

Benchmarking Marketing Capabilities for Sustainable Competitive Advantage

Market-based organizational learning has been identified as an important source of sustainable competitive advantage. One particular learning mechanism, benchmarking, is a widely used management tool that has been recognized as appropriate for identifying and enhancing valuable marketing capabilities. However, despite widespread admonitions to managers, the benchmarking of marketing capabilities as a route to sustainable competitive advantage has received scant empirical attention. The authors empirically examine the potential business performance benefits available from benchmarking the marketing capabilities of top-performing firms. The results suggest that benchmarking has the potential to become a key learning mechanism for identifying, building, and enhancing marketing capabilities to deliver sustainable competitive advantage.

Market-based learning has been recognized as an important source of sustainable competitive advantage (e.g., Hult 1998; Slater and Narver 1995). A widely adopted market-based learning approach is benchmarking, a structured process by which a firm seeks to identify and replicate “best practices” to enhance its business performance (Camp 1995; Zairi 1998). One of the most popular management tools in the world, benchmarking has become a primary instrument in firms’ total quality management, knowledge management, and process improvement efforts (e.g., Anderson 1999; Garvin 1993; Rigby 2001). It has also been recommended as a marketing capability improvement tool (e.g., Brownlie 2000; Day 1994; Dickson 1992; Woodburn 1999), with firms having undertaken benchmarking projects in areas such as customer satisfaction monitoring and brand management (e.g., Andriopoulos and Gotsi 2000; Hiebeler, Kelly, and Kettelman 1998). Yet despite the popularity of benchmarking and the theoretical importance of market-based learning, there is almost no empirical evidence either to support admonitions to benchmark marketing capabilities as a route to sustainable competitive advantage or to guide managers’ benchmarking efforts if they follow this advice (e.g., Ettlle and Johnson 1994).

This article addresses three important gaps in knowledge regarding the benchmarking of marketing capabilities. First, we examine the key normative benchmarking theory

premise that marketing capabilities associated with superior firm performance can be identified and that the marketing capability gap between a firm and top-performing benchmarks explains significant variance in business performance. This provides the first calibration of the performance benefits potentially available through benchmarking marketing capabilities. Second, we present the first empirical assessment of important benchmarking process design questions regarding what the appropriate number of benchmark sites is, whether to search for benchmark sites within or across industries, which marketing capabilities may be appropriate for benchmarking, and how they should be examined. Third, we demonstrate how profile deviation can be used as a sophisticated and robust tool for benchmarking marketing capabilities, and we extend this method by using models that incorporate weightings and interdependence among capabilities and sensitivity analyses using multiple different benchmark profiles. We also provide practical guidance for managers regarding how to implement benchmarking processes to identify and improve marketing capabilities as a route to sustainable competitive advantage.

We begin by describing benchmarking and the theoretical rationale linking it with sustainable competitive advantage. Next, we identify and develop indicators of relevant marketing capabilities. We then describe our data collection and measures and examine the relationship between marketing capabilities and business performance. Using profile deviation analysis to operationalize key stages of the benchmarking process, we then identify top-performing firms and calibrate their marketing capability profiles as benchmarks. Next, we assess the business performance impact of deviation from these benchmarks and the effect of weighted versus unweighted marketing capability models, different numbers of benchmark firms, and benchmarks from the same industry versus across industries on this relationship. Finally, we discuss the implications and limitations of our study and identify important areas for further research.

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Research Framework

Benchmarking is a market-based learning process by which a firm seeks to identify best practices that produce superior results in other firms and to replicate these to enhance its own competitive advantage (Camp 1995; Mittelstaedt 1992). Over time, the primary focus of benchmarking has moved from the content of the product or services produced, the strategy pursued, and performance outcomes achieved by top-performing firms to a process focus on the capabilities believed to have produced the superior performance outcomes observed (e.g., Anderson 1999; Ralston, Wright, and Kumar 2001). Although this process/content dichotomy is widely used in the literature, in practice benchmarking organizational capabilities involves both content and process issues (e.g., Fawcett and Cooper 2001; Zairi 1998). Benchmarking organizational capabilities is a structured learning process comprising (1) a search stage in which managers search for firms exhibiting superior performance and identify the capability drivers of observed performance superiority, (2) a gap-assessment stage in which the capability differences between the firm and the benchmark sites are assessed, and (3) a capability improvement stage in which the firm plans and executes gap-closing capability improvements (e.g., Camp 1995; Garvin 1993).

Three major theoretical perspectives support normative suggestions that benchmarking marketing capabilities can provide a source of sustainable competitive advantage. First, resource-based view (RBV) theory identifies heterogeneity in the levels, value, inimitability, and nonsubstitutability of firms' resources and capabilities as the fundamental cause of interfirm performance variations (Amit and Shoemaker 1993; Barney 1991; Wernerfelt 1984). To the extent that benchmarking can enable a firm to enhance the level and value of its stock of marketing capabilities, it should therefore lead to competitive advantage (Teece, Pisano, and Shuen 1997). Furthermore, to the extent that benchmarking as a continuous higher-order learning capability is itself valuable, inimitable, and nonsubstitutable, benchmarking-based improvements in a firm's stock of marketing capabilities can be sustained (Dickson 1992).

Second, strategic marketing scholars have identified a firm's market orientation—its ability to learn about its market environment and to use this knowledge to guide its actions appropriately—as a key driver of business performance (e.g., Hunt and Morgan 1995; Jaworski and Kohli 1993; Narver and Slater 1990). Market orientation researchers have specified benchmarking as an important market-based learning tool that can enable firms to build and deploy resources and capabilities in ways that are appropriate for their market environment (Slater and Narver 1995). The literature indicates that benchmarking provides an operational mechanism for directing manager and employee attention to the external market environment (e.g., Hiebeler, Kelly, and Ketteman 1998; Teece, Pisano, and Shuen 1997), for reaching a shared interpretation of the capabilities required to achieve superior performance (e.g., Camp 1995; Zairi 1998), and for appropriately directing investments in capability improvement (e.g., Brockett et al. 2001; Camp 1989). Therefore, market orientation researchers have posited benchmarking as a learning tool

that can help create market-driven firms (Day 1994; Slater and Narver 1995).

Third, organizational learning theory indicates that for market-based learning to form a source of sustainable competitive advantage, a firm's market surveillance must be more alert, timely, and accurate than that of its rivals (e.g., Dickson 1992; Teece, Pisano, and Shuen 1997). Benchmarking has been identified as a structured and continuous process that helps reduce perceptual bias (e.g., Dickson 1992), core rigidity (e.g., Leonard-Barton 1995), and satisficing problems (e.g., Winter 2000) that constrain a firm's motivation and ability to learn from market surveillance (e.g., Levinthal and Myatt 1994). The literature also posits that organizational learning may be accomplished by both imitation and experimentation (e.g., March 1991). Benchmarking has been identified as an important mechanism for imitative learning (Mittelstaedt 1992; Voss, Ahlstrom, and Blackmon 1997). However, the effect of different organizational and capability contexts on imitative capability improvement efforts inevitably results in the creation of a unique stock of capabilities in the benchmarking firm (Collis 1994; Grant 1996). Therefore, benchmarking also provides an important opportunity for learning by experimentation (Dickson 1992; Haunschild and Miner 1997).

Despite this theoretical support, the benchmarking literature makes important normative theory assumptions and poses many benchmarking process design implementation questions to which little or no empirical attention has been paid. We focus on theoretical assumptions and process design questions associated with the search and gap-assessment stages of benchmarking for three reasons. First, unless the assumptions underpinning normative benchmarking theory can be validated in the first two stages, deploying resources on the final capability improvement stage of benchmarking is likely to be unproductive. Second, *ceteris paribus*, firms that successfully accomplish the search and gap-assessment stages will have an advantage over rivals in the alertness, accuracy, speed, and efficiency of their benchmarking efforts (e.g., Dickson 1992). Third, the market-based identification and monitoring of valuable sources of competitive advantage such as marketing capabilities can provide fact-based evidence to help managers recognize the need for capability improvements (e.g., Day and Wensley 1988). The search and gap-assessment stages of benchmarking marketing capabilities are also required to select the most appropriate benchmarks, calibrate the potential value of alternative capability improvements options, and trigger the appropriate detailed investigations of the benchmark site required to plan and execute capability improvement actions (Camp 1995; Day 1994). Therefore, the first two stages of benchmarking both constitute a source of competitive advantage in their own right and are required for the success of the final capability improvement stage.

In assessing these stages of the benchmarking process, we first examine the theoretical assumption that distinct marketing capabilities can be identified and linked with superior business performance. We then examine four important but unresolved questions regarding how benchmarking marketing capabilities should be accomplished: (1) Do valuable interdependencies exist that require bench-

marking the entire set of marketing capabilities associated with superior performance? (2) If they do, can individual marketing capabilities be treated as equally important in assessing capability gaps? (3) Should firms search for benchmarks across industries or only in their own industries? and (4) What is an appropriate number of top-performing firms that should be used as benchmark sites?

Empirically Assessing Marketing Capability Benchmarking

Identifying Marketing Capabilities for Benchmarking

The search stage of process benchmarking involves identifying the capabilities contributing to superior performance that should be isolated for further study (Camp 1989). Because the notion of benchmarking marketing capabilities is relatively new, relevant marketing capabilities have yet to be comprehensively catalogued (e.g., Menon et al. 1999; Moorman and Slotegraaf 1999). As a starting point, however, the literature identifies specific capabilities used to transform resources into valuable outputs based on the classic marketing mix (e.g., Day 1994; Vorhies and Morgan 2003) and the capabilities used to orchestrate marketing-mix capabilities and their resource inputs involving market information management and marketing strategy development and execution (e.g., Capron and Hlland 1999; Day 1994; Morgan et al. 2003). To gain insights into relevant marketing capabilities in practice, we conducted in-depth field interviews with 30 managers involved in senior marketing roles in a wide range of firms. This was supplemented with four focus groups, three involving 24 marketing managers from different firms and one involving the 9 managers on the senior marketing management team of a *Fortune*-500 high-technology company. We used open-ended questions, asking these 63 managers to identify and describe the marketing capabilities of their firms that they believed contributed most to creating value for customers and for the firm.

Synthesizing insights from our fieldwork with those in the literature, we identified eight distinct marketing capabilities that are viewed as contributing to business performance and therefore suitable for benchmarking:¹ (1) product development, the processes by which firms develop and manage product and service offerings (e.g., Dutta, Narasimhan, and Rajiv 1999); (2) pricing, the ability to extract the optimal revenue from the firm's customers (e.g., Dutta, Zbaracki, and Bergen 2003); (3) channel management, the firm's ability to establish and maintain channels of distribution that effectively and efficiently deliver value to end-user customers (e.g., Weitz and Jap 1995); (4) marketing communications, the firm's ability to manage customer value perceptions (e.g., McKee et al. 1992); (5) selling, the processes by which the firm acquires customer

¹We do not suggest that these are the only marketing capabilities worth benchmarking—merely that these capabilities are both easily distinguished and identifiable by managers and have support in the literature as being potentially valuable determinants of business performance.

orders (e.g., Shapiro, Slywotzky, and Doyle 1997); (6) market information management, the processes by which firms learn about their markets and use market knowledge (Day 1994; Menon and Varadarajan 1992); (7) marketing planning, the firm's ability to conceive marketing strategies that optimize the match between the firm's resources and its marketplace (Morgan et al. 2003); and (8) marketing implementation, the processes by which intended marketing strategy is transformed into realized resource deployments (e.g., Noble and Mokwa 1999).

Linking Marketing Capabilities and Business Performance

Normative benchmarking theory assumes that managers not only can isolate distinct marketing capabilities they believe to be valuable but also can empirically link these capabilities with superior business performance. In doing so, the literature highlights two key benchmarking search process design alternatives: functional benchmarking, in which individual capabilities are assessed separately, and integrative benchmarking, in which a set of related capabilities is assessed collectively (e.g., Fawcett and Cooper 2001). The theoretical literature indicates that interdependencies between individual capabilities often exist and can be a valuable source of competitive advantage (e.g., Srivastava, Shervani, and Fahey 1999; Teece, Pisano, and Shuen 1997). Empirically, the extent to which such valuable interdependencies exist between marketing capabilities should determine whether marketing capabilities require functional or integrative benchmarking process designs.

In the absence of relevant secondary data sources, we collected primary data on the eight marketing capabilities identified and firm performance through a mail survey of the top marketing executives of 748 U.S. firms in six industry types: consumer durables, consumer nondurables, consumer services, business durables, business nondurables, and business services. Within each of these industry types, we randomly selected two three-digit Standard Industrial Classification codes. The 12 industries in the sample were audio and video appliances; household appliances; canned and frozen foods; soaps and toiletries; insurance; hospitals; process equipment; machine tools and patterns; chemicals, gases, and pigments; packaging; trucking; and business software services. We generated a mailing list of firms in each industry from business directories and mailed a survey packet to the top marketing executive at each firm. In all, 230 usable surveys were returned, representing a 31% response rate.

We assessed the eight marketing capabilities using new multi-item measures developed by means of insights from our fieldwork and the literature (for item sets, see the Appendix). We had pretested and modified these measures through two smaller-scale surveys before using them in this project. We measured business performance through respondents' subjective assessments of their customers' satisfaction, using a synthesis of previous measures (e.g., Fornell et al. 1996); profitability, using perceptual scales related to performance over the past 12 months and expectations for the following year (e.g., Morgan, Clark, and Gooner 2002); and market effectiveness, using a scale that

tapped the degree to which the firms' market-based goals had been achieved (e.g., Vorhies and Morgan 2003). In addition, for a subset of 109 respondent firms, we were able to collect the objective data necessary to calculate return on assets (ROA) from secondary sources. To minimize the impact of any short-term unobserved events and to allow for lagged effects, we calculated the average ROA for the two-year period immediately following our primary data collection (e.g., Boulding, Lee, and Staelin 1994). Finally, we also collected data using Jaworski and Kohli's (1993) scales to control for the environmental effects of competitive intensity, market dynamism, and technological turbulence on firm performance (e.g., Menon et al. 1999).

We assessed the measurement properties of the constructs using confirmatory factor analyses (CFAs). To ensure acceptable parameter estimate-to-observation ratios, we divided the measures into three subsets of theoretically related variables (e.g., Bentler and Chou 1987). The measurement models fit well with the data as indicated by the CFA results for the eight marketing capability constructs ($\chi^2 = 761.91$, 499 degrees of freedom [d.f.], $p < .001$; comparative fit index [CFI] = .942; root mean square error of approximation [RMSEA] = .048), the four performance constructs ($\chi^2 = 142.19$, 94 d.f., $p < .001$; CFI = .990; RMSEA = .051), and the three environmental constructs ($\chi^2 = 63.91$, 55 d.f., $p < .02$; CFI = .982; RMSEA = .049). We also conducted additional pairwise discriminant validity assessments by comparing CFA models in which we allowed the covariance coefficient between each possible pair of constructs to vary and then fixed it at one (Anderson and Gerbing 1988; Bagozzi and Phillips 1982). Changes in χ^2 were large in each case, suggesting discriminant validity in each model. Reliability analyses (Table 1) produced Cronbach's alpha values ranging from .80 to .91 for the marketing capability measures, .89 to .95 for the business performance measures, and .71 to .91 for the environmental control measures. Overall, we conclude that our measures demonstrate good measurement properties.

Tests revealed no significant differences between first-wave (early) and second-wave (late) respondents on any of the constructs, indicating that nonresponse bias is unlikely to be present in the data (Armstrong and Overton 1977). To assess whether our results are likely to be significantly affected by common method bias, we used the objective ROA data from secondary sources to validate all analyses using the perceptual measures from the primary survey data and obtained similar results. In addition, Harmon's single-factor *post hoc* test for common methods variance indicated no "same-source" factor in our data.² Therefore, there are no indications of common method problems in our data.

Using full-information structural equation modeling (SEM), which estimates the loading from each indicant to the latent construct, we simultaneously examined (1) the benchmarking premise that the marketing capabilities we identified are linked with business performance and (2) the

benchmarking process design question whether valuable interdependencies among these capabilities exist that would require that they be benchmarked as an integrated set. We estimated the eight individual marketing capabilities as first-order constructs using the relevant indicants from our survey data and estimated marketing capability interdependence as a second-order construct capturing the covariance among the eight marketing capabilities. Likewise, we estimated overall firm performance as a second-order factor comprising the three first-order latent performance factors (customer satisfaction, market effectiveness, and profitability) that we estimated using the relevant indicants from our survey data (e.g., Venkatraman 1990).

As we show in Figure 1, each marketing capability is positively and directly related to firm performance, indicating that these marketing capabilities are sources of competitive advantage and are therefore appropriate targets for benchmarking. The data also support the second-order factor representing interdependence among the eight marketing capabilities, and we find that this marketing capability interdependency factor is strongly and positively linked with firm performance. Furthermore, the indirect paths linking each marketing capability with firm performance by way of marketing capability interdependence are stronger than the direct paths from each marketing capability to firm performance. This indicates that in designing benchmarking processes for the firms in our sample, these marketing capabilities should be benchmarked as a set.

The Potential Business Performance Impact of Different Benchmarking Approaches

Having identified a set of marketing capabilities that are appropriate for benchmarking, we now turn our attention to calibrating the potential performance benefits of successfully benchmarking these marketing capabilities. In addition, we consider the impact of different benchmarking process design alternatives for searching for benchmarks within or across industries and the impact of the number of benchmark sites used in conducting capability gap assessments. The literature suggests that these process design alternatives contribute to important trade-offs in benchmarking efficiency and effectiveness. For example, for efficiency reasons some analysts advocate limiting the total number of firms included in the benchmark search, focusing only on industries closely related to that of the benchmarking firm, and minimizing the number of high-performing benchmark sites used in capability gap assessments (e.g., Spendolini, Friedel, and Workman 1999). However, given the relatively small number of major firms in many industries and the mimetic isomorphism among them, other analysts argue that limiting benchmarking searches to the firm's own industry reduces benchmarking effectiveness (Camp 1989). To maximize the probability of correctly identifying a firm exhibiting superior performance and to enhance the likelihood of gaining generative rather than adaptive insights, benchmarking analysts advocate searching for larger numbers of top-performing benchmarks across industries (Benner and Tushman 2002; Camp 1995).

We assess the potential business performance impact of benchmarking marketing capabilities and the effect of these

²Comparison of a single-factor confirmatory model (CFI = .42, RMSEA = .11) with a 14-factor confirmatory model (CFI = .92, RMSEA = .04) yields a χ^2 difference equal to 3885.81, 91 d.f., $p < .001$.

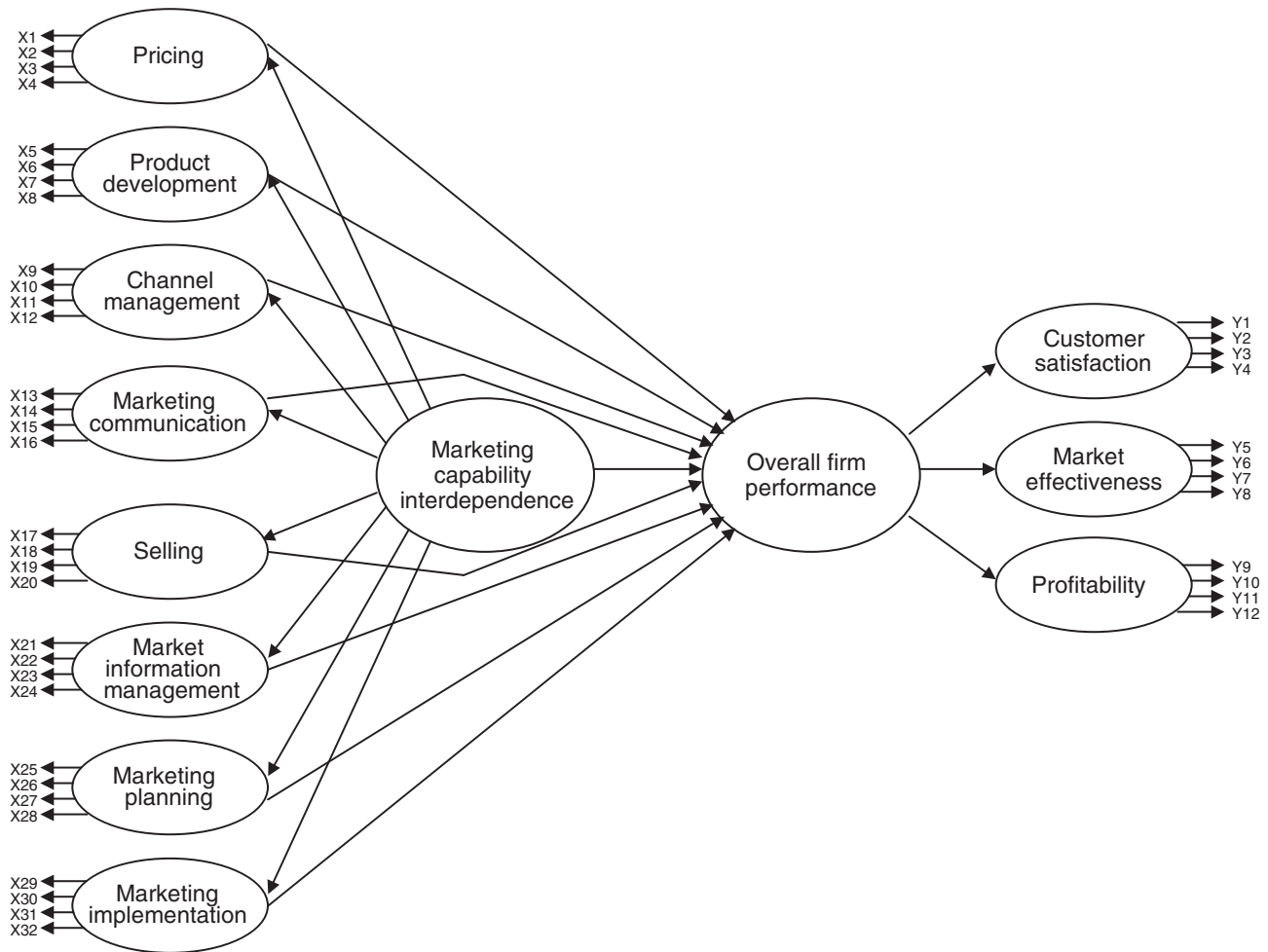
TABLE 1
Construct Means, Alphas, and Correlations

	Mean (S.D.)	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16
X1 Product development capabilities	4.74 (1.13)	.80															
X2 Pricing capabilities	4.72 (.84)	.29***	.83														
X3 Channel management capabilities	4.89 (1.21)	.31***	.29***	.90													
X4 Marketing communication capabilities	4.25 (1.15)	.37***	.18**	.25***	.84												
X5 Selling capabilities	4.71 (1.09)	.38***	.42***	.52***	.35***	.90											
X6 Market information management capabilities	4.47 (1.14)	.55***	.40***	.38***	.54***	.49***	.86										
X7 Marketing planning capabilities	4.56 (1.16)	.46***	.36***	.37***	.63***	.63***	.38***	.91									
X8 Marketing implementation capabilities	4.61 (1.15)	.45***	.40***	.40***	.41***	.57***	.56***	.68***	.91								
X9 Profitability	4.86 (1.29)	.31***	.07	.26***	.11*	.39***	.26***	.43***	.37***	.95							
X10 Customer satisfaction	5.45 (1.06)	.41***	.04	.37***	.20***	.42***	.37***	.38***	.47***	.38***	.91						
X11 Market effectiveness	5.15 (1.11)	.34***	.06	.32***	.19***	.37***	.32***	.37***	.32***	.58***	.49***	.89					
X12 ROA	.09 (.17)	.25***	.23**	.14	.04	.14	.25***	.23**	.21**	.35***	.20**	.22**	N/A				
X13 Firm size	391 (2045)	.01	-.05	-.07	.08	-.07	.04	.02	-.03	-.08	-.16**	-.10	-.10	N/A			
X14 Competitive intensity	4.22 (1.36)	-.08	.15**	.12*	-.10	.10	-.07	-.01	.04	.01	-.01	-.01	.23**	-.04	.83		
X15 Market dynamism	3.76 (1.19)	.06	.01	.06	-.08	-.04	-.07	.02	.05	.07	.04	.06	.17*	-.14**	.21***	.71	
X16 Technological turbulence	4.63 (1.51)	.02	-.11	-.03	.02	-.16**	.01	.04	-.04	.12*	.03	.07	-.01	-.02	-.15**	.30***	.91

* $p < .10$.** $p < .05$.*** $p < .01$.

Notes: Alphas are shown in bold on the correlation matrix diagonal. S.D. = standard deviation, N/A = not applicable.

FIGURE 1
Second-Order SEM and Results



Paths modeled:		Coefficient	t-Value	
Product development	→	Overall firm performance	.27	2.55
Pricing	→	Overall firm performance	.33	3.50
Channel management	→	Overall firm performance	.23	2.76
Marketing communications	→	Overall firm performance	.34	3.18
Selling	→	Overall firm performance	.35	2.80
Market information management	→	Overall firm performance	.34	1.71
Marketing planning	→	Overall firm performance	.43	2.87
Marketing implementation	→	Overall firm performance	.48	2.92
Product development	→	Capability interdependence	.62	8.27
Pricing	→	Capability interdependence	.51	6.52
Channel management	→	Capability interdependence	.50	7.13
Marketing communications	→	Capability interdependence	.72	9.37
Selling	→	Capability interdependence	.73	10.64
Market information management	→	Capability interdependence	.84	10.92
Marketing planning	→	Capability interdependence	.90	14.84
Marketing implementation	→	Capability interdependence	.82	12.51
Market effectiveness	→	Overall firm performance	.78	8.33
Profitability	→	Overall firm performance	.68	7.93
Customer satisfaction	→	Overall firm performance	.67	7.34
Capability interdependence	→	Overall firm performance	.67	7.41

Model fit: $\chi^2 = 1559.56$, 969 d.f., $p < .001$; CFI = .914; RMSEA = .052

benchmarking process design alternatives using profile deviation analysis. Profile deviation analysis involves identifying top-performing firms, calibrating the characteristics of the firms that are believed to be important in determining their superior performance as an ideal profile, and assessing the relationship between deviation from this profile and the performance outcome of interest (e.g., Drazin and Van de Ven 1985; Venkatraman 1990). Profile deviation analysis is particularly appropriate here because it is directly analogous to the search and gap-assessment stages of the benchmarking process. Therefore, it not only offers a method for assessing the performance potential of benchmarking but also, as we illustrate, may be used by managers as a sophisticated and robust methodology for conducting benchmarking in practice (e.g., Vorhies and Morgan 2003).

In the selection of benchmark sites, the literature indicates that firms that have superior both market and financial performance should be targeted (e.g., Camp 1995; Spendolini 1992). Therefore, we selected top-performing firms in our sample to serve as benchmarks on the basis of two criteria: (1) the firms needed to report the highest performance scores on both customer satisfaction and current profitability, and (2) the firms needed to be anticipating superior financial performance for the following year. We found only one firm in the data set reporting the highest possible scores on all items composing the customer satisfaction, current, and anticipated profitability scales, and therefore we selected this firm as the primary benchmark site. We were also able to track this benchmark firm's stock performance for the 18-month period immediately following our data collection (at which point it merged with another firm). Rising 202%, the stock price of our benchmark firm outperformed the index of the stock market on which it is listed (which rose by 36%) by a wide margin, providing confidence in our primary benchmark site selection.

The next step in the benchmarking process is to determine the gap between the benchmarking firm's marketing capabilities and those in the benchmark site (e.g., Camp 1995; Spendolini 1992). This requires calibrating the set of marketing capabilities of the top-performing firms as the benchmark and comparing the marketing capabilities of the remaining firms in the data set to this benchmark (e.g., Gresov 1989; Venkatraman and Prescott 1990). We accomplished this by calculating the Euclidean distance from the benchmark of all other firms in the sample across the eight marketing capability dimensions (e.g., Venkatraman 1990; Vorhies and Morgan 2003),³ using the following formula:

$$\text{Dist} = \sqrt{\sum_j^N (X_{sj} - \bar{X}_{ij})^2},$$

where X_{sj} = the score for a firm in the study sample on the j th dimension, \bar{X}_{ij} = the mean for the ideal profile along the j th dimension, and j = the number of profile dimensions (1,

³We use the averages of each firm's score on the items composing each marketing capability. A comparison using item-factor coefficients indicated that the profile deviation results obtained using the simple averages are robust.

2, ..., 8). This provides a "profile deviation" score representing the gap between the marketing capabilities of the benchmark firm and each of the remaining firms in our sample.

To calibrate the potential performance impact of benchmarking these marketing capabilities, we regressed each firm's marketing capability profile deviation score onto its business performance. To control for the possible effects of scale economies, industry, and environmental conditions on firm performance, we also included firm size; a dummy industry variable; and the competitive intensity, market dynamism, and technological turbulence constructs in our regression analyses (e.g., Menon et al. 1999). We regressed the profile deviation score for each firm, along with the control variables, in turn onto its overall firm performance; the three individual perceptual performance measures of customer satisfaction, market effectiveness, and profitability; and the objective ROA performance data (Table 2). If benchmarking marketing capabilities has the potential to significantly improve business performance, then our results should indicate that deviation from the benchmark marketing capabilities profile is negatively and significantly related to business performance (e.g., Drazin and Van de Ven 1985; Venkatraman and Prescott 1990).

As we show in Table 2, the significant, negative coefficient for deviation from the benchmark marketing capability profile in explaining firms' overall performance ($\beta = -.56, p < .001$) clearly indicates the potential business performance benefits of benchmarking marketing capabilities. We also assessed the impact of treating each of the eight marketing capabilities as equally important by comparing the regression containing the unweighted benchmark profile deviation term with one in which each marketing capability deviation score was weighted by that marketing capability's contribution to overall business performance (calculated from the SEM results in Table 2) (Venkatraman and Prescott 1990).⁴ As we show in Table 2, the regression model containing the weighted marketing capability profile deviation term performs no better than the unweighted regression model in our data.

To assess the potential performance impact of firms identifying top performers and benchmarking marketing capabilities across industries rather than limiting their search to their own industries, we also separately identified the single top-performing firm for each of the six industry types in our sample using the same selection criteria described previously. We then used the marketing capability profile of each top performer as the benchmark for the rest of the firms within that industry type. As we show in Table 2, our regression analyses revealed a significant, negative coefficient on firms' deviation from the within-industry marketing capability benchmark profile onto their overall performance. However, the smaller profile deviation term coefficient ($-.47$ versus $-.56$) and lower R^2 value (.25 versus .35) indicate a greater potential performance impact of cross- rather than within-industry benchmarking of marketing capabilities.

⁴We are grateful to an anonymous reviewer for this suggestion.

TABLE 2
Regression Results for Deviation from Single Top Performer Benchmark (N = 1)

	Cross-Industry Overall Performance (Unweighted)	Cross-Industry Overall Performance (Weighted)	Within-Industry Overall Performance (Unweighted)	Customer Satisfaction	Market Effectiveness	Profitability	Two-Year Average ROA
Deviation from benchmark	-.56**	-.56**	-.47**	-.49**	-.44**	-.44**	-.43**
Competitive intensity	-.02	-.01	-.04	-.03	-.02	-.01	-.02
Market dynamism	.01	.02	.05	.01	.02	.01	.12
Technological turbulence	.12*	.13*	.05	.05	.10	.16*	-.05
Firm size (log)	-.13*	-.13*	-.18**	-.15**	-.09	-.08	-.08
Industry	.01	.01	.03	.01	-.01	-.01	.12
R ²	.35	.34	.25	.27	.21	.22	.22
F-value	19.56	19.21	11.89	13.66	9.78	10.06	4.82
Number of firms ^a	229	229	224	229	229	229	108

* $p < .05$.

** $p < .01$.

^aTotal less benchmark firm.

We also assessed the impact of deviation from the cross-industry marketing capability benchmark on each performance dimension. With significant, negative profile deviation coefficients ranging from $-.49$ to $-.44$ and R^2 values ranging between $.21$ and $.27$, the performance impact potential of benchmarking marketing capabilities appears to be consistent across the three dimensions of business performance. Confidence in the findings is enhanced by the regression results using the objective ROA data obtained for 109 firms in our sample as the performance dependent. The coefficient for the deviation term ($-.43$) and R^2 value ($.22$) in the ROA regression are very much in line with the values we observed when using the perceptual indicators of business performance as dependents.

To provide empirical insights regarding appropriate numbers of top-performing benchmark sites, we also examined the impact of deviation from the marketing capability profile of single- versus multiple-benchmark sites. We accomplished this through a sensitivity analysis in which we gradually relaxed the selection criteria for top-performers and used breakpoints observed in the performance data to identify benchmark groups containing different numbers of top-performing firms (e.g., Venkatraman 1990). For each benchmark group, we calibrated the mean value of each of the eight marketing capabilities as the benchmark marketing capability profile. The regressions in Table 3 show the impact on the profitability performance dependent of using larger numbers of top-performing firms ($N = 5, 8,$ and 16) as marketing capability benchmark sites compared with using the single top-performer benchmark ($N = 1$).⁵ The results for the single versus top-five and top-eight performing firms are very similar in terms of R^2 ($.21$ versus $.20$ versus $.19$) and the impact of marketing capability profile deviation ($\beta = -.44$ versus $-.43$ versus $-.42$). However, as more firms are added to the benchmark group ($N = 16$), overall model fit ($R^2 = .16$) and the impact of marketing capability profile deviation ($\beta = -.39, p < .001$) decline.

For comparison purposes, we also randomly selected five firms in which the level of business performance was

⁵Analyses using the other perceptual performance measures and objective ROA produced similar results.

unknown and used these firms to calibrate a “nonbenchmark baseline” marketing capability profile (e.g., Venkatraman and Prescott 1990; Vorhies and Morgan 2003). The low R^2 ($.03$) and insignificant coefficient for deviation term in the random baseline profile regression shown in Table 3 provide additional confidence in our profile deviation results (e.g., Venkatraman and Prescott 1990).

Finally, we also examined the marketing capability profiles of the top-performing firms used as the benchmarks in our study (Table 4). The single top-performing benchmark firm rated six of its eight marketing capabilities with the highest possible score (the pricing and market information management capabilities both scored six on the seven-point scale). In line with the results of our sensitivity analysis, the profiles indicate that the marketing capability mean scores tend to trend downward in a linear fashion as more firms are added to the benchmark group. The rate of decline ranges from selling capabilities, which appear to decline least quickly, to marketing communications capabilities, which appear to decline the most quickly in our sample. Overall, consistent with the predictions of RBV theory, each of the top-performing benchmark groups exhibit marketing capability scores that are much higher than the mean for either the sample as a whole or the random baseline group (Table 4). In addition, the high marketing capability scores for each of the benchmark groups and the general trend downward as lower-performing firms are added to the benchmark groups also provide additional confidence in the validity of the approach we used to select appropriate benchmark sites.

Discussion and Implications

Our findings support the previously untested central premise of normative benchmarking theory—that marketing capabilities associated with superior business performance can be identified and that the marketing capability gap between top-performing benchmarks and other firms explains significant variance in business performance. Our SEM results indicate that the eight marketing capabilities we identify are associated with business performance and are therefore appropriate for benchmarking. Furthermore, the firms most closely matching the benchmark marketing capability profile in our sample significantly outperformed

TABLE 3
Profitability Regressions for Deviation from Different Top-Performing Benchmark Groups

Number of Benchmark Firms	N = 1	N = 5	N = 8	N = 16	Random Baseline ^a
Deviation from benchmark	$-.44^*$	$-.43^*$	$-.42^*$	$-.39^*$	$-.11$
Competitive intensity	.01	$-.01$.01	$-.01$	$-.02$
Market dynamism	.01	$-.02$.01	.02	.02
Technological turbulence	$.16^*$	$.17^*$	$.17^*$	$.16^*$.11
Firm size (log)	$-.08$	$-.03$	$-.02$	$-.01$	$-.02$
Industry	$-.01$	$-.02$	$-.01$	$-.02$	$-.01$
R^2	.21	.20	.19	.16	.03
F-value	9.89 [*]	8.93 [*]	8.20 [*]	6.49 [*]	1.13
Number of firms ^b	229	225	222	214	225

* $p < .01$.

^aProfile of $N = 5$ randomly selected firms; we obtained similar results for alternative $N = 8$ and $N = 16$ random profiles.

^bTotal less benchmark firms.

TABLE 4
Marketing Capability Profiles of Top-Performing Benchmark Groups

Marketing Capability Area	Number of Firms in Top-Performing Group				Profile of Entire Sample	Random Baseline Profile
	N = 1	N = 5	N = 8	N = 16	N = 230	N = 5
Pricing capabilities	6.00	6.25	6.13	5.78	4.72	4.90
Product development capabilities	7.00	6.15	6.16	5.95	4.75	4.30
Distribution capabilities	7.00	6.40	6.28	5.98	4.89	4.80
Marketing communication capabilities	7.00	5.40	5.03	4.95	4.25	4.65
Selling capabilities	7.00	6.52	6.40	6.04	4.71	5.12
Market information management capabilities	6.00	5.84	5.75	5.40	4.47	4.12
Marketing planning capabilities	7.00	6.45	6.06	5.84	4.56	4.25
Marketing implementation capabilities	7.00	6.15	6.09	5.83	4.61	4.63

firms that were less similar to the benchmark in customer satisfaction, market effectiveness, profitability, ROA, and overall firm performance (Table 2). Sensitivity analyses using different benchmarks and the insignificant results using a random baseline benchmark (Table 3) indicate that these relationships are robust.

The significant, negative coefficients for deviation from the benchmark marketing capability profile and the variance accounted for in each of the business performance dependents in our regressions provide a calibration of the potential business performance benefits of successfully benchmarking marketing capabilities. Our results indicate the value of a benchmarking process in which managers search among competitors and peers in other industries to identify the marketing capability drivers of superior performance and assess and monitor these capabilities within their own firms. From a “what gets measured gets done” perspective, successfully completing these search and gap-assessment stages of the benchmarking process can help bring about successful marketing capability improvement (e.g., Day 1994; Teece, Pisano, and Shuen 1997). By focusing on the capability sources of competitive advantage, rather than just observed outcomes, and using competitors and peers as referents, such benchmarking provides an important component of a comprehensive marketing control system (e.g., Day and Wensley 1988; Morgan, Clark, and Gooner 2002). When this benchmarking is an ongoing process, it helps managers plan and monitor the outcomes of their capability improvement efforts and thereby aids continuous improvements in the firm’s marketing capabilities (Camp 1995).

This approach to benchmarking can also enable transformative marketing capability changes. By providing a continuous and structured process for directing managerial attention externally to competitors and peers and by reaching a shared interpretation of the marketing capabilities required to achieve superior performance, benchmarking can deliver important generative organizational learning insights (e.g., Camp 1989; Day 1994; Slater and Narver 1995). It can also trigger and guide more detailed investigations of specific marketing capabilities in particular benchmark sites (Camp 1995). This is not purely imitative learn-

ing, because it is difficult to replicate the capabilities of a benchmark firm exactly (Dickson 1992). Furthermore, the marketing capability interdependency we identify means that even if capabilities are perfectly replicated, improvements in one marketing capability will likely have an impact on a firm’s remaining capabilities. Benchmarking can therefore lead to novel changes in a firm’s marketing capability stock, which both enables experimentation and innovation and increases heterogeneity between firms (e.g., Haunschild and Miner 1997). Therefore, it is likely to be beneficial not only for the benchmarking firm and its customers but also for the economy (Dickson 1992).

Implications for Marketing Theory

Our study has three primary implications for marketing theory. First, from an RBV perspective, we provide new insights by identifying and directly measuring eight distinct marketing capabilities and linking these with business performance in a cross-industry sample. More important, our results offer the first empirical support for the existence and performance impact of interdependency among individual marketing capabilities. This indicates that the firms in our sample have not established superiority in only one or a small number of marketing capabilities. Theoretically, such interdependency may make marketing capabilities a more inimitable resource and therefore a greater potential source of competitive advantage (Barney 1991). Interdependency among marketing capabilities also suggests that in allocating scarce capability improvement resources, managers should be careful not only to consider individual marketing capabilities as separate investment options but also to assess the implications of such investments for the firm’s overall set of marketing capabilities. Therefore, our findings indicate that strategic marketing theory explanations of firm performance should more explicitly consider the interdependence among multiple marketing capabilities.

Second, in calibrating the significant potential business performance benefits available from successfully benchmarking marketing capabilities, our study contributes to the market orientation literature by empirically supporting propositions that market-based learning should include

learning from competitors and peers (e.g., Day 1994; Slater and Narver 1995). Because we benchmark the firms in our sample with the highest customer satisfaction performance, our benchmark marketing capability profiles also provide new empirical insights into the capabilities required by market-driven firms. These profiles support the proposition that market-oriented firms require strong marketing capabilities (Day 1994); the profiles also reveal that strength across a range of marketing capabilities—and not just in market information management—is required to deliver superior customer satisfaction and business performance. Overall, our findings indicate that benchmarking should be an important tool in managers' efforts to create market-oriented firms (Day 1994; Slater and Narver 1995).

Third, our study also contributes to the literature on organizational learning. Although benchmarking has been posited as a valuable tool for market-based learning (DiBella, Nevis, and Gould 1996; Leonard-Barton 1995; Teece, Pisano, and Shuen 1997), ours is among the first studies to calibrate its potential performance benefits empirically. In addition, the larger profile deviation coefficients and greater variance explained in business performance when using across-industry versus within-industry top performers as benchmarks indicate that *where* an organization learns from affects the potential value of *what* it may learn. In line with Nelson and Winter's (1982) evolutionary perspective of viewing routines (the subprocesses on which capabilities are built) as the "genes" of an organization, our results suggest the intriguing possibility that learning from peers in other industries represents the potentially transformative value of "gene splicing" (Dickson 1992).

Implications for Managers

In addition to verifying the potential value of benchmarking marketing capabilities, our study reveals new insights into how managers can benchmark marketing capabilities to achieve sustainable competitive advantage. First, we demonstrate how profile deviation can be used as a tool for undertaking the search and gap-assessment stages of benchmarking. Profile deviation enables managers to calibrate the value potential of improving individual marketing capabilities or sets of them. It is also flexible enough to allow the benchmarking of more content-focused areas, such as marketing organization design (e.g., Vorhies and Morgan 2003), or hybrid content- and process-related phenomena, such as the marketing capabilities of top-performing firms in specific industries or strategy-type groups or even those of highly market-oriented firms. In practice, benchmarking consortia such as those organized by the American Productivity and Quality Center and others may provide members with samples that may be suitable for using profile deviation to benchmark marketing capabilities. For example, using standardized measures of various marketing processes, the United Kingdom's Chartered Institute of Marketing is developing a database of the marketing capabilities of medium-sized firms (Woodburn 1999).

Second, in benchmarking marketing capabilities in practice, our study provides new insights relevant to each of the three stages of the benchmarking process:

1. *Search stage.* Our benchmark marketing capability profiles support the use of customer satisfaction and profitability criteria to select top-performing firms to serve as benchmarks. Our marketing capability measures also provide a starting point for benchmarking search efforts that may be useful in firms' monitoring of their capabilities compared with those of competitors and peers and with their own prior performance (Day and Wensley 1988; Morgan, Clark, and Gooner 2002). In addition, our results indicate the potential value of cross-industry benchmark searches and the use of single or small groups of top-performing firms as marketing capability benchmarks. This supports the practice of benchmarking cross-industry "best in class" capabilities in single-benchmark sites such as Wal-Mart's logistics capabilities and Toyota's new product development process (e.g., Camp 1995). Although these findings are specific to our sample, by using the SEM and profile deviation approaches we illustrate that managers can assess for themselves the likely impact of such benchmarking search alternatives in the context of their own industries, strategies, and capability focuses.
2. *Gap-assessment stage.* Profile deviation also provides a tool for measuring marketing capability gaps between the benchmark and other firms and for linking the size (deviation) and composition (capability interdependence and weighting) of the capability gap to business performance. The value of marketing capability interdependence revealed in our data suggests that among the firms in our study, the eight marketing capabilities we examine should be benchmarked as a set. Our results further indicate that for these firms, weighting the individual capabilities by their impact on business performance may not add much insight beyond that provided by an unweighted model. However, managers using profile deviation analysis can assess for themselves the extent to which this is true for the capabilities on which they are focused and the set of firms in their benchmark search set. In an example of this in practice, Touchstone Energy, guided by the insights provided in our study, is currently using profile deviation as a benchmarking tool to assess the size, composition, and performance implications of customer satisfaction monitoring capability gaps between top customer satisfaction performers and others among its more than 600 electric co-op members.
3. *Capability enhancement stage.* Firms often allocate scarce marketing capability improvement resources to individual capabilities that are internally perceived to be weak and benchmark firms in which this capability is believed to be strong (e.g., Andriopoulos and Gotsi 2000; Woodburn 1999). In contrast, our study indicates that managers should attempt first to identify the marketing capability drivers of superior business performance and then to assess the relevant capability gap between themselves and top-performing benchmarks. Assessments of the relative performance of weighted and unweighted profile deviation models can then indicate where managers should allocate their capability improvement resources. For example, our results show that in our data set, firms should prioritize marketing capabilities where their current profile is the weakest relative to the benchmark in allocating their capability improvement resources.

When managers have determined which capability improvements will likely yield the greatest return, the literature suggests that they should then communicate and discuss benchmarking findings within the firm to develop a common understanding, use process mapping tools to conduct more detailed investigations of the target capabilities in the benchmark sites, agree on specific capability improve-

ment goals, develop and execute detailed capability improvement action plans, and monitor outcomes using market and cost feedback to enhance initial capability improvements further (e.g., Camp 1995; Day 1994; Dickson 1992; Zairi 1998). This approach was used by IBM to improve its “market management” capability after a cross-industry benchmarking study in the early 1990s. This resulted in a radically new market management process design that IBM believed was superior to those of its competitors. Consistent with our capability interdependency finding, the improved market management capability had important ripple effects in changing and enhancing IBM’s selling, pricing, and product management capabilities. In combination, these capability improvements transformed the way IBM addressed its markets and helped create a more market-driven organization.

Limitations and Research Directions

Several limitations in our study result from trade-off decisions in our research design. First, guided by our fieldwork, the literature, and our SEM results, we benchmark eight specific mid-level marketing capabilities. This precluded any assessment of higher-level integrative marketing capabilities such as brand management and customer relationship management that might usefully be examined by future researchers (e.g., Day 1994; Grant 1996). Second, although we control for several factors in our analyses, we were unable to collect data to control for firms’ other organizational capabilities (e.g., research and development). As more parsimonious capability measures are developed, researchers may be better able to control for such differences among firms in further research. Third, because we examine eight different marketing capabilities, our capability measures are relatively broad and use standard activity performance-level indicants. Inevitably, this results in a relative lack of depth of understanding of any single marketing capability. Future researchers should focus on developing more fine-grained measures of individual marketing capabilities (e.g., Dutta, Narasimhan, and Rajiv 2003) and examine the potential of more novel process measurement approaches such as process mapping (e.g., Day 1994; Keen 1997).

Beyond these limitations, our study indicates three important new areas for further research. First, having calibrated the potential value of the search and gap-assessment stages of benchmarking, we believe that additional research is required on the capability improvement stage. A particularly useful area for such research is enhancing the understanding of the specific stages of the subprocesses underlying individual marketing capabilities and illuminating how movement between these stages is successfully accomplished. This may provide insights that would enable managers to diagnose better the capabilities of a benchmark site and plan detailed capability improvement actions required in their own firm. A related issue arising from our findings is the potential for trade-offs between the novel capability insights that may result from benchmarking top-performing peers in other industries versus managers’ ability to trans-

late these novel insights into valuable capability improvements within the benchmarking firm. The relationship between different search and gap-assessment marketing capability insights available from competitors versus peers in other industries and the resultant capability improvements and outcomes under different conditions should be a priority for further research.

Second, whereas our study indicates the potential value of using competitor- or peer-focused benchmarking of marketing capabilities to enhance firms’ customer satisfaction performance, Etlie and Johnson (1994) report that in a new product context there may be trade-offs between using such competitor- or peer-focused benchmarking tools and using more directly customer-focused tools such as Quality Function Deployment. Furthermore, Nilsson, Johnson, and Gustafsson (2001) report that orientations toward both satisfying employees and process management are required for firms to achieve a customer orientation and superior performance. This raises the important question whether in a marketing capabilities context there are trade-offs between the competitor- or peer-focused benchmarking supported in our research and the customer- and employee-oriented approaches and tools supported in prior research. If there are, what balance of customer, competitor or peer, and internal orientations is required to maximize business performance under different conditions?

Third, although our study provides insights into the benchmarking of marketing capabilities, it does not address how firms should develop, deploy, and enhance their higher-order benchmarking capability. Other than Nilsson, Johnson, and Gustafsson’s (2001) work on process orientation, we know little about how firms deal with these issues (DiBella, Nevis, and Gould 1996). For example, organizational learning theory indicates that the embedded learning represented in a firm’s capabilities can constrain both the motivation and the ability to generate and respond to benchmarking insights (Dickson, Farris, and Verbeke 2001; Tripsas and Gavetti 2000) and that firms need to ensure that they balance their exploration knowledge development and exploitation knowledge deployment efforts (March 1991). However, we have little understanding of the types of organizational culture and benchmarking process designs that prevent marketing capability inertia and help firms balance continuous marketing process improvement with “bedding down” and routinization. Similarly, although theory indicates that benchmarking is an important higher-order “learning to learn” capability, we have no empirical insights into how firms can best develop and enhance such capabilities (e.g., Dickson 1992; Winter 2000).

Conclusion

Although benchmarking has been identified as a key market-based learning tool, there has been little empirical evidence either to support normative calls to benchmark marketing capabilities or to guide managers’ benchmarking efforts. Our findings support normative benchmarking theory, indicating that marketing capabilities associated with superior business performance can be identified and that the marketing capability gap between a firm and top-

performing benchmarks explains significant variance in business performance. Our study also illustrates the utility of SEM and profile deviation as benchmarking tools and

offers new insights into how managers can benchmark marketing capabilities to achieve sustainable competitive advantage.

APPENDIX

Marketing Capabilities and Performance Scales

Please rate your business unit relative to your major competitors in terms of its marketing capabilities in the following areas. Seven-point scale running -3 ("much worse than competitors") to +3 ("much better than competitors").

Pricing	Using pricing skills and systems to respond quickly to market changes Knowledge of competitors' pricing tactics Doing an effective job of pricing products/services Monitoring competitors' prices and price changes
Product development	Ability to develop new products/services Developing new products/services to exploit R&D investment Test marketing of new products/services ^a Successfully launching new products/services Insuring that product/service development efforts are responsive to customer needs
Channel management	Strength of relationships with distributors Attracting and retaining the best distributors Closeness in working with distributors and retailers ^a Adding value to our distributors' businesses
Marketing communication	Providing high levels of service support to distributors Developing and executing advertising programs Advertising management and creative skills Public relations skills Brand image management skills and processes Managing corporate image and reputation
Selling	Giving salespeople the training they need to be effective Sales management planning and control systems Selling skills of salespeople Sales management skills Providing effective sales support to the sales force
Market information management	Gathering information about customers and competitors Using market research skills to develop effective marketing programs Tracking customer wants and needs Making full use of marketing research information
Marketing planning	Analyzing our market information Marketing planning skills Ability to effectively segment and target market Marketing management skills and processes Developing creative marketing strategies ^a Thoroughness of marketing planning processes
Marketing implementation	Allocating marketing resources effectively Organizing to deliver marketing programs effectively Translating marketing strategies into action Executing marketing strategies quickly Monitoring marketing performance ^a

Performance: Please evaluate the performance of your business over the past year (the next twelve months) relative to your major competitors. Seven-point scale running -3 ("much worse than competitors") to +3 ("much better than competitors").

Customer satisfaction	Customer satisfaction Delivering value to your customers Delivering what your customers want Retaining valued customers
Market effectiveness	Market share growth relative to competitors Growth in sales revenue Acquiring new customers Increasing sales to existing customers
Current (anticipated) profitability	Business unit profitability Return on investment (ROI) Return on sales (ROS) Reaching financial goals

^aItems deleted during scale purification.

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