
Practice Article

Value assessment and pricing capabilities— how to profit from value

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ABSTRACT Value is a key concept for researchers and practitioners in the fields of strategy, marketing, and pricing. In the strategy literature, value is closely related to competitive advantage and profit, in the marketing literature value is the cornerstone of the marketing management process, in the pricing literature value represents the customer's willingness to pay. The aim of this article is to bridge the gap between marketing, pricing and strategy research through a compilation of five short essays that focus on value assessment and pricing capabilities. This article argues that value assessment and pricing capabilities provide the foundation for value creation and value appropriation in business-to-business markets, highlights their implications for profiting from value created and delivered, and outlines important areas for future research.

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INTRODUCTION

Value is a key concept for researchers and practitioners in the fields of strategy, marketing, and pricing. In the strategy literature, a firm's competitive advantage stems from its ability to create value for its customers, and value is defined largely as the difference between a customer's perceived utility from a given product and the firm's cost of producing it (Porter, 1985; Bowman and Ambrosini, 2000; Mizik and Jacobson, 2003; Peteraf and Barney, 2003; Besanko *et al.*, 2010). In the marketing literature, value is considered as the cornerstone of the marketing management process, and usually defined as the customer's subjective perception of the benefits and costs involved in an exchange (Ulaga & Eggert, 2006; Anderson *et al.*, 2008; Grönroos, 2011). And in the pricing literature, value is considered as the key lever to increasing profitability, and usually defined as the customer's willingness to pay (Nagle and Holden, 2002; Liozu *et al.*, 2012; Hinterhuber, 2013). What is common to each of these literature streams is that to benefit (or profit) from value, firms need to be able to leverage their value assessment and pricing capabilities, and quantify and communicate the potential and delivered value to their customers (Anderson *et al.*, 2006).

By value assessment, we refer to activities related to understanding, documenting, and communicating value created for and with customers (Payne and Frow, 2005; Anderson *et al.*, 2006), and by pricing, we refer to activities related to setting and getting prices that enable firms to appropriate a profitable portion of the value created (Dutta *et al.*, 2003; Hinterhuber, 2004; Wagner *et al.*, 2010, see also Ingenbleek and van der Lans, 2013). Prior research has considered value assessment and pricing activities in business-to-business (B2B) markets mainly as a responsibility of, marketing, and pricing units, who work in close interaction with customers (for an overview of various types of value assessment and pricing methods see for instance Anderson *et al.*, 1993; Lipovetsky *et al.*, 2011). This view, however, underemphasizes value assessment and pricing capabilities

that leverage resources from several organizational functions, and are exercised in a strategically concerted fashion throughout the whole organization. Capabilities play a key role in several research streams, and the aim of this article is to bridge the gap between customer value-oriented marketing, pricing and strategy research by pointing to a few important areas of value assessment and pricing capabilities that are central to profiting from value delivered.

Capabilities can be seen as special, firm specific, types of resources (Makadok, 2001) in the form of a collection of routinized activities (Winter, 2003) or as the skills being exercised through organizational processes (Day, 1994). Hence, we view value assessment and pricing capabilities as routinized activities or processes that ensure repeatability and reliability in the firm's assessment of the value it creates and appropriates.¹

Prior research on capabilities has to a large extent focused on the role in value creation or cost reduction in order to gain a competitive advantage (Peteraf and Barney, 2003). However, several scholars (for example, Pitelis, 2009; Pitelis and Teece, 2009; Ellegaard *et al.*, 2014) have emphasized the importance of capabilities required to appropriate value and the interaction between value creation and value appropriation capabilities of the firm. Among the studies of capabilities that focus on appropriation we find work related to pricing capabilities (Dutta *et al.*, 2003), although they do not deal explicitly and exclusively with value assessment or value-based pricing techniques.

Successful value assessment aims to make the created and delivered value visible to customers (Payne and Frow, 2005), which in turn facilitates value appropriation through value based pricing (Hinterhuber, 2008a). Hence value assessment and pricing capabilities are closely related, and viewing them as firm capabilities emphasizes a holistic perspective where value creation and value appropriation cut across a multitude of functions of the firm. This is in line with the recent calls in marketing literature to connect business processes that cut across traditional organizational silos, especially related to

value creation and value appropriation (Bolton, 2006; Ellegaard *et al*, 2014).

Background

This article provides five different perspectives on the role of value assessment and pricing capabilities through a compilation of five short essays that are based on some of the key presentations from a workshop on the topic of Value Assessment Capabilities organized by the Institute of Economic Research, Lund University, Sweden in May, 2014. The first two essays have a strategy perspective, and they address value assessment capability as an integrative process, and illustrate how it might be deployed in practice. The next two essays have a pricing perspective, and they address the behavioral barriers to implementing value-based pricing and establishing socio-technical pricing capabilities. Through these two essays we provide a link between value assessment capabilities and their implementation, and the way that they relate to pricing and pricing capabilities. Finally, the last essay outlines the need for future research on value quantification, with a particular focus on B2B markets. Overall, the purpose of these five essays is to provide a synoptic view of important areas related to value assessment and pricing capabilities in B2B markets, and highlight their implications for profiting from value created and delivered.

LAYING THE FOUNDATION FOR FUTURE VALUE CAPTURE – VALUE ASSESSMENT AS AN INTEGRATIVE CAPABILITY, MAGNUS JOHANSSON

Performing value assessment often ends up being the responsibility of the pricing function of the firm. The reason for this is that when a new product finally reaches the point where price has to be set the question of value has to be addressed. So pricing will have to make sure that it has a reasonable value estimate to base its

price setting on. The exception is of course when the firm does not care at all about market value when pricing its products or services, but instead relies on cost-plus or competition-based pricing.

Since pricing often comes in late in the process of product development, when the value assessment is finally done it might be too late. The product may already have a cost base that exceeds the value that it can command in the market. As Nagle and Hogan (2006) state, the value creation process should start with customers and the customer value that needs to be created, after that price, cost and product definitions can be addressed. And it is in the interest of the pricing function to push the value assessment capability further back in the organization so that it gets to price products with the right value offering and cost level. Value assessment is not a pricing problem but is a problem that the whole organization must address.

Value assessment activities that truly put customers and value first have to handle a number of challenges. For instance, needs and value perception may vary on the individual level of the customer, which increases the complexity of value assessment (Corsaro and Snehota, 2010). This is common for B2B-settings and services where customization provides customer unique value. Another challenge of value assessment stems from innovative industries where the pace of change makes future value estimation difficult. To estimate the exchange value of a product the firm needs to assess not just future customer preferences but also how fast competitors will fulfill the new demands of customers (*c.f.*, Möller and Törrönen, 2003). In general, innovation introduces risk into an industry, and if innovation involves technology as well as market changes, the higher the risk level is (Assink, 2006).

Example: Stream of product generations with innovation

To illustrate the challenges of value assessment on innovative markets consider a market where

new products or new product generations are constantly introduced. Each new product or product generation involves a competitive race where new features are brought to the market and where timing is essential.

Since value creation should start with customers and value, the firm needs to estimate future value perception of a new product concept and whether competitors will make it to the market before or after the firm manages to do so. Since many products can have long development cycles, estimates may concern customer value perception and competitor offering estimates several years ahead. A key issue is to try to estimate what will be a differentiating value of the firm's product and what will end up as a commodity value at launch because of competition, that is, what parts of the use value will constitute differentiation versus commodity value (Smith and Nagle, 2005) at launch.

Firms need to decompose their products and their competitor's products into value drivers and then analyze what technologies provide innovation value for these value drivers. For future products the focus should be on the key technologies that provide the prime innovation value. To achieve this, value assessment needs to be integrated with technology forecasting to provide estimates of the timing, value and content of future product and product generations.

On markets where new technologies are introduced at a constant rate such analysis can be supported by considering the pace of the industry and its players (Eisenhardt and Brown, 1998). Within the limits of incremental innovation, firms are constrained in introducing new technologies in their products because of the risks that these incur. Therefore, they are often introduced at a regular pace (see Figure A1) that also provides opportunities for competitor analysis, especially when trying to forecast value, content and timing of new product releases. Historical analysis of technologies and price relations can add to this picture by providing estimates of value erosion. Keeping track of the industry pace in relation to value can also help

provide early warnings of disruptive behavior of competitors (Christensen, 2003; Assink, 2006).

The integrative role of value assessment capability

Value assessment therefore requires integration with technology forecasting, competitor and customer intelligence as well as with R&D, product & portfolio management and marketing. Value assessment should therefore be viewed as an integrative capability (Yeoh and Roth, 1999) in the form of an integrative and iterative set of routinized activities.

The process of value assessment integrates internal functions, capabilities and resources as well as external data. Since it also has to deal with value assessment of future offerings it is iterative (see Figure A2) in refining its value estimate toward product launch. It is a central process to the firm because of the strategic importance of the value concept (Porter, 1985; Brandenburger and Stuart, 1996) and of the concept of competitive advantage as defined from the perspective of value creation (Peteraf and Barney, 2003). Value assessment is central for value creation, value capture and decision making of the firm.

Implication for pricing and its profit impact

Although one of the two common definitions of competitive advantage relies solely on value creation, the ability of the firm to assess value will influence not just value capture activities but also support value creation activities making them more effective. Assessing value, which is essential if applying a value based pricing approach, is far from cost free. It requires resources being put to use in value assessment activities. To ensure reliability and efficiency value assessment capability as an organizational process, in the form of a set of routinized activities, must be collective, that is, coordinating and integrating individual resources (Felin *et al*, 2012), repetitive (Helfat and Peteraf, 2003) and supported by the appropriate organizational

structures (Felin *et al*, 2012). Of particular importance is that the activities can be supported by appropriate structures through various stages of the product development and life-cycle stages and the various functions that are involved. An efficient value assessment capability should be one of the first priorities of the firm as it helps identify one of the key parameters of competitive advantage of the firm, the value level provided to the market. Thus, it provides the framework for value creation and value capture activities of the firm, and essentially lays the foundation for the organizations ability to capture profit. In particular, firms with a well-developed value assessment capability can help improve communication of value to customers and strengthen the bargaining position of the firm and thus the opportunity to capture more value through pricing.

STRATEGY AND ORGANIZATION – HOW TO DEPLOY VALUE ASSESSMENT CAPABILITY, JOONA KERÄNEN

The central role of capabilities in creating value and achieving superior performance has long been recognized in the marketing and management literature (for example, Helfat and Peteraf, 2003). Organizational capabilities are often regarded as ‘complex bundles of skills and accumulated knowledge, exercised through organizational processes’ (Day, 1994, p. 38), or ‘a firm’s capacity to deploy resources for a desired end result’ (Helfat and Lieberman 2002, p. 725). From this perspective, understanding the processes and resources that are needed to deploy a firm’s value assessment capability is key to delivering and capturing value.

Owing to that value assessment is often regarded as a sales or pricing activity, prior research has focused on exploring the related processes, resources, and activities in these domains (Dutta *et al*, 2003; Töytäri *et al*, 2011). However, as modern B2B markets have become more complex, several studies have

illustrated difficulties encountered by sales and pricing organizations when trying to appropriate and capture value from customer engagements (for example, Hinterhuber, 2008a; Ellegaard *et al*, 2014; Ulaga and Loveland, 2014). In reality, delivering, evaluating, and capturing value has increasingly become a cross-functional and firm-wide effort that goes beyond the sales or pricing unit’s responsibilities (Sheth and Sharma, 2008).

For example, emerging research findings indicate that best practice firms in B2B markets tend to employ customer value assessment strategies that utilize several organizational functions (Keränen and Jalkala, 2014). Instead of an activity that is only delegated to sales or pricing, these firms see value assessment as an organization-wide process that leverages resources, skills, and knowledge from all of the firm’s customer facing organizational units including sales, delivery, service and marketing. In essence, best practice firms have understood that successful value creation and value capture requires strategic alignment of resources (Mizik and Jacobson, 2003), and, consequently, established organizational structures and routines that facilitate value assessment throughout the whole life cycle of customer engagement.

Examples from best practice firms

Leading firms in the enterprise software industry, Oracle and SAP, leverage their industry knowledge and consulting skills by establishing designated organizational units and value specialist teams that focus on evaluating and quantifying business benefits that customers receive from their products and services. These value specialist teams have two important functions: first, they work in close collaboration with sales, production, and R&D, combining customer insight with engineering to maximize value delivered to customers. Second, and perhaps even more importantly, they help marketing and pricing to demonstrate the actual worth and monetary value that customers will realize from the firm’s products and services. This improves

the chances that products and services are created to fulfill valuable customer needs, and that customers are willing to accept pricing logics that are based on value delivered to customers.

However, securing commitment to value assessment and coordinating resources from several organizational units requires strong support from senior management. For example, SKF, a global industrial bearings supplier has placed value management on their top agenda. To implement this strategy, SKF has appointed global value managers, whose mission is to develop value quantification tools and value propositions that will make potential cost savings and other benefits visible to prospective customers and other stakeholders, and ensure that the activities of the whole organization are aligned with these goals.

Strategic initiative

By recognizing the strategic and long-term nature of value assessment, best practice firms have avoided the typical pitfall with which most firms in B2B markets tend to struggle: short-sighted management that treats value assessment as a tactical activity, left to individual sales reps to conduct at their own. This approach underutilizes skills and knowledge about prior deliveries that have accumulated within the organization, and usually results in arbitrarily set pricing strategies with very little, if any, concrete evidence on potential value that the customer is expected to gain.

An 'ideal' value assessment process should, at least, evaluate how a supplier can add value to its customers' business, measure customers' current performance and, ultimately, ensure that promised value added is realized in the long term (Keränen and Jalkala, 2014). This takes time, commitment, and coordinated activities aimed at understanding how customers actually benefit from the supplier's products and services in their own value-generating processes. Specifically, to evaluate how customers actually utilize the supplier's value proposition, firms

need to look beyond sales and pricing, and leverage organizational units who have a better visibility to customers' everyday operations. The value from the supplier's offering is often realized long after implementation (Tuli *et al*, 2007), and field technicians and service people represent key resources that are needed to delve deep into customers' world of product usage and value creation in B2B markets (Uлага and Reinartz, 2011).

Implication for pricing and its profit impact

Successful firms know how to deliberately allocate organizational resources such as processes, routines, and people, to evaluate, document and demonstrate the value and business benefits their offerings deliver to customers. By providing credible value evidence on the potential benefits of their offerings, suppliers can reduce customer's uncertainty to purchase higher-priced offerings (Anderson and Wynstra, 2010), and barriers to accept value-based pricing strategies (Hinterhuber, 2008a). The first step toward a more efficient deployment of value assessment capability is often the realization that, instead of merely sales or pricing activity, it is strategic initiative that involves several organizational functions. This allows management to take a closer look at their resource portfolio, and choose the optimal strategies and organizational structures that are needed to ensure that suppliers actually profit from the value delivered.

BEHAVIORAL BARRIERS TO VALUE BASED PRICING, LINN ANDERSSON

Despite the strong impact pricing has on profitability (Dutta *et al*, 2003) and the advantages of value-based pricing (Anderson and Narus, 1998; Hinterhuber, 2008a; Hinterhuber and Bertini, 2011), surprisingly few B2B firms succeed in developing a pricing capability that enables them to match prices with the products' customer value (Hinterhuber, 2004; Lancioni, 2005;

Hinterhuber, 2008a). One reason to why few managers decides to invest resources in implementing ambitious value-based pricing strategies is the belief that prices are automatically determined by external factors, such as customers and competitors, and therefore consider price setting as a response to changes in customer and competitive situation (Dolan and Simon, 1996; Nagle and Holden, 2002). A second reason is difficulties in communicating the product's customer value to the customer (Hinterhuber and Bertini, 2011). Another major challenge for managers when managing the firm's pricing processes is the pricing authority delegation decision, for example, deciding who should have the authority to grant discounts.

A common practice within B2B firms is to delegate the pricing authority to the individual sales representative (Richards *et al*, 2005). Sales representatives are likely to accumulate in-depth customer specific information throughout the many customer interactions. Therefore, sales representatives are often in a better position *vis-à-vis* management to set and negotiate prices with individual customers (Joseph, 2001; Mishra and Prasad, 2005; Homburg *et al*, 2012). Since communicating the sales representative's tacit knowledge that they gain from continuous customer interactions to others in the organization is difficult (Szulanski, 1996) and often costly, the company often has to rely on each individual sales representative, especially if the pricing strategy is to match the product's often idiosyncratic value to individual customers. Consequently, the individual sales representative plays a key role in the firm's ability to maximize gross-profit margin (Anderson *et al*, 2007; Blocker *et al* 2012; Haas *et al*, 2012). Given the information asymmetry, managers might decide not to interfere in the sales representative's decision making in customer negotiations and instead choose output control in form of monetary incentives (Hinterhuber, 2004; Nagle and Hogan, 2006; Hinterhuber, 2008a).

A sales representative that is measured and rewarded on gross profit margin might be more willing to walk an extra mile. Yet the fact that

managers often finds it difficult to implement value-based pricing (Hinterhuber, 2004; Lancioni, 2005; Hinterhuber, 2008a), despite the wide spread practice of rewarding the sales force based on profit contribution, combined with the flora of pricing techniques that have been known to most industries for quite some years (see Dolan and Simon, 1996; Monroe, 2005; Marn *et al*, 2004) indicates that relying on monetary incentives and training in pricing techniques is not sufficient in order to implement value-based pricing. Hence, our theoretical understanding of value-based pricing implementation is not complete.

A longitudinal, case study of a three-year value-based pricing implementation project in a global, manufacturing B2B firm, based on 59 semi-structured interviews with respondents ranging from higher level management to sales representatives (see Andersson, 2013 for detailed case study description), showed that the key success factor to achieve value-based prices was to address the following behavioral obstacles; (i) the influences of hedonic intrinsic motives on individual behavior (Lindenberg, 2001), causing sales representatives to prioritize friendly, pleasant customer relations at the expense of profit maximization, (ii) individuals tendency to behave in a myopic manner (Cyert and March, 1963; Levinthal and March, 1993), causing price setters to use discounts as a means to quickly close a deal even when it has a negative influence over profit margin contribution, and (iii) individuals' uncertainty-avoidance in decision processes and tendency to stick to already established procedures (Cyert and March, 1963), causing price setters to turn to historical prices instead of trying to negotiate higher-profit margins.

Hedonic intrinsic motivation explains why individuals in some situations prioritize the type of behavior that simply makes them feel better here and now over behavior that result in a future reward (Lindenberg, 2001). Hedonic intrinsic motivation is distinguished from both normative intrinsic motivation, referring to incentives that make individuals behave

according to what they believe that norms stipulate to be appropriate, and extrinsic motivation, which generally concerns more unpleasant actions that individuals undertake in order to achieve a reward (Lindenberg, 2001). The case study findings showed that close customer relationships often develop into something that resembled friendship between the sales representatives and the customers' representatives, which in turn sometimes resulted in the sales representative granting discounts as a sympathetic gesture, and deliberately avoided price discussions. Owing to hedonic intrinsic motives, the sales representatives were inclined to prioritize a nice, pleasant, friendly meeting with the customer over value-based prices and higher-profit margins, also in situations when the sales representatives were rewarded based on gross profit margin contribution. Hence, instead of capturing the customer value in customized value-adding arrangements based on in-depth customer understanding accumulated during years of close relationships, the sales representatives were instead often inclined to grant discounts as a gesture of friendship.

Like individuals in general, salespeople prioritize short-term gains before long-sightedness, simply because that is the human nature (Cyert and March, 1963; Levinthal and March, 1993). The case study showed that influence from myopic behavior caused sales representatives to sometimes grant discounts in order to close a deal as quickly as possible even if that meant accepting a lower gross profit margin.

Lastly, the sales representatives in the study tended to favor historical prices instead of revised prices, also in situation when historical prices were clearly unprofitable because of increased cost of production. One reason for this is the human nature of seeking to avoid uncertainty in decision process (Cyert and March, 1963). A key challenge with value-based pricing is that the pricing decision process often involves uncertainty concerning the idiosyncratic product value to individual customers, which causes sales representatives to rely on historical prices because of uncertainty avoidance.

Implication for pricing and its profit impact

When management at the case firm identified mentioned three behavioral barriers to value-based pricing, they decided to restrict the individual sales representative's influence over prices and discounts. This compromised the sales representatives' autonomy to influence prices to individual customers, but it resulted in higher profit margins. Management concluded that although the individual sales representatives often had an information advantage *vis-à-vis* management regarding individual customers, they were not in a better position to match price with the products' often idiosyncratic value to individual customers. Even though the sales representatives might be in a better position to assess the products' value to individual customers, the strong impact from behavioral barriers for profit margin maximization motivated the decision to restrict the individual sales representatives' pricing authority.

Although some publications addressing challenges with implementing new pricing strategies might recognize difficulties with changing 'the mindset for pricing' among salespeople (for example, Lancioni, 2005), they seldom elaborate on this observation. The case study identified three behavioral obstacles that need to be addressed in order to implement value-based pricing.

PRICING CAPABILITIES FROM A SOCIO-TECHNICAL PERSPECTIVE, STEPHAN LIOZU

Pricing is an organization discipline that can be adopted and internalized only through the design and implementation of an intentional transformational strategic roadmap aimed at generating and developing organizational capital in pricing.

For a successful transformation in pricing, managers in charge must think like socio-technical designers and must pay equal attention to technical and humans resources and capabilities in pricing as shown in Figure A3. The technical resources and capabilities relate to

infrastructure, information systems, pricing analytics, tools & models and advanced pricing methods (Hallberg, 2008). Social or organizational capabilities relate to organizational change capacity, organizational confidence, championing behaviors and organizational design of pricing organization (Liozu and Hinterhuber, 2012). This strategic roadmap becomes a journey toward pricing excellence that leads to superior relative firm performance (Liozu, 2014).

Research questions

A careful review of the analysis in the area of pricing capabilities from a socio-technical perspective uncovers significant research gaps. The first gap relates to the social, human, and organizational dimensions of firms that can positively impact the pricing transformation towards pricing excellence but also positively impact firm performance. Second, pricing is traditionally considered by many practitioners as a function mostly characterized by its technical and analytical dimensions. It is therefore equally critical to identify the organizational capabilities that can increase the technological adoption of pricing resources and ensure a successful organizational transformation. Finally, to the best of our knowledge, a comprehensive quantitative scale to measure pricing capabilities as a construct does not exist (Liozu and Hinterhuber, 2014).

These three gaps represent the basis for the research questions addressed in this research stream and presented in Figure A4.

Overview of research design

The overall research design was informed by a problem of practice, by our strong practitioner experience, as well as by various research methodologies studied over the past years. The lack of attention to and interest in the field of pricing, and particularly pricing capabilities, guided the overall research agenda. The overall design for addressing the research questions embraces a mixed methods approach (Creswell, 2009) and is aligned with the declared research gaps and the related research

questions shown in Figure A4. Three distinct empirical studies were designed and executed sequentially from 2010 through 2012 (one qualitative inquiry and two quantities surveys).

Development of an integrated model

We propose a model for the adoption and internalization of pricing over time. This model depicts the interconnection between technical pricing capabilities and organizational capabilities at every stage of the pricing transformation. On the basis of our research findings and practical experience in conducting such a pricing transformation, in the next section, we discuss five stages of transformation toward pricing excellence.

Stages of Transformation – There are five distinct stages of transformation (see Figure A5). During each stage, technical pricing resources are deployed and necessary pricing activities are implemented. Stage 1 is a stage of realization and exploration during which a firm’s managers understand the nature of their problems and engage in search (Cyert and March, 1963) and mindful scanning behaviors (Fiol and O’Connor, 2003) to explore potential solutions.

From Stage 1 on, and assuming they have found potential solutions, firms proceed to stage 2 to build a knowledge foundation in pricing to prepare the future. At this stage, technical pricing activities might include conducting training on basic technical concepts. This stage is critical for initial cultural appropriation of future pricing resources (Geels, 2004). Stage 3 is the phase of experimentation during which pilot projects are conducted. Firms stay in experimentation mode until success is demonstrated across several pilot projects. Stage 4 is a step of increased adoption once technical pricing capabilities prove successful in delivering the intended outcome. Finally, Stage 5 is an acceleration of the transformation process with the deployment of pricing resources at the enterprise level. At this stage of the transformation, pricing has become embedded in the fabric or DNA of the firm (Forbis and Mehta, 1981). The journey through the stages is different for each firm. Firms will adopt various

pricing resources at different stages, and each stage may be longer or shorter depending on the organization's capacity to change and learn. There is no copy-and-paste template for this process. Each firm will have to design a specific roadmap in order to undertake this journey and reach the desired level of performance.

Constant interaction between technical and social dimensions

As technical pricing resources are deployed in the organization, constant interactions occur between the technical and social dimensions of change. Organizational change is a learning process that requires the development of a learning community inside the firm (Pasmore, 1995) and among users of technology. Because deployed pricing resources become increasingly technical and complex at each stage the intensity of learning must remain high level at each stage. Two organizational capabilities associated with pricing – organizational confidence and organizational change capacity – will also grow in intensity from stage to stage, as depicted in Figure A6. The increase in intensity is correlated with the increase in organizational scope of the programs as well as the increased level of complexity. The third organizational capability, related to championing behaviors, remains constant throughout the journey to provide sustained support and drive to the overall implementation (Liozu *et al*, 2014). All three organizational capabilities were positively and significantly linked to relative firm performance composed of sales growth, profit, and pricing power.

Dynamic learning environment

A critical element of this capability assimilation model is the feedback loop between the various stages indicating a need to experiment with pricing concepts and resources. Experimentation may lead to increased success and therefore increased adoption (Thomke, 2003). But it may also lead to failures and a need to modify the roadmap for this difficult transformation. Pilot studies and projects happening in Stage 3 of the

transformation are therefore critical to ensure that pricing technologies are deployed successfully and supported by the appropriate capabilities and to show a significant impact to the bottom line. Feedback loops are important to ensuring that the pace of change is controlled and that firms move from stage to stage when ready. Pacing changes and ensuring high levels of absorptive capacity (Cohen and Levinthal, 1990) are part of the required behavioral repertoire leaders must adopt to promote knowledge assimilation and cultural appropriation (Geels, 2004).

Implication for pricing and its profit impact

By developing conceptions of technical and social pricing capabilities, we hope that pricing practitioners might realize the complex nature of technical and social pricing capabilities. This realization then may lead to a desire to further explore both dimensions of these capabilities and request additional training focused on social and organizational elements of change. Our quantitative studies revealed a very significant and positive relationship between pricing capabilities and relative firm performance. We hope that pricing leaders in charge of pricing resources, programs, and activities will find these results useful with respect to designing and organizing pricing roles and responsibilities, and to reinforcing their firm's pricing sophistication by adopting modern pricing methods and organizational design. Showing the link between pricing capabilities and relative firm performance can help to build more credibility for the pricing discipline and to make the case for greater future investments.

VALUE QUANTIFICATION AND FIRM PERFORMANCE IN INDUSTRIAL MARKETS – AN AGENDA FOR INQUIRY, ANDREAS HINTERHUBER

Pricing is certainly a key function in business: 'Of all the tools available to marketers, none is more

powerful than price' (Han *et al*, 2001, p. 435). In industrial marketing, pricing has one further, distinctive twist: industrial marketing managers must quantify the benefits delivered to customers in order to document that the quantified value delivered to customers is larger than the price or, with competition, that the quantified incremental value over the customer's best available alternative is larger than the price premium. To be clear: Industrial marketing managers must quantify both value and price.

This is not the case in consumer products: consumers translate perceived value into utility and will purchase only if this self-calculated utility is larger than the purchase price (Miller *et al*, 2011).

Value in B2B markets 'is the worth in monetary terms of the economic, technical, service, and social benefits a customer firm receives in exchange for the price it pays for a market offering' (Anderson *et al*, 2008, p. 6). According to this view, value is equal to the sum of the benefits customers receive as a result of the purchase. This conceptualization, quite frequently used in the marketing literature (Forbis and Mehta, 1981; Nagle and Holden, 2002; Hinterhuber, 2004; Liozu *et al*, 2012) as well as in the strategic management domain (Priem, 2007) has the advantage that value is quantified independently of price: changes in, for example, prices, discount levels or payment terms do not change the amount of customer value as defined here. Industrial purchasing managers will thus buy from those suppliers offering the largest absolute difference between value and price (Anderson *et al*, 2006).

Value quantification is thus a core and distinctive element of industrial marketing. The value proposition (Lanning and Michaels, 1988) or alternatively, the value word equation (Anderson *et al*, 2006) are instruments designed to translate customer value into quantified, monetary benefits: Anderson *et al* (2006, p. 96): 'a value word equation expresses how to assess the differences in functionality or performance between a supplier's offering and the

next best alternative and how to convert those differences into dollars.'

Numerous studies suggest that very few sellers have the capabilities to quantify the value proposition for their customers (Anderson *et al*, 2007; Hinterhuber, 2008a). Practicing managers concur: Snelgrove (2013), Chief Value Officer of SKF states: 'Best in class companies have taken the time, effort, and focus to quantify the value of their products and services. If you can't, purchasing will have no choice but to ask for a lower price.'

Intuition would suggest that the ability to quantify and document value to customers positively influences performance in industrial markets; so far, however, we do not have empirical data to substantiate this intuition. Value quantification is thus a substantial problem of practice as well as an area where further academic research is warranted.

Quantifying value in B2B markets – challenges

Value is not an inherent property of goods and services, but a property that customers ascribe to them. This poses three challenges: the multidimensionality, the subjectivity and the discoverability of value.

First, value in industrial markets is multidimensional (Hinterhuber, 2008b; Terho *et al*, 2012): suppliers create value for their customers by providing tangible, quantified financial benefits (that is, revenue increase, cost reduction, working capital reduction and risk reduction) as well as by providing qualitative, intangible benefits (for example reputation, experience, relationship benefits, status and ease of doing business). Customer value quantification thus inevitably requires quantifying both financial benefits as well as non-financial, qualitative benefits into one monetary measure of total customer value created; the relative importance of financial versus non-financial benefits will vary across offerings and customers. Aggregating financial and qualitative benefits into one monetary measure of total value created is a non-trivial

challenge: many of the available approaches to quantify customer willingness to pay (for example, conjoint analysis, BDM) require sample sizes that are larger than the ones typically available in industrial markets. As a consequence, the literature suggests to resort to expert estimates to estimate customer willingness to pay (for example, Nagle and Holden, 2002; Anderson *et al*, 2007), but so far we do not have a single rigorous study comparing the performance of these approaches with real purchase data or with the value actually delivered to industrial customers.

Second, value is subjective, that is, customer-specific (for example, Grönroos, 2011). Value is always relative to one, and only one customer. With the exception of customized products or services it may, however, not be technically feasible to quantify customer value on an individual basis – a customer segmentation and aggregation is thus required: Broadly defined, customers in industrial markets can be segmented by how they perceive value from suppliers (DeVincentis and Rackham, 1998):

- Price buyers: these buyers invest minimum resources in the relationship with suppliers. The relationship with suppliers is transactional and the primary interface is the purchasing department. The time horizon is short, cooperation is minimal and price is the predominant purchase factor.
- Total cost of ownership buyers: Total cost of ownership (TCO) is the ‘sum of purchase price plus all expenses incurred during the productive lifecycle of a product minus its salvage or resale price’ (Anderson *et al*, 2008). TCO is exclusively concerned with the cost side of customer value and thus neglects the value of customer-specific benefits (Anderson *et al*, 2008; Piscopo *et al*, 2008). TCO buyers expect to collaborate with suppliers to identify opportunities for joint cost reductions. The relationship with suppliers is consultative and the primary interface is operations (for example, manufacturing). Price is not the main purchase factor if a higher price allows for reducing the overall cost of ownership.

- Total value of ownership buyers. Companies such as SKF have found ways to document to customers the total value created – beyond TCO. This requires that elements such as the quality of the relationship, a track record of superior performance and other soft factors are quantified into a monetary value that reflects the sum of customer benefits created, financial as well as intangible (Snelgrove, 2012). Total value of ownership buyers enter into strategic partnerships with suppliers, exchange know-how and competencies and aim to jointly create more value – as opposed to jointly reducing the total costs of ownership. The relationship with buyers is enterprise wide and the main interface is frequently general management.

The following figure illustrates the impact of differences between customers on subjective perceptions of value (DeVincentis and Rackham, 1998). Figure A7.

Quantifying customer value where differences between customer segments are significant or where segment membership is difficult to establish is thus likely fraught with difficulties. Furthermore, an open research question is: what are factors that explain why different customers assign a different economic value to substantially similar purchase offerings in industrial markets?

Third, value discoverability. Research in consumer markets points out that customer willingness to pay is ultimately unobservable (Voelckner, 2006). Unobservability may not be the main issue in industrial markets – substantial research (for example, Plank and Ferrin, 2002; Terho *et al*, 2012; Keränen and Jalkala, 2014) as well as individual practitioners (Snelgrove, 2012) point out that industrial suppliers go great lengths to quantify and document value to customers.

The main issue in industrial markets rests on the weak, quite possible negative, incentives customers have to fully reveal the total value created by their suppliers which, *de facto*, is value co-created together with their suppliers (Grönroos and Voima, 2013): Recent qualitative research suggests that customers are very reluctant to fully reveal the total economic benefits that

products or solutions create within their organization (Rosenback, 2013). One reason is the fear that the documentation of the full economic value created could motivate suppliers to ask for a commensurate price increase. In other words, suppliers do have incentives to document that the total value exceeds the purchase price or, with competition, that the incremental difference in value between alternative suppliers exceeds the price premium. In the organization of their customers the total value created may exceed this amount by a very substantial amount, and customers will be very reluctant to reveal this to their suppliers; customers will, of course, reveal all those instances where the value actually realized falls short of the value promised. So far, academic research has not yet found convincing answers on how to motivate customers to reveal the full economic value co-created with their suppliers without triggering requests for price increases by their suppliers. Value in B2B markets may be observable by customers, but it may be difficult to discover by suppliers.

A tentative research agenda

In light of the above it seems worthwhile to conduct systematic research to answer the following questions:

- What are value creation capabilities? Quantitative surveys are required to operationalize the construct.
- Value quantification and firm performance: in view of the importance of value quantification in industrial marketing practice it is surprising that we do not know if value quantification leads to superior firm performance. Of particular further interest are contingency and moderation effects.
- The multidimensionality of value: we need approaches that measure the value of qualitative customer benefits (for example, reputation, brand, ease of doing business, relationship quality) as well as the value of quantitative, financial benefits with small sample sizes.
- The subjectivity of value: we need further research that explores why and how different

customer segments assign different economic value to substantially similar purchase offerings.

- The discoverability of value: we need further research that explores how suppliers motivate customers to disclose the total economic value created.
- The micro-foundations of pricing: are characteristics at the individual level (for example, psychological traits) an explanation for organizational outcomes in value quantification and pricing capabilities?

This list of research questions should provide a stimulus for further research although it certainly is not exhaustive.

CONCLUDING DISCUSSION

Value assessment and pricing capabilities play a central role when firms want to profit from the value they create and deliver to their customers. We argue that firms should recognize the resources (that is, processes, structures, and people) and collective efforts needed to make value assessment and pricing efficient and reliable, that is, capabilities of the firm.

In this article we have shown how value assessment and value-based pricing capabilities are closely related, and the organizational obstacles associated with deploying and implementing these capabilities at the firm's operational level. We have also argued how these capabilities stretch beyond the sales and pricing domain, and should be viewed as organizational capabilities that provide the foundation for value creation and value appropriation activities in B2B markets. Managers should recognize the firm-wide nature of these capabilities and how they leverage resources from several functions of the firm. By doing so, the firm can establish a foundation that can help to guide value creation and appropriation activities and ensure that firms actually profit from value delivered.

FUTURE RESEARCH

While this article provides a synoptic view of important areas related to value assessment and

pricing capabilities in B2B markets, future research could take a more in-depth approach, and investigate how these capabilities, or their deployment and the related challenges, varies across different business contexts. Another interesting research area would be to outline the differences and interdependencies between value assessment and pricing capabilities. Since value creation is the core element of profitable exchange, firms need more understanding on the capabilities that allow them to successfully appropriate a profitable portion of the value delivered. From this perspective, future research would benefit greatly from integrating the fields of marketing, pricing, and strategy, within which advances so far have been partly done in parallel. An increased cross-fertilization of these areas would most likely help us moving forward toward a better understanding of how firms can profit from the value they create and deliver to their customers and broader stakeholder networks.

NOTE

1 By value creation, we refer to the total value that is created in a collaborative exchange between a supplier and a customer, and by value appropriation, we refer to the net value that a supplier (or a customer) can successfully claim (see for example, Wagner *et al.*, 2010). While the service-logic of marketing (for example, Grönroos, 2011) advocates a different conceptualization, where *value creation* refers to customers' activities, and *value generation* to suppliers' activities in creating value-in-use, we use the term 'value creation' to refer to the collaborative activities between suppliers and customers.

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APPENDIX

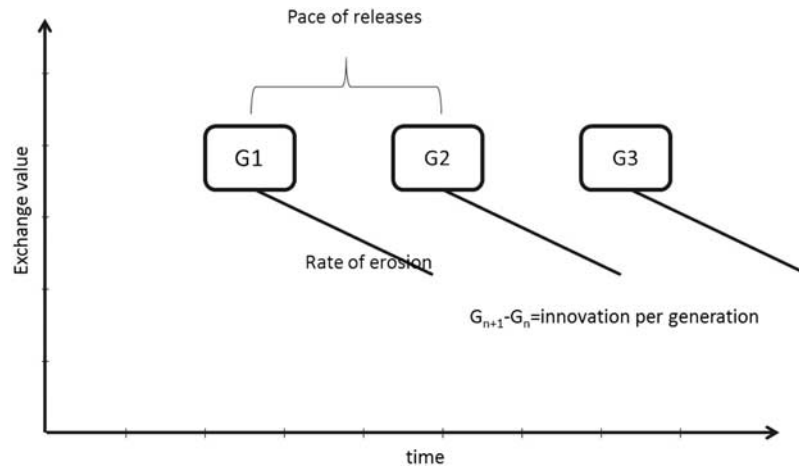


Figure A1: Pace of product generation releases, value level and erosion.

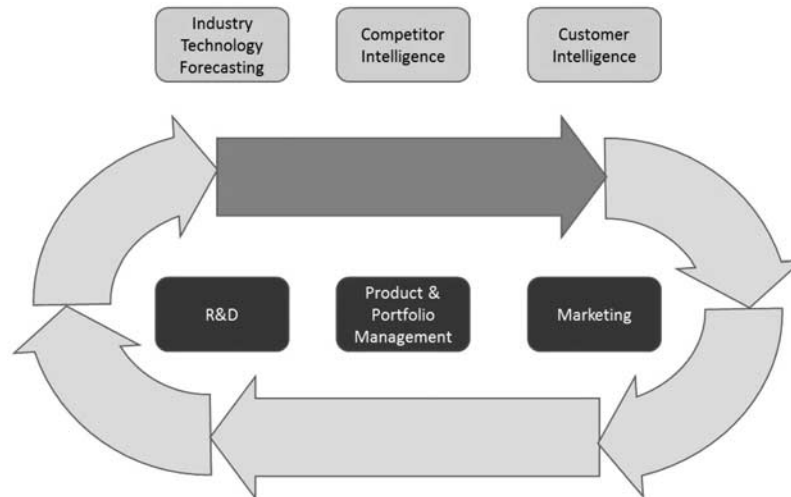


Figure A2: Value assessment capability – iterative and integrative, example functions.

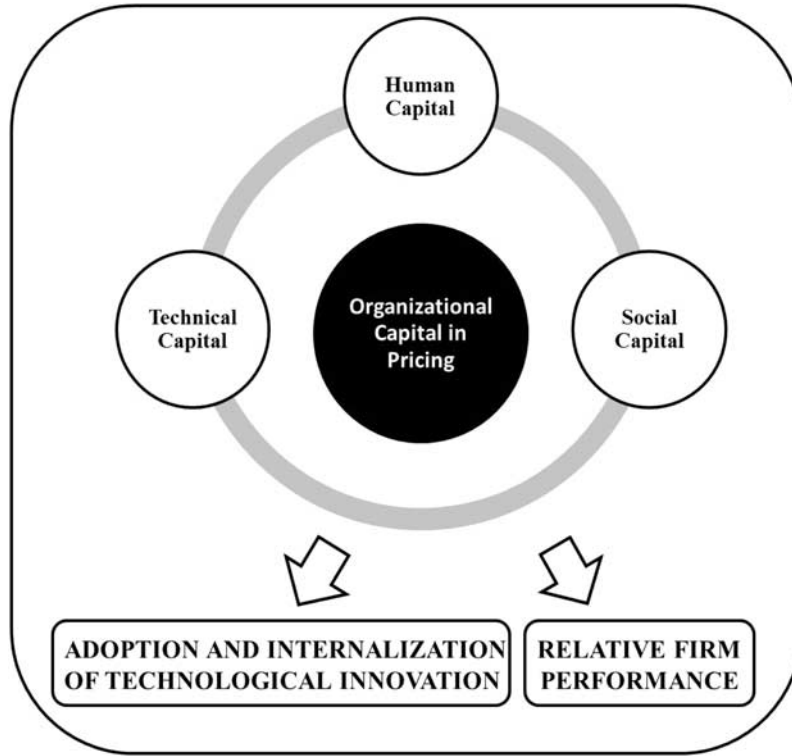


Figure A3: Overall theoretical hypothesis.

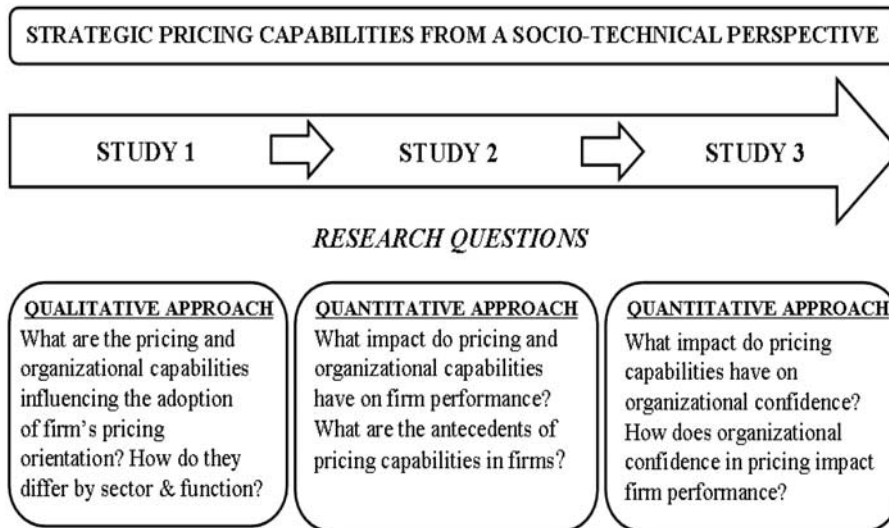


Figure A4: Overall research design.

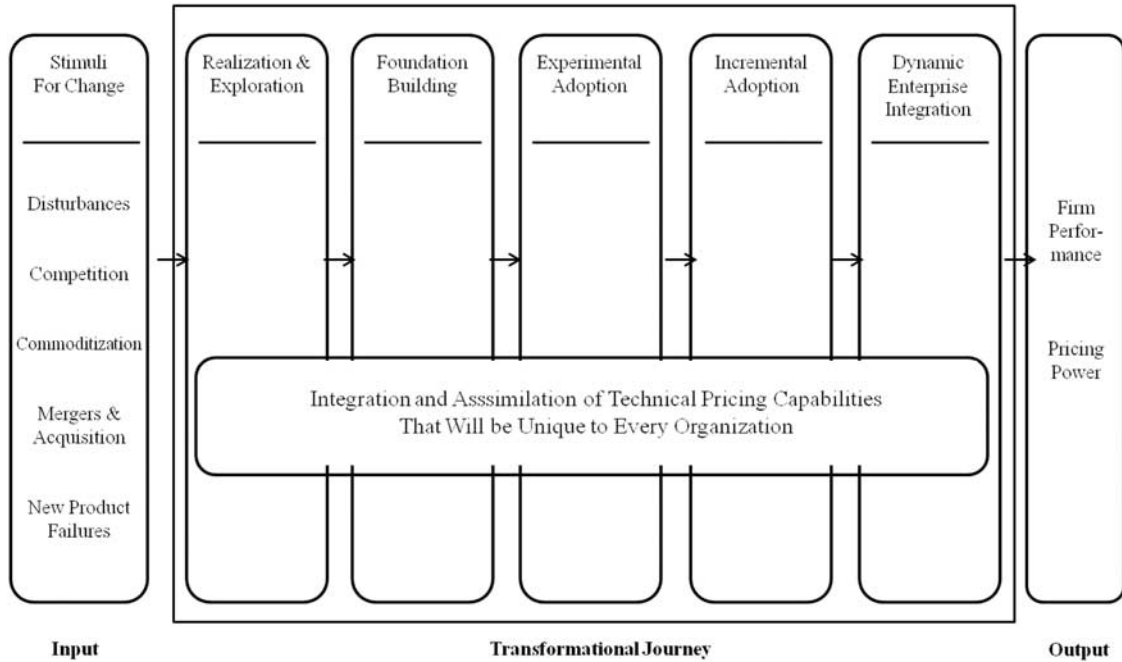


Figure A5: Stages of the transformation process.

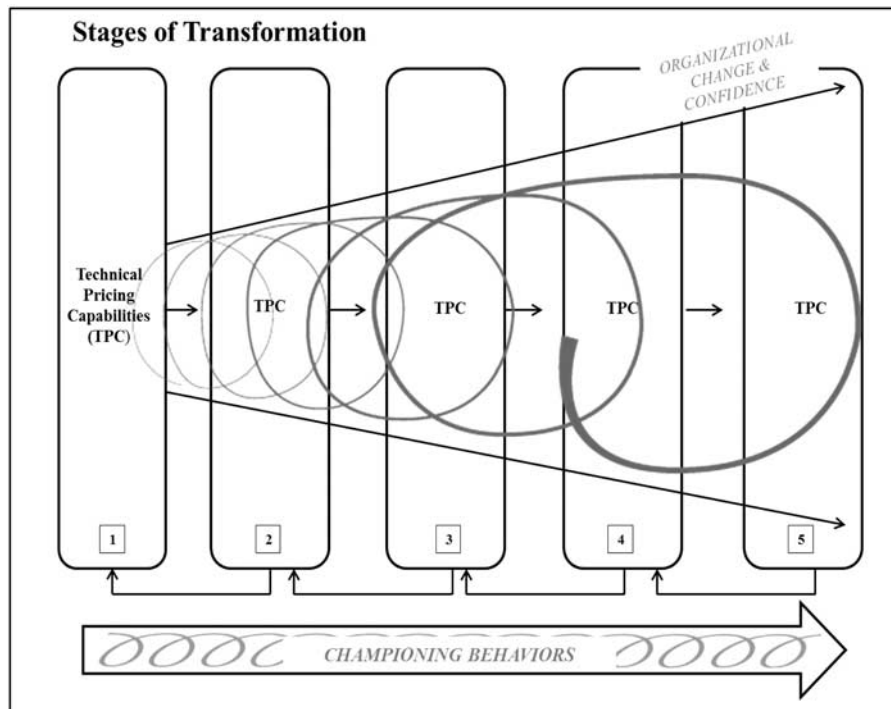


Figure A6: Toward a model of pricing as a socio-technological innovation.

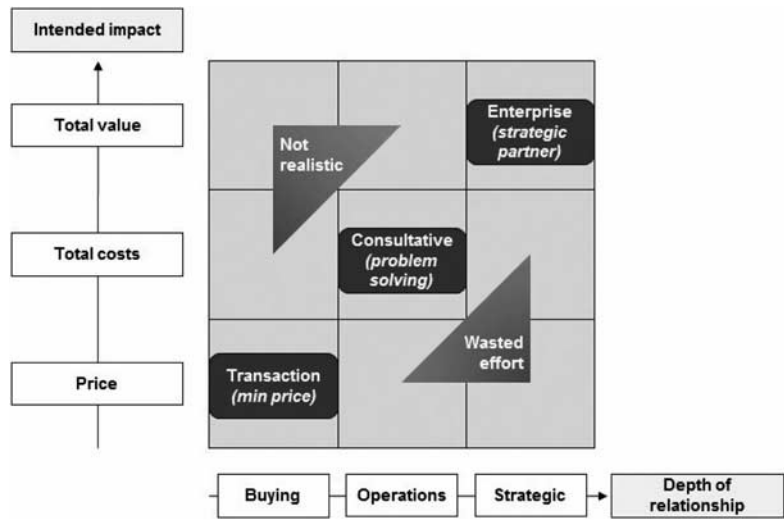


Figure A7: A classification of industrial customers by value perceptions (DeVincentis and Rackham, 1998).