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Organizational design and pricing capabilities for superior firm performance

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Abstract

Purpose – The purpose of this paper is to test the relationship between organizational antecedents, pricing capabilities, and firm performance.

Design/methodology/approach – Quantitative survey of 748 managers from mostly large companies globally.

Findings – It was found that the following five key organizational resources (the 5 Cs) – center-led price management, organizational confidence, championing behaviors, organizational change capacity, and pricing capabilities – positively influence firm performance. Furthermore, it was found that center-led price management, organizational change capacity, and championing behaviors act as important antecedents to pricing capabilities and, except for the former, to organizational confidence. The authors also examine interaction and mediation effects.

Originality/value – The results thus suggest that generic organizational factors – namely center-led price management – as well as highly idiosyncratic firm, specific capabilities – namely organizational confidence, championing behaviors by top management, organizational change capacity, and pricing capabilities – are key requirements to increase firm performance via pricing.

Keywords Performance, Organizational design, Pricing, Organizational behaviour, Pricing strategy

Paper type Research paper

Introduction

Despite recent critiques (Kraaijenbrink *et al.*, 2010; Hinterhuber, 2013), the core propositions of the resource-based view (Barney, 1991; Barney *et al.*, 2011; Grant, 1991) are widely accepted: differences in firm profitability are the result of differences in firm capabilities. Empirical tests of the RBV (resource-based view), however, have yielded overall mixed results (Armstrong and Shimizu, 2007; Newbert, 2007, 2008) and have led to frequent calls for further empirical studies (Mol and Wijnberg, 2011).

As an important subset of overall firm capabilities, pricing capabilities are important drivers of firm performance (Dutta *et al.*, 2003). Research on the role of

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pricing capabilities is today largely confined to qualitative studies. Furthermore, little is known about the organizational antecedents of pricing capabilities.

From a managerial perspective, this study is important. Although managers do understand the criticality of pricing, in day-to-day practice they frequently revert to ineffective rules of thumb in price setting (e.g. cost-based pricing) and largely ignore the role of pricing in the overall design of their organizations (Hinterhuber, 2004; Liozu *et al.*, 2012). A significant problem of practice is thus the question of how to increase firm performance via pricing. This study shed light on this question.

In this study we test the relationship between organizational antecedents, pricing capabilities, and firm performance through a survey of 748 managers worldwide. We find that four key resources and capabilities – championing behaviors, pricing capabilities, organizational confidence, and organizational change capacity – directly influence firm performance.

We also find that three organizational factors – center-led pricing management, championing behaviors, and organizational change capacity – are significant antecedents of pricing capabilities; these organizational factors are – with the exception of center-led pricing management – also significant antecedents of organizational confidence. We finally study interaction effects between these antecedents. In sum, this paper is the first quantitative study to link both organizational confidence and pricing capabilities to firm performance. We also contribute to the literature of organization theory by suggesting key organizational antecedents of pricing capabilities as well as of organizational confidence.

The remainder of the article is organized as follows. In the next section, we provide our conceptual framework and theoretical support for the testable hypotheses that support the nomological network. The methodology section describes our database, sample, measures, and analysis. Next, we present a discussion of the results, the limitations of the research design, the theoretical contributions, and the implications for future research and managerial practice.

Research model and hypotheses

Our work is informed by organizational theory and the RBV. Among the vast array of derivative theories and multiple schools of thought that surround organizational theory and the theory of the firm, we focus, relative to the first, on organizational decision-making theory (March, 1994; March *et al.*, 1958) and, with regard to the latter, on the behavioral theory of the firm (Cyert and March, 1992) and the RBV of the firm (Wernerfelt, 1984). Organizational theory focuses on the internal structure of the firm and the relationships between its units and departments (Grant, 1996), and decision-making theory addresses the flow of information within organizations that supports and influences decision-making processes (March, 1994, 1999; Simon, 1961). Previous work by leading behavioral and social researchers addresses many important aspects of organizational theory. In the following, we focus on the most relevant aspects, including organizational structure (Aiken *et al.*, 1980; Hall, 1977; Hall *et al.*, 1967; Miller *et al.*, 1988), organizational efficacy (Bandura, 2000; Bohn, 2001), organizational champions (Howell and Shea, 2006; Schon, 1963), and organizational change capacity (Judge and Douglas, 2009).

Effects of organizational structure: center-led pricing

Central pricing teams focus on the diffusion of pricing expertise and skills across the organization. If present, these central pricing teams – typically under the

responsibility of a chief pricing officer or pricing director – lead a company's overall pricing strategy, resulting in a "center-led" pricing strategy (Ecker, 2010, p. 13). Because these central positions are nonroutine and highly specialized, their expert incumbents are likely to gain power and influence (Pfeffer, 1978). The presence of this team of experts also increases organizational confidence in executing marketing activities (John and Martin, 1984). This organizational configuration thus results in the diffusion of pricing capabilities throughout the organization as well as in higher level of confidence. Formally:

H1a. Center-led pricing management has a positive effect on pricing capabilities.

H1b. Center-led pricing management has a positive effect on organizational confidence.

Organizational confidence

Social cognitive theory (Bandura, 1997) suggests that two main perceptions motivate an organization member to "engage in teamwork activities and behaviors" – the "individual's perception of his or her ability to perform generic teamwork behavior (self-efficacy) and perceptions regarding the team's possession of the resources required for completing the task (collective efficacy)" (Tasa *et al.*, 2007, p. 19). Social cognitive theory broadens the concept of human agency to collective agency (Bandura, 2000): people share beliefs in their "collective power" to produce desired results. Socially shared cognitions are placed into an organizational context where people work together to accomplish desired outcomes and ends (Bohn, 2001). Among the social cognitions of firm members are beliefs about or perceptions of their organization's capabilities. Bandura (1997, p. 476) posits that "an organization's beliefs about its efficacy to produce results is undoubtedly an important feature of its operative culture."

Self-efficacy, central to the motivational concept of human action in organizations, is the generative capacity of one's resources and abilities to cope with a situation (Bandura, 1997). Collective efficacy refers to the perception of groups, teams, and other social collections of the capability of a group (Bohn, 2001). A meta-analysis conducted by Gully *et al.* (2002) shows that the relationship between collective efficacy and team performance is positive and significant, thus supporting social cognitive theory's claim that efficacy is "a primary determinant of the extent to which individuals or teams are likely to put forth the efforts required to perform successfully" (Bandura, 1986, p. 392). Confidence consists of "positive expectations" for favorable outcomes and tremendous potential results (Hoover and Valenti, 2005, p. 244). Confidence influences a member's willingness to invest money, time, reputation, and emotional energy to shape the ability to perform (Kanter, 2006, p. 7).

In this paper, we use the words organizational efficacy and organizational confidence interchangeably and adopt Bohn's definition and properties of organizational efficacy as an organizational factor affecting the adoption of pricing approach: organizational efficacy is a generative capacity within an organization to cope effectively with the demands, challenges, stressors, and opportunities it encounters within the business environment. It exists as an aggregated judgment of an organization's individual members about their sense of collective capacities, sense of mission or purpose, and sense of resilience. In its most basic form, organizational efficacy is a sense of "can do" (Bohn, 2001, p. 39c; Bohn, 2002).

These shared beliefs in employees' "collective power" promote people working together, and lead to the desired superior outcome (Bohn, 2001). Indeed, De Jong *et al.* (2006) show a causal link between employee confidence and performance. Therefore, we hypothesize:

H2. Organizational confidence has a positive effect on firm performance.

Organizational champions

Nearly half a century ago, a seminal article on radical military innovation (Schon, 1963, p. 85) defines the champion's role to be to "promote ideas actively and vigorously through informal networks and to risk his or her position and prestige to ensure the innovation success." Schon (1963, p. 84) declares that a new idea "either finds a champion or dies." Later, Chakrabarti (1974, p. 58) elaborates by linking the role of champion to the various stages of the collective decision-making process: the champion plays a critical role at all stages, overcoming technical and organizational obstacles and guiding effort to achievement by the "sheer force of his will and energy."

Other scholars and practitioners focus on the role of champions strictly from a leadership perspective. Organizational champions are defined as charismatic leaders (Nadler and Tushman, 1990), transformational leaders (Bass, 1985, p. 22; Wang and Huang, 2009), and champions of change (Nadler and Nadler, 1997, p. 98). Champions may exhibit a "constellation of behaviors" (Howell *et al.*, 2005, p. 643) that can be nurtured and learned – including "communicating a clear vision of what innovation could be or do, displaying enthusiasm and demonstrating commitment to it, and involving others in supporting it" (Howell and Higgins, 1990, p. 323). Champions may increase "effort-accomplishment expectancies" by reinforcing collective efficacy and increase both self-efficacy and collective efficacy by expressing positive evaluations (Tasa *et al.*, 2007), showing confidence in others' abilities to perform effectively and to meet challenges (Nadler and Tushman, 1990), and rallying troops (Hacker and Roberts, 2003).

Champions mobilize organizations by energizing teams, providing resources, and continuously emphasizing pricing capabilities, as well as by learning from failures to remove organizational and behavioral barriers (Chakrabarti, 1974). The focus by champions on energizing teams creates organizational excitement, which generates the "emotional contagion" (Hatfield *et al.*, 1994, p. 7) necessary for change. Charismatic champions raise "effort-accomplishment expectancies" by reinforcing self- and collective efficacy (Tasa *et al.*, 2007) and by showing confidence in people to meet challenges (Nadler and Tushman, 1990). Championing of pricing by the CEO increases pricing capabilities as well as firm performance (Liozu and Hinterhuber, 2013a). Thus, we posit the following:

H3a. Championing behaviors have a positive effect on pricing capabilities.

H3b. Championing behaviors have a positive effect on firm performance.

H3c. Championing behaviors have a positive effect on organizational confidence.

Organizational change capacity

Organizational change capacity is a relatively new construct emanating from the RBV that describes organizational, as opposed to individual, ability to change.

Organizational change capacity is "a dynamic organizational capability that allows the enterprise to adapt old capabilities to new threats and opportunities as well as create new capabilities" (Judge and Elenkov, 2005, p. 893). Learning is a central element of this capacity (Moilanen, 2005). Organizational change capacity is an antecedent of organizational ambidexterity, which allows organizations to simultaneously explore and exploit market opportunities (Judge and Blocker, 2008). Judge and Elenkov (2005) operationalize the construct for empirical research and suggest eight dimensions encompassing leadership, culture, and systems thinking. In a sample of Bulgarian companies, Judge and Elenkov (2005) find that organizational change capacity is positively related to environmental performance, largely defined as the degree of preservation of environmental resources. Since in our research we are interested mostly in firm financial performance, we choose to narrow this construct to a reduced set of dimensions (see "Methods").

We conjecture that the capacity of firms to change will strongly and positively influence the development of pricing capabilities and will amplify organizational confidence, or a "can do" attitude (Bohn, 2001) toward change. Finally, we posit that the overall capacity of a firm to learn and adapt to change will positively influence firm performance *vis-à-vis* competitors. Accordingly:

H4a. Organizational change capacity has a positive effect on pricing capabilities.

H4b. Organizational change capacity has a positive effect on firm performance.

H4c. Organizational change capacity has a positive effect on organizational confidence.

Capabilities

Capabilities are the glue that combines, develops, and transforms the resources to create value offerings for customers (Day, 1994; Grant, 1991; Teece *et al.*, 1997). Dutta *et al.* (2003) specifically highlight 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: pricing capabilities refer to, on the one side, the price-setting capability within a firm (identifying competitor prices, setting pricing strategy, translating from pricing strategy to price) and, on the other, to the price-setting capability *vis-à-vis* customers (convincing customers on price-change logic, negotiating price changes with major customers). Today, our understanding on the role of pricing capabilities is largely confined to qualitative research (Berggren and Eek, 2007; Dutta *et al.*, 2002; Dutta *et al.*, 2003; Hallberg, 2008), i.e. interviews with CEOs, pricing and marketing managers. This stream of research finds that pricing capabilities are positively related to firm performance. We thus posit that this relationship also holds in our quantitative survey:

H5. Pricing capabilities have a positive effect on firm performance.

Link between capabilities and confidence

Organizational and individual confidence rest on activities that organizations and individuals do well: in a study of sales personnel, Román and Iacobucci (2010) find that an increase in selling skills leads to an increase in confidence. Qualitative research in pricing suggests that an increase in individual pricing capabilities leads to an increase in individual confidence, enabling sales personnel to be a "superhero for one second,"

that is, to withstand customer pressure to discount prices during sales negotiations (Hinterhuber and Liozu, 2012, p. 72). Accordingly,

H6. Pricing capabilities have a positive effect on organizational confidence.

Championing behaviors as an amplifying variable

Championing behaviors can have a powerful impact on organizations as top executives make strategic choices (Hambrick and Mason, 1984), purposefully become involved in projects and tasks (Cyert and March, 1992), and influence group cohesiveness through transformational leadership (Wang and Huang, 2009). When executive champions design organizational architecture, they influence the management and speed of system-wide organizational change (Nadler and Tushman, 1990). In pricing, CEO championing behaviors positively affect pricing capabilities and firm performance (Liozu and Hinterhuber, 2013a). We thus hypothesize that the presence of strong championing behaviors in firms, coupled with the presence of purposely designed center-led pricing teams and organizational change capacity, acts as an amplifier on firm performance:

H7. Championing behaviors amplify the positive effect of organizational change capacity on firm performance.

H8. Championing behaviors amplify the positive effect of center-led pricing management on firm performance.

The moderating effect of competitive intensity and product advantage

The adoption and implementation of pricing practices and the organizational design for pricing are moderated by two exogenous factors: First, competitive intensity increases customer bargaining power and decreases firm performance. As competition increases, so may stress, uncertainty, and the "unanalyzability" of market information (Daft and Weick, 1984), leading to pricing decisions that are erratic and more intuition-based (Brownlie and Spender, 1995). Product differentiation, on the other hand, isolates a firm, to a degree, from competitive pressure. Differentiation influences customer preferences and customer choice (Brown and Carpenter, 2000).

Consequently, Ingenbleek *et al.* (2003) suggest that competitive intensity negatively moderates the relationship between pricing practices and firm performance and that, conversely, relative product advantage positively moderates this relationship. In line with these propositions we suggest that:

H9a. Competitive intensity negatively moderates the relationship between organizational confidence and firm performance such that, for high competitive intensity, the relationship is weaker than for low competitive intensity.

H9b. Competitive intensity negatively moderates the relationship between pricing capabilities and firm performance such that, for high competitive intensity, the relationship is weaker than for low competitive intensity.

H10a. Product advantage positively moderates the relationship between organizational confidence and firm performance such that, for high product advantage, the relationship is stronger than for low product advantage.

H10b. Product advantage positively moderates the relationship between pricing capabilities and performance such that, for high product advantage, the relationship is stronger than for low product advantage.

In sum, our hypothesized research model (see Figure 1) suggests the following key relationships: the RBV leads us to suggest that pricing capabilities and organizational confidence both positively influence firm performance. Organization theory leads us to suggest that organizational change capacity, center-led pricing management, and championing behaviors are antecedents of pricing capabilities as well as of organizational confidence. We model interaction effects between some of these antecedents and consider the moderating effects of competitive intensity and relative product advantage.

Methods

We use the membership list of the Professional Pricing Society (PPS) as the sample frame for this study. PPS is the world's largest professional organization dedicated to pricing. Members are marketing, pricing, and general managers involved in pricing at mostly large, global companies from countries across the world. The president of the PPS endorses our study with his personal support and encourages members to respond to our survey. The unit of analysis for the survey is the individual respondent. PPS distributes our survey electronically in April 2011 to its approximately 18,300 members. We assure respondents of anonymity and give them the option to enter a raffle to win a prize as inducement for participation. Responses are returned over an eight-week period. About 300 "bounce" and are assumed not to have reached the intended recipients. Of the remaining 18,000 surveys, 1,148 are returned partially or fully completed. We determine 748 to be usable for further analysis, for a response rate

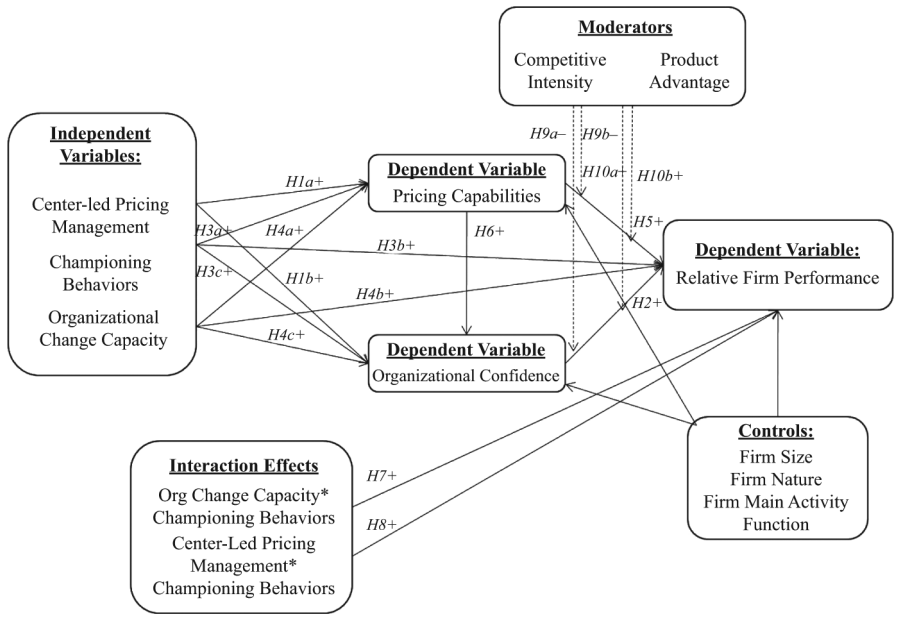


Figure 1.
Hypothesized research model

of 4.2 percent. Although this response rate is low, it is consistent with other large-scale survey response rates, which tend to range from 5 to 10 percent (Roth and Van Der Velda, 1991; Shah and Ward, 2003; Stock *et al.*, 2000). Table I summarizes the sample profile: Respondents are, by and large, pricing managers from publicly traded, US-based manufacturing firms with more than 10,000 employees.

We assess nonresponse bias by verifying that early and late respondents do not differ in their responses (Armstrong and Overton, 1977). The early respondents are identified by selecting those that responded in the first two weeks. All possible *t*-test comparisons between the means of the two groups are not different from each other at the 0.05 level of significance, except on two of the 44 (4.5 percent) study variables.

Measures

We gather multi-item measures for our major constructs from well-validated measures found in prior literature. Since there are no existing scales to measure pricing capabilities and center-led management, we develop indigenous items following rigorous established item-development procedures and guidelines (Churchill, 1979; Nunnally and Bernstein, 1994). We take all other scales from the literature with minor modifications, with the exception of organizational change capacity, which we modify substantially. Judge and Elenkov (2005) suggest eight dimensions: trustworthy leadership, trusting followers, capable champions, involved mid-management, innovative culture, accountable culture, systems communication, and systems thinking. We regard the dimensions trustworthy leadership and innovative culture to be most critical for this study and operationalize organizational change capacity based on only these two dimensions using an eight-item scale (see below).

The construct definitions, survey items, response format, and scale sources are presented in detail in the Appendix (see Table AI). In summary, they are as follows:

Main Activity	**Count**	**%**
Manufacturing Firm	415	55%
Service Organization	206	28%
Distribution/Retail Company	107	14%
Missing Data	20	3%
Nature of Firm	**Count**	**%**
Publicly Traded	437	58%
Privately Owned	257	34%
Both	25	3%
Do Not Know	9	1%
Missing	20	3%
Firm Size - Employees Numbers	**Count**	**%**
Less Than 250	78	10%
251 to 500	43	6%
501 to 1,000	45	6%
1,001 to 10,000	233	31%
More than 10,000	329	44%
Missing	20	3%
Total Respondents	**748**	

Function of Respondents	**Count**	**%**
General Management	65	9%
Marketing and Sales	177	24%
Finance and Accounting	29	4%
Pricing and Revenue Management	427	57%
Administrative and Operations	27	4%
Missing	23	3%
Geography of Firm HQ	**Count**	**%**
North America	508	68%
Latin America	10	1%
Europe	180	24%
Asia Pacific	21	3%
Middle East/Africa	2	0%
Missing	27	4%
Respondent Geo Location	**Count**	**%**
North America	532	71%
Latin America	22	3%
Europe	140	19%
Asia Pacific	25	3%
Middle East/Africa	2	0%
Missing	27	4%

Table I.
Profile of sample firms and respondents

- *Center-led management*: new seven-item scale, as in Liozu *et al.* (2011).
- *Pricing capabilities*: new 12-item scale, published in Liozu and Hinterhuber (2013b)
- *Organizational confidence*: 12-item scale adapted from Bohn (2001).
- *Championing behaviors*: nine-item scale adapted from Howell *et al.* (2005).
- *Organizational change capacity*: two dimensions from the eight-dimension scale by Judge and Elenkov (2005) with in total eight items: three for "trust worthy leadership," – degree to which business unit leaders protect the core values while encouraging change, consistently articulate an inspiring vision of the future, and show courage in their support for change initiatives; and five for "innovative culture," – measuring the extent to which current organizational culture values innovation, values change, attracts and retains creative people, provides resources to experiment with new ideas, and allows people to take risks and occasionally fail.
- *Product advantage*: three-item scale from Ingenbleek *et al.* (2003).
- *Competitive intensity*: three-item scale from Ingenbleek *et al.* (2003).
- *Perceived relative performance*: eight-item scale from Ingenbleek *et al.* (2003) and Morgan *et al.* (2009).

The use of subjective performance measures requires clarification. First, although North American respondents dominate our sample, about 32 percent of respondents are located elsewhere, mostly in Europe, Latin America, and Asia. A multidimensional measure based on perceived firm performance facilitates comparisons across different regions adhering to different accounting standards. Second, our sample includes privately owned companies (34 percent of sample) and small companies (22 percent have less than 1,000 employees). For these companies, researchers express strong reservations about the use of objective performance data, since these data are biased as a result of managerial manipulation for corporate and personal tax reasons (Sapienza *et al.*, 1988). Third, recent studies show that perceptual performance measures tend to be highly correlated (80 percent) with objective performance indicators (Kumar *et al.*, 2011). Subjective performance data are used widely in strategy research (Anderson and Paine, 1975). Taken in the aggregate, subjective or perceptual measures of firm performance reliably indicate a company's health (Quinn and Baily, 1994).

We conduct face-to-face interviews with six pricing practitioners using concurrent verbal protocol content analysis (Bolton, 1993). Next, we pretest scale items with a panel of five academics and eight pricing practitioners. We then send a pilot test of this survey to 150 professionals representing pricing, marketing, sales, and general management functions and obtain 70 complete and usable responses. We modify the survey iteratively to incorporate all relevant test results.

We include control variables to account for sample heterogeneity, to rule out alternative explanations, to help eliminate contamination by our methods, and to mitigate omitted-variable problems. We control for a number of likely determinants of performance by including demographic characteristics of the firm, such as firm activity (manufacturing, service, retail), firm nature (B2B, B2C, both), firm size (Amburgey and Rao, 1996), and geographic zone.

We first conduct an exploratory factor analysis (EFA) on the sample data to determine whether each of the items, particularly those for the new scales, reliably measures the intended construct. The results confirm unidimensionality, with each item loading on its respective factor (Anderson and Gerbing, 1988). Next, we use confirmatory factor analysis (CFA) to simultaneously test the unidimensionality of a set of correlated constructs and to establish convergent and discriminant validity. The measurement model results indicate that all item loadings exceed the 0.30 threshold value, establishing unidimensionality (O'Leary-Kelly and Vokurka, 1998). The standardized regression weights are greater than 0.58, and all are statistically significant ($p < 0.001$), indicating convergent validity. In addition, significant cross-loadings are absent. We establish convergent validity of the measures by examining whether each construct has an average variance extracted (AVE) of at least 0.50 (Fornell and Larcker, 1981). This is true for all but two of the constructs (see Table II).

AVE exceeds the average shared variance (ASV) and maximum shared variance (MSV) in all cases but two, providing evidence of discriminant validity. We find that the square root of the AVE for each construct is greater than the correlation of the construct with any other given construct in the analysis, confirming satisfactory discriminant validity of the constructs. Furthermore, without exception, Cronbach alphas and composite reliability (CR) for each construct exceed the commonly used norm for acceptable psychometrics (>0.70).

The hypothesized CFA model of six correlated latent factors fits the data well using a number of conventional fit indices ($\chi^2/df = 1.842$, RMSEA $= 0.034$, NFI $= 0.984$, NNFI $= 0.973$, IFI $= 0.969$, and CFI $= 0.969$) (see Table III).

We assess configural and metric invariance to identify whether the factor structure is equivalent across different groups (Rungtusanatham *et al.*, 2008). The results of multiple-group CFAs across both types of competitive intensity (high and low) and product advantage (high and low) provide evidence of configural equivalence. Analysis of metric invariance confirms that the groups are also metric-invariant based on non-significant path differences between them (Vandenberg and Lance, 2000).

To assess the extent to which common method bias is a concern, we conduct CFA in which the baseline model includes a common method bias factor (Podsakoff *et al.*, 2003), where each of the items are linked to a common method factor (CMF). The results indicate that the common method bias, if present, is negligible. Next, a marker variable, determined *ex post* to have no signification correlation with other items in the constructs, is added to the measurement model (Lindell and Whitney, 2001). The marker variable extracts a negligible 1.25 percent of the variance.

Constructs	Mean	Standard Deviation	Center-Led Pricing Management	Pricing Capabilities	Relative Performance	Organizational Confidence	Championing Behaviors	Organizational Change Capacity
Center-Led Pricing Management	5.20	1.48	***0.43 (0.66)***					
Pricing Capabilities	4.31	1.50	0.445	***0.48 (0.69)***				
Relative Performance	4.82	1.31	0.328	0.555	***0.55 (0.74)***			
Organizational Confidence	5.07	1.41	0.317	0.467	0.456	***0.58 (0.76)***		
Championing Behaviors	4.94	1.59	0.449	0.551	0.564	0.531	***0.71 (0.84)***	
Organizational Change Capacity	4.93	1.46	0.363	0.477	0.555	0.549	0.705	***0.57 (0.75)***

Notes: Bolded values on the diagonal are the AVEs with square root of AVE in parentheses. All correlations are significant at $p < 0.001$

Table II.
Summary statistics and correlations for the study constructs

Constructs and Corresponding Items	Cronbach Alpha	Mean	Standard Deviation	Standardized Regression Weights	Standard Error	Critical Ratio	Composites Reliability	Average Variance Extracted	Maximum Shared Variance	Average Shared Variance
Pricing Capabilities (PC)	**0.906**						**0.9**	**0.48**	**0.42**	**0.35**
PC1		4.32	1.594	0.766	0.051	23.998				
PC2		4.32	1.425	0.653	0.048	19.298				
PC3		4.73	1.318	0.808	0.041	25.956				
PC4		4.44	1.482	0.625	0.051	18.228				
PC6		4.35	1.498	0.694	0.05	20.932				
PC7		4.25	1.473	0.756	0.048	23.406				
PC8		3.98	1.505	0.682	0.050	20.384				
PC10		4.12	1.568	0.607	0.054	17.513				
PC11		3.96	1.162	0.621	0.056	17.982				
PC12		4.63	1.514	0.712	0.05	21.448				
Relative Performance (RP)	**0.915**						**0.91**	**0.55**	**0.40**	**0.32**
RP1		4.63	1.310	0.621	0.045	17.875				
RP2		4.86	1.279	0.696	0.043	20.536				
RP3		4.93	1.339	0.725	0.045	21.683				
RP4		4.74	1.311	0.735	0.044	22.09				
RP5		4.65	1.366	0.764	0.044	23.593				
RP6		5.03	1.295	0.774	0.042	23.809				
RP7		4.82	1.292	0.797	0.042	24.442				
RP8		4.89	1.320	0.815	0.043	25.231				
Organizational Change Capacity (OCC)	**0.919**						**0.91**	**0.57**	**0.64**	**0.41**
OCC1		5.14	1.340	0.821	0.041	26.707				
OCC2		5.01	1.419	0.796	0.041	26.707				
OCC3		5.06	1.410	0.872	0.042	29.156				
OCC4		5.37	1.378	0.710	0.045	21.662				
OCC5		4.97	1.448	0.710	0.048	21.619				
OCC6		4.70	1.520	0.744	0.05	22.762				
OCC7		4.46	1.578	0.687	0.053	20.638				
OCC8		4.69	1.548	0.648	0.052	19.082				
Champion Behavior (CBE)	**0.959**						**0.96**	**0.71**	**0.55**	**0.41**
CBE1		4.76	1.690	0.827	0.051	27.228				
CBE2		5.21	1.603	0.828	0.048	27.361				
CBE3		5.10	1.549	0.861	0.046	29.113				
CBE4		4.86	1.516	0.839	0.045	27.998				
CBE5		4.58	1.631	0.862	0.048	29.223				
CBE6		5.05	1.498	0.813	0.046	26.562				
CBE7		5.03	1.557	0.848	0.046	28.474				
CBE8		5.16	1.524	0.821	0.046	27.007				
CBE9				0.894	0.049	31.129				
Center-led Pricing Management (CLED)	**0.784**						**0.79**	**0.43**	**0.26**	**0.20**
CLED2		5.01	1.598	0.617	0.078	14.436				
CLED3		5.56	1.389	0.584	0.069	13.504				
CLED4		4.70	1.603	0.645	0.078	15.252				
CLED5		5.15	1.509	0.692	0.072	16.67				
CLED7		5.58	1.292	0.729	0.06	17.792				
Organization Confidence (OC)	**0.851**						**0.84**	**0.58**	**0.64**	**0.44**
OC2		4.74	1.505	0.81	0.049	25.091				
OC4		4.71	1.486	0.796	0.048	24.435				
OC7		5.08	1.414	0.805	0.045	25.124				
OC9		5.75	1.216	0.608	0.043	17.063				

Table III.
Measurement model results

Structural model

We estimate a structural model to further test our direct-effect hypotheses (*H1a*, *H1b*, *H1c-H10*), shown in Figure 1. The structural model results are shown in Table II, and the final SEM in Figure 2. The model-fit measures indicate acceptable agreement with the covariance in the data: χ^2/d.f. = 1.00, root mean square error of approximation (RMSEA) = 0.002, normed fit index (NFI) = 0.997, non-normed fit index (NNFI) = 1.000, incremental fit index (IFI) = 1.000, and comparative fit index (CFI) = 1.000.

Direct effects on dependent variables

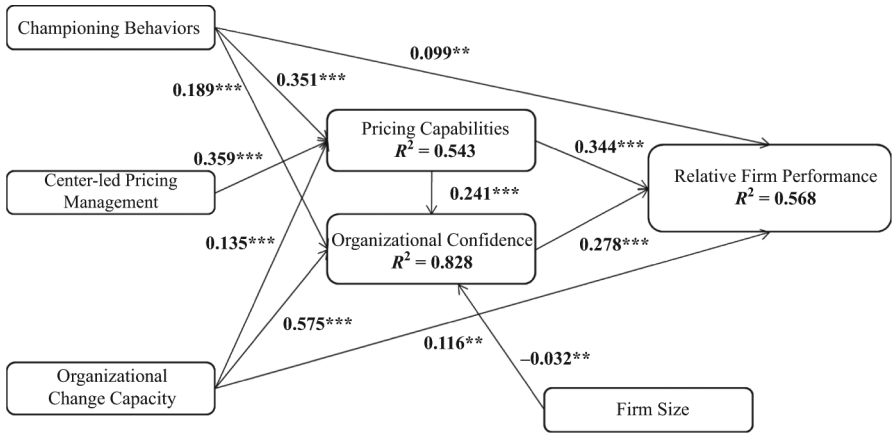
First, the hypothesized impact of center-led pricing management on pricing capabilities ($b = 0.359$, $p < 0.01$) is significant. However, center-led pricing management does not positively influence an organization's confidence ($b = 0.013$, $p = 0.531$). These results provide support for *H1a* but not for *H1b*.

Second, we find championing behaviors to have a positive and significant effect on relative firm performance ($b = 0.09$, $p < 0.05$), pricing capabilities ($b = 0.351$, $p < 0.01$), and organizational confidence ($b = 0.189$, $p < 0.01$). Our findings support *H3a*, *H3b*, and *H3c*.

Third, we find organizational change capacity to be positively and significantly related to pricing capabilities ($b = 0$ 0.135, $p < 0.01$), organizational confidence ($b = 0.575$, $p < 0.01$), and relative firm performance ($b = 0.116$, $p < 0.05$), thereby validating *H4a*, *H4b*, and *H4c*.

Fourth, we find pricing capabilities to have a positive and significant influence on organizational confidence ($b = 0.241$, $p < 0.01$) and a much stronger positive influence on relative firm performance ($b = 0.344$, $p < 0.01$), providing support for *H5* and *H6*.

Finally, as with pricing capabilities, we find organizational confidence to have a positive and significant influence on relative firm performance ($b = 0.279$, $p < 0.01$), providing support for *H2*. With one exception, all of our ten direct-effect hypothesized relationships are supported (see Table IV).



Notes: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

Figure 2.
Final trimmed research model

Hyp	Hypothesized Paths	Regression Estimates	Standardized Estimate	Critical Ratio	Hypothesis Supported
H1a	Center-led Pricing Management to Pricing Capabilities	0.445	0.354***	11.432	Yes
H1b	Center-led Pricing Management to Organizational Confidence	0.016	0.013 (ns)	0.626	No
H2	Organizational Confidence to Relative Firm Performance	0.244	0.274***	4.727	Yes
H3a	Championing Behaviors to Pricing Capabilities	0.275	0.353***	8.351	Yes
H3b	Championing Behaviors to Relative Firm Performance	0.062	0.091**	2.037	Yes
H3c	Championing Behaviors to Organizational Confidence	0.143	0.185***	6.823	Yes
H4a	Organizational Change Capacity to Pricing Capabilities	0.169	0.140***	3.417	Yes
H4b	Organizational Change Capacity to Relative Firm Performance	0.128	0.121**	2.296	Yes
H4c	Organizational Change Capacity to Organizational Confidence	0.684	0.574***	22.615	Yes
H5	Pricing Capabilities to Relative Firm Performance	0.299	0.341***	9.530	Yes
H6	Pricing Capabilities to Organizational Confidence	0.232	0.235***	10.452	Yes
H7	Org Change Capacity*Champ Behaviors to Rel Firm Performance	-0.005	-0.009 (ns)	-0.268	No
H8	Center-led Management*Champ Behaviors to Rel Firm Performance	-0.011	-0.18 (ns)	-0.553	No
H9a	Competitive Intensity Moderates Pricing Cap to Firm Performance		HighCI= 0.376*** LowCI= 0.154(ns)		Yes
H9b	Competitive Intensity Moderates Org Confidence to Firm Performance		HighCI= 0.371*** LowCI= 0.298***		No
H10a	Product Advantage Moderates Pricing Cap to Firm Performance		HighPA= 0.363*** LowPA= 0.128(ns)		Yes
H10b	Product Advantage Moderates Org Confidence to Firm Performance		HighPA= 0.236*** LowPA= 0.251***		No

R Square Relative Firm Performance	***0.567***
R Square Pricing Capabilities	***0.543***
R Square Organizational Confidence	***0.828***

Table IV.
Structural model results

Notes: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$

Interaction effects

Champions throughout the organization, especially in the pricing function, can effectively support important organizational changes. Consequently, we hypothesize that the combination of an organization's capacity to manage change and the championing of pricing affects relative performance differently than each variable individually. However, our data do not support this relationship, and we reject *H7*.

A center-led management team of pricing experts ensures consistency and diffusion of key pricing activities across the entire company while also supporting decentralized managers who are involved in pricing based on their specific requirements. When top executives champion pricing, they send critically important signals to the organization on the importance of pricing, resolve conflicts, and ensure that managers see pricing as a critical activity, regardless of their hierarchical position or functional department. We hypothesize that championing behaviors and a center-led pricing organization work together; however, we observe that the simultaneous influence of these on relative firm performance is not multiplicative. That is, the effect of the pricing champion on relative firm performance is not larger when he or she interacts with the organization's center-led management team of pricing experts. Therefore, we reject *H8*.

Analysis of moderation

We use multiple-group SEM to test *H9a*, *H9b*, *H10a*, and *H10b*: the moderating role of competitive intensity and product advantage on the relationships between organization confidence and relative performance and between pricing capabilities and relative performance. Table II shows significant moderator effects for both competitive intensity and product advantage on the relationship between organizational confidence and relative firm performance. Under both conditions of high competitive intensity ($b = 0.376$, $p < 0.01$) and high product advantage ($b = 0.236$, $p < 0.01$), organizational confidence is positively and significantly related to relative firm performance. These results are not found under low conditions of competitive intensity ($b = 0.154$, $p = 0.073$) and product advantage ($b = 0.128$, $p = 0.121$). These results provide support for *H9a* and *H10a*.

Further, we observe that competitive intensity and product advantage do not moderate the relationship between pricing capabilities and relative firm performance. This relationship remains positive and significant under conditions of high and low competitive intensity, but also under circumstances of high and low product advantage. Consequently, *H9b* and *H10b* are not supported. Last, most of our control variables are not significant, except for firm size ($b = -0.036$, $p = 0.043$), which has a positive effect on organizational confidence.

Discussion

In this paper we examine how firms increase performance via pricing. Our survey of 748 pricing and marketing managers from countries around the world offers three main contributions.

First, this study suggests a parsimonious model for driving firm performance via pricing: the 5 C model. Championing behaviors by top management, center-led pricing management, pricing capabilities, organizational confidence, and, finally, organizational change capacity are all positively linked to firm performance. Our data suggest that all of these factors, with the exception of center-led pricing organization, are directly related to firm performance. Furthermore, we find that center-led pricing management, organizational change capacity, and championing behaviors act as important antecedents of pricing capabilities. We also find that change capacity and championing behaviors are antecedents of organizational confidence.

In line with current research (Homburg *et al.*, 2012), we find that centralization is only conditionally beneficial. In our model, center-led pricing management increases pricing capabilities, but not organizational confidence. Pricing capabilities and organizational confidence in turn directly increase firm performance. In our model, the benefits of a center-led pricing organization are contingent on the current level of pricing capabilities and organizational confidence. Given highly developed pricing capabilities and a low level of organizational confidence, center-led pricing does not appear to increase firm performance. Conversely, with weakly developed pricing capabilities and a high level of organizational confidence, center-led pricing management seems to strongly increase firm performance, via its effect on pricing capabilities and without negatively affecting organizational confidence. Further empirical studies directly exploring these relationships seem warranted.

Second, our study highlights the role of organizational confidence as an antecedent of firm performance. To the best of our knowledge, the relationships between organizational confidence, pricing capabilities, and firm performance have not yet been explored in a quantitative survey. A different dataset and sample (CEOs) addresses related, but distinct, research questions in our overall stream of research dedicated to pricing (Liozu and Hinterhuber, 2013a). The results of this study suggest that championing behavior, organizational change capacity, and pricing capabilities positively influence organizational confidence, which in turn leads to superior firm performance. In the overall stream of research exploring the link between capabilities, resources, and performance (Armstrong and Shimizu, 2007; Newbert, 2007, 2008), these findings thus document a positive relationship between the intangible asset of organizational confidence and firm performance.

Our research shows that an increase in organizational confidence has a very substantial impact on firm performance. Organizational confidence encompasses the following items: the belief in one's own abilities to take on any challenge, a sense of purpose, a vision for the future, the confidence in the future and belief in future accomplishments, the conviction that one's own products/services deliver value, the courage to withstand customer price objections, the courage to implement price changes in the market, and the certainty to work well together as a team.

While the role of confidence has been explored in qualitative research before (Hinterhuber and Liozu, 2012), this is the first quantitative study documenting a positive relationship between organizational confidence and firm performance. As such, this study is also an important milestone in the overall research stream on the RBV. Also here, further research is warranted: particularly promising seem further quantitative studies exploring contingent factors of confidence or curvilinear relationships between confidence and firm performance.

Third, our study is the first quantitative research documenting a positive relationship between organizational change capacity – measured on the two dimensions of trustworthy leadership and innovative culture – and pricing capabilities, organizational confidence, and firm performance. It is firmly established by now that a new pricing approach is not "just a change of marketing signals" but "a new way of life" (Forbis and Mehta, 1981, p. 42). Our study documents that the higher the organizational change capacity – specifically, trustworthy leadership and innovative culture – the higher pricing capabilities, organizational confidence, and, ultimately, firm performance. Increasing pricing capabilities and organizational confidence is thus fundamentally a change-management process that requires capabilities typical of such processes: trustworthy, visionary leaders who encourage change while promoting core values, and an organizational culture that allows innovation and change while permitting people to take risks, to occasionally fail, and to experiment with new ideas.

Developing pricing capabilities rests on developing organizational change capacity. We are not aware of any quantitative study that highlights the foundational nature of organizational change capacity toward building pricing capabilities. Also on this point, further studies are warranted, specifically studies employing the original, eight-dimensional model of organizational change capacity developed by Judge and Elenkov (2005).

Finally, although we do not find the hypothesized interaction effects, we find moderating effects between competitive intensity/relative product advantage and organizational confidence/firm performance: our data suggest that competitive intensity negatively moderates the relationship between organizational confidence and relative firm performance such that, for low competitive intensity, the relationship is stronger than for weak competitive intensity. We also find that product advantage positively moderates the relationship between organizational confidence and relative firm performance such that, for high product advantage, the relationship is again stronger than for low product advantage. Analysis of these interaction effects thus points toward the role of product differentiation and market segments with lower competitive intensity as instrumental for strengthening the positive impact of organizational confidence on firm performance.

Limitations

This study advances the literature on a number of key research questions, specifically on the role of organizational confidence and change-management capacity in pricing. We propose a parsimonious model – the 5 C model – suggesting key levers that firms should activate to increase performance via pricing. Nevertheless, this study has important limitations.

First is the use of subjective or perceptual measures of firm performance. Subjective performance measures are widely used in the strategy literature (Gruber *et al.*, 2010; Spanos and Lioukas, 2001) as well as in the marketing literature (Kohli and Jaworski, 1990; Narver and Slater, 1990). Nevertheless, subjective performance measurement is based on perceptions and is thus potentially biased. Future studies would benefit from measuring subjective and objective performance indicators simultaneously. The second limitation is common method bias. We attempt to minimize common method bias through statistical analysis but cannot rule it out entirely. Future studies would benefit from collecting multiple responses per firm. The third limitation is causality: the directionality in our hypothesized research model is based on previous empirical research as well as on established theoretical frameworks. Nevertheless, we cannot entirely rule out reverse causality – that high performance leads respondents to rate pricing capabilities within their organizations highly – as opposed to the causal path in our model. Since we are not able to control for prior year firm performance, we cannot completely rule out the possibility of reverse causality. Future research can address this issue, via appropriate controls or the use of longitudinal data. The fourth and final limitation concerns the sample and response rate: we poll members of the Professional Pricing Society, an organization that includes an estimated 30 percent of the Global Fortune 500 companies and a large number of medium-sized companies. There are strong reasons to assume that the membership base is representative of the overall population of firms globally, but we cannot completely rule out a sample selection bias. Also the response rate of 4.2 percent is comparatively low. These issues can be addressed in future studies.

Implications for practice

This study has simple, yet very important, implications for practicing managers. First, we suggest that pricing managers, marketing executives, and members of the top management team can drive firm performance via pricing through the following five

factors (the 5 Cs): center-led price management, organizational confidence, championing behaviors, change capacity, and pricing capabilities. All of these factors directly or indirectly contribute to increased firm performance. Our 5 C model also may help to explain why pricing initiatives frequently fail: by concentrating on a narrow set of factors, such as, for example, increasing pricing capabilities within their organizations, managers overlook that significant increases in firm performance are possible only when all five factors are addressed conjointly – when, in addition to increasing pricing capabilities, executives also establish a center-led pricing organization, when the organization has top managers actively championing the pricing function, when the organization has developed capabilities to manage organizational change, and, last, when managers actively develop organizational confidence. Increasing performance via pricing is a complex, multifaceted endeavor requiring that managers activate the five organizational and strategic levers we identify conjointly.

Of interest to practicing managers are our findings on organizational confidence and organizational change capacity. These two factors have so far been largely neglected in pricing research. This study shows, for the first time using a quantitative survey with global respondents, that organizational confidence is directly related to firm performance. We also, very likely for the first time, highlight the role of organizational change capacity for pricing purposes: organizational change capacity positively and directly influences pricing capabilities, organizational confidence, and firm performance. Our study also confirms key findings from earlier studies on the importance of CEO championing behavior (Liozu and Hinterhuber, 2013a). Championing behaviors by senior management positively influence pricing capabilities, organizational confidence, and firm performance.

The key managerial implication of this study is that executives need to manage pricing holistically in order to increase firm performance: pricing capabilities, center-led price management, organizational confidence, championing behaviors, and organizational change capacity need to move in symphony to increase firm profits.

The analysis of moderating effects shows, unsurprisingly, that the effect of organizational confidence on firm performance is stronger when products are strongly differentiated and when competitive intensity is low. We thus remind managers that basic housekeeping activities have an indirect effect on performance: creating meaningful, relevant differentiation and carving out market niches or customer relationships with lower competitive intensity are activities that strengthen the positive relationship between organizational confidence and firm performance.

Research directions

The findings of this study offer a number of avenues for future research. First, we need to know more about the role of center-led pricing management in increasing firm performance. Our findings suggest that center-led pricing management is particularly effective in increasing firm performance when pricing capabilities are low and when organizational confidence is high. The data in our study only point toward this possibility, so clearly more research is needed to substantiate this finding.

Second, we intuit that organizational confidence has an upper boundary with regard to firm performance. In other words, we need to understand when organizational confidence becomes arrogance, thus potentially decreasing firm performance. Thus,

further research should explore the existence of curvilinear relationships between organizational confidence and performance, possibly augmented by a differentiation between hierarchical levels in organizations or departments. Examining where and when organizational confidence starts to hurt performance is a potentially very fruitful research endeavor.

Finally, the moderation effects in our data – for low competitive intensity or high product advantage, the relationship between organizational confidence and firm performance is strengthened – raise the interesting question of whether organizational confidence can act as *de facto* substitute for product differentiation or privileged customer relationships. This question may well be worth a study.

References

Aiken, M., Bacharach, S.B. and French, J.L. (1980), "Organizational structure, work process, and proposal making in administrative bureaucracies", *Academy of Management Journal*, Vol. 23 No. 4, pp. 631-652.

Amburgey, T.L. and Rao, H. (1996), "Organizational ecology: past, present, and future directions", *Academy of Management Journal*, Vol. 39 No. 5, pp. 1265-1286.

Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 No. 3, pp. 411-423.

Anderson, C.R. and Paine, F.T. (1975), "Managerial perceptions and strategic behavior", *Academy of Management Journal*, Vol. 18 No. 4, pp. 811-823.

Armstrong, J.S. and Overton, T.S. (1977), "Estimating nonresponse bias in mail surveys", *Journal of Marketing Research*, Vol. 14 No. 3, pp. 396-402.

Armstrong, C.E. and Shimizu, K. (2007), "A review of approaches to empirical research on the resource-based view of the firm", *Journal of Management*, Vol. 33 No. 6, pp. 959-986.

Avolio, B., Bass, B. and Jung, D. (1999), "Re-examining the components of transformational and transactional leadership using the multifactor leadership questionnaire", *Journal of Occupational and Organizational Psychology*, Vol. 72, pp. 441-462.

Bandura, A. (1986), *Social Foundations of Thought and Action*, Prentice Hall, Englewood Cliffs, NJ.

Bandura, A. (1997), *Self-Efficacy: The Exercise of Control*, Worth Publishers, New York, NY.

Bandura, A. (2000), "Exercise of human agency through collective efficacy", *Current Directions in Psychological Science*, Vol. 9 No. 3, pp. 75-78.

Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Barney, J., Ketchen, D.J. and Wright, M. (2011), "The future of resource-based theory: revitalization or decline?", *Journal of Management*, Vol. 37 No. 5, pp. 1299-1315.

Bass, B. (1985), *Leadership and Performance Beyond Expectations*, Free Press, New York, NY.

Berggren, K. and Eek, M. (2007), "The emerging pricing capability", Master thesis, School of Economics and Management, Lund University, Lund, available at: http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=1341163&fileOId=2434896

Bohn, J. (2001), "The design and validation of an instrument to assess organizational efficacy", University of Wisconsin-Milwaukee, Milwaukee, WI, unpublished dissertation.

Bohn, J. (2002), "The relationship of perceived leadership behaviors to organizational efficacy", *Journal of Leadership & Organizational Studies*, Vol. 9 No. 2, pp. 65-79.

Bolton, R.N. (1993), "Pretesting questionnaires: content analyses of respondents' concurrent verbal protocols", *Marketing Science*, Vol. 12 No. 3, pp. 280-303.

Brown, C. and Carpenter, G. (2000), "Why is the trivial important? A reasons-based account for the effects of trivial attributes on choice", *Journal of Consumer Research*, Vol. 26 No. 4, pp. 372-385.

Brownlie, D. and Spender, J. (1995), "Managerial judgement in strategic marketing", *Management Decision*, Vol. 33 No. 6, pp. 39-50.

Chakrabarti, A. (1974), "The role of champion in product innovation", *California Management Review*, Vol. 17 No. 2, pp. 58-62.

Churchill, G.A. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16 No. 1, pp. 64-73.

Cyert, R. and March, J. (1992), *A Behavioral Theory of the Firm*, Wiley-Blackwell, Oxford.

Daft, R. and Weick, K. (1984), "Toward a model of organizations as interpretation systems", *Academy of Management Review*, Vol. 9 No. 2, pp. 284-295.

Day, G.S. (1994), "The capabilities of market-driven firms", *Journal of Marketing*, Vol. 58 No. 4, pp. 37-52.

De Jong, A., De Ruyter, K. and Wetzels, M. (2006), "Linking employee confidence to performance: a study of self-managing service teams", *Journal of the Academy of Marketing Science*, Vol. 34 No. 4, pp. 576-587.

Dutta, S., Bergen, M.E., Levy, D., Ritson, M. and Zbaracki, M. (2002), "Pricing as a strategic capability", *MIT Sloan Management Review*, Vol. 43 No. 3, pp. 61-66.

Dutta, S., Zbaracki, M.J. and Bergen, M. (2003), "Pricing process as a capability: a resource-based perspective", *Strategic Management Journal*, Vol. 24 No. 7, pp. 615-630.

Ecker, K. (2010), "Choosing the right type of pricing organisation for your company", paper presented at the European and Global Pricing Conference, Brussels, 16 November.

Forbis, J. and Mehta, N. (1981), "Value-based strategies for industrial products", *Business Horizons*, Vol. 24 No. 3, pp. 32-42.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18, pp. 39-50.

Grant, R.M. (1991), "The resource-based theory of competitive advantage: implications for strategy formulation", *California Management Review*, Vol. 35 No. 2, pp. 114-135.

Grant, R.M. (1996), "Toward a knowledge-based theory of the firm", *Strategic Management Journal*, Vol. 17 No. 10, pp. 109-122.

Gruber, M., Heinemann, F., Brettel, M. and Hungeling, S. (2010), "Configurations of resources and capabilities and their performance implications: an exploratory study on technology ventures", *Strategic Management Journal*, Vol. 31 No. 12, pp. 1337-1356.

Gully, S., Incalcaterra, K., Joshi, A. and Beaubien, J. (2002), "A meta-analysis of team-efficacy, potency, and performance: interdependence and level of analysis as moderators of observed relationships", *Journal of Applied Psychology*, Vol. 87 No. 5, pp. 819-832.

Hacker, S. and Roberts, T. (2003), *Transformational Leadership: Creating Organizations of Meaning*, ASQ Quality Press, Milwaukee, WI.

Halal, W.E. (1999), "Organizational intelligence: what is it, and how can managers use it?", in Cortada, J.W. and Woods, J.A. (Eds), *The Knowledge Management Yearbook 1999-2000*, Butterworth-Heinemann, Boston, MA, p. 65.

Hall, R.H. (1977), *Organization, Structure, and Process*, Vol. 2, Prentice Hall, London.

Hall, R., Johnson, N. and Haas, J. (1967), "Organizational size, complexity, and formalization", *American Sociological Review*, Vol. 32 No. 6, pp. 903-912.

Hallberg, N. (2008), *Pricing Capabilities and Its Strategic Dimensions*, Lund Business Press, Lund, available at: http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=1059443&fileOId=1059444

Hambrick, D. and Mason, P. (1984), "Upper echelons: the organization as a reflection of its top managers", *Academy of Management Review*, Vol. 9 No. 2, pp. 193-206.

Hatfield, E., Cacioppo, J.T. and Rapson, R.L. (1994), *Emotional Contagion*, Cambridge University Press, Cambridge and New York, NY.

Hinterhuber, A. (2004), "Towards value-based pricing: an integrative framework for decision making", *Industrial Marketing Management*, Vol. 33 No. 8, pp. 765-778.

Hinterhuber, A. (2013), "Can competitive advantage be predicted? Towards a predictive definition of competitive advantage in the resource-based view of the firm", *Management Decision*, Vol. 51 No. 4, pp. 795-812.

Hinterhuber, A. and Liozu, S. (2012), "Is it time to rethink your pricing strategy?", *MIT Sloan Management Review*, Vol. 53 No. 4, pp. 69-77.

Homburg, C., Jensen, O. and Hahn, A. (2012), "How to organize pricing? Vertical delegation and horizontal dispersion of pricing authority", *Journal of Marketing*, Vol. 76 No. 5, pp. 49-69.

Hoover, J. and Valenti, A. (2005), *Unleashing Leadership: Aligning What People Do Best with What Organizations Need Most*, Career Press, Franklin Lakes, NJ.

Howell, J. and Higgins, C. (1990), "Champions of technological innovation", *Administrative Science Quarterly*, Vol. 35 No. 2, pp. 317-341.

Howell, J. and Shea, C. (2006), "Effects of champion behavior, team potency, and external communication activities on predicting team performance", *Group & Organization Management*, Vol. 31 No. 2, pp. 180-211.

Howell, J., Shea, C. and Higgins, C. (2005), "Champions of product innovations: defining, developing, and validating a measure of champion behavior", *Journal of Business Venturing*, Vol. 20 No. 5, pp. 641-661.

Ingenbleek, P., Debruyne, M., Frambach, R. and Verhallen, T. (2003), "Successful new product pricing practices: a contingency approach", *Marketing Letters*, Vol. 14 No. 4, pp. 289-305.

John, G. and Martin, J. (1984), "Effects of organizational structure of marketing planning on credibility and utilization of plan output", *Journal of Marketing Research*, Vol. 21 No. 2, pp. 170-183.

Judge, W. and Blocker, C. (2008), "Organizational capacity for change and strategic ambidexterity: flying the plane while rewiring it", *European Journal of Marketing*, Vol. 42 Nos 9/10, pp. 915-926.

Judge, W. and Douglas, T. (2009), "Organizational change capacity: the systematic development of a scale", *Journal of Organizational Change Management*, Vol. 22 No. 6, pp. 635-649.

Judge, W. and Elenkov, D. (2005), "Organizational capacity for change and environmental performance: an empirical assessment of Bulgarian firms", *Journal of Business Research*, Vol. 58 No. 7, pp. 893-901.

Kanter, R.M. (2006), *Confidence: How Winning Streaks and Losing Streaks Begin and End*, Three Rivers Press, New York, NY.

Kohli, A.K. and Jaworski, B.J. (1990), "Market orientation: the construct, research propositions, and managerial implications", *Journal of Marketing*, Vol. 54 No. 2, pp. 1-18.

Kraaijenbrink, J., Spender, J.C. and Groen, A.J. (2010), "The resource-based view: a review and assessment of its critiques", *Journal of Management*, Vol. 36 No. 1, pp. 349-372.

Kumar, V., Jones, E., Venkatesan, R. and Leone, R.P. (2011), "Is market orientation a source of sustainable competitive advantage or simply the cost of competing?", *Journal of Marketing*, Vol. 75 No. 1, pp. 16-30.

Lindell, M.K. and Whitney, D.J. (2001), "Accounting for common method variance in cross-sectional research designs", *Journal of Applied Psychology*, Vol. 86 No. 1, pp. 114-121.

Liozu, S. and Hinterhuber, A. (2013a), "CEO championing of pricing, pricing capabilities and firm performance in industrial firms", *Industrial Marketing Management*, Vol. 42 No. 4, pp. 500-515.

Liozu, S. and Hinterhuber, A. (2013b), "Pricing orientation, pricing capabilities, and firm performance", *Management Decision*, Vol. 51 No. 3, pp. 594-614.

Liozu, S., Boland, R., Hinterhuber, A. and Perelli, S. (2011), "Industrial pricing orientation: the organizational transformation to value-based pricing", *Proceedings of the First International Conference on Engaged Management Scholarship*, available at SSRN: http://ssrn.com/abstract=1839838 or http://dx.doi.org/10.2139/ssrn.1839838

Liozu, S., Hinterhuber, A., Perelli, S. and Boland, R. (2012), "Mindful pricing: transforming organizations through value-based pricing", *Journal of Strategic Marketing*, Vol. 20 No. 3, pp. 197-209.

March, J.G. (1994), *A Primer on Decision Making: How Decisions Happen*, Free Press, New York, NY.

March, J.G. (1999), *The Pursuit of Organizational Intelligence*, Wiley-Blackwell, Malden, MA.

March, J.G., Simon, H.A. and Guetzkow, H. (1958), *Organizations*, Wiley, New York, NY.

Miller, D., Droge, C. and Toulouse, J. (1988), "Strategic process and content as mediators between organizational context and structure", *Academy of Management Journal*, Vol. 31 No. 3, pp. 544-569.

Moilanen, R. (2005), "Diagnosing and measuring learning organizations", *Learning Organization*, Vol. 12 No. 1, pp. 71-89.

Mol, J.M. and Wijnberg, N.M. (2011), "From resources to value and back: competition between and within organizations", *British Journal of Management*, Vol. 22 No. 1, pp. 77-95.

Morgan, N.A., Vorhies, D.W. and Mason, C.H. (2009), "Market orientation, marketing capabilities, and firm performance", *Strategic Management Journal*, Vol. 30 No. 8, pp. 909-920.

Nadler, D. and Nadler, M.B. (1997), *Champions of Change: How CEOs and Their Companies Are Mastering the Skills of Radical Change*, Jossey-Bass, San Francisco, CA.

Nadler, D.A. and Tushman, M.L. (1990), "Beyond the charismatic leader and organizational change", *California Management Review*, Vol. 32 No. 2, pp. 77-97.

Narver, J.C. and Slater, S.F. (1990), "The effect of a market orientation on business profitability", *Journal of Marketing*, Vol. 54 No. 4, pp. 20-35.

Newbert, S.L. (2007), "Empirical research on the resource based view of the firm: an assessment and suggestions for future research", *Strategic Management Journal*, Vol. 28 No. 2, pp. 121-146.

Newbert, S.L. (2008), "Value, rareness, competitive advantage, and performance: a conceptual level empirical investigation of the resource based view of the firm", *Strategic Management Journal*, Vol. 29 No. 7, pp. 745-768.

Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, McGraw Hill, New York, NY.

O'Leary-Kelly, S.W. and Vokurka, R.J. (1998), "The empirical assessment of construct validity", *Journal of Operations Management*, Vol. 16 No. 4, pp. 387-405.

Pfeffer, J. (1978), "The micropolitics of organizations", in Meyer, M.W. (Ed.), *Environments and Organizations*, Jossey-Bass, San Francisco, CA, pp. 29-50.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.

Quinn, J.B. and Baily, M.N. (1994), "Information technology: increasing productivity in services", *Academy of Management Executive*, Vol. 8 No. 3, pp. 28-51.

Román, S. and Iacobucci, D. (2010), "Antecedents and consequences of adaptive selling confidence and behavior: a dyadic analysis of salespeople and their customers", *Journal of the Academy of Marketing Science*, Vol. 38 No. 3, pp. 363-382.

Roth, A.V. and Van Der Velda, M. (1991), "Operations as marketing: a competitive service strategy", *Journal of Operations Management*, Vol. 10 No. 3, pp. 303-327.

Rungtusanatham, M., Ng, C.H., Zhao, X. and Lee, T.S. (2008), "Pooling data across transparently different groups of key informants: measurement equivalence and survey research", *Decision Sciences*, Vol. 39 No. 1, pp. 115-145.

Sapienza, H.J., Smith, K.G. and Gannon, M.J. (1988), "Using subjective evaluations of organizational performance in small business research", *American Journal of Small Business*, Vol. 12 No. 3, pp. 45-53.

Schon, D. (1963), "Champions for radical new innovations", *Harvard Business Review*, Vol. 41 No. 2, pp. 77-86.

Shah, R. and Ward, P.T. (2003), "Lean manufacturing: context, practice bundles, and performance", *Journal of Operations Management*, Vol. 21 No. 2, pp. 129-150.

Simon, H.A. (1961), *Administrative Behavior*, Macmillan, New York, NY.

Spanos, Y.E. and Lioukas, S. (2001), "An examination into the causal logic of rent generation: contrasting Porter's competitive strategy framework and the resource based perspective", *Strategic Management Journal*, Vol. 22 No. 10, pp. 907-934.

Stock, G.N., Greis, N.P. and Kasarda, J.D. (2000), "Enterprise logistics and supply chain structure", *Journal of Operations Management*, Vol. 18 No. 5, pp. 531-547.

Tasa, K., Taggar, S. and Seijts, G. (2007), "The development of collective efficacy in teams: a multilevel and longitudinal perspective", *Journal of Applied Psychology*, Vol. 92 No. 1, pp. 17-27.

Teece, D.J., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 8 No. 7, pp. 509-533.

Vandenberg, R.J. and Lance, C.E. (2000), "A review and synthesis of the measurement invariance literature, suggestions, practices, and recommendations for organizational research", *Organizational Research Methods*, Vol. 3 No. 1, pp. 4-70.

Wang, Y.S. and Huang, T.C. (2009), "The relationship of transformational leadership with group cohesiveness and emotional intelligence", *Social Behavior and Personality: An International Journal*, Vol. 37 No. 3, pp. 379-392.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5 No. 2, pp. 171-180.

Appendix

Construct/ dimensions	Definition	Items	Source
Organizational structure Center-led management	The existence of a centralized team of experts focusing on the diffusion of knowledge and expertise throughout the firms and on the support of business unit leaders in making the appropriate pricing decisions. Center-led also indicates that decision-making authority remains decentralized with business unit managers	Indicate the degree to which this central team support your organization with the following activities … (1 = Rarely to 7 = Frequently) 1. Conducts pricing training with divisional decision makers and top executives (D) 2. Manages specific pricing projects or programs to support divisional marketing programs 3. Assists in the design and/or implementation of pricing tools 4. Conducts pricing research activities to support pricing decision-making process 5. Assists decision makers with price-setting process as part of the formal product development process 6. Provides top management with pricing reports and trends (D) 7. Provides knowledge with overall pricing process (for example, pricing increases, pricing reviews)	Construct and item definition follow qualitative research (Liozu *et al.*, 2011). Result of the pilot survey with 70 responses yielded an AC of 0.745 with these seven items
Pricing capabilities	Pricing capabilities are part of marketing capabilities which concern the firm's adequate management of individual "marketing mix" processes such as product development and management, pricing, selling, etc. as well as marketing strategy development and execution. These capabilities may be rare, valuable, non-substitutable, and inimitable source of advantage that can lead to superior firm performance	Rate your organization relative to your major competitors in terms of its capabilities in the following areas: (1 = Much Worse Than Competitors to 7 = Much Better Than Competitors) 1. Using pricing skills and systems to respond quickly to market changes 2. Knowledge of competitors' pricing tactics 3. Doing an effective job of pricing products/ services 4. Monitoring competitors prices and price changes 5. Sticking to price list and minimizing discounts (D) 6. Quantifying customers' willingness to pay 7. Measuring and quantifying differential economic value versus competition 8. Measuring and estimating price elasticity for products/services 9. Designing proprietary tools to support pricing decisions (D) 10. Conducting value-in-use analysis or Total Cost of Ownership 11. Designing and conducting specific pricing training programs 12. Developing proprietary internal price management process	Construct definition include Morgan *et al.* (2009) and the researcher qualitative research (Liozu *et al.*, 2011). Result of the pilot survey with 70 responses yields an AC of 0.885 with these 12 items
Organizational confidence	Organizational confidence is a generative capacity of an organization to cope effectively with the demands, challenges, stresses and opportunities it encounters within the business environment. It exists as an aggregated judgment of an organization's individual members about their (1) sense of collective capacities, (2) sense of mission or purpose, and (3) a sense of resilience. In its most basic form, organizational efficacy is a sense of "can do" (Bohn, 2001, 2002)	To what extent do you agree or disagree with the following statements about your organization (1 = Strongly Disagree to 7 = Strongly Agree) 1. We can take on any challenge (D) 2. Because our departments work together well, we can beat our competition 3. We are more innovative than most organizations I have worked in (D) 4. Everyone works together effectively 5. People here have a sense of purpose to accomplish something (D) 6. We have a strong vision of the future (D) 7. We are very certain about what we will accomplish together as a company 8. We are confident about our future (D) 9. We believe in the value of our products/services 10. We have the necessary courage to stand firm to customers' pricing objections (D) 11. We have the necessary courage to implement difficult price changes in the market (D) 12. We have a strong sense of resilience with pricing (D)	Adapted from Bohn (2001) Overall Bohn questionnaire AC is 0.93 with 20 items Sense of Collective Capability (AC: 0.92) (Items 1-7, 9 and 10) Sense of Mission and Future (AC: 0.84) (Items 11, 12, 14, 15 and 16) Sense of Resilience (AC: 0.86) (Items 13, 17-21)

Table AI.
Construct, measurement items and representative literature

(*continued*)

Construct/ dimensions	Definition	Items	Source
Championing behaviors	Transformational leaders motivate followers to achieve performance beyond expectations by transforming followers' attitudes, beliefs and values. They take on the role of organizational champions by demonstrating specific behaviors to lead and support organizational implementations	To what extent do you agree or disagree with the following statements about your top management involvement with pricing (1 = Strongly Disagree to 7 = Strongly Agree) 1. Enthusiastically promotes the pricing function 2. Expresses strong conviction about the importance of pricing 3. Expresses confidence in what pricing can do 4. Shows tenacity in overcoming obstacles when changes in pricing are needed 5. Knocks down barriers and obstacles to pricing implementations 6. Gets pricing problems into the hands of those who can solve them 7. Gets the right people involved in pricing discussions 8. Gets key decision makers involved in the pricing process 9. Acts as a champion of pricing	Adapted from Howell *et al.* (2005)) based on Avolio *et al.* (1999) MLQ scales Champion Behavior Scale (15 items and overall AC of scale: 0.94): Expresses enthusiasm and confidence: six items (AC: 0.91) Persists under adversity: six items (AC: 0.90) Gets the right people involved: three items (AC: 0.83)
Organizational change capacity	The organization's capacity to manage the change process from a dynamic capabilities prospective	To what extent do you agree or disagree with the following statements about your organization (1 = Strongly Disagree to 7 = Strongly Agree) In this organization, business unit leader(s) ... 1. Protect the core values while encouraging change 2. Consistently articulate an inspiring vision of the future 3. Show courage in their support for change initiative In this organization, our organizational culture ... 1. Values innovation 2. Values change 3. Attracts and retains creative people 4. Provides resources to experiment with new ideas 5. Allows people to take risks and occasionally fail	Adapted two dimensions from Judge and Elenkov (2005) eight dimension scale: Trustworthy Leaders: four items (AC: 0.92) and Innovation culture: four items (AC: 0.89)
Product advantage	Relative superiority of product over competition	To what extent do the following statements apply to your products/services? (1 = Does Not Apply to 7 = Strongly Applies) 1. Our products/services offer higher quality that competing ones 2. Our products/services solve problems customers have with competing products/services 3. Our products/services are very innovative and can substitute for an inferior competing alternative	Adapted from Ingenbleek *et al.* (2003) Product Advantage: three items (AC: 0.74)
Competitive intensity	Competitive behavior or rivalry between competitors	To what extent do the following characteristics apply to your primary market? (1 = Does Not Apply to 7 = Strongly Applies) 1. Intense price competition 2. Strong competitors' sales, promotion and distribution systems 3. Strong and high quality competing products and services	Adapted from Ingenbleek *et al.* (2003) Competitive Intensity: three items (AC: 0.73)
Perceived relative performance	Respondents' perceived evaluation of their organization's performance relative to their competition	Please evaluate the performance of your major line of business over the past year relative to your major competitors (1 = Much Worse/Lower Than Competitors to 7 = Much Better/Higher Than Competitors) 1. Acquisition of new customers 2. Increase of sales to current customers 3. Growth in total sales revenues 4. Absolute price levels 5. Pricing power in the market 6. Business Unit profitability 7. Return on sales (ROS) 8. Return on investment (ROI)	Adapted from Ingenbleek *et al.* (2003) and Morgan *et al.* (2009). Market Effect: three items (AC: 0.90) and profitability: three items (AC: 0.95). Our pilot survey with 70 resp. yielded an AC of 0.929

Note: (D) = Item dropped due to poor reliability

Table AI.

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