yet, an emphasis on value-based pricing and selling is no silver bullet. Emphasizing value-based pricing and selling requires considerable commitment (Nagle & Holden, 2002); however, the pay-off is not guaranteed and depends on a variety of internal and external conditions. Nevertheless, prior research indicates that value-based selling has on average a positive relation with

performance at the level of the salesperson (Terho, Eggert, Haas, & Ulaga, 2015; Terho, Eggert, Ulaga, Haas, & Böhm, 2017) and value-based pricing with performance at the level of the product (Ingenbleek, Frambach, & Verhallen, 2010, 2013) and the firm (Liozu & Hinterhuber, 2013). As the first group of examples indicates, firms may struggle to profit from the customer value they enable to create. Consequently, firms like ARDEX (Crouch & Hunsicker, 2013), Schneider Electric (Reinartz & Ulaga, 2008), and Continental AG (Hinterhuber, 2016) invested considerably in value-based pricing and selling. Notwithstanding this interest by these and other firms, only a minority of firms emphasizes customer value in their pricing and selling practices.

Prior research has mainly stressed organizational challenges as potential reasons for this circumstance. Research suggests for instance that firms need to cooperate across departments (Hinterhuber, 2004), overcome institutional norms (Töytäri & Rajala, 2015; Töytäri, Rajala, & Brashear Alejandro, 2015), and create a fit between the incentive structure of the personnel involved in pricing and selling and a focus on customer value (Nagle & Holden, 2002). Certainly, organizational challenges are germane to value-based pricing and selling, but focusing solely on these aggregated issues tells only part of the story. Indeed, considering only organizational challenges obscures important factors below the surface; that is, how individuals within organizations contribute to both practices.

1.1 The micro-foundations of value-based pricing and selling

Research on micro-foundations has witnessed a surge in interest within the last years (e.g., Barney & Felin, 2013; Felin & Foss, 2005; Gavetti, 2005; Helfat & Peteraf, 2015) with a specific interest in value-based pricing and selling arising more recently (e.g., Hinterhuber, 2015, 2017; Hinterhuber & Liozu, 2017; Terho et al., 2017; Ulaga & Loveland, 2014). Micro-foundations are concerned with “the level of individual action and interaction” and its connection to firm performance (Abell, Felin, & Foss, 2008, p. 492). In other words, micro-foundations are concerned with human behavior in organizations. At the heart of the micro-foundations movement lies the idea that considerable explanatory power for organizational outcomes can be found at the individual level (see Felin & Foss, 2005). In line with this general description, Hinterhuber and Liozu (2017, p. 159) have recently argued that “research on the micro-foundations of pricing seeks to understand how individual traits or individual activities influence organizational activities in the domain of pricing or organizational performance”. Among others, prior research has identified an individual’s experience (Hallberg, 2017a; Töytäri, Keränen, & Rajala, 2017), cognitive style (Estelami & Nejad,

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2017), judgment (Hallberg, 2018), beliefs and attitudes (Töytäri, Keränen, & Rajala, 2017) to be distinct micro-foundations that impact upon pricing. Above all, these results show that micro-foundations are diverse. Hence, micro-foundations can be affective, cognitive, or motivational in nature. Building on this prior work, research into the micro-foundations of value-based pricing and selling investigates the psychological and behavioral basis of individual actions and interactions that affect firm performance by determining and realizing prices based on customer value.

Micro-foundations are essential in the study of value-based pricing and selling since it is not the organization that acts but the individuals within it (Hinterhuber & Liozu, 2017).¹ In this regard, Felin and Foss (2005, p. 441) highlight that “organizations are made up of individuals, and [that] there is no organization without individuals.” These individuals put organizational capabilities and behavior into practice; it is thus necessary to analyze the individual level. As such, the micro-foundations movement shares commonalities with behavioral strategy, which “applies cognitive and social psychology to strategic management theory and practice” (Powell, Lovallo, & Fox, 2011, p. 1369). Cyert and March (1963) were perhaps the first to highlight the importance of individuals within organizations and to comprehend this behavioral dimension of firms. Moreover, since “organizations are systems of coordinated action among individuals and groups whose preferences, information, interests, or knowledge differ” (March & Simon, 1993, p. 2), it is germane to recognize how these differences influence firm performance.

Indeed, evidence suggests that individuals have a sizable impact on firm performance.² For example, Nath and Mahajan (2011), who analyze the effect that chief marketing officers (CMOs) have on firm performance across a range of industries, find that CMOs with responsibility for sales have a substantial influence on the sales growth of their firms. Chatterjee and Hambrick (2007) analyze the influence of chief executive officers’ (CEOs’) narcissism on firm performance in the computer hardware and software industry. Among other things, the authors find that CEOs’ narcissism affects return on asset (ROA) extremeness and fluctuation. Finally, Mollick (2012), who investigates the impact of individual producers and designers on revenue in the electronic games industry, finds that the two groups jointly have a bigger effect on game revenue than the firm itself. He finds that individual producers and designers explain about 30% of the total variance while the firm explains only about 21%. Thus, Mollick (2012) concludes that individuals have a unique influence on their firms. These findings suggest that individuals are relevant to firm performance.³

¹ I use the terms *firm* and *organization* interchangeably throughout the thesis.

² I consider it reasonable to talk about *firm performance* in connection with organizational-level outcomes such as sales growth, ROA, or revenue, for instance.

³ Note, all examples use objective individual-level predictors and objective firm-level outcomes; that is, no

Considering the impact of individuals on firm performance, it is interesting to observe the scarcity of research focusing on individuals in organizations. Potentially, the prime reasons for this lack of interest is that business research (e.g., marketing [strategy], strategic management, etc.) has its roots in neoclassical economics and has inherited its core assumption of rationality. According to this assumption, humans are assumed to consider all (or at least most) available information, have stable and known preferences, and are utility-maximizing (Simon, 1955). While prior research has examined how human behavior systematically deviates from this strong form of rationality (e.g., Cyert & March, 1963; Simon, 1957; Tversky & Kahneman, 1981), not all business research addresses this circumstance explicitly. However, some existing research shows that managers consider only a limited amount of information when making decisions (Wübben & Wangenheim, 2008), do not have stable preferences (e.g., Kivetz, Netzer, & Srinivasan, 2004; Steiner, Eggert, Ulaga, & Backhaus, 2016), and do not always maximize utility (i.e., profit) (e.g., Armstrong & Collopy, 1996; Griffith & Rust, 1997). Rather than being rational, humans are bounded rational; that is, the environment and their cognitive limitations restrict rationality (Simon, 1957). Considering this more limited form of rationality, Simon (1959) highlights that:

it [is] hard to ignore the distinction between the objective environment in which the economic actor ‘really’ lives and the subjective environment that he perceives and to which he responds. When this distinction is made, we can no longer predict his behavior—even if he behaves rationally—from the characteristics of the objective environment; we also need to know something about his perceptual and cognitive processes. (p. 256)

Arguably, these perceptual and cognitive processes differ between people. Recently, Helfat and Peteraf (2015) argued that such individual differences (i.e., heterogeneity) exist in regard to managerial cognition. Traditionally, however, heterogeneity would be disregarded due to the assumption of rationality. As a result, firms are analyzed at a macro-level, overlooking the individuals within them.

Marketing research on business markets is a prime example of this neglect as it “continues to regard individual decision-making as a black box” (Sheth & Sharma, 2006, p. 425). While individuals frequently serve as respondents, interest in them is limited to the extent that they facilitate the investigation of the organization (LaPlaca, 2014). Similarly, Wierenga (2011) points out that “managerial decision making in marketing is the heart of the field. Strangely

self-reported measures (e.g., Likert scales), which should increase the trust in the reported effects. Moreover, the quoted examples primarily include large firms, indicating that individuals do not only have an impact in entrepreneurial and small firms.

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enough, academic work on this topic is scarce” (p. 89). This lack of interest in the micro-foundations of firms operating in business markets is perhaps less surprising considering that business markets are believed to be particularly rational. Sheth and Sharma (2006, p. 425) note that “business decisions are supposed to be based on reason and there is presumed accountability of managers to make the right decisions.” While research on business markets has in fact transitioned from a pure focus on neoclassical economics to incorporating behavioral science (LaPlaca & da Silva, 2016), there is still a need to explicitly consider bounded rationality and heterogeneity and their consequences. In short, micro-foundations are important for business markets.

1.2 Research purpose and questions

In consideration of the aforementioned circumstances, it appears fruitful to shine some light on the micro-foundations of value-based pricing and selling in business markets. If one accepts that organizational activities, routines, capabilities and processes tell only part of the story, then the individuals within organizations become an important unit of analysis. Therefore, the purpose of this thesis is to describe and analyze the micro-foundations of value-based pricing and selling in business markets. Building on this overarching purpose, the thesis sets out to answer the following two specific research questions:

Research question 1: How can different research approaches advance research on the micro-foundations of value-based pricing and selling in business markets?

Research investigating micro-foundations is different from research on the organization, such as firm-level processes and capabilities; it concerns a different level of abstraction. Beyond this rather obvious observation, one may wonder how individuals can be studied due to this change of analytical focus. The term *research approaches* is here used in a broad sense encompassing research design (i.e., how data is collected, such as through surveys), theoretical foundations (i.e., the basis for research questions or hypotheses, such as trait theory), and sampling frame (i.e., who participates, such as marketing managers from supplier firms).

Research question 2: How do micro-foundations influence value-based pricing and selling in business markets?

Firms operate under neither totally deterministic nor random conditions; that is, individuals within organizations can influence outcomes, such as the relative emphasis on value-based pricing and selling in their practice. Considering the aforementioned evidence that individuals have an impact on firm performance, it becomes crucial to recognize how individuals may influence value-based pricing

and selling practices. Herewith, both the reasons and processes behind individuals' impact are important to recognize.

With the said purpose and the two specific research questions, the thesis intends to advance current knowledge about and practice of value-based pricing and selling in business markets.

1.3 Contribution of appended papers

The scholarly foundation of this thesis consists of five research papers (see Table 1). Value-based pricing and selling is a wide-ranging topic; each of the appended papers thus investigates a more explicit topic by shining some light on a specific aspect of pricing or selling and a particular set of micro-foundations. Yet, each paper makes a distinct contribution to the thesis' overall purpose by providing input to one or both research questions.

Table 1: Overview of appended papers

Paper	Topic	Side	Design	Key finding(s)	RQ
I	Pricing	Both	Literature review	Marketing research on pricing strategy has significantly changed within the last 22 years. Takeaways for research approaches are provided.	1
II	Pricing	Supply	Non-experimental scenario	Managerial personality traits influence preferences for and against value-based pricing under uncertainty.	2
III	Pricing	Supply	Conceptual overview	Cognitive biases have a negative effect on managers' emphasis on value-based pricing. Research approaches to investigate these biases are also discussed.	1 & 2
IV	Selling	Supply	Cross-sectional survey	Experience and learning orientation positively influence salespeople's emphasis on value-based selling.	2
V	Buying	Demand	Experimental scenario	Price presentation indirectly influences managers' perceived value and purchasing intentions.	2

Source: This table is an adaption and extension of Table 1 presented in Kienzler (2016).

As can be seen from Table 1, the papers use different research designs, investigate different topics, and concentrate on different market actors. In short,

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each paper takes a slightly different approach to investigating the micro-foundations of value-based pricing and selling.

1.4 Disposition of the thesis

The thesis continues with the presentation of its theoretical outline in Chapter Two. Research in marketing, psychology and strategic management is reviewed. This theoretical outline illustrates the growing interest in micro-foundations and explains their importance for value-based pricing and selling. Chapter Three discusses the thesis' methodology. In particular, the overarching philosophical view on research and the concrete research process leading to this thesis are discussed. Furthermore, the employed research designs and analytical techniques are outlined, as well as ethical considerations. The fourth chapter presents the findings of the appended papers. The penultimate chapter discusses the research findings and answers the research questions. The final chapter highlights the thesis' most important contributions and its implications for theory and practice. The thesis ends with a discussion of its limitations and suggestions for further research.

2

Theoretical outline

“Nothing is as practical as a good theory” — Kurt Lewin [2]

It is necessary for supplier firms to enable their customers’ value creation, but they also need to make a profit for themselves. This chapter outlines this circumstance in more detail. Moreover, to investigate pricing and selling practices, it is necessary to disaggregate them from a firm level to the individuals who perform them; in other words, it is necessary to look into the micro-foundations of value-based pricing and selling. In particular, it is important to consider individual and situational aspects, given the lack of attention paid to them so far. That said, this second chapter reviews relevant research and outlines the theoretical background against which the thesis is situated. In line with Kurt Lewin’s observation on theory, the outline is intended to be useful for examining the empirical context (i.e., the challenge of value-based pricing and selling) and for situating the thesis in that stream of research. The chapter finishes with a conceptual framework.

2.1 Marketing, behavior, and micro-foundations

Marketing has its origins in economics (Bartels, 1951). Early marketing research was mainly concerned with the distribution of commodities and applied economic principles to marketing problems (Bartels, 1951). Marketing's beginnings may thus be best understood as a form of applied economics (Kerin, 1996; Wierenga, 2011). Hence, early marketing research inherited some of the assumptions of neoclassical economics, such as rationality, for instance (LaPlaca & da Silva, 2016). Despite this connection with economics, over the years several key publications introduced a behavioral perspective. For example, Alderson (1952) stressed the importance of psychology in studying marketing behavior, Levitt (1960) showed how myopic managerial behavior can lead business astray, and Zaltman (1970) highlighted the advantages of drawing on behavioral sciences in marketing. Considering these and other contributions with a focus on psychology, it has been suggested that marketing took more of a behavioral perspective, most noticeably during the 1960s (Kerin, 1996; Wierenga, 2011).

Indeed, nowadays marketing integrates a variety of theories and concepts from other disciplines. For example, Pieters and Baumgartner (2002) found that marketing research frequently cites publications from psychology, economics, and management. However, marketing has developed into a discipline with distinct fields (Reibstein, Day, & Wind, 2009). This development is noteworthy because the aforementioned use of a behavioral perspective is most prominent in research on consumer behavior (Wierenga, 2011). Indeed, it has been argued that other fields of marketing pay too little attention to behavioral aspects. For instance, the modeling field has been criticized for relying on excessively stringent assumptions about market actors coming from economics (Goldfarb, Ho, Amaldoss, Brown, Chen, Cui, Galasso, Hossain, Hsu, Lim, Xiao, & Yang, 2012; Meyer, Vosgerau, Singh, Urbany, Zauberger, Norton, Cui, Ratchford, Acquisti, Bell, & Kahn, 2010). Similarly, it has been argued that the field of business marketing needs to incorporate a stronger behavioral perspective in order to produce explanatory research (LaPlaca & da Silva, 2016). Indeed, the choice of theoretical perspective is an important aspect of research. Yet, it is not the only one.

There is also a divide between marketing research focusing on households and that focusing on firms. Research on households is primarily situated at the micro-level; that is, it focuses on individual consumers. In contrast, research focusing on firms is often conducted at a macro-level; that is, the organization, and has thus neglected individual decision-making within organizations.⁴ For instance, LaPlaca (2014) stresses that research on business markets too often

⁴ An exception is, for instance, sales research, which often focuses on individual salespeople and typically takes a behavioral perspective (see Williams & Plouffe, 2007).

assumes that decisions are made by organizations when it is in fact the individuals within these organizations who make decisions. In line with this argument, Wierenga (2011) estimates that less than 5% of marketing research considers organizational decision-makers (e.g., marketing managers). Wierenga's estimation would support Sheth and Sharma's (2006) sentiment that very little is actually known about the decision-making of individuals in the realm of business markets.

Figure 1 displays these different levels. The figure is based on the work of sociologist James Coleman (1990) on social action and is suitable for investigating the micro-foundations of value-based pricing and selling for at least three reasons. First, Coleman's (1990) diagram outlines exchange relationships, which are an integral part of marketing (American Marketing Association, 2013). Second, the diagram has been used in the micro-foundations movement within strategic management (see Felin, Foss, & Ployhart, 2015), which shares similarities with marketing research focusing on firms (Moorman, 2016). Specifically, in strategic management it has been argued that the focus is too tightly directed at the organizational level, forgetting about the individuals who make up the organization (Felin & Foss, 2005). Third, the diagram illustrates the need to change the level of analysis. While the diagram builds on microeconomics, specifically rational choice theory, and thus is silent about the "insides" of individuals, Coleman (1990) indicates that the individual nodes can be open to research from psychology; that is, the aforementioned behavioral perspective. This means that the diagram can specify the level of analysis and that a behavioral perspective, drawing on research in psychology, can illuminate the individual nodes at the micro-level.⁵ In support of this notion, Coleman (1990, p. 508), attests to the "major interface between psychological theory and the theory

Figure 1: A view on micro- and macro-levels in business markets

Source: Adapted and extended from Figure 1.2 presented in Coleman (1990).

⁵ This combination of analysis at the micro-level and from a behavioral perspective is important because considering only the effect of the micro-level on the macro-level without taking a behavioral perspective would constitute organizational sociology. On the other hand, considering only the macro-level and taking a behavioral perspective resembles some of the current research on business markets studying relationships between firms, for instance.

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of social action”. Hence, a behavioral perspective, drawing on research in psychology, is necessary to illuminate how economic actors at the micro-level enact firms through their judgment and decision-making.

Considering the aforementioned argument that research focuses on the macro-level and economic aspects, much of the research on business markets concerns interactions, relationships, and exchanges between firms (arrow pair 1).⁶ Yet, as outlined previously, it is the individuals within organizations who make decisions and act; not the firm itself. While the macro-level is relevant, it is important to analyze causal relationships at the micro-level (Coleman, 1990), as indicated by the dashed lines at the macro-level. In the realm of business markets, this means that, while two firms may *do* business with each other (arrow pair 1), the causal relationship involves the arrow pairs 2, 3 and 4; that is, the individuals from the supplier and buyer firms who interact with each other.

In fact, a number of different arguments speak in favor of an increased focus on micro-foundations and a behavioral perspective. These arguments can largely be grouped into pragmatic, domain-related, and practical ones (see Hallberg & Felin, 2017). First, in general, it is humans who make pricing and selling decisions in organizations. Hence, choosing individuals as the level of analysis seems rather pragmatic.⁷ Second, marketing has a long tradition of borrowing from psychology in order to investigate behavioral phenomena at an individual level. For instance, consumer behavior research frequently uses psychological theories, such as regulatory focus theory, to investigate consumers’ responses to different price presentation formats (Lee, Choi, & Li, 2014). Thus, shifting the focus away from firms, or even networks, towards the individuals within firms aligns with the wider discipline’s focus on human aspects to build marketing theory. Third, micro-foundations are relevant for managers. Managers are not necessarily able to change industry norms or direct collaborations with other firms, but they are very much in the position to decide how to select, train, and manage people within their own organization. Hence, managers should be interested in how to select employees, improve training programs for managers with pricing responsibility and salespeople, and to implement guidelines for marketing and sales personnel. In short, micro-foundations and a behavioral perspective are too important to be overlooked.

⁶ Not that the figure is a necessary simplification. In reality, there may be more than two firms engaging with each other. However, the number of firms is secondary to my argument since the point here is rather to discuss the unit of analysis. Furthermore, individuals within firms interact with each other. One may thus include groups between the micro- and macro-level.

⁷ Arguably, then, one might ask what exactly a focus on individuals ought to entail; a focus on their stated or observed behavior, psychological processes or even neurobiological aspects? Again, a pragmatic stance, considering the particular research question, intended contribution, and access to respondents might be most fruitful to answer this question.

2.2 Methodological individualism: Individual actors in a social context

A focus on micro-foundations is related to methodological individualism. Methodological individualism is a paradigm that emphasizes individual behavior as the basis for social phenomena (Arrow, 1994; Hodgson, 2007; Udehn, 2002). In Arrow's (1994, p. 3) words: "The starting point for the individualist paradigm is the simple fact that all social interactions are after all interactions among individuals." In contrast, methodological collectivism underlines holistic concepts (e.g., groups, cultures, or institutions) as the basis for social phenomena (Arrow, 1994; Hodgson, 2007; Udehn, 2002). As such, methodological collectivism "retorts that society is more than merely a collection of individuals" (Agassi, 1960, p. 244).

Yet, it is quite unclear what researchers actually mean when they refer to methodological individualism (see Hodgson, 2007; Udehn, 2002). This is primarily due to the circumstance that different authors have defined and used the term differently (see Udehn, 2002, for a detailed review). In its extreme form, two types of methodological individualism can be distinguished: a strong and a weak type. The strong type requires that social phenomena are exclusively described in regard to individual behavior (i.e., total reduction) (Udehn, 2002). However, in economics—traditionally a stronghold for this type of methodological individualism (Udehn, 2002)—it has been suggested that studying individual behavior requires us to consider the social dimension, such as relations and interactions between individuals (Arrow, 1994). The social dimension becomes perhaps even more important in an applied discipline like marketing. For example, consider the importance of relational norms for buyer–supplier relationships and the competitive intensity on the market for price determination and realization. A weaker type, on the other hand, suggests that social phenomena can be explained to a considerable degree by looking at individuals' behavior and their social interactions (Udehn, 2002). This more nuanced view maintains that individuals are important, but it is not enough to look at the parts to explain the whole (Coleman, 1990). This proposition seems particularly reasonable considering the aforementioned buyer–supplier example. Yet, some critics have argued that this type does not classify as methodological *individualism* (Hodgson, 2007). Perhaps it is then most fruitful to consider methodological individualism and collectivism on a continuum, with different types situated along it and differing in degree, rather than two alternatives (see Udehn, 2002).

No matter how methodological individualism is defined, discussions of it often have a normative flavor; that is, proponents argue that scholars should adhere to it (Hodgson, 2007). However, it is the focus on *how* social phenomena

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can be explained with the help of methodological individualism that may be a more relevant aspect to stress. For example, starting from the individual suggests that psychological theories about the human mind become more relevant as part of the explanation (see also Udehn, 2002). A similar argument can be made about research designs and analytical techniques. Adhering to methodological individualism requires research designs and analytical techniques that enable the researcher to explain how individual actions and/or interactions cause social phenomena. This aspect is central because it is individuals, such as managers with pricing authority and salespeople, who capture value in exchange relationships through their pricing and selling practices. In turn, adopting methodological individualism can guide how such research may be conducted.

Finally, perhaps the title of this section has already foretold its conclusion. Indeed, individual actors are often a viable starting point for research. Yet, the methodological individualism advocated here considers individuals and their interactions within a social context. As such, it is close to the view of Joseph Schumpeter—the economist who first formulated methodological individualism (Hodgson, 2007). Schumpeter (1909) argued that individuals are the foundation for explaining social phenomena. Hence, from a pragmatic point of view, methodological individualism allows us to look beneath the organization’s surface and recognize the humans within it. In this regard, fundamental human qualities such as emotion, cognition, and motivation may become more important to consider.

2.3 Emotion, cognition, and motivation

Economics can be defined as the optimal allocation of scarce resources among mutually exclusive goals (Becker, 1976). Thus, making judgments and decisions grounded in economics ought to be concerned with efficiency. Becker (1976) points out that the allocation of resources—such as time, money, and effort—may be studied in a variety of different contexts. Contemplating the business context, certainly, economic considerations play an important role; yet, other aspects may impact upon judgment and decision-making too. Consider for example, emotion, cognition, and motivation.

Emotions can be defined as “multifaceted, biologically mediated, concomitant reactions” (Lerner, Li, Valdesolo, & Kassam, 2015, p. 800). Put differently, an emotion is an expressed response to a stimulus. In simple terms, emotions concern *feeling*. Most research in psychology considers some emotions to be basic in the sense that they are distinct from each other but universal across humans, such as anger, for instance (Ekman, 1992). The literature in psychology typically distinguishes between emotion and affect. While emotions are specific

and expressed feelings, such as happiness, affect is abstract and may be non-expressive, such as pleasure; also, emotions involve affect, making affect a more general concept (Lerner et al., 2015). Perhaps the first to acknowledge the impact of emotions on decision-making and behavior was Herbert Simon (1967). Evidence suggests that emotions can have a positive or a negative influence on decision-making and behavior (Lerner et al., 2015); this may also be the case for individuals within organizations, such as managers (Bazerman & Moore, 2009). For example, project managers may *feel right* about certain projects and are thus more supportive of them.

Cognition can be defined as the mental mechanisms involved in recognizing, representing, and processing information (Fiske & Taylor, 2017). Information may relate to a variety of different types of input, such as visual or auditory, for instance. In lay terms, cognition is primarily concerned with *thinking*. In the past, the metaphor for human cognition was often a computer (see Simon, 1967); although an error-prone one. Consequently, cognition has been at the heart of judgment and decision-making research (Tversky & Kahneman, 1974). Since individuals within organizations—such as managers—have to deal with uncertain or ambiguous information on a daily basis (March, 1991), cognition is an important aspect to consider when analyzing judgment and decision-making in a business context. For example, managers may have to evaluate information that is ambiguous, such as sales forecasts.

Motivation can be defined as the drive directed towards achieving a particular goal (Simon, 1967). For example, managers may be motivated to increase their business unit's profitability. One particular element that helps to categorize motivation is its origin; that is, is the motivation intrinsic or extrinsic to the person (Fiske & Taylor, 2017)? Keeping with the aforementioned example, intrinsically motivated managers would want to improve profitability because of their own eagerness and extrinsically motivated ones would act because of a bonus tied to profitability. Moreover, the degree of motivation has an impact on how much importance and attention is given to specific goals (see Simon, 1967). This circumstance is especially relevant in a business context where the decisions and behavior of a few individuals impact upon many others. For example, managers may falsely attribute the superior performance of their firms purely to their own skills instead of considering luck, due to the motivation to see themselves in a better light (see Bazerman & Moore, 2009). Such an egocentric view can cloud managers' ability to make objective decisions.

Taken together, emotions, cognition and motivation can affect the decision-making and behavior of individuals within organizations. As firms typically try to achieve economic objectives, it is important to consider how these non-economic aspects impact upon this goal.

2.4 Bounded rationality and heterogeneity

Herbert Simon (1955) introduced bounded rationality as a more realistic alternative to the unlimited type of rationality implied by rational choice theory. Rational choice theory assumes that humans consider all available information (e.g., March, 1991; Simon, 1955), have stable and known preferences (e.g., Becker, 1976; March, 1978; Simon, 1955), and are utility-maximizing (e.g., Arrow, 1986; Becker, 1976; Coleman, 1990; Simon, 1955, 1959). However, rational choice theory is neither descriptive nor procedural; that is, it only specifies what decision outcomes to expect (e.g., maximum profit) but not the process by which decisions are made (Levelt, 1995).⁸ As a consequence, “to apply the rational choice paradigm, few—if any—psychological assumptions [about how individuals actually make decisions] are needed” (Hogarth & Reder, 1986, p. S187).

Despite the computational elegance offered by rational choice theory, it is hard to reconcile it with actual human behavior. Indeed, Simon (1955, p. 114) cites the aim of building a model that is more representative of “the actual decision processes” as the motivation behind bounded rationality. So, instead of the *economic man*, specified in rational choice theory, bounded rationality suggest that humans are rational within limitations (March, 1978). Hence, bounded rationality makes less stringent assumptions about humans than rational choice theory. For instance, bounded rationality acknowledges that humans do not consider all the available information (Simon, 1959), may have unstable or unknown preferences (March, 1978), and may satisfice instead of maximize (Cyert & March, 1963) when making decisions.

Indeed, Simon (1959) highlights that human perception is colored in that objective information about the world becomes passively or actively distorted or excluded. For example, managers often use only a limited amount of information to classify customers into active and inactive ones (Wübben & Wangenheim, 2008). This is due in part to the “the limitations of the decision-maker and the complexity of the environment” (Simon, 1959, p. 273). Bounded rationality also accepts that humans may have unknown or unstable preferences. March (1991) outlines how, in an organizational context, preferences are often negotiated and thus may be frequently altered. Finally, a central aspect of bounded rationality is that humans do not maximize utility but instead try to attain satisfactory results within given constraints (Simon, 1955, 1959). In other words, it is not the theoretically optimal outcome that is the benchmark but instead a satisfactory outcome given constraints and a particular level of aspiration. Aspiration levels are informed by the past and present experiences of the decision-maker; that is,

⁸ Interpreting the “how” very liberally, one could argue that the theory “describes” that economic actors simply choose the best alternative. In other words, the omnipotence of the actor does not require great specificity.

they increase or decrease depending on goal achievement (Simon, 1959). Considering the business context, Cyert and March (1963) have investigated satisficing in the context of organizational decision-making, for instance.

Besides rationality, neoclassical economics holds a second strong assumption about human nature: the homogeneity assumption. Traditionally, economists have considered people to be quite homogeneous and have supposed that differences in their behavior arise not from their inherent nature but instead due to incentives (see, for example, Hume, 1754[1987]; Smith, 1776). Criticizing this assumption, Arrow (1986, p. S389) writes that “homogeneity across individual agents is not the only auxiliary assumption [to rationality posed by neoclassical economics], though it is the deepest.”

One may argue that this assumption of neoclassical economics is hardly problematic for today’s marketing research. However, this assertion is dangerous because it neglects marketing’s historical roots and contemporary connections with neoclassical and other schools of economics. For example, referring to research on routines and capabilities, Felin and Foss (2009, p. 163) write: “The assumption is that collective factors [...] drive overall outcomes and ought to be the key focal point of organizational analysis. The assumption, then, is not just that individuals do not matter, but more generally that individuals are homogeneous.” Theories like the capabilities view are frequently used in marketing⁹, are grounded in economics¹⁰ and have inherited—at least implicitly—*this* homogeneity assumption. Additionally, marketing researchers focusing on the firm level as analytical unit often implicitly assume homogeneity at the individual level. Again, the implicit assumption in these studies is “that significant variation occurs at the firm level of analysis, whereas individuals are more or less homogeneous or randomly distributed across firms” (Rothaermel & Hess, 2007, p. 899). A final argument may revolve around the assumption that—even if people are heterogeneous—individual differences do not matter because the organizational context (e.g., accountability) reduces their effect (see Sheth & Sharma, 2006).

Both the rationality and the homogeneity assumption conceal the importance of individuals within organizations. Indeed, opening up space for bounded rational and heterogeneous decision-makers allows the investigation of heuristics and biases and the inherent individual differences between individuals and their influence on decisions and behavior.

⁹ A Google Scholar search (accessed on April 7, 2018) with “capabilities” or “capability” as keyword, restricting the range to outlets with “marketing” in its title, resulted in over 50,000 results.

¹⁰ To be precise, the capability view is connected with evolutionary economics through its foundation in routines (see Felin & Foss, 2009).

2.4.1 Heuristics and biases

In January 2012, Eastman Kodak filed for protection against bankruptcy (Ro, 2012); the camera titan had officially lost the fight for the digital image market. Looking back, this outcome is remarkable. Eastman Kodak's engineers had the technical capabilities to develop a digital camera early on. In fact, Steven Sasson, an engineer at the firm, invented the world's first digital camera back in 1975 (Estrin, 2015). Yet, management argued that digital imaging would threaten the film market that Eastman Kodak relied on heavily and thus decided that the camera would not be marketed (Estrin, 2015). Ironically, Eastman Kodak's lackluster approach to digital imaging allowed competitors to market their own digital substitutes for film years later. Why did management misjudge the digital camera's potential? Herbert Simon (1959) argued that—to comprehend human decision-making—it is vital to consider the thought processes of the individual. Could it be that Eastman Kodak's management only considered the most salient information?

Heuristics can be defined as rules-of-thumb that humans use to simplify decision-making by considering only some of the available information (Gigerenzer & Gaissmaier, 2011). As such, the use of heuristics can be a sound tactic for dealing with the defining aspects of bounded rationality; that is, humans' cognitive limitations within a complex world (Simon, 1959). Building on Simon's (1959) earlier work, which suggested satisficing as a heuristic, decision-making research has identified a variety of other heuristics (for an overview, see Mousavi & Gigerenzer, 2014). The two main streams of research considering heuristics are Gigerenzer's (2004) fast and frugal heuristics and Tversky and Kahneman's (1974) heuristics and biases program. The fast and frugal program suggests that heuristics constitute viable tactics to make resource-efficient decisions (Gigerenzer, 2004). The focus is thus on ecological rationality; that is, does the heuristic match the situation (Gigerenzer & Gaissmaier, 2011)? In contrast, the heuristics and biases program focuses on how individuals depart in various ways from the normative optimum prescribed by rational choice theory. Hence, this latter program is related to research considering humans to be cognitive misers (Fiske & Taylor, 2017). Tversky and Kahneman (1974, p. 1124) point out that "heuristics are quite useful, but sometimes they lead to severe and systematic errors." These systematic errors are commonly referred to as biases. Indeed, managers commonly use heuristics. For example, Wübben and Wangenheim (2008) argue that managers frequently and successfully use hiatus heuristics to categorize their customer base into active and inactive customers. Employing hiatus heuristics, managers specify a cut-off value for the last purchase (e.g., nine months) and subsequently classify customers who have purchased since that time as active and the rest as inactive, the authors write.

Similarly, Bingham and Eisenhardt (2011) find that managers learn and apply a limited number of context-specific heuristics.

Biases can be defined as consistent, non-random errors in judgment and decision-making (Tversky & Kahneman, 1974). Biases can be affective, cognitive or motivational in nature (Bazerman & Moore, 2009). For instance, individuals can be affected by their emotions when making economic decisions, as shown by Lerner, Small, and Loewenstein (2004), who demonstrate that sadness reverses the endowment effect. The endowment effect is the circumstance whereby people evaluate objects they own more highly than the ones they do not own (Thaler, 1980). The framing effect—the circumstance that presenting the same information in slightly different ways influences people’s judgment and choices—is an example of a cognitive bias investigated in psychology (e.g., Tversky & Kahneman, 1981). An example of a motivational bias is the self-serving bias frequently observed when people make fairness judgments that consider outcomes beneficial to themselves to be fair (Messick & Sentis, 1979). Although these prototypical categories exist, it may be problematic to categorize biases as strictly affective, cognitive or motivational, since a combination of different processes may lead to a particular bias.

While much of the research on biases has been conducted in behavioral labs with student samples, biases have also been found outside the lab among professionals, such as salespeople and managers. Examples of bias in managerial decision-making include Golden’s (1992) longitudinal investigation of CEO strategy recall. The author asked 259 CEOs of primary-care hospitals to indicate their current strategy and two years later to recall that past strategy and found in nearly 60% of cases a mismatch between indicated and recalled strategy. While Golden (1992) points out that the findings could be due to the managers’ bad memory, he also suggests that managers may have an interest in engaging in impression management; that is, actively altering the reported strategy to appear in a better light. Clapham and Schwenk (1991) investigated self-serving attribution among the management of 20 large firms in utility industries over five years. In particular, the study investigated whether positive outcomes are attributed to internal factors and negative outcomes to external factors. In support of similar studies, Clapham and Schwenk (1991), did find this attribution and suggested that it could be due to biased perception. Salespeople have also been shown to be affected by biases. For instance, Mantel (2005) studied how salespeople’s affective state impacts upon their decision-making. In particular, she used a scenario-based experiment to study how 286 salespeople, working in a variety of industries, responded to the opportunity to use an ethically questionable sales technique (“backdoor selling”; that is, directly influencing the end customer instead of negotiating with the purchasing department). Among others, Mantel (2005) found that positive compared to neutral affect increases

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salespeople's appropriate decision-making; that is, to not use backdoor selling. This result suggests in turn that neutral affect biases salespeople towards unethical decision-making.

The evidence presented above suggests that in many situations heuristics offer a viable tactic for making sound decisions while only using a minimum of resources. Yet, heuristics can also lead to biases. Heuristic processing of information and the appearance of biases are not limited to student samples. Evidence of bias can even be found in the business context among professional decision-makers.

2.4.2 Individual differences

The business press is full of stories about how outstanding managers are instrumental to a firm's success. These managers are typically portrayed as having a natural talent or a particular idiosyncratic characteristic. In short, something that makes them different from other people. Consider, for instance, John "Jack" Welch, the former CEO of General Electric. When he took over as CEO in 1980, General Electric was a sluggish giant from the past, unfit to meet the new competition from Japanese and German manufacturing firms, but Welch had a vision; General Electric would become not a bigger but a better firm (Colvin, 1999). Contemplating General Electric's transformation during these times of change, several years later *The Economist* (1999) stressed Jack Welch's adaptability as his essential skill.

Individual differences can be defined as a person's characteristics that distinguish him or her from other people. The term includes but is not limited to personality, ability, and interests (Revelle, Wilt, & Condon, 2011). What makes a consideration of these differences potentially powerful is that "individual differences research proclaims that there are robust, inevitable, and salient differences *between* and *within* people" (Chamorro-Premuzic, von Stumm, & Furnham, 2011, p. xvi, italics in original). In other words, people are heterogeneous in their make-up; that is, their fundamental nature. For instance, Lounsbury, Sundstrom, Gibson, Loveland, and Drost (2016) investigate the difference between 9,138 managers and 76,577 non-managers across nine personality traits. They find that managers scored significantly higher on all of the investigated personality traits. However, research also shows that there are variations within a person. For example, Fleeson (2004) points out that individuals can behave quite differently across different situations. While research on individual differences focuses on the characteristics of human beings, it is broad in its line of investigation, as "the study of individual differences includes the study of affect, behavior, cognition, and motivation" (Revelle, Wilt, &

Condon, 2011, p. 1). In this regard, individual differences can be investigated using a variety of different psychological theories.

In the business context, individual differences have been extensively studied among salespeople and upper-echelon managers, such as managers in the C-suite and the board of directors. For instance, salespeople's personalities, abilities, and interests and their relation to job performance has been heavily researched within the last few decades, as indicated by several meta-analyses (see Churchill, Ford, Hartley, & Walker, 1985; Verbeke, Dietz, & Verwaal, 2011; Vinchur, Schippmann, Switzer, & Roth, 1998). The findings of these meta-analyses suggest that individual differences in salespeople affect sales performance. Similarly, meta-analytical findings on CEOs' charisma and extraversion (Wang, Holmes, Oh, & Zhu, 2016) provide evidence that some individual differences in managers impact upon firm performance.

Taken together, these findings align with Murphy's (1996, p. xvi) sentiment that "[individual differences] profoundly affect our behavior; an examination of the role of individual differences provides an important starting point for understanding human behavior in organizations."

2.5 The many faces of value

Value plays a central role in marketing theory and practice. Accordingly, within the last few decades a number of researchers have highlighted the importance of focusing on value in the realm of marketing activities (e.g., Anderson & Narus, 1998; Payne, Storbacka, & Frow, 2008; Slater, 1997; Woodruff, 1997). Likewise, practitioners have stressed the importance of value to their business. For example, James Griffith—former CEO of international bearing manufacturer Timken—said the following in an interview with McKinsey:

For a hundred years, all we made was that bearing. And as we entered our second century, the 21st century, we had to go back to the *fundamental value* that the company creates, and that is we make machines more reliable. (George, 2012, p. 1, emphasis added)

Despite this embracing of value by scholars and managers alike, the term is often used in a remarkably vague manner, rendering it at best confusing and at worst meaningless. Thus, the question to be answered remains: what is value?

Merriam Webster defines value—among other things—as “the monetary worth of something”, “a fair return or equivalent in goods, services, or money for something exchanged”, and “relative worth, utility, or importance” (Unknown, 2018). These definitions indicate—among other things—that value is a multifaceted term that is related to prices (i.e., monetary worth), relates to

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fairness, may include exchange, and is relative to a reference point (i.e., relative worth).

Indeed, the marketing literature has linked price and value to each other (e.g., Anderson & Narus, 1998; Hinterhuber, 2004; Monroe, 2003). For example, Anderson and Narus (1998, p. 6) write, “we see a market offering as having two elemental characteristics: its value and its price.” Value is also connected to fairness in the marketing literature (e.g., Corsaro, 2014; Ellegaard, Medlin, & Geersbro, 2014; Jap, 2001). For instance, Corsaro (2014) found that perceived fairness can vary between different actors relating to the same value in business relationships. The exchange aspect of value is also well established in marketing (e.g., Anderson & Narus, 1998; Kowalkowski, 2011; Zeithaml, 1988). Zeithaml (1988, p.14) points out that value includes “give and get components”, for instance. Finally, value is also relative; that is, “relative to the next best alternative” (Anderson & Narus, 1998, p. 7) or to a “reference product” (Forbis & Mehta, 1981).

As the brief preceding discussion illustrates, value is a term with many faces¹¹. Unsurprisingly, there exist different views on value and the contexts in which the term is used. In order to shine some light on these different views and contexts, Tirole’s (1988) value–price–cost (VPC) framework is used as a starting point (see Figure 2). Two advantages of the VPC framework compared to other conceptualizations are its relative simplicity and the fact that it resembles other frameworks commonly used in marketing research (see Steiner et al., 2016; Töytäri, Rajala, & Brashear Alejandro, 2015). At the outset, the framework shows

Figure 2: The VPC framework

Note: Both buyers and sellers capture value but I focus on the latter due to the thesis’ purpose.

Source: Based on Tirole (1988) and Figure 1 in Kienzler (2016).

¹¹ The chapter’s title is inspired by Tellis’ (1986) seminal article *Beyond the many faces of price - An integration of pricing strategies*.

how one antagonistic value pair—namely, *value creation* versus *value capture*—interact. It does so by clarifying the relation between value(-in-use), price and costs. This clarification should help to bring some more depth and understanding into the discussion of value.

Note that the concepts shown in Figure 2 are central to the understanding of the context in which this thesis is situated. While far from exhaustive, they also present concepts that are frequently used in the marketing and strategic management literature. Beyond the concepts themselves—which will be elaborated upon in more detail below—they are also related to each other, as shown in Figure 2. For example, for both buyer and seller, their surplus—or value captured—influences their incentive to buy and sell, respectively. Whereas buyer surplus is defined as the monetary differences between value(-in-use) and price, seller surplus is defined as the monetary difference between price and costs (Monroe, 2003). Hence, value captured by the seller is—all else being equal—dependent on the price and the cost since it is the difference between these that determines the profit for the supplier firm. Managers of supplier firms who are interested in increasing value captured could work with different tactics. For example, they could try to increase the price, reduce costs, or a combination of both (Hallberg, 2017b). Yet, the value-capture opportunity for sellers—and buyers—also depends on competition. For example, if rivals can provide a very similar offering at a lower price, sellers can either forgo some of the sales opportunities or reduce the price and thus decrease their surplus; a case where rivals cannot match the price has the opposite effect on seller surplus (see also Hallberg, 2017b). More generally, factors related to competition (e.g., competitive intensity) impact the buyer's and the seller's ability and extent to capture value. Finally, value might be potential or actual value-in-use depending on whether the buyer already made use of the offering in his or her context.

Originally, Tirole (1988) used the VPC framework to explain bargaining behavior between firms. Importantly, he highlighted the challenge of private information. The buyer is often aware of the actual or expected value-in-use and the supplier of the costs but not vice versa (Tirole, 1988). As will be seen later, increasing the value-capture potential for the seller through pricing and selling requires knowing more about the customer's value perception and the ability to communicate potential value creation.

2.5.1 Value-in-use and value-in-exchange

Traditionally, value has been considered to be embedded in goods through the means of production (Vargo & Lusch, 2004). This assumption is reflected in the notion that value is created by suppliers and can subsequently be traded in the marketplace with buyers. However, contemporary marketing theory considers

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value to emerge in the customer's context of use (e.g., Ballantyne & Varey, 2006; Grönroos & Voima, 2013; Vargo & Lusch, 2004). In other words, firms can only enable value creation but do not create value *per se*.

As such, marketing follows the established view on value in economics; namely, that value is subjective. This view became accepted during the marginalist revolution, which marked the beginning of neoclassical economics (Udehn, 2002). Classical economists like Adam Smith (1776), David Ricardo (1821), and James Mill (1844) assumed that value is embedded in goods and services through production (i.e., labor) but William Jevons (1871), Carl Menger (1871 [1950]), and Leon Walras (1874 [1954])—all economists—questioned this assumption at the end of the 19th century and instead suggested that value is subjective to an individual and the context (see Hallberg, 2017b). Yet, the idea of the subjectivity of value is older than the marginalist revolution. For example, as early as 1738 Daniel Bernoulli argued that:

the *value* of an item must not be based on its *price*, but rather on the *utility* it yields. The price of the item is dependent only on the thing itself and is equal for everyone; the utility, however, is dependent on the particular circumstances of the person making the estimate. (Bernoulli, 1954, p. 24, italics in original)

One might thus argue that the subjectivity of value has a fairly long history in economic thinking.

In connection with the subjectivity of value, two essential concepts are frequently discussed within marketing theory; namely, value-in-use and value-in-exchange (e.g., Ballantyne & Varey, 2006; Eggert, Ulaga, Frow, & Payne, 2018; Grönroos & Voima, 2013; Kowalkowski, 2011; Vargo & Lusch, 2004). Moreover, distinguishing between value-in-use and value-in-exchange also has a long tradition in economics (e.g., Menger, 1871 [1950]; Smith, 1776).

Value-in-exchange is defined as the value the seller receives from the buyer in exchange for a good or service and is typically expressed in monetary terms (Bowman & Ambrosini, 2000). In contrast, value-in-use is defined as the subjective utility an individual customer perceives in connection with the usage of a good or service to fulfill particular needs (Bowman & Ambrosini, 2000). Since value-in-use is subjective, it is perceived by and unique to the individual customer. Hence, affective, cognitive, and behavioral aspects can play a role in value-in-use (Payne, Storbacka, & Frow, 2008). Indirectly, the definition of value-in-use also supports the idea that such value is uncertain until it emerges in the customer's use context (Hinterhuber, 2008). Thus, purely subjective but also more objective elements play a part in value-in-use. Then, in more practical terms, value-in-use equates to all the offering's perceived benefits minus all its perceived sacrifices (e.g., Ulaga & Chacour, 2001; Zeithaml, 1988); except the

price. In business markets, a range of effects constitute value-in-use; for example, to enable customers to reduce their costs (Anderson & Narus, 1998). What is commonly termed customer's perceived value or simply customer value corresponds to value-in-use.

Both value-in-exchange and value-in-use are essential for marketing. For instance, the American Marketing Association (2013) highlights both value and exchange in its the current definition of marketing. However, an apparent focus on exchange value has been criticized in the marketing literature (Vargo & Lusch, 2004). Nevertheless, both value-in-use *and* value-in-exchange are important. For instance, Kowalkowski (2011) highlights that value-in-use and value-in-exchange are essential elements of an offering; however, their importance may vary, depending on the concrete situation. Moreover, although value-in-use is crucial for exchange relationships, decision-makers typically have to determine value-in-exchange (i.e., the price) before customers receive any value-in-use through usage. Given that both value forms are—at least to a certain degree—contingent upon each other, potential value-in-use often has to be “guesstimated” in order to decide on the amount of value-in-exchange. Managers in supplier firms may respond to this conundrum by segmenting the market into different areas according to their potential value-in-use.

Considering Figure 2, *ceteris paribus*, an increase in value-in-exchange by the supplier does not change the amount of value-in-use for the customer. Instead, a change in value-in-exchange alters the customer's incentive to buy and the supplier's incentive to sell.

2.5.2 Value creation and value capture

Value creation and value capture have been studied in both marketing strategy (e.g., Blocker et al., 2012; Han, Mittal, & Zhang, 2017; Mizik & Jacobson, 2003) and strategic management (e.g., Bowman & Ambrosini, 2000; Brandenburger & Stuart Jr, 1996; Lepak, Smith, & Taylor, 2007). While both disciplines study value creation and value capture, the relative emphasis and focus is different due to different objectives.¹² For example, while strategic management puts a strong emphasis on isolating mechanisms, such as intangible resources, for value capture (Lepak, Smith, & Taylor, 2007), marketing strategy focuses on processes, such as pricing (Burkert et al., 2016) and selling (Blocker et al., 2012). It is thus perhaps not surprising that value creation and value capture can be studied at the individual, organizational, and societal levels (Lepak, Smith, & Taylor, 2007).

¹² Moorman (2016, p. 562) highlights the important differences between marketing strategy and strategic management, writing: “strategy scholars focus on the firm and study firm investments, strategies, characteristics, and outcomes. What separates marketing strategy from strategy is that our [marketing strategy's] focus is on the firm's exchanges with the marketplace.”

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Value creation is defined as the application of skills, processes, and competences to fulfill distinct customer needs (see Vargo & Lusch, 2004). Value creation in marketing is often associated with activities geared towards new or improved offerings for customers (Mizik & Jacobson, 2003); for instance, new product development or other R&D activities (Han, Mittal, & Zhang (2017).

Value capture, on the other hand, is defined as the processes that allow firms to claim some of the value created in exchange relationships. For supplier firms, value capture means making a profit from enabling customer value creation. Value creation has been extensively studied in marketing, while value capture has largely been overlooked (see Burkert et al., 2016; Ellegaard, Medlin, & Geersbro, 2014; Hinterhuber, 2004). In fact, academia in general has shown little interest in value capture compared to value creation, leading Reitzig and Puranam (2009, p. 765) to conclude that research has primarily focused on firms' "ability to create value, rather than their differential ability to capture and protect the returns to value creation from the forces of competition."¹³ This assessment is particularly troublesome considering that capturing a sufficient amount of value is necessary for supplier firms to survive and continue to enable customer value creation.

2.6 Value capture through pricing

Previous research has highlighted that pricing represents an important process for supplier firms to capture value (e.g., Burkert et al., 2016; Dutta, Zbaracki, & Bergen, 2003; Matthysens, Vandenbempt, & Goubau, 2009; Nagle & Holden, 2002; Smith & Nagle, 2006; Töytäri, Rajala, & Brashear Alejandro, 2015), and marketing scholars have frequently highlighted the connection between pricing and firm revenue (Forman & Hunt, 2005; Lancioni, Schau, & Smith, 2005) and profit (e.g., Hinterhuber, 2004; Monroe, 2003; Nagle & Holden, 2002). Furthermore, empirical investigations utilizing secondary data indicate the larger potential profits attainable through price increases vis-à-vis cost decreases as showing that—*ceteris paribus*—pricing has a larger effect on value capture (Hinterhuber, 2004; Marn & Rosiello, 1992). It is thus perhaps understandable that Corey (1962) arrives at the conclusion that "pricing is the moment of truth—all of marketing comes to focus in the pricing decision" (p. 167).

Yet, in order to comprehend value capture through pricing, it becomes important to outline in more detail how pricing helps to capture value for the supplier firm. First, the price divides the metaphorical "value pie" into buyer and

¹³ Google Scholar (accessed on February 9, 2018) indicates that the term 'value creation' (329,000 results) is more often used than the terms 'value capture' (15,800 results) and 'value appropriation' (6,400 results) put together. While this is only anecdotal evidence, it is in line with Reitzig and Puranam's (2009) conclusion and the weight of evidence, given the variety of other scholars highlighting this circumstance.

seller surplus, respectively. Hence, pricing is the determinant of value capture, all else being equal. Increasing the price increases the seller's surplus and reduces the buyer's surplus; a price decrease has the opposite effects. Certainly, in a real business situation, increasing or decreasing prices is likely to result in fewer or more customers, respectively. Second, many suppliers "do not understand and capture the value they [enable to] create for individual customers" (Dolan & Simon, 1996, p. 4); they lack reliable information about customer value. Thus, let us consider the following extension of Tirole's (1988) VPC framework, shown in Figure 3.

Figure 3: An extension to the VPC framework

Source: Based on and extended from Tirole (1988) and Figure 1 in Kienzler (2016).

As highlighted previously, while supplier firms are generally aware of their costs, substantial uncertainty can materialize regarding the subjective value the customer experiences in the context of use (Tirole, 1988). This circumstance is indicated through the fading color and dashed lines in Figure 3. This results in less certainty about buyer surplus and the value created (indicated by italics). This situation makes it difficult to set a suitable price that appropriately divides the value pie. Yet, pricing practices that emphasize value-based pricing inform managers with pricing authority about the relative advantages of their offering vis-à-vis competitors, the customer's value perception, and their willingness-to-pay (Ingenbleek, Debruyne, Frambach, & Verhallen, 2003). In other words, there is less uncertainty about the size of the value pie when engaging in value-based pricing. This in turn allows managers to set prices to allow reasonable value capture for the supplier, considering the value they enable to create.

Moving on, at the outset, two important traditions within pricing research need to be distinguished; a normative and a descriptive tradition (Ingenbleek & van der Lans, 2013). The normative tradition considers how decision-makers *should* make pricing decisions (Ingenbleek & van der Lans, 2013). This tradition

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has generated a vast amount of literature about different pricing strategies (for overviews, see Noble & Gruca, 1999; Tellis, 1986). A second tradition is the descriptive one, which focuses on how decision-makers *actually* make pricing decisions (Ingenbleek & van der Lans, 2013). This tradition investigates pricing practices; that is, the process of setting a price (for example, see Avlonitis & Indounas, 2006; Dutta, Zbaracki, & Bergen, 2003; Ingenbleek et al., 2003; Liozu & Hinterhuber, 2013). Given these different backgrounds, research on pricing strategies and pricing practices differs. Yet, both streams are also linked, as will be seen later.

Moreover, since it is actual managers who make decisions regarding pricing strategies and pricing practices, it is reasonable to assume that psychological aspects can influence these managers in their pricing behavior. For instance, managers responsible for pricing may decide to focus on a pricing strategy that is familiar to them instead of the one that would be best suited to a given pricing situation, or only focus on what they perceive to be definite information in their pricing practices. Such decisions, and others, may have a substantial influence on value capture.

2.6.1 Pricing practices

Pricing practices are the processes that managers with pricing responsibility use to set and change prices (Ingenbleek et al., 2003). To do so, they collect and process a variety of different information (Smith, 1995). Indeed, while empirical evidence suggests that managers consider a variety of different information in their pricing practices (Avlonitis & Indounas, 2006), Ingenbleek, Frambach, and Verhallen (2013, p. 562) highlight that “managers cannot analyze all available information”. This limitation is due to two fundamental challenges. The first is related to the internal and external environments. For example, information may be unavailable or uncertain, as is often the case when setting the price for new goods or services (Monroe, 2003). The second relates to their own information-processing ability. For example, managers may not be able to sufficiently integrate all the information available to them (see Simon, 1959). An additional reason may relate to the motivation to not consider all available information. Thus, it is perhaps not surprising that, pricing is a complicated process (Dutta, Zbaracki, & Bergen, 2003). Hence, an important aspect of managerial pricing practices is that “managers may use a combination of different types of information in a process of weighing and comparing them in order to set a price” (Ingenbleek, Frambach, & Verhallen, 2013, p. 563), but may do so in a way that makes economic use of their resources. In short, pricing practices involve managerial judgment and choice.

Pricing practices may differ between firms for a number of reasons. First, they can differ due to how pricing is organized across firms. For instance, Burkert et al. (2016) surveyed managers from 419 small, medium, and large firms operating in business markets, and categorized them into five different clusters depending on how pricing is organized. The authors found that these clusters often differ along such variables as formalization, centralization, and specialization, for instance. Formalization indicates the degree to which the firm has standardized processes, centralization refers to who has decision-making authority, and specialization relates to the extent to which pricing is a dedicated process (Burkert et al., 2016). Similarly, Carricano, Trinquencoste, and Mondejar (2010) interviewed 28 managers involved in pricing within international firms and found three different clusters of how pricing is organized, depending on the main focus of the managers within these firms. For example, the authors found that managers in some firms give up and see pricing as a necessary evil, others embrace technical analysis to establish prices, and the last group of managers sees pricing as a way to capture value.

Second, the individuals involved in pricing may differ. For example, the number of people involved may vary between firms. In some firms, pricing may be a top-management decision and is thus in the hands of a single individual who has pricing responsibility; this seems to be particularly the case in smaller firms (Carson, Gilmore, Cummins, O'Donnell, & Grant, 1998). In other firms, a specific group of individuals working together as a team may be responsible for pricing (Burkert et al., 2016; Carricano, Trinquencoste, & Mondejar, 2010).

Third, individuals or teams involved in pricing may differ in the number and degree of pricing capabilities they possess. Pricing capabilities are competences and skills that are used to set and changes prices (Dutta, Zbaracki, & Bergen, 2003). Indeed, a rather extensive stream of research has investigated pricing capabilities (e.g., Andersson, 2013; Dutta, Zbaracki, & Bergen, 2003; Hallberg, 2008; Liozu & Hinterhuber, 2013; Töytäri, Rajala, & Brashear Alejandro, 2015). This research shows, for example, that pricing capabilities have a positive relation with relative firm performance (Liozu & Hinterhuber, 2013), indicating that profitability depends on these pricing capabilities.

Indeed, while pricing practices are unique to a particular firm, three different orientations to pricing practices are usually considered within the pricing literature; cost-based, competition-based, and value-based pricing (e.g., Avlonitis & Indounas, 2005; Hinterhuber, 2008; Hinterhuber & Liozu, 2012; Ingenbleek et al., 2003; Ingenbleek & van der Lans, 2013; Liozu, 2017; Monroe, 2003; Nagle & Holden, 2002; Shapiro & Jackson, 1978; Shipley & Jobber, 2001). Put differently, while firms may differ along the aforementioned dimensions, pricing practices can be classified into these three broad orientations. Cost-based pricing focuses on information about the firm's expenses in relations to

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production and marketing activities (Ingenbleek et al., 2003). One example of cost-based pricing is target return pricing (Hinterhuber & Liozu, 2012), in which the price is set to make a predetermined profit. Evidence suggests that managers in many firms emphasize cost-based pricing in their pricing practices (e.g., Liozu, Hinterhuber, Perelli, & Boland, 2012; Noble & Gruca, 1999; Shipley & Jobber, 2001). Competition-based pricing focuses on information about the current and expected prices of competing offerings (Ingenbleek et al., 2003). One example of competition-based pricing is follower pricing, where the price is established relative to the market leader and sustained by allowing for a fixed price differential with that competing firm (Shapiro & Jackson, 1978). Pricing practices that emphasize competition-based pricing are also very common in many industries (Hinterhuber, 2008; Liozu, 2017). Value-based pricing focuses on the customer's value perception and uses this as the foundation for pricing (Ingenbleek et al., 2003). Yet, as Nagle and Holden (2002, p. 7) highlight, "the purpose of value-based pricing is to [also] price more profitably by capturing more value" for the supplier. An example of value-based pricing is economic value to the customer (EVC) analysis, as described in Forbis and Mehta (1981). Value-based pricing is still the least emphasized orientation to pricing practices (Liozu, 2017).

Indeed, an emphasis on value-based pricing offers a big potential for firms to capture more value (e.g., Liozu & Hinterhuber, 2013). In particular, by segmenting the market into different groups, managers are able to target customer segments with different value perceptions (Nagle & Holden, 2002). Thus, segmentation is particularly important for pricing practices that emphasize customer value (Nagle & Holden, 2002). Liozu (2017) recently surveyed 144 managers, primarily in large firms, from a range of industries. The respondents reported that they consider segmentation to be among the biggest issues for value-based pricing. Segmentation is perhaps challenging because unbiased information regarding customers' value perceptions is hard to obtain (Hinterhuber & Liozu, 2012). Indeed, the pricing literature has pointed out the difficulty of getting such information (e.g., Forbis & Mehta, 1981; Hinterhuber, 2008). Hence, managers who are able to successfully segment their customers into different groups may be able to capture more value, as indicated by Liozu (2017), who shows that segmentation has a positive relation with relative firm performance.

2.6.2 Pricing strategies

Pricing strategies are the outcome of the pricing process. According to Noble and Gruca (1999, p. 436, *italics in original*):

a pricing strategy is the *means* by which a pricing objective is to be achieved. Most pricing strategies imply a relative price level or schedule related to costs, competition, or customers. Determinants are the internal and external conditions that determine managers' choices of pricing strategies.

A pricing strategy, therefore, details the elements that managers responsible for pricing should consider (Cressman, 2012). The following paragraphs will shine some more light on what precisely managers have to consider in regard to each element.

A specific pricing strategy allows managers to accomplish a particular pricing objective (Noble & Gruca, 1999). Neoclassical economics would suggest that managers pursue only one objective: utility maximization, which means profit maximization as pricing objective. However, the empirical reality is much more complex; managers do not necessarily maximize profits, and other objectives are also common. For example, Avlonitis and Indounas (2005) provided 170 managers from a variety of medium and large service firms with 28 different pricing objectives and asked them to rate them from unimportant to important on a 5-point scale; "maintenance of the existing customers" scored highest, at 4.31, with "profit maximization" scoring lower with 3.49. Moreover, the authors found that "achievement of satisfactory profits" scored higher than maximizing profits (3.84 versus 3.49). These findings support satisficing versus maximizing found in earlier research on managerial decision-making (Cyert & March, 1963). Similarly, Diamantopoulos and Mathews (1994) studied one large manufacturing firm by interviewing all of its 21 product managers and found that different managers within one firm can have a variety of different pricing objectives; both maximizing and satisficing, for example. Furthermore, a particular pricing strategy is often linked to a particular objective. Price skimming, for example, aims to capture as much value as possible for the firm by initially targeting the customer segment that is willing to pay the highest launch price and then progressively reducing the price to reach the next highest paying customer segment, and so on (Indounas & Avlonitis, 2011; Noble & Gruca, 1999; Shipley & Jobber, 2001). Yet, strategies are also connected to non-economic objectives; for instance, reducing the perceived risk (e.g., Forman & Hunt, 2013; Hunt & Forman, 2006).

The relative price level of a strategy is related to the aforementioned pricing practices. For instance, investigating pricing in small and medium-sized firms, Ingenbleek and van der Lans (2013) surveyed 95 managers from

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manufacturing and service firms and found empirical support that price skimming, price leader and premium pricing are linked to value-based pricing. Specifically, the authors found that, given a specific pricing situation, managers who choose the aforementioned strategies focus more strongly on value-based pricing than managers who choose another strategy linked to that particular pricing situation. Similarly, Avlonitis and Indounas (2006) surveyed 170 managers from a variety of medium and large-sized service firms and found that pricing strategies are related to information about customer value, competition, and costs. Yet, Avlonitis and Indounas' (2006) and Ingenbleek and van der Lans' (2013) results also indicate that this relation is not perfect. One conclusion from these studies is that normative pricing theory, from which pricing strategies originated, does not accurately represent managerial pricing practices (Ingenbleek & van der Lans, 2013).

Finally, internal and external determinants also play a role. Among others, the literature recognizes the overall firm strategy (Monroe, 2003) and the firm's cost structure (Forman & Hunt, 2005) as internal determinants and the competitive and demand situation in the market as external determinants (Shipley & Jobber, 2001). For example, investigating international pricing strategies, Forman and Hunt (2005) surveyed 135 managers of international industrial manufacturing firms. They found that managers who use a low-price supplier strategy make use of external determinants in their decision-making. Similarly, Carricano (2014) surveyed 98 managers of large industrial manufacturing firms with pricing responsibility and found some evidence that managers use external determinants when choosing among pricing strategies for new industrial goods.

Taken together, research on pricing strategies outlines how managers ought to make decisions and should choose pricing strategies, but some investigations also indicate how managers actually select different pricing strategies.

2.6.3 Behavioral and psychological aspects of pricing

A growing body of literature explores the behavioral and psychological aspects of pricing; that is, non-economic factors impacting upon managerial pricing decisions. While this body of research is diverse, two of the overarching themes are the deviations from rationality and homogeneity associated with neoclassical economics. More precisely, bounded rational managers may (try to) use various tactics to compensate for their limited cognitive abilities and the environmental intricacies they face. Moreover, this body of literature increasingly acknowledges explicitly that managers are heterogeneous in their nature and behavior. While insights lag behind behavioral and psychological investigations on the demand

side—that is, research on consumer behavior and reactions to prices—some conclusions about frequently investigated topics can be drawn.

Intuition in managerial decision-making has been among the topics frequently investigated in previous pricing literature (e.g., Bogomolova, Szabo, & Kennedy, 2017; Carson et al., 1998; Estelami & Nejad, 2017; Rusetski, 2014). Intuition can be defined as “affectively charged judgments that arise through rapid, nonconscious, and holistic associations” (Dane & Pratt, 2007, p. 40). For example, Carson et al. (1998), who investigated the pricing practices of small and medium-sized firms, found that intuition affects some of the owner managers. These managers, the authors write, base their pricing decisions on their gut feeling about what would be an appropriate price. Examining the price-promotion decisions of small, medium, and large manufacturers and retailers, Bogomolova, Szabo, and Kennedy (2017) found that managerial pricing decisions are largely based on intuition. Similarly, Rusetski (2014) investigated pricing decisions by brand and product managers working for firms selling consumer goods and found that, with limited information, managers rely on heuristics that produce consistent results across competitive situations. This finding suggests that managers employ intuitive judgments rather than cognitively intensive calculations by weighing all the available information. Estelami and Nejad (2017) investigated managers from a variety of industries and their reactions to a competitor’s price reduction. They found that managers who rely more on intuitive decision-making are more likely to cut prices in response to the competitor’s price change. Prior pricing literature has often considered intuitive decision-making as inferior to analytical decision-making (see Monroe & Della Bitta, 1978; Walker, 1967). However, this is not necessarily true and in fact a number of situations and individual factors and their interplay determine the potential of intuitive decision-making in a managerial context (Dane & Pratt, 2007). Yet, many of these factors remain unexplored in a pricing context. Taken together, these findings suggest that intuition has been frequently investigated but that opportunities remain.

Another common topic follows Tversky and Kahneman’s (1974) pioneering work on heuristics and biases and investigates how bounded rational managers make pricing decisions. Existing conceptual work suggests that managerial decision-making in the pricing context may be substantially influenced by heuristics (Hinterhuber, 2015; Iyer, Hong Xiao, Sharma, & Nicholson, 2015; Urbany, 2001). Hinterhuber (2015) suggests that managers use simple rules-of-thumb to cope with the complexity of pricing decisions. For example, he writes, managers may always set prices in relation to rivals. Indeed, Rusetski (2014) shows empirically that some of the surveyed managers use such simple heuristics that 15% consistently match competitors’ prices, for example. Iyer et al. (2015) highlight the representativeness and the anchor-and-adjustment heuristic; two of

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the original mechanisms described by Tversky and Kahneman (1974). Another mechanism is the default heuristic (Gigerenzer & Gaissmaier, 2011), which manifests itself in the pricing context in the particular form of the cost-plus heuristic (Urbany, 2001); managers focus on cost-plus pricing because this is the standard way of setting prices. While these heuristics can be justifiable and frugal in some situations, in others they might lead to biased pricing decisions.

A range of articles have also investigated particular biases displayed by managers. For example, managers may act in a self-serving manner, deflecting harm from themselves but harming the firm instead. Bertini, Halbherr, and Koenigsberg (2017) show that managers attribute successful outcomes to a product's quality and negative ones to its price; quality is seen to be more under managerial control than prices, which are ostensibly dictated by the market. Similarly, Hunt and Forman (2006) and Forman and Hunt (2013) investigated the self-serving behavior of managers. While these authors do not explicitly link their research to the heuristics and bias literature, the managers investigated do display a self-serving bias in that their pricing strategy choice allows them to reduce their personal accountability in case of failure. Some articles have also investigated framing effects. For example, Ferguson, Brown, and Johnston (2017) showed—among other things—that price partitioning can influence the fairness perception of professional purchasers in small and medium-sized firms. Moreover, research exists on the status quo bias in pricing. The status quo bias can be defined as a preference for the current conditions when in a choice situation (Samuelson & Zeckhauser, 1988). Noticeably, a number of authors have suggested that the status quo bias affects pricing negatively (e.g., Hallberg, 2018; Iyer et al., 2015; Urbany, 2001). For example, Hallberg (2018, p. 129) argues that it can “lead to exchange-related problems if decision-makers in the seller's organization are reluctant to change commercial agreements (e.g., price, quality) when conditions change”. The variety of biases highlights that there are many different ways to end up making suboptimal pricing decisions. In fact, different biases may lead to the same suboptimal decision. For instance, a sole focus on cost-plus pricing might be due to a status quo bias (cost-plus is standard) or a self-serving bias (cost-plus reduces accountability) (see Urbany, 2001).

Finally, individual differences can also play a role in pricing decisions. For instance, among others, Arnett and Hunt (2002) investigated how an individual's relativism impacts upon pricing decisions. They found that relativism has a positive relationship with punishing competitors and suggest that relativism encourages decision-makers making socially sanctioned decisions. This finding is relevant in the realm of competitive irrationality that the authors investigated, since some managers decide to forgo a substantial amount of profit for their own firm in order to be able to punish competitors (e.g., push them out of the market).

Taken together, the available evidence suggests that behavioral and psychological aspects can play a role in managerial pricing decisions. The negative effects of bounded rationality and heterogeneity have been somewhat more in focus instead of the potentially positive effects that behavioral and psychological aspects may have on pricing practices and pricing strategies. For example, a frugal use of limited resources (e.g., managerial attention) during the pricing process.

2.7 Value capture through selling

An increasing amount of research highlights that salespeople play a key role in value capture for supplier firms (e.g., Blocker et al., 2012; Nagle & Holden, 2002; Töytäri & Rajala, 2015). For instance, Blocker et al. (2012) emphasize that salespeople may engage in sales activities that help to capture more value by either reducing losses or increasing gains. Indeed, salespeople may operationalize these generic tactics in various ways.

Salespeople are often able to adjust the selling price and hence may engage in price negotiations with customers (Nagle & Holden, 2002). However, this discretion can have a negative impact on profits. Giving salespeople the chance to negotiate prices puts the emphasis on price instead of potential customer value (Hinterhuber, 2008). Hence, salespeople and customers may focus too much on value-in-exchange instead of value-in-use. Limiting such adverse effects may thus enable salespeople to both create and capture more value. Moreover, when salespeople have price discretion, they may be guided by their subjective view of what constitutes a reasonable price and their motivation to maintain a smooth relationship with customers, rather than enforcing the most profitable prices (Andersson, 2013).

Salespeople are important for communicating potential value to customers. For example, Ballantyne and Varey (2006) point out that communication is essential for enabling customer value creation. This argument is mirrored in the sales literature (e.g., Hinterhuber, 2017; Terho, Haas, Eggert, & Ulaga, 2012). Yet, communication is also essential for capturing value. One important reason why value communication is important to capture value is that customers often do not see the potential value that a good or service may offer them (Nagle & Holden, 2002). Put differently, salespeople need to provide customers with information about the potential value of the offering to translate the sales situation into a value-capture opportunity. Yet, it is anything but simple to communicate potential value in an effective way to customers and thus salespeople may need to provide tangible evidence of potential value (Anderson & Wynstra, 2010).

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Salespeople are also important for communicating customers' value perceptions back to their superiors. For example, Blocker et al. (2012) point out that salespeople are often able to identify opportunities to capture more value from certain customers. One reason for this ability is that salespeople may generally have a good awareness of customers' value perception (Woodruff, 1997) due to frequent customer contact, and are thus in a unique position to identify such value-capture opportunities. Yet, relying too heavily on salespeople's perceptions may prove dangerous. For instance, purchasing managers may misinform or deceive salespeople about their value perception (Nagle & Holden, 2002).

In order to comprehend value capture through selling, it becomes important to outline in more detail how selling helps to capture value for the supplier firm. While managers determine list prices and general price levels, salespeople realize prices. Part of this price realization is—as already mentioned—value communication and price negotiation. Yet, in order to do both, salespeople need to be able to quantify potential or actual customer value (see Hinterhuber, 2017; Terho et al., 2012; Töytäri, Brashear Alejandro, Parvinen, Ollila, & Rosendahl, 2011; Töytäri & Rajala, 2015). Certainly, negotiation and communication ability are important, but they are meaningless if salespeople do not know the lower (cost) and upper (customer value) bounds to price; that is, the range of viable price points and how much value can potentially be created. In other words, quantifying the value pie becomes essential in order to communicate and then negotiate how to divide it (see Figure 3). The fact that value quantification is essential is exemplified by the observation that firms like SKF build collections of reference cases, documenting the value they have enabled their customers to create (Hinterhuber & Snelgrove, 2016). This circumstance suggests that value quantification is an essential factor for value capture.

Taken together, it is reasonable to assume that salespeople can have an impact on value capture. Particularly in business markets, where they are often an important link between the supplier and the buyer firm, salespeople may enable or hinder value capture (Nagle & Holden, 2002). Thus, in order to amplify value capture, managers need to incorporate the sales force into their overall value-capture strategy.

2.7.1 Selling practices

Salespeople engage in selling practices. Much like pricing practices, sales practices are a matter of relative emphasis on one or a combination of several sales techniques. However, at a more general level, it may be argued that salespeople rely on different, fairly generic, orientations when selling. For example,

salespeople may vary in the degree to which they focus on customer needs (Saxe & Weitz, 1982) or customer value (Terho et al., 2012).

Among the major sales orientations described in the literature are customer-oriented and adaptive selling (Franke & Park, 2006). “Customer-oriented selling can be viewed as the practice of the marketing concept at the level of the individual salesperson and customer” (Saxe & Weitz, 1982, p. 343). Hence, in practicing customer-oriented selling, a salesperson directs the sales effort towards an individual customer’s needs. “The practice of adaptive selling is defined as the altering of sales behaviors during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation” (Weitz, Sujan, & Sujan, 1986, p. 175). Thus, adaptive selling requires salespeople to be receptive and alter their behavior. However, neither of these—or other—sales orientations emphasize customer value as central to selling (Terho et al., 2012).

While practitioners (e.g., de Rose, 1991, 1992) and the pricing literature (e.g., Nagle & Holden, 2002) have highlighted the need for salespeople to focus on both value creation and value capture, the sales literature has been lagging behind. Yet, one sales orientation that focuses on both has witnessed a surge in interest in recent years: value-based selling (e.g., Hinterhuber, 2017; Terho et al., 2015; Terho et al., 2017; Terho et al., 2012; Töytäri & Rajala, 2015). Value-based selling is a selling orientation aligned with capturing a reasonable amount of value for the supplier (Nagle & Holden, 2002; Töytäri & Rajala, 2015) while enabling customer value creation (Terho et al., 2012). Value-based selling can be defined “as a sales approach that builds on identification, quantification, communication, and verification of customer value” (Töytäri & Rajala, 2015, p. 101).

Considering these theoretical arguments, value-based selling appears to be a promising sales orientation to capture more value. Recent research (Terho et al., 2015; Terho et al., 2017) suggests that value-based selling is indeed positively related to a salesperson’s ability to capture more value (i.e., measured in terms of sales performance) in medium and large firms.

Considering the difficulty of balancing value creation and value capture, it appears that selling practices, which emphasize value-based selling, allow salespeople to capture more value for their firm while enabling customer value creation. Enabling their salesforce to focus on value-based selling thus offers a promising opportunity for supplier firms.

2.7.2 Behavioral and psychological aspects of selling

The sales literature draws frequently and heavily on behavioral and psychological concepts to analyze sales topics. For instance, Williams and Plouffe (2007) found that psychology is among the strongest theoretical foundations of sales research.

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This circumstance is perhaps not surprising, considering that salespeople often work alone within a challenging environment (Vinchur et al., 1998) and thus aspects concerning the individual and the situation are valuable predictors to investigate sales-related behaviors or outcomes. Consequently, meta-analyses lend support to the notion that a variety of behavioral and psychological aspects can have an impact on salespeople's performance (Churchill et al., 1985; Verbeke, Dietz, & Verwaal, 2011; Vinchur et al., 1998).

In general, individual differences have been heavily studied in sales research. This is also the case for research investigating sales practices that focus particularly on the customer and value. In this stream of literature, learning orientation has been highlighted as an important factor (e.g., Terho et al., 2017; Ulaga & Loveland, 2014). For example, Ulaga and Loveland (2014) interviewed 20 managers from small to large industrial firms about the challenges they perceived when focusing more strongly on selling hybrid offerings; that is, offerings that contain both goods and services. As the authors write, this type of offering requires salespeople to sell value. Among other things, Ulaga and Loveland (2014) found that individual differences affect success rates. The most often mentioned individual difference the authors encountered during their interviews was a learning orientation. In line with this finding, Terho et al. (2017) found that learning orientation and value-based selling were positively related to each other in a sample of 944 salespeople from 43 different firms of various sizes. Moreover, Ulaga and Loveland (2014) found that the ability to handle risk is another crucial factor necessary to focus more strongly on selling value. Recently, Hinterhuber (2017) surveyed 131 sales and account managers, primarily from large industrial manufacturing firms, and showed that their risk-taking and creativity were positively related to their value-quantification capability. Since value quantification is an important part of value-based selling (e.g., Hinterhuber, 2017; Terho et al., 2012; Töytäri & Rajala, 2015) this finding supports the positive relation between the ability to handle risk and value-based selling.

Over the last few years, research has also extended into the biological realm of selling. For example, Bagozzi, Verbeke, van den Berg, Rietdijk, Dietvorst, and Worm (2012) showed across two studies that a salesperson's customer orientation has a genetic ($n = 65$; business markets) and a neurological ($n = 24$; variety of different industries) base. Replicating the first study, Verbeke, Bagozzi, and van den Berg (2014) found a link between salespeople's customer orientation and their genes in another sample of salespeople working in business markets ($n = 64$).

Taken together, these findings suggest that individual differences can affect salespeople's selling practices. In particular, they are relevant to selling practices that focus on customers and their value perception, as salespeople in

business markets increasingly employ such selling practices to realize a competitive advantage for their firms (Terho et al., 2017).

2.8 Linking value-based pricing and selling

Value-based pricing and selling are distinct but related practices that individuals in organizations may engage in to varying degrees. Yet, the respective literature—and the preceding chapters—has largely dealt with either value-based pricing or value-based selling separately. Nevertheless, some of the available literature has highlighted certain links between the two practices (e.g., Hinterhuber, 2004; Hinterhuber, 2017; Nagle & Holden, 2002; Töytäri & Rajala, 2015).

For example, value-based pricing has been described as a practice that is aligned with value-based selling. For instance, Töytäri and Rajala (2015, p. 110) write: “Creating superior customer value [through value-based selling] is a necessary but not a sufficient prerequisite for capturing value. The ability to quantify and agree on the value created provides an opportunity for value-based pricing.” Essentially, the authors argue that value-based selling allows firms in business markets to provide their customers with offerings that enable customer value creation, which firms can in turn monetize via value-based pricing. Similarly, Hinterhuber (2017) maintains that value quantification—one aspect of value-based selling—is essential for determining prices based on customer value. In short, value-based pricing links the value that salespeople enable their customers to create to prices that reflect this circumstance and allow the supplier firm to make a profit.

Other scholars have pointed out that “value-based pricing is not primarily a sales strategy; it is a marketing strategy whose implementation requires a different sales approach” (Nagle & Holden, 2002, p. 213). According to this view, value-based pricing and value-based selling are linked, but pricing is the starting point. In particular, since managers determine list prices *but* salespeople realize sales prices (Hinterhuber & Liozu, 2012), the argument is that a particular sales practice is necessary to extend the focus on value into the salesforce. Consider, for instance, the following: a potential mismatch between pricing and selling practice exists when salespeople are rewarded for generating sales revenue and operationalize this objective by deep and frequent discounts (Nagle & Holden, 2002). Such a behavior—while reasonable from a salesperson’s point of view—erodes the idea that prices should reflect customer value. Hence, the salesforce needs to be rewarded for sales profitability instead of sales revenue (Hinterhuber, 2004). Doing so minimizes the potential difference between the initial list price, reflecting potential customer value, and the final sales price. Value-based selling—if compensation is linked to sales profitability—offers this potential by

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focusing the attention of the salesforce away from granting discounts on lists prices and negotiating deals with customers (Nagle & Holden, 2002). Instead, the focus becomes learning to understand what customers value and how to communicate the offering's potential value to these customers in relation to its price (e.g., Forbis & Mehta, 1981; Hinterhuber, 2016; Nagle & Holden, 2002). The bottom line is that salespeople's compensation schemes need to reward them for realizing prices that are tied to customer value and a good profit margin for their firm in order to operationalize value-based prices at the sales level.

Considering the differences between the aforementioned perspectives found in the literature, one might argue that they are marginal at best. Indeed, the essential difference is whether scholars start out from a selling perspective and acknowledge that selling value requires a corresponding emphasis on value in pricing, or vice versa. More importantly, it appears that the two practices are linked, and—in fact—appear to have a symbiotic relationship. Furthermore, it is not only theoretical arguments that speak in favor of such a symbiotic relation between the practices; firms have also been combining the two practices for a while now. For instance, some firms in business markets have started to emphasize value-based pricing in their pricing practices and have also started to use value-based selling (see Forbis & Mehta, 1981; Liozu et al., 2012). For example, Hinterhuber (2016) reports that Continental AG—the German tire manufacturer—as part of its focus on value-based pricing, trained its salesforce in value-based selling.

Evidently, theoretical arguments and practical examples both indicate that value-based pricing and selling are linked. While the precise order may be up for debate, what seems clear is that the full potential of enabling customer value creation and achieving an appropriate degree of value capture is unlikely to be achievable with a sole focus on one or the other. Rather, a focus on both seems to be a promising tactic to align customer value creation with pricing and selling practices that reflect said value.

2.9 Heading for new shores: A conceptual framework

As argued previously, much of the existing research on customer value in pricing and selling focuses on the macro-level. Consequently, markets, firms or offering determinants take center stage. The preceding sections, however, outlined that there is increasing evidence that micro-foundations—that is, the individuals within organizations—play an important role in pricing and selling. In specific, it was argued that bounded rationality and heterogeneity are two currently overlooked forces that lead—among other things—to cognitive biases and

individual differences in perception regarding information processing in the realm of pricing and selling customer value. This circumstance is shown in Figure 4, the thesis' conceptual framework.

Figure 4: Conceptual framework

Figure 4 can be separated into a macro-level (white elements) and a micro-level (colored elements), and three stages; namely, determinants, processes, and outcomes. Determinants influence the pricing and selling practices of a firm, which in turn yield a particular outcome, such as the overall pricing strategy. While many normative models in marketing, and even some descriptive ones, focus on this macro-level of the conceptual framework, the micro-level is at best only mentioned and at worst ignored. In the following, the framework's elements are explained in more detail.

Beginning with the left-hand side—the determinants—one can see that the previous literature mainly distinguished between three different types of determinants. Among others, the literature mentions market, firm, and offering determinants in connection with an emphasis on customer value in pricing and selling. Market determinants include the degree of competition (e.g., Ingenbleek et al., 2003; Terho et al., 2012), the market dynamism (e.g., Hinterhuber, 2017; Ingenbleek, Frambach, & Verhallen, 2013; Smith, Sinha, Lancioni, & Forman, 1999), and the customer's value perception (e.g., Nagle & Holden, 2002; Töytäri & Rajala, 2015). Among the firm determinants are firm culture (e.g., Anderson,

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Kumar, & Narus, 2007; Cressman, 2012; Töytäri, Keränen, & Rajala, 2017), training (e.g., Forbis & Mehta, 1981; Liozu et al., 2012; Ottosson & Kindström, 2016; Töytäri & Rajala, 2015), the availability of value quantification tools (e.g., Hinterhuber, 2017; Terho et al., 2017; Töytäri & Rajala, 2015; Töytäri, Rajala, & Brashear Alejandro, 2015), the ability to communicate value (e.g., Anderson, Kumar, & Narus, 2007; Cressman, 2012; Forbis & Mehta, 1981; Nagle & Holden, 2002; Töytäri & Rajala, 2015), and the congruence of pricing and selling with the overall firm strategy (e.g., Hinterhuber, 2004; Terho et al., 2012). Finally, offering determinants include relative product advantage (e.g., Anderson, Kumar, & Narus, 2007; Ingenbleek et al., 2003; Ingenbleek, Frambach, & Verhallen, 2010, 2013), the cost to supply (e.g., Anderson, Kumar, & Narus, 2007; Nagle & Holden, 2002), and the ability to provide variations of the offering (Anderson, Kumar, & Narus, 2007; Cressman, 2012). While this list is far from comprehensive, it illustrates that determinants fall within these three broad categories.¹⁴

The determinants on the left-hand side of the framework have an influence on the pricing and selling process, depicted in the middle. For instance, the availability of value quantification tools allows the salesforce to illustrate potential customers' revenue growth or cost-reduction opportunities (see Hinterhuber, 2017). It is reasonable to assume that this type of information would then affect price negotiations and value communication by the salesforce. As previously outlined in section 2.8, pricing and selling are also linked with each other. Moreover, since managers make use of different information regarding costs, competition, and customers' value perceptions to determine prices (Ingenbleek et al., 2003), value quantification tools can also help to qualify the weighting and combination of this data; that is, the relative emphasis on customer value. During all these processes, feedback loops between sales and marketing are central. For example, to identify a mismatch between potential and actual customer value-in-use that could be communicated by a salesperson performing value assessments of customers.

Finally, on the right-hand side of Figure 4, firms obtain particular outcomes as a consequence of their pricing and selling processes. A variety of outcomes are conceivable. For instance, managers may arrive at a relative price level (Ingenbleek, Frambach, & Verhallen, 2013) for a good or service, or salespeople may decide on a particular sales discount for a particular customer (Nagle & Holden, 2002). Moreover, the overall pricing strategy is influenced by customers' value perceptions, which are considered in pricing practices since this information is an important part of building a pricing strategy (see Cressman, 2012). "Making" a sale may be the ultimate outcome of pricing and selling

¹⁴ Since the deliberate goal was to construct a parsimonious framework, other determinants—particularly those only applicable to either selling or pricing—were intentionally omitted.

processes. Ultimately, these outcomes may or may not influence the determinants (see the dashed feedback line).

So far, the framework has considered the organizational level, with individuals entering the picture only in terms of the person who is performing a certain task. Yet, as we move on to the micro-level, bounded rationality and heterogeneity impact upon the outlined connections. Bounded rationality and heterogeneity are the two overarching forces outlined in this thesis, and they require us to consider the influence of emotion, cognition, and motivation on judgment and choice. For instance, due to heterogeneity, managers with the same information may arrive at vastly different decisions. Heterogeneity may materialize in the form of personality, preferences or any other individual difference. Similarly, managers' bounded rationality may result in cognitive biases that can hinder them from processing information objectively. In short, bounded rationality and heterogeneity require us to consider the individual (see Simon, 1959). Considering individuals is important at three points within the framework: where the determinants influence pricing and selling, where managers and salespeople engage in pricing and selling, and where pricing and selling lead to an outcome. At all three points in the framework, it is necessary to consider the micro-level's influence on the macro-level.

In summary, considering bounded rationality and heterogeneity and their effect on individuals' emotions, cognition, and motivation will help in understanding individual's judgment and decision-making within organizations better. In particular, a consideration of individuals may shed more light on how supplier firms can capture more value in the form of profits through pricing and selling. The framework above is intended to guide such an investigation.

3

Methodology

“All models are wrong but some are useful” — George Box [3]

This chapter discusses the thesis’ methodology. The thesis is based on a scientific realist perspective on science. I outline the main characteristics of scientific realism and discuss why these characteristics make it particularly suitable for my research. Additionally, I briefly comment on my views on research in general. Moreover, I provide a description of my research process; from the initial idea, through the intermediate steps, to the final version of this thesis. Furthermore, a general account of the different research designs and analytical techniques of the appended papers is given.¹⁵ I also articulate the reasons for using different research designs and analytical techniques throughout the five appended papers. Finally, I discuss the most important ethical considerations concerning the research reported in this thesis and detail the concrete steps taken to protect the respondents’ rights and integrity.

¹⁵ Details such as sample composition and reliability/validity can be found in the respective papers listed in the appendices and will not be reiterated in this chapter. Rather, the focus is on discussing the similarities and differences between the employed research designs and analytical techniques.

3.1 Philosophy of science and my view on research

This thesis is grounded in scientific realism. There is disagreement among realist philosophers about the nature of scientific realism (Leplin, 1984). Hence, I will start out by discussing some of the central concepts of the strand of scientific realism to which this thesis adheres and how these concepts relate to my own research.

First, scientific realism deals with both observables (e.g., managers) and unobservables (e.g., managers' perceptions) (Okasha, 2002). In contrast, positivism does not deal with unobservables. Hunt (1991, p. 33) writes that positivists think "science should avoid metaphysical concepts and rely exclusively on observables." Philosophies of science that do consider unobservables have to argue why it is scientifically sound to do so. Okasha (2002, p. 63) emphasizes that "the empirical success of theories that posit unobservable entities is the basis of one of the strongest arguments for scientific realism, called the 'no miracles' argument." The 'no miracles' argument—he goes on to explain—postulates that the success of scientific theories that predict empirical results based on unobservables would be extremely unlikely did these unobservables not exist. In other words, if unobservables, such as managerial perceptions, do not exist—that is, if they are merely noise in the data—theories based on unobservables would be unlikely to match empirical observations. Since this thesis deals to a large extent with unobservables, scientific realism is an appropriate philosophy.¹⁶

Second, scientific realism promotes objectivity. Hempel (1965, p. 141, *italics in original*) writes, "science aims at knowledge that is *objective* in the sense of being intersubjectively certifiable, independently of individual opinion or preference"; in other words, objective scientific results are independent of the researcher(s). Hunt (1993, p. 83) points out that objectivity is attainable in marketing research, "except to persons who misguidedly insist that one can never 'know' without 'knowing with certainty'" (p. 83). In this regard, objectivity does not imply absolute certainty. Rather, it means that a cumulative body of research, based on standard assessment criteria, can provide strong evidence regarding what is known. In Hempel's (1965, pp. 83–84) words: "Eventually, a hypothesis may be so well confirmed by the available evidence that it is accepted as having been established beyond reasonable doubt. Yet no scientific hypothesis is ever proved completely and definitively." In this regard, this thesis' findings build on prior research and established theories and can be evaluated against them. Additionally, its findings can be tested against subsequent research. A common

¹⁶ Note, however, that a categorization into observables and unobservables is contingent on what we mean by observable. Hempel (1965, pp. 22–23) stresses: "Now the concept of observability itself obviously is relative to the techniques of observation used. What is unobservable to the unaided senses may well be observable by means of suitable devices [...]; if observability is construed in [such] a broader sense, [...] the concept of observable attribute becomes more comprehensive." That said, I consider observables to be perceivable with the unaided senses; in turn, unobservables are not.

criticism of objectivity is Kuhn's claim about the 'theory-ladenness' of data, which posits that "data are invariably contaminated by theoretical assumptions" (Okasha, 2002, p. 88) However, Hunt (1993, p. 85, italics in original) points out "that objectivity requires a theory-*neutral* language, not a theory-*free* one". This means that theories must not presuppose results.

Third, scientific realism asserts that scientific theories are (approximately) true. Chalmers (1999, p. 238) writes, "according to scientific realism, science aims at true statements about what there is in the world and how it behaves". Similarly, Okasha (2002, p. 64) writes that "the empirical success of a theory is evidence that what the theory says about the unobservable world is approximately true"; it "may not be correct down to every last detail, while still holding that they are broadly on the right lines." The empirical success of contemporary theories suggests that science can make (approximately) true statements. However, one needs to remember that theories may be revised in light of new theoretical or practical developments. Hence, it is naïve to believe that all contemporary scientific theories—or research results—are true; however, it is overly pessimistic to believe that none are.

Adhering to scientific realism comes with practical implications for such issues as research approach. Scientific realism does not necessitate a quantitative design or statistical analysis (Hunt, 1991). This is a non-trivial but rather overlooked aspect that makes scientific realism particularly appealing to me because it does not dictate a certain research approach. Rather, as Hunt (1991, p. 41) stresses, "dogmatism is antithetical to science; we should adopt a tolerant, open posture toward new theories and methods" but "all methods, theories, and their respective knowledge claims can (and must) be subjected to critical scrutiny; nothing is exempt". In fact, Papers I and III advocate both qualitative and quantitative methods.

Finally, George Box's introductory quote relates to both scientific realism and my view on research. Models are means to an end and not ends in themselves. All models are wrong because they involve necessary simplifications. In fact, simplification is the core purpose of any model. However, some models are useful, and some are not; their utility can be evaluated based on their empirical success (i.e., how well the model predicts data). This view is in line with scientific realism. Philosophies of science also have implications for academic engagement with practitioners. My view is that the single most important contribution a marketing researcher can make to practices is to provide better theories, models, and explanations for the practical challenges that managers face. For what other substantial reasons would practitioners want to work together with academics if we do not provide objective and (approximately) true statements of how the (business) world works (for a more extensive argument, see Hunt, 1990)? In short, scientific realism submits academic theories to

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practical testing (see earlier Hempel quotes). While managers may not necessarily be interested in academic theories and models, they should be interested in the predictions these theories make and the explanations these models offer; in other words, does X have an effect on Y ?¹⁷ Hence, I am convinced that scientific realism is a philosophy of science that is beneficial to both marketing academics *and* practitioners.

3.2 Research process

My initial research idea for this thesis was to study emerging value-based pricing strategies for solutions; but nothing came of it. Many different factors gradually influenced the thesis to turn towards the micro-foundations of value-based pricing and selling. I think it is fairly difficult to identify each and every one of these factors. What seems clear to me, though, is that I did not abandon but rather altered my initial research idea. The Austrian philosopher Otto von Neurath provides an analogy that illustrates this iterative process, so typical of science. He writes:

We are like sailors who on the open sea must reconstruct their ship but are never able to start afresh from the bottom. Where a beam is taken away a new one must at once be put there, and for this the rest of the ship is used as support. In this way, by using the old beams and driftwood, the ship can be shaped entirely anew, but only by gradual reconstruction. (von Neurath, 1973, p. 199)

Hence, I gradually changed and refined my initial research idea during the research process; that is, I primarily put more emphasis on the colorful bars in Figure 5. In the following, I detail some of—what I deem to be—the key factors for the changes and then describe their connections.

Figure 5: Research process

Source: This figure is an adaption and extension of Figure 7 in Kienzler (2016).

¹⁷ Note, X and Y do not have to be quantitative variables but can be concepts in a qualitative argument, similar to the relation between cognitive biases and pricing practices described in Paper III.

First, the research projects¹⁸ with which I have been associated have shaped this thesis. Among others, I was associated with a project between a number of Swedish steel manufacturers, Linköping University, and the Swedish Steel Producers' Association (henceforth, the steel project). The steel project focused on topics surrounding customer value. One of the research activities was to collect cross-sectional survey data from salespeople. The survey investigated salespeople's value-based selling processes. Hence, my direct access to steel manufactures through the project and the opportunity this provided to collect survey data shaped the context and the broad topic that I investigated in Paper IV to a considerable extent. Moreover, some research projects with which I was not associated also shaped this thesis. This is perhaps a strange thought, yet, considering the typical nature of research projects perhaps makes this assertion clearer. I realized that my initial research idea demanded close co-operation with a select number of firms to be able to understand the context-specific nature of emerging pricing strategies. Yet, such a project was not possible at that time. A silver lining of not being associated with such a project was that I had the opportunity to rethink my research direction relatively free from constraints.

Second, I think it is a reasonable assertion that recent trends in research on business markets have influenced me. The recent surge of interest in psychological and behavioral aspects of pricing (Hinterhuber & Liozu, 2015, 2017) and value-based selling (e.g., Ulaga & Loveland, 2014) motivated me to focus more strongly on micro-foundations. As a growing field of research, micro-foundations offer a variety of research opportunities. I deemed this circumstance to be particularly attractive since the state of research allows me to contribute in various ways; in other words, there are fewer restrictions and lots of research opportunities remain unexplored.

Third, my background and personal interests have also influenced the research process. I have a background in Business Administration, and among the researchers who have made a lasting impact on my thinking are Herbert Simon and James March, scholars who consider both individuals and situational aspects and their impact on decision-making in an organizational context. Many phenomena in the business world make little sense from a purely neoclassical economic perspective without a good dose of various strands of psychology, for instance.¹⁹ In particular the circumstance whereby many firms overlook pricing, but academic scholars have highlighted its importance is baffling. However, remembering the pioneering research by the Carnegie Mellon group (e.g., Cyert & March, 1963; Simon, 1957) taking a descriptive instead of a normative

¹⁸ The term research project refers to endeavors with a specific topical focus, close industrial collaboration with a number of firms, and typically of longer duration (e.g., several years).

¹⁹ Consider—among others—managerial competitive irrationality (i.e., positional concerns; for research on competitive irrationality see Armstrong & Collopy, 1996; Griffith & Rust, 1997) and managerial short-termism (see evolutionary processes discussed in Griskevicius, Ackerman, Van den Bergh, & Li, 2011).

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perspective on decision-making within organizations (i.e., satisficing instead of maximizing and the abandonment of the infamous *homo economicus*) made me realize that it makes for a more interesting dissertation to analyze the individuals within organizations instead of the organizations themselves.

Accordingly, Figure 5 shows a schematic overview of my research process. In connection with my initial ideas, I read research on value-based pricing and pricing strategies. At the beginning of my PhD I also took a course with a focus on pricing; these activities laid the foundations for my research and made value-based pricing the common theme throughout the research process. Calls for an emphasis on psychological and behavioral aspects of pricing voiced by Hinterhuber and Liozu (2014) and the freedom to pursue my own research agenda (e.g., I had no research project involving pricing) led me to read more about the micro-foundations of pricing. This led to Papers I, II and III. In parallel, the firms associated with the steel project focused on selling value to various degrees. Research highlighted the connection between value-based pricing and value-based selling and the importance of individual differences for selling value. This led to Paper IV. Finally, realizing that my focus was predominantly on the supply side, I decided that it would be worthwhile to investigate the demand side in Paper V by looking at managers' buying decisions.

3.3 Research designs

The appended papers employ a range of different research designs. Overall, pragmatism drove this decision; different research questions require different designs. This means that some research designs are better suited than others to answer a particular research question. Despite apparent differences, the majority of the research designs employed are quantitative. As noted earlier in this chapter, the thesis' underlying philosophy of science supports both qualitative and quantitative designs. Research on micro-foundations and behavioral strategies also encourages a blend of research designs. Hence, the use of quantitative research designs should be interpreted in light of the specific research question and situation. It should however, not be taken as a subtle comment on the superiority of quantitative research designs; if at all, it reflects my personal preferences towards more pre-planning which is typically associated with quantitative studies. Below, I explain my choices for each paper in more detail.

Paper I—a literature review—uses a conceptual–quantitative design to examine the large body of published pricing-strategy research in order to deduce key takeaways. MacInnis (2011) suggests that the researcher takes the metaphorical role of an astronaut in outer space in this type of conceptual paper;

considering aggregated and condensed information. To find general trends, a reductionist and quantitative design seemed most promising. Qualitative reviews are also well suited to conceptual contributions, but in light of the maturity and sheer amount of the reviewed literature, a conceptual–qualitative review was deemed impractical.

Paper II—a non-experimental decision-making scenario—used an empirical–quantitative design to analyze how managerial personality influences pricing decisions. Biased responses are a major concern in research settings where respondents lack the ability or motivation to accurately reflect upon their own influence. Managers are probably unaware of how their own personality affects their pricing decisions. It is thus unlikely that managers are able to accurately articulate their influence in an interview, for instance. Even though some may have this ability, it is rather difficult to find managers willing to discuss organizational pricing details and their own personal characteristics. Considering these circumstances, I followed prior literature combining research on pricing decisions and individual differences and used a non-experimental design with a scenario-based survey (e.g., Arnett & Hunt, 2002). This research design has the advantage that managers do not have to speculate about their own influence; rather, this influence is statistically determined. Furthermore, managers do not have to disclose specific details about their firm’s pricing decisions (i.e., list prices, sales price, discount levels, etc.) but rather take a decision within a hypothetical but representative scenario.

MacInnis (2011) argues that conceptual contributions are essential to marketing research. In that spirit, Paper III—a conceptual overview—constitutes the second conceptual paper in this thesis. This third paper integrates research from psychology and marketing and argues that cognitive biases influence managerial pricing practices. The article is an integrative rather than a systematic review. It is not systematic since it does not meticulously review all the published research. Instead, the literature is used to make the argument that cognitive biases have been overlooked but are relevant for pricing in business markets. Compared to Paper I, the design is qualitative, rather than quantitative, as the aforementioned argument is built. Paper III reinterprets the pricing-practice literature in light of evidence from psychology and thus a qualitative design was deemed most suitable.

Paper IV—a cross-sectional survey—uses an empirical–quantitative design. Through the steel project, I had the opportunity to collect survey data from salespeople of several steel manufacturers. To the best of my knowledge, using a cross-sectional survey to gather data from the salespeople of the involved firms had been decided before I became involved with the project. Thus, the empirical situation drove the decision rather than it being a conscious decision of mine to use a survey. Yet, one argument in favor of a survey design is that, at the

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time of data collection, there were no published quantitative studies with a main focus on value-based selling. Furthermore, in light of more recent publications on value-based selling that employ surveys, the choice seems reasonable after all (Terho et al., 2015; Terho et al., 2017).

Paper V—an experimental decision-making scenario—uses an empirical-quantitative design to test the effect of price presentation formats on managers' perceived value and purchasing intentions for an offering. This last paper builds on some of the key takeaways highlighted in Paper I; namely, Paper I highlights that pricing-strategy research in business markets should employ more experiments, collect data from the demand side and investigate non-economic factors in decision-making. Additionally, similar arguments put forward for the design of Paper II also apply to Paper V. That is, it is assumed that asking respondents directly about how subtle information influence their purchasing decisions is unlikely to produce accurate results.

3.4 Analytical techniques

The appended papers also employ a range of different analytical techniques to analyze the data. Above everything else, the compatibility between research design and analytical technique guided the choice of technique. In addition, common and established techniques were favored. The primary reason for this choice is the inherent trade-off between benefits and costs; specialized techniques may be more useful but are harder to learn, more likely to be rejected by the uninitiated, and may also be limited in the scope of their application.

Paper I uses quantitative content analysis and chi-square tests as the main analytical techniques. Content analysis allows us to analyze information in a structured way (Berelson, 1952) and is thus well suited to systematic literature reviews. A chi-square test is a non-parametric technique commonly employed to analyze ordinal data (see Zikmund, Babin, Carr, & Griffin, 2009); alternative but related tests can be used in cases where the assumptions of the chi-square test are violated (e.g., Fisher's exact test). Both are rather simple but robust techniques; that is, the results should be easy to understand for a broad audience but also resistant to error. Moreover, similar reviews on other topics have used the same analytical techniques.

Papers II and IV use Partial Least Squares (PLS) structural equation modeling (SEM) through SmartPLS 3.2.0 for Macintosh (Ringle, Wende, & Becker, 2015). Since both papers investigate multiple independent and dependent variables, a technique that allows us to simultaneously estimate the relation between all the variables in the model rather than several separate models was considered important. Such an analytical technique is germane to interconnected

concepts such as different pricing practices (i.e., the degree of value-based, competition-based and cost-based pricing). The same applies to the extent to which salespeople engage in the different sub-processes of value-based selling (i.e., comprehension, crafting, and confirmation). Additionally, both papers employ rather small samples that restrict the use of traditional (covariance-based) structural equation modeling (see Hair, Hult, Ringle, & Sarstedt, 2014). However, the sample size in both papers is sufficient for path modeling with PLS-SEM (Hair et al., 2014).

Paper III did not use any formal analytical techniques beyond divergent thinking and logical reasoning (see conceptual goals 1 and 2 in MacInnis, 2011).

Paper V employed path analysis via the Hayes (2013) PROCESS plug-in for SPSS; this is a common and established technique for analyzing experimental data involving mediation in marketing research.

3.5 Research ethics

The research reported here focuses on individuals and their idiosyncratic nature; that is, among other things, the respondents' personal preferences, judgment and (stated) behavior. In light of this focus, particular attention has been paid to protecting the respondents from any potential negative consequences arising from participation. The main ethical considerations were to ensure voluntary participation, obtain informed consent, guarantee anonymity and confidentiality, and minimize response burden.

Participation in all research studies was voluntary; none of the respondents was obliged to participate. Information regarding the study's purpose and the value of their contribution was provided to potential respondents before they participated.

To ensure informed consent, the research purpose was explained to potential respondents in a non-technical manner (i.e. no jargon) to ensure that they understood the general goal and importance of the study. This briefing took place via invitation emails and before the start of each online survey through a welcome screen. Following this briefing, potential respondents were provided with the opportunity to participate in data collection or refuse. Participants could also drop out at any time during data collection.

Prior to data collection, respondents were guaranteed that data would only be presented in anonymized and aggregated form to ensure that any interference regarding individual respondents was impossible, to protect the anonymity of respondents and enforce confidentiality.

A final factor was response burden. The research design and data collection were informed by the motivation to keep the burden for respondents

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as low as possible. To limit the time constraints and ease of access for respondents, data was generally collected via online surveys. Furthermore, the employed measures were kept as short as possible. Within marketing research, the (appropriate) use of single versus multi-item measures is a controversial topic (e.g., Bergkvist, 2015; Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012).²⁰ Overall, the appended papers for this thesis used established multi-item measures for the most important research variables to ensure appropriately representing and measuring concepts. However, to keep the response burden low, whenever two or more qualitatively similar scales were available, the scale with the best quality/length ratio was employed. Single-item measures were also used as often as possible; for example, for background and demographic variables.

²⁰ The interested reader may consult the growing body of research for technical details; they are not reiterated here.

4

Summary of findings

“Don’t become a mere recorder of facts, but try to penetrate the mystery of their origin.” — Ivan Pavlov [4]

This chapter presents the most important findings of the appended papers in relation to the thesis’ purpose and its two research questions. The focus of the summaries is to explain the relation between the various micro-foundations and value-based pricing and selling; that is, how do bounded rationality and the heterogeneity of individuals impact upon these practices? In line with the micro-foundations tradition, the chapter presents findings that emphasize individuals within organizations.²¹

²¹ Note that the following summaries may not outline all of the appended papers in a comprehensive fashion. Please refer to the appended papers for broader summaries (i.e., the corresponding abstract).

4.1 Paper I: Pricing strategy: A review of 22 years of marketing research

The purpose of Paper I is to investigate the evolution of pricing strategy research between 1995 and 2016 in several peer-reviewed marketing journals. Pricing is a central topic in marketing, but the vast amount of research published and the divisions within the field (i.e., business markets versus consumer markets) hampers the gaining of a clear picture of current and past developments within the literature.

Due to these difficulties, the first paper employs a quantitative design to review the literature. More specifically, a keyword-based search within Web of Science is used to identify pricing-strategy research. Quantitative content analysis (Berelson, 1952) helped to classify the literature along five dimensions (i.e., market and offering focus, topic, theoretical foundation, research design, and respondent profile).

The review includes 515 articles separated into two time periods: from 1995 to 2005 and from 2006 to 2016. The paper's findings are summarized in the form of key takeaways (for a selection, see Table 2). Among others, Paper I finds that relatively little is currently known about the role played by psychological aspects in managerial pricing strategy choice. Furthermore, atheoretical and economic research prevails as the most common theoretical foundation and it is suggested that multi-theory research is needed to understand managerial and customer behavior better. Paper I suggests marketing's pragmatism and the benefits of validated economic theories as the main reason for this circumstance.

Table 2: Selected key takeaways from Paper I

No.	Key takeaway(s)
[...]	[...]
3.	"Research is needed on [...] the psychological aspects of pricing strategy choices in B2B markets."
4.	"[T]heory development beyond established models that have been based mainly on economics is needed; multiple-lens perspectives can aid this objective."
5.	"Pricing strategy research and practice will benefit from more extensive uses of experiments in B2B studies, from both the customer (e.g., purchasing managers) and the supplier (e.g., marketing managers) sides."
6.	"Qualitative research designs such as ethnography and observations would allow researchers to gain first-hand, in-depth understanding of the intricate, context-specific processes of pricing strategy development."
7.	"Researchers should take more account of demand-side respondents (e.g., purchasing managers) in B2B studies [...]."

Source: Adapted from Table 9 in Paper I. Unless otherwise indicated, the text is taken verbatim from Paper I.

Furthermore, surveys are the most widely employed empirical–quantitative research design in research on business markets. Interviews are also used to a lesser extent. The availability of managers as key informants can be considered a viable reason for this circumstance. It is also noteworthy that experiments are dramatically underused in business markets and research *in situ* via ethnographic and observational design is virtually absent in pricing-strategy research in general. Finally, the demand side is neglected in research on business markets. Research tradition and a strong focus on the supply side in marketing management may explain this circumstance.

Paper I has mainly theoretical implications for future pricing-strategy research. For instance, more research is needed to tap into the micro-foundations of managers and customers. Thus, established and institutionalized theoretical foundations, research designs, and sampling frames should be reconsidered.

4.2 Paper II: Does managerial personality influence pricing practices under uncertainty?

The second paper builds upon trait theory and the growing body of pricing-practice research and suggests that pricing decisions are influenced by managers' personalities. Specifically, Paper II argues that the personality traits of managers influence their preferences for different pricing practices under uncertainty. Uncertain pricing situations may provide little reliable information and only ambiguous signals to managers. Despite the lack of reliable information and due to the pressure to make a decision, managers need to base their judgment on available information. Thus, it is suggested that the interpretation of the available information is influenced by managers' personality traits. A potential relation between personality traits and pricing practices is of critical importance since an emphasis on value-based pricing has a positive relation with firm-level performance (Liozu & Hinterhuber, 2013).

The paper takes an empirical–quantitative approach and uses a non-experimental scenario to provide a specific context within which to elicit a pricing decision from the managerial respondents. The scenario describes a manufacturing firm's plan to introduce a new technical consulting service for which a pricing decision has to be made. Yet, the scenario provides only ambiguous information about the potential success of information pertaining to cost, competitors, and customer value. Managers from industrial firms in Germany participated in the study and indicated their emphasis on cost-based, competition-based and value-based pricing. The respondents also rated their own personality traits.

The findings show that personality traits have a significant relation with pricing practices (see Table 3). For example, managerial conscientiousness and openness to experience have a positive relation with value-based pricing. Individuals high in openness to experience have been described as considering a broad range of information (Chollet, Géraudel, Khedhaouria, & Mothe, 2016) and tend to have a positive attitude towards risk-taking (Kowert & Hermann, 1997). Conversely, managers’ openness to experience has a positive and significant relation with value-based pricing. Individuals high in conscientiousness are characterized by a need for achievement (Digman, 1989). Considering that value-based pricing has a positive relation with firm performance (Liozu & Hinterhuber, 2013), conscientious managers emphasize value-based pricing. Assuming that personality traits are rather stable characteristics (see, for example findings by Costa Jr and McCrae, 1988) and considering the concrete results of Paper II, personality traits can be seen as viable but not perfect predictors for managerial pricing preferences under uncertainty.

Table 3: Summary of findings of Paper II

	<i>Pricing practices</i>		
	Value-based	Competition-based	Cost-based
Extraversion			—
Conscientiousness	+		
Openness	+		+
Agreeableness		+	+
Neuroticism		—	

Notes: + or — indicates a small effect (β above .2) according to Ferguson (2009).

Paper II makes a theoretical contribution to the pricing-practice literature by highlighting the benefits of including insights from personality psychology. As previously mentioned, personality traits seem to be rather stable, so the practical contribution is two-fold. First, personality traits seem to influence pricing practices, which in turn affects firm profitability. Second, it is unlikely that managers can change their employees’ personality traits via training (as they are stable) and thus they need to recruit the right candidate or give pricing responsibility to the right individual.

4.3 Paper III: Value-based pricing and cognitive biases: An overview for business markets

Previous pricing-practice literature has highlighted an intriguing paradox (see, for example Liozu et al., 2012); despite the theoretical benefits of value-based

pricing, it is seldom used in practice. While a range of organizational challenges have been suggested to explain this paradox (e.g., support from top management [Liozu et al., 2012]), Paper III argues that organizational challenges can only be a partial explanation. Additionally, psychological challenges, which are currently often overlooked, need to be considered more closely. One particular psychological challenge pertains to managerial heuristic information processing, which can lead to cognitive biases.

The purpose of the third paper is “to investigate how cognitive biases inhibit value-based pricing practices among managers in business markets” (Paper III, p. 86). Specifically, Paper III suggests that some cognitive biases have a negative influence on the degree to which managers use value-based pricing.

The paper takes a conceptual–qualitative approach. It draws on the rich stream of psychological research related to Tversky and Kahneman’s (1974) pioneering work on heuristics and biases and links these insights to the pricing-practice literature.

The paper suggests that five distinct cognitive biases have a negative effect on the degree to which managers emphasize value-based pricing. These biases are: perceived lack of control (LOC), herding, fixed-pie bias, ambiguity aversion, and the egocentric fairness bias. Perceived lack of control makes managers underestimate their influence on pricing and thus delegate pricing decisions to the market or competitors. As a consequence, value-based pricing is neglected. Managerial herding overemphasizes the importance of information on competitors’ or market prices. Value-based pricing is not the focus of pricing practices since managers focus on competitors or the market instead of customer value. The fixed-pie bias assumes that seller and buyer have diametrically opposite interests and price negotiations always produce a winner and a loser. Value-based pricing is not practiced since capturing more value for the firm is considered to result in a loss for one party and a win for the other and vice versa. Ambiguity aversion makes managers focus on ostensibly certain information instead of useful information. Consequently, customer value information is neglected in favor of presumably more certain information, such as unit costs. Finally, the egocentric fairness bias makes managers consider customers’ biased view on pricing fairness too strongly in their own evaluations and thus consider value-based pricing as unfair. Building on these arguments, the paper offers the following propositions²² for further research:

Proposition 1: The extent of managers’ internal (external) LOC is positively (negatively) related to the extent to which firms practice value-based pricing.

Proposition 2: The extent of managerial price herding is negatively

²² Note that these propositions are taken verbatim from the corresponding pages in Paper III.

related to the extent to which firms practice value-based pricing.

Proposition 3: Managerial perception of pricing as a fixed-pie problem is negatively related to the extent to which firms practice value-based pricing.

Proposition 4: Managerial ambiguity aversion is negatively (positively) related to the extent to which firms practice value-based (cost-based) pricing.

Proposition 5: Managerial overemphasis on customer price fairness perception is negatively related to the extent to which firms practice value-based pricing.

Paper III contributes to the growing body of pricing practice research with insights from cognitive psychology. Thus, the paper has major implications for pricing theory in general and pricing practice in particular. Specifically, the pricing paradox can be better understood by considering not only organizational but also psychological challenges; cognitive biases, for instance. In terms of practical implications, managers do not have to accept the potentially negative influence of cognitive biases but can actively debias pricing decisions. The paper outlines several debiasing strategies that may help to reduce the negative consequences of cognitive biases on value-based pricing.

4.4 Paper IV: Value-based selling: A multi-component exploration

Value-based selling has been around for decades in practice (see de Rose, 1991, 1992) but has only recently gained increased attention from academia (Terho et al., 2012; Töytäri & Rajala, 2015). Considering this recent surge but the relative paucity of attention paid to the micro-foundations of value-based selling, the fourth paper sets out to cast more light on these under-researched aspects of selling value. Specifically, Paper IV's purpose is to explore the antecedents of value-based selling.

The paper takes an empirical–quantitative approach and employs a cross-sectional survey to which salespeople responded as part of a larger project with steel manufacturing firms in Sweden. These manufacturers produce specialized steel and serve niche markets in which attention to customer value is crucial (Toften & Hammervoll, 2009). Thus, a focus on this empirical context fits well with a theoretical focus on value-based selling.

The findings support the notion that individual factors influence the practice of value-based selling by salespeople. The research also shows that value-

based selling is not a uniform process but can be divided into a comprehension, a crafting, and a confirmation process. Comprehension implies that salespeople try to recognize the customer's needs, crafting that they create an offer and quantify its potential value to the customer, and confirmation that they verify said value. Both experience and learning orientation have a positive relation with value-based selling, but to varying degrees. Salespeople's learning orientation has a positive relation with all three value-based selling processes, but their experience has only a positive relation with comprehension and confirmation. In turn, comprehension and crafting have a positive relation with sales performance. Experience also has a quadric effect on comprehension; with increasing experience the positive effects reduce. Including quadric effects in the model makes the linear relation between experience and crafting significant as well. These results show that both experience and learning orientation together enable salespeople to exploit their understanding of the value the firm's offer can potentially provide for customers while also exploring new opportunities. Table 4 summarizes these results.

Table 4: Summary of findings of Paper IV

	<i>Value-Based Selling</i>		
	Comprehension	Crafting	Confirmation
Individual antecedents			
Experience	+ / — ^a	+	+
Learning Orientation	++	++	++

Notes: + or — indicates a small effect (β above .2) and ++ or — — indicates a moderate effect (β above .5) according to Ferguson (2009); ^a indicates a quadric effect.

Source: Adapted from Table 4 in Paper IV. The table omits some information from the original table and all information shown is taken verbatim from Table 4.

Paper IV makes a theoretical contribution to the value-based selling literature to the extent that the findings extend the nascent micro-foundations of value-based selling. Individual-level antecedents have an impact on value-based selling processes, which in turn have an impact on a salesperson's performance. Since individual salespeople's performance has an impact on firm profitability in terms of dollar amount from sales, the findings should also be of practical relevance. The practical implications are that managers need to combine individual factors when recruiting and training salespeople.

4.5 Paper V: The effect of price partitioning on customer perceived value

The fifth paper builds on prior research on price partitioning. This stream of research suggests that framing effects influence perceptions and decision-making. Paper V hypothesizes that the format of an offering's price presentation influences the perceived value of the offering and managers' purchasing intentions.

The paper takes an empirical–quantitative approach and uses an experimental decision-making scenario to provide a specific context in which to elicit a purchasing decision from managerial respondents. The scenario asked the respondents to imagine that they are in another city and need to rent hotel conference space, including several additional services, in order to host a business meeting for ten people. This particular scenario has been successfully used before by Ferguson, Brown, and Johnston (2017). Paper V used a single factor, between subject design (partitioned price versus combined price). Respondents were randomly assigned to either the combined-price condition or the partitioned-price condition. In the combined-price condition, respondents saw only the total price for the hotel conference room and the additional services. In the partitioned-price condition, respondents saw the total price and also the individual prices for the conference room and the additional services. Managers from a variety of German industries participated in the study.

The findings show that price-presentation format does not directly impact upon managers' perceived value or purchasing intention. However, the findings show that this direct (null) effect is mediated (indirect-only mediation, see Zhao, Lynch, and Qimei [2010]) by a negative indirect effect via a relative focus on secondary components.

Paper V has theoretical implications for value-based pricing and selling research. Namely, it is not enough to consider value when it is (co-)created. Instead, managers need to think about value perception and include this consideration into their firms' pricing and selling practices. The practical implications are that managers need to take micro-foundations more fully into account; both on the supply and the demand side.

5

Discussion

“As a man is so he sees” — William Blake [5]

This chapter discusses the findings of the appended papers in relation to the thesis’ purpose and its two research questions. Furthermore, the overarching contribution of the appended papers is discussed. Hence, the chapter’s purpose is to elevate the individual contributions, answer the research questions, and outline how the appended papers integrate with each other.

5.1 The toolbox view of research

Research question one asked how different research approaches can advance research on the micro-foundations of value-based pricing and selling in business markets. It builds on the argument that a field that relies solely on a few specific research approaches is limited in scope (see also LaPlaca & da Silva, 2016). This point has been stressed by Abraham Maslow (1966, pp. 15–16), who wrote: “I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail.” His argument follows the notion that research approaches

share qualities with physical tools; different tools enable one to accomplish different tasks. They may also considerably influence results (Gigerenzer, 1991). Bearing these aspects in mind, the metaphor of a toolbox seems reasonable. This toolbox is particularly relevant to the shift in focus from organizations to individuals that is entailed by research on micro-foundations since it is currently unclear how established approaches can be adapted to micro-foundational research and how new ones can serve as complements. The following sections will answer this question for research design, theoretical foundations, and sampling frame, respectively. Table 5 organizes the toolbox alongside different approaches and briefly describes how each can help to advance research. It also provides illustrative examples of prior research on the micro-foundations of pricing and selling.²³

5.1.1 Research designs: A smorgasbord of options

A research design specifies how data is collected²⁴. Paper I highlights that the main empirical research design in pricing-strategy research in business markets consists of surveys and interviews/case studies. This finding aligns with reviews of sales research (a strong focus on surveys, see Williams & Plouffe, 2007) and business markets (a strong focus on surveys and interviews/case studies, see Reid & Plank, 2000). In fact, it appears that these research designs have somehow become institutionalized (Gigerenzer, 1991). On the other hand, Paper I also shows that observations/ethnographic studies and experiments are overlooked in pricing-strategy research on business markets. Perhaps these findings are not surprising considering that typical pricing research on business markets focuses on the organizational level (see Paper I).

Yet, the question is: how can these workhorses (i.e., surveys and interviews/case studies) help to advance research on the micro-foundations of value-based pricing and selling? Put differently, can they be adapted to fit with the focus on individuals? After all, one may argue that one of the reasons why they are the most common research designs in business markets is their flexibility. For instance, surveys can be longitudinal or cross-sectional, descriptive or analytical, and exploratory or confirmatory (see also, Zikmund et al., 2009). Yet another type of commonly used survey with particular appeal is the scenario-based one; that is, respondents answer questions in response to a short vignette or longer business case (e.g., Arnett & Hunt, 2002; Estelami & Nejad, 2017;

²³ While the table and the following discussion largely treat the different parts of the toolbox in isolation—mainly for argumentative reasons—the different parts can and should be combined in practice. For instance, researchers may combine different research designs and/or theoretical foundations to investigate a phenomenon.

²⁴ While research designs can also be conceptual and theoretical in nature (see Paper I), the following section will focus exclusively on empirical ones.

Hunt & Forman, 2006). An important challenge for research on micro-foundations is that it often investigates sensitive topics due to the focus on individuals and their particular impact (e.g., how do individual differences influence pricing? [see Paper II]). Scenario-based surveys offer the opportunity to investigate such sensitive topics through hypothetical but realistic scenarios. Similarly, scenario-based surveys can be employed to analyze stable, trait-like individual differences for which no secondary data exists, for instance. Yet, a distinct drawback is that the findings from such surveys are based on hypothetical scenarios and thus the decisions made have no stakes (e.g., resulting in a bad reputation, money lost, or similar).

Similarly, interviews/case studies do not *have* to focus on the firm. Instead of employing key decision-makers as a proxy for what their firm does, one can focus on what those key decision-makers do. In this way, it is possible to describe authentic challenges and opportunities that individuals and groups are confronted with in an organization, such as the difficulties that managers or pricing teams experience in implementing value-based pricing and how they deal with it. Perhaps the main challenge when using interviews/case studies for research investigating individual managers and salespeople is that they may be unwilling to be frank with the researcher in order to appear in a better light (for a similar argument, see Iyer et al., 2015).

By contrast, research designs that are currently not widely adopted could complement established ones. These could include research *in situ*, that is, research employing observation or ethnography to collect data in an organizational context, for instance. These designs allow researchers to observe phenomena first-hand as they unfold in the field and collect rich data. Papers I and III highlight the need for such research designs in order to understand micro-foundations better. As both papers point out, in-depth studies via observation would be beneficial in circumstances where context-specific and rich data is necessary in order to understand individuals and their interactions within organizations. Additionally, observation allows for data collection over a longer period. Observational and ethnographic studies are especially relevant considering the recent increase in interest in cognitive biases (Hinterhuber, 2015) and sensemaking (Töytäri, Keränen, & Rajala, 2017) for value-based pricing. For instance, observation (e.g., through shadowing) allows us to further our understanding of cognitive biases in an organizational context (see Paper III). A similar argument can be made for sensemaking, where following individuals over a longer period of time would allow a comprehension of how meaning is constructed. In fact, other authors have advocated observation to investigate managerial decision-making (Wierenga, 2011). However, only a meager 2 percent of all empirical articles on business markets use observation (Reid & Plank, 2000). This may be because it is challenging to gain the type of access necessary

for observation. Nevertheless, for a seminal example of observational research, one may turn to Mintzberg's (1973) in-depth and descriptive work, in which he observed five CEOs for a full working week (by shadowing them). Likewise, Hohenschwert and Geiger (2015) gained unique insight into the role of salespeople affecting customers' value perception by shadowing the customer interactions of 13 salespeople. Despite their advantages, observation and ethnography have the potential shortcoming of being obtrusive. The fact that a researcher is observing individuals' behavior may alter that behavior and thus contaminate the results (i.e., the infamous Hawthorne effect).

Experiments offer another viable way to advance research on the micro-foundations of value-based pricing and selling. The advantage of experiments is that they allow the testing of causal relationships predicted by theory (see argument in Paper I). Experiments vary one or several variables of interest. For instance, does price presentation format (varied variable) influence value perception (Paper V)? A generally acknowledged shortcoming of cross-sectional surveys is that they only show correlation but not causation; causality can only be argued theoretically but cannot be tested statistically in a cross-sectional survey design. Hence, experiments—particularly those conducted in the field—are potentially powerful tools to advance research by putting a theory to a practical test, which should also be of interest to managers (see Anderson & Simester, 2011). Despite these advantages, a challenge to conducting experiments to investigate the micro-foundations of pricing and selling is the difficulty of gaining access to the individuals involved in pricing and selling in business markets (see also Paper I).

In summary, considering various research designs will advance research on the individual level by helping to further our understanding and analysis of individuals' involvement in and influence on the pricing and selling of customer value. In particular, considering how established research designs can be adapted and those that are currently not widely adopted can be employed will allow more light to be shed on practical and theoretical issues. In short, research will benefit from different research designs.

5.1.2 Theoretical foundations: How to explain phenomena?

A theoretical foundation offers a distinct perspective on a phenomenon. In this regard, Huber (1991, p. 6) remarked: "An old joke says that economists explain why people make certain choices; sociologists explain why they don't have any to make." Thus, theoretical foundations—such as economics and sociology—to a certain extent guide what questions a researcher asks. This impact is particularly important in light of the focus on individuals that micro-foundations entail; theoretical foundations are differently apt to accommodate this shift from

organizational processes to the individual foundations of these processes. Thus, social sciences that study individuals and groups—economics, psychology, sociology, and political science—and their specific theories offer viable insights to help us formulate research questions and hypotheses.

Papers I and III highlight that there is a need to consider theoretical foundations other than neoclassical economics in order to investigate individuals within organizations and their impact on pricing. Economics is still the dominant theoretical foundation in pricing-strategy research, although a greater focus on psychology has been notable in recent years (Paper I). In line with this sentiment, the limits of neoclassical economics to understand the pricing decisions of managers have been repeatedly stressed in recent years (Hinterhuber, 2015; Iyer et al., 2015; Monroe, Rikala, & Somervuori, 2015). Indeed, Paper III exemplifies this gain in explanatory power by reconsidering an empirical paradox from a new theoretical vantage point; value-based pricing is ostensibly a superior pricing practice but only a fraction of firms focus on it. By drawing on the ample stream of research on heuristics and biases in psychology, Paper III suggests a complementary answer to this paradox and the common explanation of organizational challenges. Paper III argues that a new theoretical foundation may allow the amendment of existing results. Similarly, Papers II and V are infused with psychological theories, which informed the analysis of individuals in value-based pricing beyond the previous literature. This move away from a purely economic focus, towards micro-foundations and a behavioral perspective, is especially important in allowing for more predictive research (LaPlaca & da Silva, 2016). In contrast, in sales research, psychology is well established as a theoretical foundation and economics plays only a minor role (Williams & Plouffe, 2007). Nevertheless, due to the relative paucity of research on value-based selling in general, only a limited number of studies have explicitly used individual aspects so far (for exceptions, see Terho et al., 2017; Ulaga & Loveland, 2014). Both economics and psychology offer distinct advantages for investigating the pricing and selling of customer value. While economics can offer valuable insights into market mechanisms—for example, through theories about asymmetric information (Akerlof, 1970)—psychology offers insights into the mind.

Building on established theories about human behavior more generally, gives research a solid theoretical grounding that is relevant to the specific pricing and selling context being investigated. As an applied science, marketing has a long tradition of borrowing and applying theories that originated in other fields, most importantly from economics and psychology (see discussion in section 2.1). This has also been the case for pricing-strategy research, which borrowed mostly from economics and psychology (see Paper I). Nevertheless, theoretical foundations besides these two also offer the opportunity to advance research. For example, political science allows us to investigate intra- and inter-firm

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coalitions and conflicts between and within groups. For example, Lancioni, Schau, and Smith (2005) use a political economy standpoint to investigate pricing-strategy developments in business markets. Similarly, sociology allows us to analyze individual and group actions in their social context. For instance, Töytäri, Rajala, and Brashear Alejandro (2015) draw on institutional theory to show that managers can face institutional barriers when implementing value-based pricing.

Taken together, it appears reasonable to assume that theoretical foundations allowing the investigation of individuals and their interactions can advance research on the micro-foundations of value-based pricing and selling. Particularly in business markets, where the focus has been on the organizational level, these four social sciences can increase the current understanding of the pricing and selling of customer value with their distinct perspectives on individuals and their interactions.

5.1.3 Sampling frame: Who to ask?

A sampling frame details who participates in the research; that is, whose data is used. The decision regarding a sampling frame—such as whether to focus on the supply side, demand side or both—is fundamental because the choice dictates the data that will be used. Sampling is particularly critical in micro-foundational studies since individuals are not merely a proxy for the firm, but their particular behavior, judgment and decisions are the main interest. All three sample frames—supply, demand, and both—offer valuable insights into individuals and groups relevant to value-based pricing and selling.

So, how can different sampling frames help to advance research on the micro-foundations of value-based pricing and selling? Paper I found that pricing-strategy research in business markets focuses almost entirely on the supply side. Perhaps this finding is not surprising, considering the manufacturing focus of many business markets (Grewal & Lilien, 2012) and the fact that pricing is—by definition—a supply-side topic. Consequently, supply-side research offers the opportunity to clarify the particular role of individuals in determining and realizing prices based on customer value. After all, much of what is known about pricing today primarily concerns the organizational level (see also Iyer et al., 2015). Further research on the supply side can supplement or refute existing work. Hence, this type of research can be seen primarily as a continuation.

At the heart of value-based pricing and selling lies the customer's subjective value perception and the understanding of how firms can profit from it by enabling this value creation; ironically, research on the demand side is largely absent in business markets (Paper I). Coupled with the insight that the opposite is true for consumer markets (Paper I), this invites reflection upon what insights

can be gained from the demand side. Studies that sample from the demand side allow us to propel research by investigating the customer's *actual* value perception, not what managers or salespeople from supplier firms believe it to be. This is a real opportunity, potentially to dispel inaccurate perceptions and overlooked aspects in supply-side studies. For instance, Paper V focuses on the demand side and shows the unique insight that researchers and practitioners can gain by investigating the customer's view. On the downside, customers' perspectives might be biased and responses have to be taken with a grain of salt for topics that include two sides, such as price fairness (see Paper III).

Finally, sampling from both sides—preferably in a dyadic fashion—allows us to contemplate the full picture of supplier and buyer interactions. This offers a good opportunity to build richer theory based on the understanding of individuals' involvement on both sides of the exchange relationship. For instance, Paper III suggests that research on buyer–supplier interactions would be a potentially fruitful avenue for investigating the fixed-pie bias further. The challenge, however, is that even on a small scale—such as through case studies—this type of data is difficult to collect, mainly because it requires a high level of cooperation within both supplier and buyer organizations. Consequently, dyadic studies are rare (Paper I).

In conclusion, the findings suggest that, in many situations, a focus on the supply side offers a viable approach to conducting research, particularly when the aim is to amend established normative pricing models or clarify the micro-foundations of particular organizational aspects. Nevertheless, demand-side and dyadic studies offer great potential to enhance current knowledge.

Table 5: The toolbox: Advancement through different research approaches

Approach	Helps to advance research by...	Illustrative examples
Research design*		
Surveys	...investigating multiple relationships in the data (e.g., how do attitudes in the salesforce influence value-based selling?) [<i>traditional</i>]. ...investigating sensitive topics through hypothetical <i>but</i> realistic scenarios (e.g., how do individual differences influence pricing?) [<i>scenario-based</i>].	^S Hinterhuber (2017), ^S Terho et al. (2017) ^P Arnett and Hunt (2002), ^P Estelami and Nejad (2017), ^P Hunt and Forman (2006),
Interviews/ case studies	...describing authentic challenges and opportunities that individuals and groups face in organizations (e.g., managers' difficulties in implementing value-based pricing).	^P Hallberg (2017a), ^P Töytäri, Keränen, and Rajala (2017), ^P Töytäri, Rajala, and Brashear Alejandro (2015), ^S Uлага and Loveland (2014)
Observations/ ethnographic studies	...observing phenomena first-hand as they unfold in the field and collecting rich data about it (e.g., how do salespeople communicate customer value in the field?)	^S Hohenschwert and Geiger (2015)
Experiments	...varying variables and thus testing causal relationships predicted by theory (e.g., does price presentation format influence value perception?).	^P Forman and Hunt (2013), ^P Rusetski (2014), ^P Bertini, Halbheer, and Koenigsberg (2017)
Theoretical foundation**		
Economics	... investigating how buyers and sellers interact in markets (e.g., how do managers react to competition?)	^P Armstrong and Collopy (1996), ^P Griffith and Rust (1997)
Psychology	... investigating the psychological processes of individuals and groups (e.g., when are prices not perceived as sacrifice?)	^P Estelami and Nejad (2017), ^P Bertini, Halbheer, and Koenigsberg (2017)
Sociology	...investigating individual and group actions in an institutional setting (e.g., does firm culture affect individual salespeople's adoption of value-based selling?)	^P Töytäri, Rajala, and Brashear Alejandro (2015)
Political science	... investigating intra- and inter-firm coalitions and conflicts between and within groups (e.g., how can conflicts between sales and marketing employees be better understood?)	^P Lancioni, Schau, and Smith (2005)
Sampling frame		
Supply	...clarifying the role of individuals in determining and realizing prices based on customer value (e.g. salespeople's role in value capture).	^P Estelami and Nejad (2017), ^P Forman and Hunt (2013), ^S Terho et al. (2017)
Demand	...investigating <i>actual</i> customers; (i.e., not how managers think customers are, how they behave, and think).	^P Ferguson, Brown, and Johnston (2017), ^P Backhaus, Koch, and Stingel (2011)
Both	...contemplating the full picture of supplier and buyer interactions (e.g., how do salespeople and purchasing agents negotiate about value?).	—

^P indicates pricing and ^S selling as the topic.

* These are the most common ones and the underutilized ones with the greatest potential.

** The focus is on these four social sciences because they study (groups of) individuals.

5.2 The influence of micro-foundations on value-based pricing and selling

Blake’s quote at the beginning of this chapter highlights that stable traits color people’s perceptions. Arguably, the quote falls short of acknowledging that it is not only chronic but also temporary or situational factors that can influence human perceptions. For example, the temporal states of individuals, such as feelings or situational factors such as the level of available information may also play a role. Nevertheless, Blake’s observation is interesting to the extent that it recognizes perception as individual; a view that is still not sufficiently acknowledged in research on value-based pricing and selling. In line with this argument, research question two asked how micro-foundations influence value-based pricing and selling in business markets.

To answer the second research question, Papers II through V operationalize the conceptual framework presented earlier (see Figure 6). Particularly, building on the notions of bounded rationality and heterogeneity, each paper investigates how concrete affective, cognitive or motivational mechanisms at the individual level impact upon value-based pricing or selling.

Figure 6: Operationalization of the conceptual framework

It has been argued that emotion, cognition, and motivation have an impact on decision-making (Simon, 1967) and can affect managers' judgment and choices (Bazerman & Moore, 2009). In particular, people are prone to systematic errors in information processing; that is, cognitive biases. Cognitive biases influence which information is considered or distort available information. Furthermore, humans differ in their fundamental natures (Chamorro-Premuzic, von Stumm, & Furnham, 2011). Hence, individuals within organizations may also be heterogeneous in their emotions, cognition or motivations. The available evidence also suggests that cognitive biases and various individual differences affect pricing and selling processes (e.g., Hallberg, 2018; Hinterhuber, 2015; Iyer et al., 2015; Ulaga & Loveland, 2014). The appended papers provide additional evidence for such an impact in the realm of value-based pricing and selling.

5.2.1 Bounded rationality: Cognitive biases and price presentation

Paper III outlines how cognitive biases have a negative effect on the degree to which managers emphasize value-based pricing in their firms' pricing practices. Different psychological challenges seem to result—for some managers—in a variety of cognitive biases that in turn influence how they interpret market, firm and offering determinants. The findings also indicate that many of the cognitive biases seem to have a positive relation with cost-based or competition-based pricing. For instance, the extent to which managers perceive a lack of control over pricing seems to correlate with their emphasis on ostensibly more controllable factors, such as costs. Bearing in mind that different determinants and different psychological challenges are at work, the findings of Paper III suggest that different cognitive biases—in isolation or in combination with one another—inhibit managers from emphasizing value-based pricing. The findings underscore the variety of non-economic aspects relevant to value-based pricing (e.g., Töytäri, Keränen, & Rajala, 2017; Töytäri, Rajala, & Brashear Alejandro, 2015). Additionally, the findings are in line with the argument put forward by different scholars that psychological aspects can affect pricing (e.g., Hinterhuber, 2015; Iyer et al., 2015; Monroe, Rikala, & Somervuori, 2015; Urbany, 2001). Paper III extends these arguments to value-based pricing.

Paper III focuses primarily on managerial cognition; that is, how information is perceived and interpreted in order to arrive at pricing decisions. Unlike in some normative models of decision-making, managers perceive and interpret information and, thus, alter it (Simon, 1959). Hence, how information is processed is relevant to understanding decision-making. Conversely, while the limits of managerial cognition may materialize in a variety of different biases,

other underlying reasons beyond cognitive challenges may also be relevant to those biases. For instance, Paper III highlighted that managers may herd for motivational reasons. Imagine, for instance, a manager who recognizes that strictly following competitors in setting prices is a flawed pricing procedure but is nevertheless motivated to do so because he or she knows it is easy to justify (see Urbany, 2001). Similarly, affect can play a role in understanding ambiguity aversion (Rubaltelli, Rumiati, & Slovic, 2010) and thus managers' affective responses regarding uncertain information about customer value may shift their pricing decisions towards an emphasis on ostensibly more certain information, such as costs. Hence, not only cognition but also affect may play a role. Nevertheless, the evidence presented in Paper III suggests that mainly cognition affects the influence of determinants on pricing practices.

Indeed, the five cognitive biases—to varying degrees—impact upon the determinants suggested in the conceptual framework (see Figure 6).²⁵ Three cognitive biases relate to market determinants and one each to firm and offering determinants. First, a perceived lack of control and herding affect how market information about competitors is interpreted. Managers who perceive a lack of control over pricing look to the market and believe that powerful competitors impose market prices that one has to follow (e.g., Hinterhuber, 2004). Similarly, herding is grounded in the assumption that competitor and market prices contain information that is more actionable than customers' value perceptions for profitable pricing, for instance. Both biases prompt managers to discount other information in favor of this market information. Moreover, the egocentric fairness bias impacts upon how market information about customers is interpreted. Managers who are affected by the egocentric fairness bias believe that the customer's perception is an impartial proxy for price fairness in supplier–buyer relationships and consequently disregard value-based pricing as an unfair pricing practice. The fixed-pie bias, on the other hand, affects the influence of firm determinants on pricing practices. Managers who exhibit a fixed-pie bias perceive that pricing is a zero-sum game; the seller's gain is the buyer's loss (e.g., Hinterhuber, 2004). While previous literature has identified the antagonistic buying and selling culture common in many business markets as a hurdle towards an emphasis on value-based pricing (Töytäri, Keränen, & Rajala, 2017), the findings of Paper III suggest that a zero-sum perception is a decisive factor that seems to be related to that buying and selling culture. Lastly, ambiguity aversion impacts upon how offering information is interpreted. Managers who are ambiguity averse perceive an offering's cost information as more certain than information on competition and customer value. This perception increases the emphasis on cost-based pricing.

²⁵ In the following, I will however, focus on the main determinant for each bias to keep as close as possible to the original paper.

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Paper V investigates whether and how price-presentation format influences managers' value perceptions and purchasing intentions. The findings indicate that price-presentation format does not have a direct effect on either of the aforementioned variables. Nevertheless, it appears that there is an indirect negative effect on both via the attention paid to the primary component (i.e., the room). These results suggest that, when the price of an offering is partitioned, managers focus more on the base component, which has a negative effect on their evaluations. These findings contradict findings from consumer markets and underscore the differences between business and consumer markets when it comes to psychological factors. For instance, Hinterhuber (2015), who recently reviewed the business-market literature, highlighted that effects of the flat-rate bias (i.e., willingness to pay more for ease of mind) and the effects of .99 price endings are different from consumer markets. Paper V indicates that this is also the case for price-presentation format (i.e., combined versus partitioned prices).

Paper V focuses on both managerial cognition—that is, their value perception—and managerial motivation—that is, their purchasing intentions. It shows how cognition and motivation are relevant to understanding decision-making in a purchasing situation in business markets. While the results are similar for value perception and purchasing intention, this is not self-evident. Imagine, for instance, that managers could perceive an offering as valuable—perhaps because of how the price is presented—but they are still not motivated to purchase it; perhaps because they do not have a current need, or for other reasons. Moreover, the price presentation itself is a cognitive aspect, as partitioning an offering makes its components more salient.

Looking at the point within the conceptual framework where micro-foundations enter the picture (see Figure 6), Paper V analyzed the final stage of the framework. A pricing strategy is the outcome of the pricing process. Managers with pricing responsibility may choose a certain pricing strategy, such as price partitioning, because they think it will have a positive effect on customers' value perception. This is a reasonable assumption since empirical and conceptual arguments highlight that certain pricing strategies require managers to know and emphasize customers' value perception relatively more than others; price skimming, for instance (Ingenbleek & van der Lans, 2013). Moreover, price partitioning has been found to have a positive effect on customers' value perception in consumer markets (e.g., Bertini & Wathieu, 2008; Hamilton & Srivastava, 2008). The paper draws upon this insight. It shows, however, that price presentation format only has an effect via the relative attention paid to the primary components—and, a negative one.

5.2.2 Heterogeneity: Personality, learning orientation, and experience

Paper II shows that personality is related to managerial pricing decisions under uncertainty. With only ambiguous information about the risks involved in weighting information about cost, competition, and customer value during pricing practices, a manager's personality seems to play a role in the relative emphasis given to this different information. The business scenario in Paper II provided identical information to all respondents, and the findings suggest that managerial personality plays a role in judging and interpreting the information. This is in line with prior research, which demonstrates the influence of individual differences on pricing (Arnett & Hunt, 2002; Estelami & Nejad, 2017). It is particularly noteworthy that Paper II showed that only openness and conscientiousness are positively related to value-based pricing. This finding is important since it has been suggested that pricing practices emphasizing customer value capture more value for the firm (Nagle & Holden, 2002); a suggestion that has found empirical support at the product (Ingenbleek, Frambach, & Verhallen, 2010, 2013) and the firm level (Liozu & Hinterhuber, 2013). Hence, the findings of Paper II indicate that personality has an indirect impact on value capture by inhibiting some managers from focusing more strongly on customer value when determining prices. Additionally, it has been highlighted previously that managers need to handle uncertainty in the realm of pricing (Hallberg, 2008). Paper II's findings suggest that managerial personality plays a role in how uncertainty is handled when determining prices.

Like Papers III and V, Paper II focused primarily on cognition, by focusing on how the respondents arrive at different judgments based on identical information. The findings suggest that managers' personality traits are the underlying mechanism by which information is weighted. Despite the fact that Paper II focuses on the cognitive aspects of personality—that is, how managers weight information on cost, competition, and customer value based on the ambiguous information given in the scenario—it should be mentioned that the investigated personality traits also have links to emotion and motivation. Consider, for instance, neuroticism, which integrates a variety of traits associated with negative affect (Kowert & Hermann, 1997). Due the affective nature of neuroticism, another common label for this personality trait is emotional stability (i.e., low neuroticism) (e.g., Lounsbury et al., 2016). Hence, affect may have played a role in weighting the presented information as well. For instance, previous literature found that individuals high in neuroticism demonstrate a negative affective response to uncertainty (Hirsh & Inzlicht, 2008). Paper II found that managerial neuroticism has a negative relation with value-based pricing, albeit not a significant one. These findings suggest that managers high in

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neuroticism may worry about the uncertainty associated with customer value (see also Paper II). Furthermore, conscientiousness has motivational aspects in that conscientious individuals are motivated to act proactively and display a need for achievement (Costa Jr, McCrae, & Dye, 1991). Paper II found that managerial conscientiousness has a positive relation with value-based pricing. The paper suggests that managers high in conscientious are motivated to emphasize value-based pricing due to its positive relation with firm performance, for instance (Liozu & Hinterhuber, 2013). While these aspects are noteworthy, it should be remembered that they were not explicitly tested; however, trait theory lends itself to these reflections.

The scenario in Paper II provided hints to the respondents regarding market (e.g., competitors' prices), firm (e.g., the firm's distinctive knowledge base) and offering (e.g., cost to supply) determinants. Yet, due to the goal of providing the same ambiguous information to all managers in order to investigate their stable personality traits, it is difficult to tease apart how exactly each personality trait impacts upon the influence of these determinants on pricing practices. Nevertheless, the distinct characteristic of agreeableness to comply with norms (Digman, 1989) allows us to draw some more definite inferences. Paper II hypothesized that managers' agreeableness will be positively related to an emphasis on pricing practices that are currently considered standard or normal in business markets. These practices are cost-based and competition-based pricing (see Hinterhuber, 2008). Indeed, Paper II found that agreeableness is positively related to both practices. Yet, agreeableness has practically no relation to value-based pricing. These findings indicate that managers' agreeableness affects the influence that market (e.g., competitors' prices) and offering (e.g., cost to supply) determinants have on pricing practices.

Paper IV highlights how learning orientation and sales experience impact upon sales behavior. In this case, motivation in the form of learning orientation and cognition in the form of experience influence the emphasis on value-based selling. The suggested reason behind this result is that salespeople who are motivated to learn new things about their customers are more likely to adopt a selling practice that focuses on enabling those customers' value creation. Yet, salespeople also need experience to be able to adopt such a practice. Experience enables individuals to recognize patterns, access relevant information about them, and apply prior knowledge (see Simon, 1987). However, it is noteworthy that Paper IV shows that this positive relation between sales experience and value-based selling diminishes with an increase in experience. This finding is essential as it suggests that, beyond a certain point, more sales experience is less beneficial for an emphasis on value-based selling. These findings are in line with recent sales literature. For instance, salespersons' learning orientation has been identified as a distinct individual difference that has a positive relation with selling

value (Terho et al., 2017; Ulaga & Loveland, 2014). Likewise, value-based selling requires extensive knowledge to adapt offerings to customers' particular needs (e.g., Ulaga & Loveland, 2014) and thus it is perhaps unsurprising that experience has a positive relation with value-based selling. Yet, the literature also reports that a transition towards value-based selling may come with a distinct downside; that is, the inability of salespeople who are very experienced in traditional sales practices to adapt to selling value (see Ulaga & Loveland, 2014). The diminishing effect of experience on value-based selling found in Paper IV is in line with this circumstance.

As indicated earlier, Paper IV focused on motivation and cognition in the form of the intertwined individual differences of learning orientation and experience, respectively. The findings highlight how salespeople's motivation to learn new things about customers and their experience have a positive relation with engagement in value-based pricing. Although Paper IV centers on salespeople's motivation to learn and their ability to build on prior experience, it should be mentioned that emotions can also play a role in selling value. Take for instance, emotional stability, which has been identified as influencing a salesperson's ability to focus on selling value (Ulaga & Loveland, 2014). However, Paper IV did not investigate emotions in relation to value-based selling.

Looking at the point in the conceptual framework where micro-foundations enter the picture (see Figure 6), Paper IV zoomed in on where salespeople engage in selling practices. It shows that learning orientation and experience have a unique influence on comprehension, crafting, and confirmation; the three distinct value-based selling processes. While experience is—by its very nature—anchored in the past, learning orientation is directed towards the future; that is, how the current skillset can be advanced. Yet, only the combination of both allows salespeople to use the full potential of value-based selling and, thus, help customers to benefit from the value that the firm's offering potentially provides.

5.2.3 Commonalities and contrasts: A brief summary and integration with prior literature

The five appended papers share a fair number of commonalities. In broad terms, the papers dealt with the rationality of individuals within organizations and, particularly, how the strong assumption of rationality and homogeneity of neoclassical economics falls short of acknowledging the human condition. Building on the notions of bounded rationality and heterogeneity, the papers explored how psychological mechanisms at the individual level impact upon

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value capture in business markets. Scholars have argued that pricing and selling practices emphasizing customer value allow to capture more value for the supplier firm (Nagle & Holden, 2002); a suggestion that found empirical support at the salesperson (Terho, Eggert, Haas, & Ulaga, 2015; Terho, Eggert, Ulaga, Haas, & Böhm, 2017), the product (Ingenbleek, Frambach, & Verhallen, 2010, 2013) and the firm (Liozu & Hinterhuber, 2013) level. The findings of the appended papers suggest that individual-level factors can either inhibit or enable value capture at the organizational level. LaPlaca and da Silva (2016) have previously highlighted the need to draw more heavily upon psychology to gain insight into individual decision-making and behavior in business markets. In line with this call for research, the appended papers investigated how individuals affect the organizational processes of pricing and selling value. They impact upon the influence of determinants (Paper II and Paper III), the selling process (Paper IV) and the judgment of prices (Paper V). Hence, the papers are in good company with recent research on pricing (e.g., Hallberg, 2017a, 2018; Hinterhuber, 2015; Iyer et al., 2015; Monroe, Rikala, & Somervuori, 2015; Rusetski, 2014; Töytäri, Keränen, & Rajala, 2017) and selling (e.g., Hinterhuber, 2017; Terho et al., 2017; Ulaga & Loveland, 2014) that considers individual factors.

Another common theme is the central focus on managerial cognition related to the processing of information (Papers II, III, and V). In line with this focus, prior research on micro-foundations stressed the influence of individual cognition. For example, Hallberg (2017a, p. 187) writes: “Well-trained human judgment is the only resource with sufficient information processing capacity to handle the uncertainty and complexity that arises in markets with a large number of articles”. Similarly, research on managerial cognition has suggested that managers’ perceptions have an impact on strategic processes (Helfat & Peteraf, 2015). In particular, prior literature has highlighted that it is necessary to contemplate how managerial determinants interact with organizational and environmental ones (Iyer et al., 2015). Both Paper II and Paper III show how cognition affects the influence that determinants have on pricing practices, and Paper V shows how cognition impacts upon outcomes.

Yet, the papers also contrast with each other. For one thing, they investigate different stages and aspects of the conceptual framework (see Figure 6) and thus complement each other. While the majority of papers focused on pricing (Papers II and III), one focused on selling (Paper IV), and another one on buying (Paper V). Previous literature has argued that value-based pricing and selling are related to each other (e.g., Hinterhuber, 2004; Hinterhuber, 2017; Nagle & Holden, 2002; Töytäri & Rajala, 2015). In fact, value-based pricing and selling have a symbiotic relationship to the extent that the full potential of enabling customer value creation and achieving an appropriate degree of value

capture is unlikely to be achievable for supplier firms without engaging in both practices. Moreover, while several of the papers investigated cognition (Papers II, III, IV, and V), motivation (Paper IV and V) and emotion (Paper II) are also important in comprehending individual behavior in the realm of value-based pricing and selling. This detail is important because, in practice, emotion, cognition and motivation are all likely to play a role to varying degrees. For instance, Payne, Storbacka, and Frow (2008) highlight the affective, cognitive, and behavioral aspects of customer value. Finally, the papers also differ in whether they investigate trait-like or state-like aspects. For instance, Papers II and IV highlight how people differ on a set of rather stable individual differences and how these impact upon decision-making and behavior. Indeed, personality and learning orientation are rather stable, trait-like aspects within people. Yet, Paper IV also highlights differences in sales experience, which has an impact on value-based selling. Experience is malleable through interventions (e.g., training). Similarly, cognitive biases (Paper III) are also malleable to a certain extent through interventions (e.g., debiasing).

Taken together, these findings suggest that affective, cognitive, and motivational factors impact upon value-based pricing and selling. In contrast to what neoclassical economics suggests, individuals within organizations are bounded rational and heterogeneous. Hence, the aforementioned findings are in line with the arguments found in prior literature on the micro-foundations of pricing and selling, but extend this limited body of knowledge regarding specific individual factors related to value-based pricing and selling found in managers and salespeople.

6

Conclusion

“If I have seen farther it is by standing on the shoulders of giants” — Isaac Newton [6]

This final chapter has a two-fold purpose; looking backwards and looking forward. After a brief, concluding reflection, it highlights the thesis’ contributions and describes its main theoretical and practical implications. The chapter ends with a discussion of its limitations and suggestions for further research.

6.1 Concluding reflection

The thesis set out to shine some light on the micro-foundations of value-based pricing and selling in business markets. It was the intention to build on the growing stream of literature that lies at the intersection of marketing, psychology, and strategic management.

Certainly, this thesis is not the first scholarly work to highlight the importance of value capture vis-à-vis value creation; others have been vocal about it (e.g., Michel, 2014; Mizik & Jacobson, 2003; Nagle & Holden, 2002; Ramanujam & Tacke, 2016b). Similarly, the recent rise in research on micro-

foundations predates this thesis (e.g., Barney & Felin, 2013; Felin & Foss, 2005; Gavetti, 2005; Helfat & Peteraf, 2015). Rather, this thesis combined a focus on micro-foundations *and* value-based pricing and selling. Research that brings both topics together has only recently emerged (e.g., Hinterhuber, 2015, 2017; Hinterhuber & Liozu, 2017; Terho et al., 2017; Ulaga & Loveland, 2014). The thesis contributes to this line of research that is shifting the focus from an organizational process of value-based pricing and selling to the individual foundations of this process. Among other aspects, theories from personality (Paper II), cognitive (Paper III) and social (Paper V) psychology helped to investigate the individual level.

The thesis focused on business markets; an empirical context that is in dire need of a stronger focus on individuals and their impact on firm performance. For instance, Sheth and Sharma (2006) stress that the organization's rather than the individual's behavior is in focus in research on business markets. These and other authors have called for more research on individuals within organizations and have suggested taking a behavioral perspective. As LaPlaca and da Silva (2016, p. 232) highlight, such a behavioral perspective "will mean a reduction in ambiguity accruing to the decision making of individuals in organizations, and thus a significant contribution". The thesis takes such a behavioral perspective and offers insights into how individuals affect value-based pricing and selling. In so doing, it follows the tradition of recent business market research focusing more strongly on the individual level (e.g., Hallberg, 2017a, 2018; Hinterhuber, 2017; Töytäri, Keränen, & Rajala, 2017).

6.2 Theoretical contributions and implications

The thesis offers three specific theoretical contributions and implications. First, the thesis contributes with an analysis of individual influence on the organizational activities of pricing and selling customer value. The thesis' findings suggest that decisions and behavior at the individual level affect value capture at the firm level. These findings have implications for the level of aggregation in research on value-based pricing and selling. The crux of business research is that researchers are ultimately interested in firm-level outcomes such as profitability (e.g., net profit margin) or performance (e.g., ROA). While existing research has helped to understand the firm-level outcomes of value-based pricing and selling as a function of organizational processes and capabilities, the influence of individuals has been largely overlooked. Consequently, the thesis shows how investigating individuals enhances value-based pricing and selling research. The implications for future research include that researchers should collect information about key informants' individual differences in addition to

organizational variables. Moreover, marketing researchers who investigate business markets should build theories that explicitly include individuals and their key characteristics.

Second, the thesis highlights—through its appended papers—how bounded rationality and heterogeneity require a consideration of the influence of individuals' emotions (personality traits), cognition (personality traits, cognitive biases, experience, and price presentation), and motivation (learning orientation). These findings have implications for the assumptions of business-market theory. For instance, LaPlaca and da Silva (2016) highlight that research on business markets has started to accept the notion of bounded rationality. Indeed, instead of rationality and profit maximization, other—more realistic—assumptions about individuals within organizations are increasingly employed nowadays. Nevertheless, much research does not explicitly consider or analyze the bounded rationality of individuals within organizations or their heterogeneity. Hence, research on business markets is black boxing individual decision-making (Sheth and Sharma, 2006). While individuals within organizations are indeed bounded rational, they are so in foreseeable ways. The same applies to individual differences and their impact. In other words, the metaphorical black box of individual decision-making can and should be opened up and explored. Hence, research on business markets can use theories and methods from—among other disciplines—psychology to advance our understanding of that black box.

Third, the thesis outlined how a toolbox view of research—considering the distinct advantages offered by different research designs, theoretical foundations, and sampling frames—advances research on the micro-foundations of value-based pricing and selling. Thus, the thesis highlighted the benefit offered by a variety of research approaches compared to focusing on just a few. These findings have implications for how insights are achieved in empirical research. With a shift towards micro-foundations, researchers need to consider how research design, theoretical foundations, and sampling frames enable or hinder them to investigate individuals within organizations. The toolbox may help guide such considerations.

6.3 Practical contributions and implications

Value-based pricing and selling are not only topics of academic interest but also a very real challenge for business. Due to this practical aspect, the thesis contributes to the understanding of practicing managers who work with pricing or selling. The thesis' findings offer actionable takeaways for those managers. Below, I describe two specific ways in which managers can apply the research findings in their own work.

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First, prior evidence and this thesis' findings imply that a variety of micro-foundations influence pricing and selling value. Managers need to recognize and acknowledge this circumstance to attain and sustain a competitive advantage over rivals and make a fair profit for their own business. Yet, individuals and their effect on value-based pricing and selling are seldom explicitly considered in practice. Managers can use the findings to evaluate their own firm's current situation. In particular, the extent to which various micro-foundations can have both positive and negative effects on the amount of value their firms are able to capture should be interesting to assess.

Second, the thesis' findings have implications for a number of organizational processes directly or indirectly related to value-based pricing and selling. Managers can use the findings to adapt or design recruitment and selection processes for the personnel involved. In these processes, stable, trait-like characteristics, such as personality traits and learning orientation, may be assessed and considered as part of the recruitment and selection process. Furthermore, some micro-foundations require persistent and ongoing focus. For example, managers can focus on training, organizational design (i.e., routines and processes), and corporate culture to harness the positive effects of malleable micro-foundations, such as salespeople's experience and procedures to debias managers' pricing decisions. However, a persistent focus may be particularly problematic for smaller firms with limited resources. Smaller firms may thus have to rely more strongly on the recruitment and selection of key individuals.

6.4 Limitations and further research

This thesis is not without limitations; some offer potential fruitful directions for further research. Below, I highlight four limitations and provide specific suggestions for further research.

First, some of the appended papers (i.e., Papers II and IV) suffer from a problem common to research in business markets: small sample sizes. Small samples constrain data analysis and generalizability. It is important to remember this circumstance. Further research should thus replicate and extend the results of this thesis. Both exact and conceptual replications would increase confidence in the results and increase the scope of research on the micro-foundations of value-based pricing and selling. For example, exact replications could employ the same empirical context and constructs but extend the research by adding organizational variables (e.g., firm culture) and potentially also interactions between organizational and individual variables. For such an endeavor, larger samples would be necessary and beneficial. Moreover, further research may conceptually replicate the results in different empirical contexts, such as in

different business markets; for example, with pure service firms (i.e., non-industrial firms). From a theoretical standpoint, micro-foundations and value-based pricing and selling should be important for these firms too, but empirical insights remain limited.

Second, the empirical results of this thesis are based on hypothetical scenarios and cross-sectional data collected via surveys. This limits the findings to the extent that the respondents' answers have to be taken at face value. Yet, respondents may be unable or unwilling to answer truthfully. Thus, there is a need for more research *in situ*; that is, research that observes managers and salespeople in the field, for instance. It is not enough to conduct interviews since they may suffer from a similar self-report bias (for this argument, see Paper I). Interviews and surveys (and also experiments that ask for respondents' judgments) hinge on the assumption that respondents honestly describe and accurately remember circumstances. This factor may be especially critical in research contexts where triangulation with other data sources (e.g., through a case-study approach) is more difficult, such as research on micro-foundations. Instead, ethnographic and observational studies allow an understanding of the detailed and idiosyncratic aspects of the field (see also Papers I and III). Yet, ethnographic and observational studies come with a range of difficulties; amongst others, access and time constraints. However, industrial PhDs may have a unique opportunity to collect this type of rich and longitudinal data. Senior academics pursuing a sabbatical may also have the chance to immerse themselves for an extended period of time in a firm's day-to-day business. Alternatively, punctuated observations of critical incidents, such as pricing decisions during scheduled pricing meetings or salespeople's selling practices during customer contact, could offer similar insights without the same difficulties.

Third, this thesis is skewed towards the supply side. Most focus is put on supply-side respondents (i.e., managers and salespeople). Arguably, this is somewhat natural since this thesis' topic is the micro-foundations of value-based pricing and selling (i.e., the processes on the supply side). Moreover, the thesis is certainly in good company with the business-marketing literature at large, which also heavily favors the supply side.²⁶ While this thesis considers the demand side to some extent (e.g., Papers I and V), more research involving demand-side respondents would be fruitful. Specifically, purchasing managers and end-customers in business firms could be investigated as they are actually buying and using the goods and services (i.e., they are the ones whose perceived value *actually* matters). Marketing researchers need to focus more closely on these individuals because their responses are of vital importance to marketing theory and practice.

²⁶ This circumstance is perhaps unsurprising considering a "manufacturing/tech culture" (p.4) and the "small number of customers" (p.4) as among of the key characteristics of many business markets (Grewal & Lilien, 2012).

Chapter 6

Fourth, this thesis focused on individuals. The reason is the potentially large impact that key individuals can have on firms. However, teams or a range of individuals are increasingly involved in pricing (Carricano, Trinqucoste, & Mondejar, 2010), selling (Jones, Dixon, Chonko, & Cannon, 2005), and purchasing (Nagle & Holden, 2002). While it makes sense to focus initially on individual managers and salespeople, since it allows us to isolate effects, further research should move on and consider teams and groups of individuals. Further research could, for instance, move away from a key-respondent approach and instead collect information from all or the majority of members of the pricing, selling or purchasing function. Close cooperation with a few selected firms might be worthwhile to achieve greater insight into the collective aspect of micro-foundations and how the micro-foundations of value-based pricing and selling aggregate to the team or function (for a discussion of aggregation, see Barney & Felin, 2013).

It is vital to remember these limitations when assessing the results of this thesis, but it is also critical to remember that *all* research has limitations; perfect research does not exist. Instead of being disheartened by this observation, I choose to have a realistic view of what a single thesis can achieve. Individual contributions are germane, but the collective insight of a field is more important than any single study. It is central to remember this fact in light of the limited body of research on the micro-foundations of value-based pricing and selling; many research opportunities remain.

Endnotes

- [1] Taken verbatim from page 142 in Kotler, P. (2011). *Marketing insights from A to Z: 80 concepts every manager needs to know*. Hoboken, NJ: Wiley & Sons.
- [2] Taken verbatim from page 129 in Lewin, K. (1945). The Research Center for Group Dynamics at Massachusetts Institute of Technology. *Sociometry*, 8(2), 126–136.
- [3] Taken verbatim from page 2 in Box, G. E. P. (1979). Robustness in the strategy of scientific model building. Technical Summary Report #1954, May 1979.
- [4] Taken verbatim from page 209 in Comer, R., & Gould, E. (2010). *Psychology around us*. Hoboken, NJ: John Wiley & Sons.
- [5] Taken verbatim from page 119 in Makdisi, S. (2015). *Reading William Blake*. Cambridge: Cambridge University Press.
- [6] Taken verbatim from page 123 in Merton, R. K. (1942). A note on science and democracy. *Journal of Legal and Political Sociology*, 1, 115–126.

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