Practice Article

# The evolution and future of pricing capabilities

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**ABSTRACT** For the past 20 years, faced with increased business and pricing complexity, pricing scholars and practitioners have paid more and more attention to pricing capabilities. Grounded in resource-based view and capability-based view of the firm, pricing capabilities have moved over time from a non-existing concept to an emerging theory rich in both qualitative and quantitative research papers. From the mid-2000 to today, pricing scholars have demonstrated the need to pay greater attention toward pricing capabilities to increase competitive advantage and firm performance. This article examines the evolution of the concept of pricing capabilities over time, the current state of pricing capabilities theory and the future ahead for this emerging field.

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## INTRODUCTION

Most scholars and consultants agree that pricing is a highly complex function (Lancioni *et al*, 2005; Liozu, 2012). Its complexity might come from organizational demands to deploy pricing innovations (Liozu *et al*, 2014), from the inter-functional collaboration required to get teams to work together (Lancioni *et al*, 2005) or from the lack of formal adoption of change-management practices to support the deployment of progressive pricing practices, leading to irrational pricing decisions (Liozu, 2013a). Whatever the reason, many leaders still give up and consider pricing a managerial headache (Dolan, 1995). Many firms launching pricing programs are also stuck in the zone of good intentions, wondering how they can better manage pricing complexity (Hinterhuber and Liozu, 2012) to improve profitability.

Recent research shows that attention to pricing increases yearly. Pricing, marketing and management scholars have begun to investigate the technical and social dynamics of pricing, generating a series of papers directly related to pricing capabilities. This focus began with the seminal work of Dutta *et al* (2003), which established a strong base for additional research and a starting point for an emerging theory in the field of pricing capabilities.

This article traces the evolution of pricing capabilities since the late 1990s. We discuss the theoretical roots of this concept and the current emerging research trends, and we propose areas of future research to advance the theoretical field.

## THE RESOURCE-BASED AND CAPABILITY-BASED VIEWS OF THE FIRM

The theory of pricing capabilities is anchored in the resource-based view (RBV) of the firm. On the basis of initial research on firm resources (Wernerfelt, 1984; Penrose and Pitelis, 1995), Barney (1991) proposed a comprehensive framework linking resources to sustained competitive advantage and firm performance. Subsequent scholars built on Barney's work on resources and conjectured that capabilities also play a critical role in leveraging competitive advantage and driving profitability. These scholars defined capabilities as a special type of resource 'whose purpose is to improve the productivity of the other resources possessed by the firm' (Makadok, 2001, p. 389). Although the RBV established the basis for the definition of critical resources and assets, the theory did not offer practitioners practical implications and recommendations for designing, developing and maintaining their resources in firms (Priem and Butler, 2001; Morgan *et al*, 2009). Building on the strong contribution of the RBV, organizational theorists have complemented the concepts of resources and assets by integrating the activities, actions and processes required to execute and leverage tangible and intangible resources (Liozu, 2013b). The capability-based view and the dynamic capability theory (Teece *et al*, 1997) evolved from the RBV to become central theories of pricing capability theory.

## EVOLUTION FROM ORGANIZATIONAL TO MARKETING TO PRICING CAPABILITIES

Over the past two decades, the concept of capabilities has evolved from organizational capabilities to marketing capabilities to pricing capabilities (see Figure 1).


**Figure 1:** Capability-based view of the firm.

### Defining capabilities

Day (1994, p. 38) defines capabilities as 'complex bundles of skills and accumulated knowledge, exercised through organizational processes, that enable firms to coordinate activities and make use of their assets'. This definition clearly distinguishes assets from capabilities. Capabilities are the glue that joins assets so they can be deployed advantageously (Day, 1994). Firms may create value by creating and developing resources to generate economic rents (Barney, 1991; Peteraf, 1993), but they must also capture that value through appropriate pricing activities and processes (Dutta *et al*, 2003). Day's definition of capabilities implies that identifying capabilities in an organization might be more challenging than identifying and listing resources. Capabilities may be hidden or embedded in the organization's fabric (Makadok, 2001) in a way that makes them obscure (Teece *et al*, 1997), distributed among various individuals and dispersed (Leonard-Barton, 1992).

### Not present in organizational capabilities

The concept of capabilities transcends its individual dimension and can be elevated to the organizational level under 'organizational capabilities'. The literature is rich in papers about and definitions of organizational capabilities. None of these, however, specifically integrates capabilities related to the pricing discipline. Table 1 lists various definitions proposed by the best scholars in the field. They tend to agree, though, that organizational capabilities are related to organizational objectives or to a desired end (Hallberg, 2008). Most scholars also agree that organizational capabilities include both distinct mechanisms (Makadok, 2001): resource picking and capability building. Other researchers advance a third mechanism: that

**Table 1:** Definitions of organizational capabilities

| *Publication* | *Definition* |
|---|---|
| Amit and Schoemaker (1993) | '[…] a firm's capacity to deploy Resources, usually in combination, using organizational processes, to effect a desired end. They are information-based, tangible or intangible processes that are firm specific and are developed over time through complex interactions among the firm's Resources'. (p. 35) |
| Dosi *et al* (2000) | '[t]o be capable of some thing is to have a generally reliable capacity to bring that thing about as a result of intended action. Capabilities fill the gap between intention and outcome, and they fill it in such a way that the outcome bears a definite resemblance to what was intended'. (p. 2) |
| Dutta *et al* (2003) | See Amit and Schoemaker (1993) |
| Grant (1991) | A capability is '[…] the capacity for a team of resources to perform some task or activity'. (p. 119) |
| Helfat and Peteraf (2003) | '[…] organizational capability refers to the ability of an organization to perform a coordinated set of tasks, utilizing organizational resources, for the purpose of achieving a particular result'. (p. 999) |
| Makadok (2001) | '…a capability is defined as a special type of resource – specifically, an organizationally embedded nontransferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm'. (p. 389) |
| Winter (2003) | 'An organizational capability is a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type'. (p. 991) |



organizational routines represent a type of organized activity and the exercise of repetitive capability (Dutta *et al*, 2003; Salvato and Rerup, 2011).

## Embedded in marketing capabilities

The marketing capability literature integrates pricing as a go-to-market component used to establish and measure marketing competencies. In the 2000s, scholars use quantitative surveys to demonstrate a significant and positive link between pricing capabilities – a subset of marketing capabilities – and firm performance (Vorhies and Morgan, 2005; Morgan *et al*, 2009). These research studies and others used a specific pricing-related scale to measure pricing capabilities: (i) using pricing skills and systems to respond quickly to market changes, (ii) learning about competitors' pricing tactics, (iii) pricing products/services effectively and (iv) monitoring competitors' prices and price changes. All studies integrated pricing as a component of larger marketing models or frameworks but did not clearly isolate the effect of pricing capabilities on dependent variables. Although measuring the impact of pricing capabilities along with other marketing constructs – product development, channel management and market communication, for example (Vorhies and Morgan, 2005) – helped with the progression of pricing capabilities theory, it was insufficient to show the direct effect of performance and to ground pricing capabilities as a standalone construct. In other words, using a small and incomplete measurement scale for pricing capabilities ignored the complexity of pricing capabilities in firms (Liozu and Hinterhuber, 2014).

## Qualitative investigation of pricing capabilities

As discussed, prior research on the concept of pricing capabilities from the years 1996 to 2008

**Table 2:** Prior research on pricing capabilities

| *Construct* | *Definition* | *Authors and items* |
|---|---|---|
| Market-related capabilities – Pricing | Pricing capabilities are part of seven distinct market-related capabilities: product development, pricing, channel management, marketing communications, selling, market planning and marketing implementation | Morgan *et al* (2009)<br>Using pricing skills and systems to respond quickly to market changes<br>Knowledge of Competitors' pricing tactics<br>Doing an effective job at pricing product/services<br>Monitoring competitors prices and price changes |
| Premium pricing capability | The premium price capability reflects the ability to command superior prices. Customers are willing to pay premium prices for product innovation. Products that offer new features or products that are first in the market can command premium prices | Koufteros *et al* (2002)<br>Our capability of selling at price premium<br>Our capability of selling at prices above average<br>Our capability of selling at high prices that only a few firms can achieve |
| Pricing capabilities | Pricing processes for setting or changing prices are capabilities that a firm can use as a basis for competitive advantage | Dutta *et al* (2003)<br>Translating pricing strategy to price<br>Convincing customers on the price change logic<br>Negotiating price changes with major customers<br>Developing internal pricing management process<br>Capturing value through price |



was fairly limited. Table 2 shows three of the most relevant academic studies that touched on the concept of pricing capabilities. Dutta *et al* (2003, p. 616) highlighted the role of pricing capabilities, defined as 'a set of complex routines, skills, systems, know-how, coordination mechanisms, and complementary resources, in increasing company performance'. According to them, pricing capability has two fundamental dimensions: within a firm and *vis-à-vis* customers. Their seminal work (Dutta *et al*, 2002; Dutta *et al*, 2003) was a turning point for pricing capabilities theory. Other studies continued the work on pricing capabilities by qualitatively investigating the relationship between them and firm performance, mainly using the case study method (Hallberg, 2008).

Finally, Hallberg (2008) further explored the concept of pricing capabilities by investigating their strategic dimensions in firms. Hallberg conducted multiple case studies in the packaging industry to uncover critical dimensions of pricing capabilities and to design a framework for diagnosing and improving firm pricing capability, as shown in Figure 2.

This work, based on Dutta *et al* (2003), made several contributions to the theory of pricing capabilities. The first was to propose conceptualizations of critical pricing factors. Table 3 summarizes the pricing capabilities based on

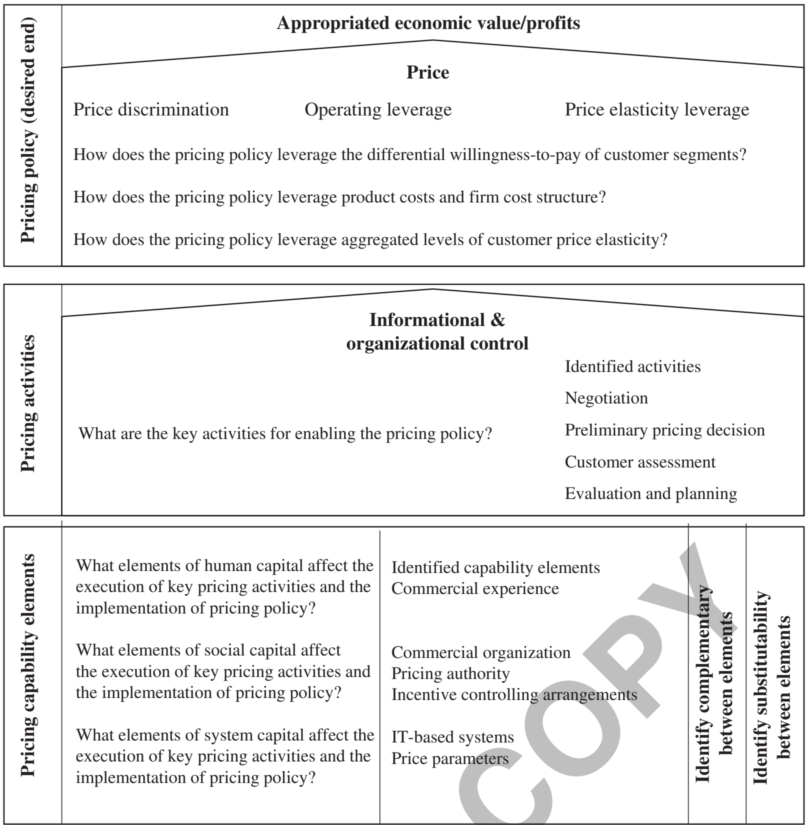


**Figure 2:** Diagnosing and improving pricing capability.
*Source*: Hallberg (2008).



previous definitions proposed by Dutta *et al* (2003) and Hallberg (2008).

The second contribution is to link pricing capabilities and resources to the appropriation of economic value and profits. Finally, Hallberg (2008) substantiates, refines and complements the empirical and theoretical work of Dutta *et al* (2003). Armed with the definition of pricing capabilities, their nature and a list of potential capabilities from prior research, we furthered the concept of pricing capabilities and clarified their conceptualizations. In Table 4, we conceptualize pricing dimensions, pricing resources and pricing capabilities from a technical perspective (Liozu, 2013b).

Despite these important contributions, this body of mostly qualitative and case study-based work did not establish statistical validation of the positive relationship between pricing capabilities and firm performance. This required surveying larger and more diverse samples of pricing practitioners in firms.

## Quantitative investigation of pricing capabilities

Since 2009, and based on the foundational work of pricing and organizational scholars (Dutta *et al*, 2003; Hallberg, 2008; Andersson, 2013), a series of quantitative studies related to pricing added a strong quantitative dimension to pricing capabilities theory. Pricing capabilities constructs were added to research models to explain how firms can develop greater pricing programs and organizational design when embarking on pricing journeys (Liozu and Hinterhuber, 2012, 2013; Liozu *et al*, 2014). These studies clearly reported a positive and

**Table 3:** Summary of pricing capabilities

| *Activities* | *Routines* | *Skills/know-how* | *Coordination mechanisms* |
|---|---|---|---|
| Identifying competitor prices | Defining functionally equivalent products<br>Nested routines for tracking competitive prices (for example, special discounts)<br>Assessing competitive price information | Technical know-how about competitive products, product changes<br>Sales force tacit know-how of field sources for reliable competitive price information | Cross-functional teams to generate equivalent competitive product comparison<br>Coordination between sales force and select customers to establish competitive prices |
| Setting pricing strategy and translation from pricing strategy to price | Collecting customer purchase history<br>Nested conflict resolution routines<br>Tracking past pricing actions<br>Pricing action analysis | System development expertise<br>Pricing strategy expertise<br>Database skills<br>Financial analysis skills<br>Customer price sensitivity<br>Scenario analysis of customer response | Coordinating knowledge of differing assumptions<br>Developing consensus on assumptions about customers<br>Coordinating knowledge of different pricing strategies<br>Channeling information of pricing actions |
| Convincing customers on the price change logic | Information exchange with customers' pricing systems<br>Identify effect on customers' customers<br>Send information to pricing team<br>Prepare price change presentation | Technical skills: pricing tool kit and price change effects<br>Know-how on customer response<br>Tacit know-how to separate sincere concerns from negotiating postures | Learn about different perspectives<br>Develop consensus within firm and sales force on new prices<br>Learn of customer response |
| Negotiating price changes with major customers | Organizational hierarchy approval of new prices<br>Customers assessment<br>Development of negotiation materials | Knowledge of firm members biases and relations with customers<br>Knowledge of firm members biases and relations with customers<br>Know-how about competitive offerings<br>Knowledge of customer negotiation strategy<br>Cross-functional negotiation expertise<br>Customer price sensitivity analysis | Consensus amount participants on new prices<br>Consensus in negotiation team on negotiation strategy |

**Table 4:** Technical pricing dimensions, resources and capabilities

| *Pricing dimensions* | *Pricing resources* | *Pricing activities* |
|---|---|---|
| *Infrastructure* | Hardware | Select appropriate technology, deploy and conduct user training |
| | Communication devices | Select appropriate technology, deploy and conduct user training |
| | Internet and Intranet support | Deploy platforms for adequate speed of communication and provide real-time pricing data |
| | Mobile communication network | Equip appropriate staff and conduct user training |
| *Analytics* | Cockpit and dashboards | Design and communicate dashboards |
| | Automated pricing reports | Design, program and communicate reports |
| | Basic pricing analytics | Conduct analysis: waterfall, pricing cloud, price-elasticity, pricing sensitivity, cost-to-serve, CVP, EVE® |
| | Advanced pricing analytics | Conduct data analysis to optimize pricing decisions and set proper pricing levels; conduct segmentation analysis |
| *Information systems* | ERP system | Select appropriate technology, implement pricing module and manage pricing operations |
| | Business intelligence software | Select appropriate technology, implement pricing module and manage pricing operations |
| | Pricing optimization software | Select appropriate pricing optimization software, set up interface with ERP, implement and manage pricing operations |
| | Value-based pricing software | Select appropriate solutions, implement and manage pricing operations |
| | Competitive intelligence software | Select appropriate solutions, implement and manage pricing operations |
| *Tools and models* | TCO models | Design proprietary tools and models to perform and manage output for TCO analysis |
| | Monetization models | Design proprietary tools and models to capture monetization analysis output |
| | Advanced cost models | Design proprietary tools and models to measure real and projects costs used for bidding and planning |
| | Value-in-use models | Design proprietary tools and models to capture VIU analysis |
| *Advanced methods* | Segmentation method | Conduct cluster analysis and user need-based segmentation |
| | Pricing research | Conduct conjoint and willingness-to-pay research |
| | Voice-of-customer research | Conduct ethnographic, focus groups, direct and indirect surveys to assess value and perceived worth |
| | Value assessment methods | Conduct all six types of value-assessment techniques |

**Table 5:** Summary of regression scores in various models

| *Study* | *Hypothesized paths* | *Regression estimates* | *Standardized estimate* | *Critical ratio* | *Hypothesis supported* |
|---|---|---|---|---|---|
| PPS survey | Pricing capabilities to Relative firm performance | 0.299 | 0.341*** | 9.530 | Yes |
| SAMA survey | Pricing capabilities to Relative firm performance | 0.318 | 0.381*** | 7.990 | Yes |
| CEO survey | Pricing capabilities to Relative firm performance | 0.420 | 0.440*** | 11.479 | Yes |
| Combined Data set | Pricing capabilities to Relative firm performance | 0.427 | 0.666*** | 30.232 | Yes |

*** = 99% Confidence.

**Table 6:** First and final pricing-capabilities scale

| *Items* | *Pricing capabilities (PCs)* |
|---|---|
| PC1 | Using pricing skills and systems to respond quickly to market changes |
| PC2 | Knowledge of competitors' pricing tactics |
| PC3 | Doing an effective job of pricing products/services |
| PC4 | Quantifying customers' willingness to pay |
| PC5 | Measuring and quantifying differential economic value versus competition |
| PC6 | Measuring and estimating price elasticity for products/services |
| PC7 | Designing proprietary tools to support pricing decisions |
| PC8 | Conducting value-in-use analysis or Total cost of ownership |
| PC9 | Designing and conducting specific pricing training programs |
| PC10 | Developing proprietary internal price management process |



significant relationship between pricing capabilities and firm performance. Four quantitative inquiries conducted from 2009 to 2014 supported these conclusions; see Table 5, which shows specific regression scores for the pricing capacities and relative firm performance constructs (Liozu and Hinterhuber, 2014).

The combination of these bodies of work allowed for the design, development and validation of a first and final pricing-capabilities scale, composed of 10 items (Table 6) (Liozu and Hinterhuber, 2014).

The work conducted by these pricing scholars also strongly contributed to the development of the theory of pricing capabilities and added some of the required validation following years of qualitative and case-based research work. The body of knowledge related to pricing capabilities continues to develop but needs further research. In the meantime, the concept of pricing capabilities is also evolving in other directions. One of these is the extension of the concept of pricing capabilities to value capabilities (Johansson *et al*, 2015) and to value-selling capabilities (Töytäri and Rajala, 2015). A second direction for the evolution of pricing capabilities is to focus on the intangible dimension of the construct and how these intangible capabilities affect the adoption and assimilation of technical pricing capabilities.

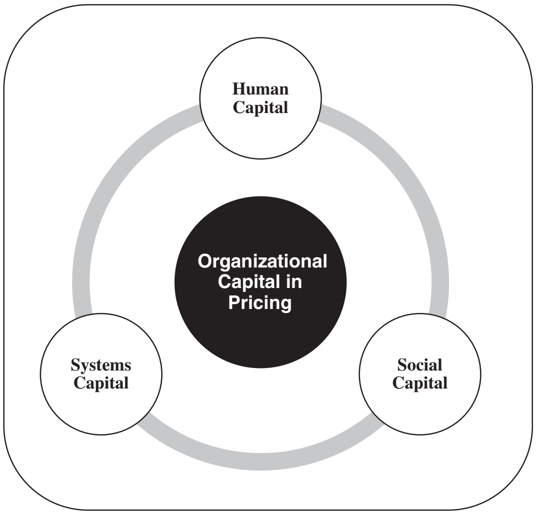


**Figure 3:** Organizational capital in pricing.

## INTANGIBLE CAPABILITIES: THE FUTURE OF PRICING CAPABILITIES

The RBV theory proposes that resources include 'all assets (physical and nonphysical), capabilities, organizational processes, firm attributes, information, knowledge etc. controlled by the firm that enable a firm to conceive and implement strategies that improve its efficiency and effectiveness' (Barney, 1991, p. 101). A specific combination of tangible and intangible resources and capabilities is valuable, rare and difficult to imitate or acquire by competitors (Hall, 1993; Barney and Clark, 2007) and cannot be captured on paper (Nadler and Tushman, 1990, p. 18). These unique capabilities are a function of traditions, shared values, informal patterns of interaction and careful attention to recruiting and promoting the right kind of people (Nadler and Tushman, 1990). Renowned scholars have focused on the study of intangible capabilities, referring to them as intellectual capital (Marr *et al*, 2004), as social capital (Dutta *et al*, 2002), as intangible assets (Hall, 1992) or as knowledge assets (Sanchez *et al*, 2000). Itami (1991) also calls them intangible assets and proposes that they include information, brand names, reputation and corporate culture, for example. The construct of corporate culture is often mentioned when referring to these intangible capabilities. The culture of the firm is an 'invisible structure' that is powerful enough to shape the norms and rules that employees follow (Itami and Roehl, 1991, p. 23).

To generate organizational capital in pricing, managers in firms must invest in specific strategic capabilities related to systems, human factors and social networks (Dutta *et al*, 2002). Figure 3 shows three dimensions of organizational capital – human, system and social capital – that are interconnected and that can bring create sustainable and inimitable competitive advantage (Dierickx and Cool, 1989; Dutta *et al*, 2002; Hallberg, 2008). Human capital refers to the development of specific training programs to support the diffusion of knowledge about pricing and value management.

System capital refers to implementing and managing all appropriate pricing software (Dutta *et al*, 2002) in order to make appropriate pricing decisions. Social capital is 'the internal glue that coordinates and holds together the many participants in the pricing process' (Dutta *et al*, 2002, p. 65). Pricing capabilities related to social capital are the most difficult to develop but also the least imitable by competitors. These capabilities are specific activities uniquely designed to support an organization's pricing transformation (Liozu *et al*, 2011). They might include change management in pricing capabilities (Liozu, 2014), the development of collective confidence levels (Liozu, 2015) or the integration of mindful learning programs in pricing (Liozu *et al*, 2012).

## CONCLUSIONS

Over the past 20 years, the concept of pricing capabilities has evolved from non-existence in organizations to embedment in the marketing construct to a standalone concept. More recently, this evolution has accelerated with the publication of qualitative and quantitative research papers creating a robust body of literature. Some scholars might find the title 'theory of pricing capabilities' controversial, claiming that the current state of theory does not warrant the title. We disagree and conjecture that previous transformational work by the best marketing and pricing scholars has established a strong base on which current scholars can add bricks of knowledge. The level of publication on the subject of pricing capabilities is increasing, and the use of the terms and concepts in practitioners' circles has also exploded. Therefore, this nascent theory deserves its title but requires additional research. With the exponential development of technical pricing capabilities such as data analytics, pricing software and pricing science, there is a need to further validate the qualitative and quantitative work conducted by pricing and organizational scholars to strengthen the theory and to improve the pricing discipline overall.

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