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SMALL BUSINESS MANAGER SCANNING EMPHASES AND THE DOMINANT LOGIC OF THE BUSINESS-LEVEL STRATEGY

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ABSTRACT

Normative prescription dictates that the pursuit of a business-level strategy can be best achieved when strategic decision makers focus their attention on those functions and activities most relevant to that particular strategy (Porter, 1980; 1985). We examine two elemental research questions for strategic management: 1) what is the connection, if any, between business-level strategies and the sectors managers scan most in their external environments; and 2) are business-level strategies associated with specific internal firm characteristics and capabilities managers attend to most? We evaluate these questions using a field survey in which small business managers identify differences in the external environmental sectors and internal firm attributes they scan most when pursuing different strategies. Results demonstrate some connections between the strategy being pursued and external and internal scanning emphases. Importantly, we conclude that this "scanning connection" should not be taken for granted and we offer suggestions for how managers should be deliberate about their scanning behavior.

INTRODUCTION

Effective environmental scanning has long been recognized as important for small businesses (Pearce, Chapman and David, 1982). Early research showed that one key distinction between the information scanning of small and large firms is that in smaller firms, the information gathering tends to be the responsibility of one or two individuals rather than the specialization of scanning activities among members of the top management group (Hambrick, 1981). Other early research on environmental scanning demonstrated that small business managers tend to scan a wide variety of information sources (Junh & Lacho, 1975), but have lower levels of resources available for information gathering (Golde, 1964). Thus, because effective environmental scanning is an important strategic decision process for small businesses with limited resources, the study of managerial scanning at the individual level may reveal new insights into strategy making in these settings.

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Environmental scanning is an initial step in the progression of activities that may lead to effective organizational adaptation (Daft, Sormunen, & Parks, 1988). Data are abundant, however, and their interpretation is complex. The environment contains "an infinite number of situations and events, each of which could provide some material for environmental scanning. Somehow, the tidal wave of environmental data must be funneled down to a small pipeline of information" (Smircich & Stubbart, 1985: 725). Because managers' time is limited, attention must focus on key subsets of the available data, while some potentially important data sources are ignored (Hambrick, 1981). Moreover, the blend of data subsets attended to or ignored likely affects subsequent action (Peteraf & Berger, 2003). Thus, this "scanning information selection" task, wherein managers decide *which* and *how much* data to gather, may profoundly influence organization design and outcomes. Yet scanning does not take place in a vacuum. We argue that a small business' strategy will influence which data draw the majority of manager attention.

Our study addresses the link between strategy and small business managers' environmental scanning behaviors by building on previous research in two important ways. First, scanning research has focused on which sectors of the external environment should be scanned most often, based on the levels of uncertainty associated with the various sectors (e.g., Daft et al., 1988). We take a different approach by using the concept of "dominant logic" (Prahalad & Bettis, 1986) to predict which sectors are likely to garner more scanning attention than others, based on the data *content* of each sector. Thus, we predict relationships between business-level strategy and the specific data items that can be obtained from each sector. This approach may provide a start toward greater specificity in scanning theory and prescription.

Second, whereas the bulk of previous scanning research has concentrated exclusively on executive scanning of the firm's external environment (e.g., Aguilar, 1967; Daft et al., 1988; El Sawy, 1985; Elenkov, 1997), we also examine scanning of the firm's internal "environment." Aggressive monitoring of only the external environment would be sufficient if the internal characteristics of the firm seldom change or are easily known. Internal characteristics also may change, however, either in response to executive action, or unintentionally such as when key employees leave the firm. Indeed, the internal characteristics of a firm are similar to its external environment in several important ways, First, they change over time. Second, they must be understood prior to effective adaptation. And third, they also compete for the manager's limited time and attention. These arguments suggest that executives must scan both the external environment and the internal characteristics of their firms.

In summary, we investigate the individual scanning behaviors of small business managers for both external and internal domains. We postulate that particular scanning patterns will emerge as a result of the dominant logic inherent in the firm's strategy. In the following sections, we first present a brief review of the scanning literature and develop our hypotheses. Then, details of the study are presented, along with results. Finally, we discuss the implications of our findings for researchers and practitioners.

THEORETICAL BACKGROUND

Research on environmental scanning in small businesses has been relatively scarce. Indeed, it has generally been limited to the response of small businesses to specific issues such as perceptions of opportunities and threats. For example, Lang, Calantone, and Gudmundson (1997) found that when faced with a perceived threat or an opportunity, small business managers increased their search for information. Pineda, Lerner, Miller, and Phillips (1998)

found that when confronted with important problems, small business managers increased the intensity of information search and made greater use of external sources.

Because of the relative dearth of small business scanning research, we reviewed general scanning research for insights applicable to small business managers. The general scanning literature encompasses both content and process studies. Scanning content studies have generally examined *which* sectors of the external environment capture the attention of managers (e.g., Aguilar, 1967; Daft et al., 1988; Hambrick, 1981, 1982; Kefalas & Schoderbek, 1973). Scanning process studies have investigated either the time spent scanning the external environment or scanning system sophistication. Time issues have included the total time spent scanning (e.g., Aguilar, 1967; Kefalas & Schoderbek, 1973), the distribution of time spent among environmental sectors (e.g., Hambrick, 1981; 1982), and the frequency of scanning efforts (e.g., Daft et al., 1988; Hambrick, 1981; 1982). Sophistication studies have involved the scope (i.e., rigor or continuity) of organizational or individual scanning efforts (e.g., El Sawy, 1985; Fahey, King, & Narayanan, 1981; Jain, 1984; Subramanian, Fernandes, & Harper, 1993).

Relatively few studies have examined the links between strategy and executive scanning. Hambrick (1981; 1982) found little support for a contingency theory that stated different strategic types (Miles & Snow, 1978) focus on scanning different sectors of the external environment. Subramanian, Fernandes, and Harper (1993), on the other hand, found that Miles and Snow's (1978) strategic types did differ in their scanning system sophistication. Based on Jain's (1984) typology–proactive, reactive, ad hoc, and primitive–the strategic types in decreasing order of scanning sophistication were prospectors, analyzers, and defenders. Yasai-Ardekani and Nystrom (1996) surveyed strategic planners in diversified firms and found that low cost emphasis was related to design characteristics of the firms' scanning systems. Overall, the results to date concerning a strategy-scanning link are equivocal.

These equivocal findings may be due to two omissions in previous research. First, much environmental scanning theory is built upon the assumptions of limited managerial resources such as managers' time and attention. Managers are likely to be selective in their scanning efforts, actively scanning some sources while ignoring others. The general argument has been that those sources viewed as highly uncertain will receive the greatest scanning effort (Daft et al., 1988). Yet, executives have been identified as "sophisticated information seekers" (Boyd & Fulk, 1996: 2) who, nevertheless, are constrained by bounded rationality (Cyert & March, 1963). This sophistication suggests that executive scanning selectivity may emanate from other, previously omitted factors. The dominant logic inherent in the pursuit of a particular strategy, for example, might also contribute to which sectors executives believe are most important to scan. This "sector content" approach is absent from previous scanning research.

Second, the failure to include internal elements may contribute to the equivocal findings concerning strategy-scanning links. Although effective external scanning allows a small business manager to develop a "profound understanding of the external environment" (Grant, 1995: 8), such understanding is a necessary, but not sufficient, condition for understanding a firm's competitive situation. Internal scanning is also required. As noted by Yasai-Ardekani and Nystrom, for example, "a scanning system can be considered effective if it generates awareness of environmental conditions, *knowledge about the organization's strengths and weaknesses*, and an awareness of existing or impending problems" (1996: 187, italics added). As argued in the early strategy literature, the executive decision maker's job entails adjusting the internal aspects of the organization to best match the demands of the external environment (e.g., Ansoff, 1965; Learned, Christensen, Andrews, & Guth, 1965; Miller, 1988; Vickers, 1965).

HYPOTHESES

Prahalad and Bettis (1986: 490) define dominant logic as "the way in which managers conceptualize the business and make critical resource allocation decisions." They also discuss the role of organizational schemas in an organization's dominant logic, noting that "these systems represent beliefs, theories, and propositions that have developed over time based on the manager's personal experiences. . . . An organizational schema is primarily a product of managers' interpretations of experiences while operating within certain firms and industries" (Prahalad & Bettis, 1986: 489). They argue further that the selection of elements to be scanned is likely affected by a manager's schema. One might similarly expect that those sectors of a firm's external environment and those internal capabilities that are most closely associated with the firm's distinctive competencies would have highest salience for the manager. These sectors and capabilities would receive more scanning attention than would less salient sectors. Thus, strategic decision-makers will attend most to those internal capabilities and external environmental elements perceived as most connected with their firms' dominant logic. The extension of Prahalad and Bettis' (1986) logic to small business managers is straightforward. Small business managers pursuing different business-level strategies are likely to have different business conceptualizations and different data requirements, and thus are likely to pay the most attention to differing sets of external and internal data. This expectation is strengthened by the fact that data are so abundant that they cannot all be processed; data less relevant to competitive strategy are largely ignored (Bettis & Prahalad, 1995). In the next section, we turn our attention to specifying further how the dominant logics associated with different business-level strategies will likely affect small business manager's scanning behavior.

Generic Strategies and Relative Focus of Attention

The strategy literature provides guidance concerning which external environmental sectors and which internal firm characteristics likely command the most executive attention in different strategic contexts, as well as which sectors and characteristics require less attention. Porter (1980; 1985), for example, has asserted that firms pursuing different approaches to competitive advantage allocate attention to different dimensions of the value chain. Different generic strategies require different resources and skills. They "also imply differing organizational arrangements, control procedures, and incentive systems. As a result, some commitment to one of the strategies as the primary target is usually necessary . . ." (Porter, 1980: 40). Firms that do not focus on specific dimensions are likely to have no coherent strategy. "The firm stuck in the middle also probably suffers from a blurred corporate culture and a conflicting set of organizational arrangements and motivation systems" (Porter, 1980: 42).

Internal Scanning for Cost Leaders and Differentiators

Porter (1980; 1985; 2001) asserts that, when following coherent strategies, management assigns the value chain activities that occur inside the firm to categories that best represent their contribution to strategy. Following Porter's suggestions, and for sake of parsimony, six internal firm (i.e., value chain) characteristics are included in our discussion: market research, product research and development, basic engineering, financial management, cost controls, and operational efficiency. Brief descriptions of each internal characteristic are shown in Table 1.

Table 1 - The External and Internal Environment

External Sectors	Examples
Market Environment	Customer trends in the industry; tastes and preferences; changes in industry sales
Technological Environment	New breakthroughs in products and processes; information technology's impact on business practices; automation
Political/Legal Environment	Actions of legal officials; legislation potentially affecting the firm; government funding sources/subsidies
Economic Environment	Interest rates; inflation; savings rates; currency fluctuations; exchange rates
Internal Sectors	**Examples**
Market Research	The firm's customer database; segmentation; customer tracking; use of marketing consultants
Product R&D	The firm's research related to new products and features; patent activity; qualifications of researchers and scientists
Basic Engineering	Discoveries that may not have an immediate market; basic knowledge collection and management efforts
Financial Management	Information about financial efficiency; capital management; use of excess cash; investment structure
Cost Controls	Information about cost containment efforts in all possible areas; reduction of overhead; cost savings incentives
Operational Efficiency	Information about scale economies; reduced waste; production; defect rates; cycle time

The cost leadership strategy is dependent on the devotion of attention to the financial management, cost controls, and operational efficiency internal characteristics. Porter reinforces the importance of attention to these internal elements in his discussion of the learning curve: "Learning does not occur automatically but results from the effort and attention of management and employees. Attention should not be confined to labor costs but also to the cost of constructing facilities, the cost of scrap, and other significant value activities" (1985: 101). Porter (1985) also notes that management must establish targets and demand learning improvements in these areas. "Improving relative cost position may not require a major shift in strategy so much as greater management attention" (Porter, 1985: 115). Similarly, "cost declines with cumulative volume are by no means automatic, nor is reaping all available economies of scale achievable without significant management attention" (Porter, 1980: 45). Continual attention to these areas is paramount, as they can change over time and affect the cost position of the firm. On the other hand, cost leadership "generally calls for minimal expenditures on R&D, marketing, and overhead" (de Kluyver, 2000: 63). These areas are likely to require less attention by top management. Miller (1987; 1988) asserts that cost leaders attempt to reduce innovation and marketing expenses. "Market scanning and analysis are less necessary when relatively unvarying and standard products are designed to appeal mainly due to low price" (Miller, 1987: 61).

Together, these arguments suggest that the dominant logic of a manager whose firm is pursuing a cost leadership strategy will likely result in a pattern of internal information search in which attention is most allocated to capabilities–such as financial management, cost controls, and internal efficiency–that emphasize formal profit and budget controls. Given their need to be selective in scanning efforts, these managers likely devote relatively less attention to product R&D, market research, and basic engineering. Thus,

> *H1a: Managers of firms pursuing a cost leadership strategy will emphasize financial management, cost controls, and operational efficiency in their internal scanning.*

Attention to particular internal elements of a firm's value chain is also likely when pursuing a differentiation strategy. Differentiation "requires a thorough understanding of what customers value, what relative importance they attach to the satisfaction of different needs and wants, and what they are willing to pay extra for" (de Kluyver, 2000: 65). According to Miller (1987; 1988), differentiation requires allocating attention to market research data to discern customer requirements, an aggressive marketing effort, and key roles played by engineering and R&D personnel. Thus, market research, basic engineering, and product R&D are high in perceived importance and salience. Although financial management, cost controls, and internal efficiency cannot be completely ignored, they likely receive relatively less attention from managers of differentiators than they do from those of cost leaders. "Differentiation is usually costly. A firm must often incur costs to be unique because uniqueness requires that it perform value activities better than competitors" (Porter, 1985: 127). Moreover, although Porter (1985) recommends attempts at cost parity in areas less beneficial to differentiation, top executives' cognitive limits and the "time scarcity" problem warrant that the majority of attention be focused on areas related to differentiation's potential advantages.

These arguments suggest that the dominant logic of a small business manager whose firm is pursuing a differentiation strategy will focus on customer and product research. Executives' patterns of internal information search are therefore expected to give the most attention to the related capabilities of product R&D, market research, and basic engineering. Thus,

> *H1b: Managers of firms pursuing a differentiation strategy will emphasize product R&D, market research, and basic engineering sectors in their internal scanning.*

External Scanning for Cost Leaders and Differentiators

External environmental sectors that are important to top executives have emerged from numerous studies (e.g., Bourgeois, 1980; Daft et al., 1988; Dill, 1958). These sectors include the market environment, the technological environment, the political/legal environment, and the economic environment. Descriptions and brief examples of each sector are shown in Table 1. Cost leadership strategies may be especially sensitive to government regulation arising from the political-legal environment. Porter (1985) has noted that "institutional factors"–such as government regulation, tax holidays and other financial incentives, unionization, tariffs and levies, and local content rules–merit special attention by cost leaders. And, cost leaders are particularly vulnerable to regulatory changes because they often must make long-term commitments to processes and to plant and equipment. The economic environment includes key indicators such as interest rates and inflation rates. These factors may be particularly salient for cost leaders because they frequently make major expenditures for plant expansion and equipment purchases in order to achieve scale and learning economies. "In an

increasingly global economy, cost leadership is particularly vulnerable to new entrants from other parts of the world that can take advantage of lower factor costs. And until recently, inflation threatened to reduce the price differential cost leaders could maintain vis-à-vis competitors using differentiation strategies" (de Kluyver, 2000: 65). These arguments suggest that managers of cost-leader firms are likely to direct external scanning toward the economic and political/legal sectors of their environment. Thus,

> *H2a:*   *Managers of firms pursuing a cost leadership strategy will emphasize the economic and political/legal sectors in their external scanning.*

The competitive advantage of a firm pursuing a differentiation strategy is often a result of management decisions regarding the development of new products and services, product design, product features, brand image, superior service, technology, distribution, etc. Implementation of this strategy requires that executives devote attention to the customer and technology sectors of the external environment. Attending to the customer sector entails paying close attention to changing customer tastes and preferences and to behaviors in the firm's distribution channels. Porter (1985) demonstrates the importance of the customer sector by pointing out that uniqueness does not lead to differentiation unless it is valuable to the buyer. The buyer's value chain is the starting point for understanding what is valuable to the buyer, and a firm can justify a premium by lowering buyer cost or raising buyer performance. "The ultimate basis for differentiation is a firm and its product's role in the buyer's value chain which determines buyer needs" (Porter, 1985: 34). Often the analysis includes identifying purchase criteria and understanding how the package of benefits compares to those of present and potential competitors.

The technology sector also can have important implications for every aspect of differentiators' value chains. Differentiators' competitive advantage may derive from adapting new technology to product features, new products, and service conveniences. Product development is often undertaken in order to enhance product quality, features, deliverability, or switching costs. Quality control, reliable scheduling, and fast response time for custom orders may rely heavily on advanced technology (Porter, 1985). Referring again to internal characteristics required for differentiation, the external technology sector may hold important new information for R&D and engineering. Also, integrating the latest advances in information technology can enhance a firm's customer database and information system. Finally, the increasing possibilities of integrating operations within the value chains of customers brought about by e-commerce represent tremendous opportunities to increase switching costs. The foregoing arguments indicate that top executives pursuing differentiation likely attend particularly to the market and technology sectors of the external environment. Thus,

> *H2b:*   *Managers of firms pursuing a differentiation strategy will emphasize the market and technology sectors in their external scanning.*

METHOD

The highest ranking manager of each manufacturing firm that appeared in a large southwestern state's <u>Directory of Manufacturers</u> was identified as a possible sample subject if the firm met the criteria that the firm (1) was an independent business rather than a subsidiary, a division of another firm, or a unit of a conglomerate; (2) was in a single business (Rumelt, 1974), indicated by operation in only one four-digit SIC code; and (3) had from 50-99 employees. The first two criteria helped to ensure that managers' scanning would not be influenced by parent firm preferences or by the differing business-level strategies of multiple

divisions. Criterion 3 facilitated hypothesis testing with smaller firms, where managers are likely to operate at both the strategic and operational levels and where individual managers do much of the organization's scanning.

We developed a questionnaire to identify the managers' scanning practices and their firms' business-level strategies. All scales used multiple items. The scales for business-level strategy were from Miller (1988) and have been used frequently in subsequent research. The portions of the questionnaire that concerned scanning behaviors were adapted from the external environmental sectors used by Daft et al. (1988) and Aguilar (1967), and from the internal capabilities of the value chain believed to be critical to the pursuit of business-level strategies (Porter, 1980). Specifically, the participants were asked to rate the importance of six sectors of the internal environment and four sectors of the external environment (see Table 1) when gathering information useful for making strategic decisions, on a 1 (very important) to 7 (not at all important) scale. These values were transposed in our Tables 2 and 3 so larger numbers would represent greater importance.

Packets were sent to the managers of 385 firms. Responses were received from 116 firms, representing a 30 percent response rate. Two responses were eliminated because they had experienced rapid growth subsequent to their reports to the state directory of manufacturers and no longer met the definition of a small business (i.e., less than 500 employees – United States Small Business Administration, 2004). The mean size of the firms was 84 employees (s.d.= 53, range= 10 to 500). The firms manufactured a variety of products, including metal cans, automotive accessories, draperies and blinds, laboratory instruments, and living room furniture. The average manager had spent 11.6 years (s.d.= 9.8) as the highest ranking manager and was 49.9 years old (s.d.= 10.4). The average length of time at the firm was 16.2 years (s.d.= 11.1), and average length of time in the industry was 21.7 years (s.d.= 12.7). No differences in firm sales or number of employees were found for responding versus non-responding firms. Thus, no evidence of response bias was found. Means, standard deviations, and correlations for the firm-level data gathered via the questionnaires are presented in Table 2. Examination of the correlation table hints at support for some of the expected relationships. More specifically, strong correlations are evident among marketing and product innovation differentiation and market and technological external sector importance and the market research internal sector.

Hypothesis Tests

Hypothesis testing required grouping respondents by the business-level strategies actually pursued by their firms. Cost leaders and differentiators were classified by examining the standardized means of the cost leadership, marketing differentiation, and innovative differentiation scales (Miller, 1988) based on *a priori* criteria. Specifically, when a firm was reported to be above the mean of all sample firms on innovative and/or marketing differentiation, and below the mean on cost leadership, it was classified as a differentiator. When a firm was below the mean on innovative and marketing differentiation and above the mean on cost leadership, it was classified as a cost leader. We believed that the dominant logic inherent as a result of the pursuit of a coherent strategy would manifest itself in particular scanning patterns. In order to assure a "clean" comparison between cost leaders and differentiators, firms with ill-defined strategic types (i.e., stuck-in-the-middle, or high or low on all three) were excluded. This analytical process resulted in fifty differentiators, thirty-six cost leaders, and twenty-eight firms that were stuck-in-the-middle. Chi-square analyses were conducted to ensure that the strategies reported were not artifacts of the managers' previous functional-level experiences. No significant association was found between managers' early

functional backgrounds and their firms' current strategy. Additionally, *t*-tests revealed no significant association between strategy and age or tenure.

Table 2 - Descriptive Statistics and Pearson Correlations

n=116	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1) Log Size	4.3	0.47														
Strategy:																
2) Cost Leadership	4.0	0.99	.00													
Differentiation					(.50, .42)											
3) Marketing	3.4	1.33	-.13	.09	(.64, .64)											
4) Product Innovation	3.9	1.14	-.10	-.14	.49											
External Sector Importance							(.64, .73)									
5) Market	5.6	1.38	.11	-.06	.25	.35										
6) Technological	4.8	1.61	-0.1	-.08	.32	.29	.45									
7) Political/Legal	3.9	1.70	-.11	.13	.20	.04	.13	.28								
8) Economic	4.3	1.68	.13	-.06	.14	-.01	.16	.20	.38							
Internal Sector Importance																
9) Market Research	4.8	1.60	-0.4	-.14	.38	.40	.58	.46	.32	.28						
10) Product R&D	4.1	1.70	.06	-.12	.30	.34	.46	.46	.19	.13	.51					
11) Basic Engineering	4.1	1.82	-.04	-.25	.22	.33	.20	.39	.14	.14	.17	.45				
12) Financial Management	5.1	1.63	.04	-.02	.24	.30	.44	.39	.27	.26	.51	.36	.27			
13) Cost Controls	5.9	1.25	.04	.01	-.11	-.15	.28	.17	.12	.21	.17	.02	-.04	.45		
14) Operational Efficiency	6.0	1.32	.03	-.10	-.05	-.06	.35	.11	.06	.23	.24	.02	-.04	.39	.81	

Correlations of .18 are significant at $p<.05$, and .23 at $p<.01$. Higher numbers indicate greater importance.

Cronbach alpha scale reliabilities and interrater reliabilities, where appropriate, are presented in parentheses on the diagonal.

From thirty-five companies we also received questionnaires completed by other top managers in addition to the highest ranking managers. We used these surveys to assess the reliability of the strategy measures.

H1a and H1b were tested using the managers' internal sector importance ratings as the dependent variable. The overall MANOVA model was significant (F=8.44, p<.001). H1a received weak support from the individual importance ANOVAs shown in Table 3. Managers of cost leaders placed more importance on cost controls than did managers of differentiators (F=3.99, p<..05), but financial management and operational efficiency showed no differences across the two groups. H1b received strong support. Differentiators rated the importance of product research and development (F=4.43, p<.05), market research (F=17.36, p<.001), and basic engineering (F=16.66, p<.001) more highly than did managers of cost leaders.

Table 3 - MANOVA Results for Manager Importance Ratings of Internal Capabilities & External Sectors

	Differentiator N=50		Cost Leader N=36		
Internal Sectors	**Mean**	**(SD)**	**Mean**	**(SD)**	**F**
FINANCIAL MGNT	5.36	(1.53)	4.97	(1.74)	1.19
COST CONTROLS	6.19	(.95)	5.62	(1.52)	3.99*
OPERATIONAL EFFIC	5.96	(1.62)	6.11	(.91)	0.48
PRODUCT R&D	4.58	(1.79)	3.80	(1.53)	4.43*
MARKET RESEARCH	5.46	(1.31)	4.17	(1.56)	17.36***
BASIC ENGINEERING	4.64	(1.55)	3.14	(1.82)	16.66***
External Sectors	**Mean**	**(SD)**	**Mean**	**(SD)**	**F**
ECONOMIC ENV	4.50	(1.69)	4.02	(1.70)	1.53
POLI/LEGAL ENV	3.90	(1.78)	4.11	(1.62)	0.32
MARKET ENV	6.06	(1.25)	5.27	(1.60)	6.48*
TECH ENV	5.10	(1.68)	4.55	(1.61)	2.27

+   p<.1   Higher numbers indicate greater importance.
*   p<.05
***   p<.001

H2a and H2b also were tested via a MANOVA model, this time using the managers' external sector importance ratings as the dependent variable. Although the overall model was significant (F=2.54, p<0.05), the individual ANOVAs (Table 3) did not support H2a. Hypothesis 2b was partially supported; the perceived importance of the market environment was significantly greater for differentiators than for cost leaders (F=6.48, p<.05).

DISCUSSION

Our study is limited by one of the typical limitations associated with cross-sectional, survey research; we cannot draw causal conclusions. Nonetheless, some of our findings demonstrated hypothesized links between strategy and small business manager scanning, but some of these linkages were not apparent. Regarding internal scanning, managers of differentiators perceived more importance in scanning market research, product R&D, and basic engineering than did managers of cost leaders. Cost leaders' managers placed more importance on scanning cost controls than did managers of differentiators. For external scanning, managers

of differentiators perceived the market environment as more important than did cost leaders' managers.

Our results are interesting in light of previous studies on selective perception, such as Dearborn and Simon (1958), Walsh (1988), and Beyer et al. (1997). Those studies dealt with managers' functional experience as it relates to information attended to or problems identified. At a more aggregated level, our study examined the possible linkages between managers' prior strategy experience and scanning patterns. Interestingly, just as Beyer et al. (1997) found some evidence of selective *im*perception, our hypotheses were only partially supported. It may be the case that our sample of top executives of differentiators and cost leaders did not necessarily attend to those areas believed important for particular business-level strategies. In some cases they appeared to "see" things, and thus scanned, in accordance with the normative prescriptions regarding Porter's (1980) strategies—but not always. This is an important point: Given a firm's pursuit of a specific strategy, it does not automatically follow that top management will attend most to those areas prescribed by normative theory. Our study was intended to identify the espoused scanning behaviors of managers whose firms were following specific strategies.

Implications for Research

Whereas most prior empirical research on scanning has focused on the external environment, our study also emphasizes the importance of internal scanning. As Weick (1979: 178-179) argues, "Social systems commonly use two types of selection criteria: criteria relevant to the internal functioning of the system, and criteria relevant to the external functioning of the system with its environment. It is rare for equal attention to be given to both sets of criteria, even though both are instrumental to survival." We found that small business managers divide their attention among external and internal domains, supporting Weick's (1979) arguments. Porter's (1980) ideas regarding a link between business-level strategy and internal value-chain components received some support in our study.

For researchers, our study supports the suggestion that work on scanning can potentially inform contingency and configuration theories to the degree that firms may exhibit a match between business-level strategy and certain scanning behaviors. Our findings were stronger for differentiators than they were for the cost leaders; perhaps our measures were not specific enough. Future work should try to link more specific internal capabilities and external environmental sectors with the cost leadership strategy, and furthermore should examine the links among business-level strategy, scanning focus, and firm performance. In addition, our study was cross-sectional in terms of industries, and we believe much greater specificity in measures of our constructs would result from single-industry studies in which the language could be tailored to specific industry characteristics and nuances sufficient for common understanding among industry participants.

Our study focused on certain external environmental sectors and internal sectors related to a firm's value chain. However, these sectors are likely not a complete list of possible sectors to scan. One notable omission is that of competitors. Indeed, our results seem to hint that a small business should not limit its scanning to competitors using the same strategy, but instead should scan competitors using different strategies. Future research should examine the relationships between a small firm's strategy and the scope of competitive intelligence.

Although we did not try to measure the dominant logic of each small business manager, the fact that we found support for some of our hypotheses would seem to indicate that the

business-level strategies do affect the mental schemas of the managers. Future research could explicitly measure dominant logic and relate it not only to the managers' scanning, but also to the decision making of small business managers.

Finally, this study examined and found evidence of the fit between scanning emphases and small business strategy. Our examination focused on the practices of small business managers. Presumably, the actions of small business managers are consistent with enhancing performance. However, the performance implications of obtaining such a fit were not tested. Future research aimed in this direction could explore the performance implications of obtaining fit among external scanning, internal scanning, and business-level strategy.

Implications for Small Business Owners/Managers

Our results provide some indication that top managers of small manufacturing firms may, to some degree, employ a contingent approach to their external and internal information search when gathering information for making strategic decisions. These managers appeared to match their emphases on certain types of available information with their strategic focus at the business level. These findings suggest that the most complete and realistic prescriptions for small business executives will emerge from theories of executive information search that include not only links between the strategy and the external environment, but also the array of internal organizational elements important for strategic decisions.

In retrospect, our conceptualization of the necessary information requirements connected with business-level strategies may have over-simplified the complexity inherent in the job of a small business manager operating at both the strategic and operational levels. For instance, although differentiators are posited to devote attention to those functions involved in enhancing the image of a firm's product and service, Porter (1985) also states that differentiators cannot afford to ignore costs. Although cost leaders' primary concerns may revolve around costs and efficiencies, perhaps differentiators have a somewhat more challenging balancing act to perform. Not only must the differentiators produce a product with an eye toward changing consumer desires, but they also must manage the costs of doing so. If differentiators fail to manage costs, the cost of differentiation may translate into excessive prices. Likewise, Porter would also maintain that a cost leader must achieve some parity regarding at least minimal quality attributes. Moreover, cost leaders often employ technology to increase efficiency in various stages of the value chain. In general, then, a firm pursuing one form of competitive advantage cannot completely ignore issues related to the other forms.

This means that in terms of information gathering, an appropriate scanning process should address a wide range of available internal and external information. On the other hand, research has demonstrated that, because of information proliferation and bounded rationality, managers are likely to process a subset of salient data when making strategic choices. These tensions highlight the dynamic nature of the scanning task, especially for small business managers; that is, perhaps initial information search is necessarily broad in scope, and at some point managerial judgment and distilled experience dictate where attention should be particularly focused given the situational context. Smaller businesses continue to be a strong force even as industrial and global changes escalate. Thus, the strategic decision processes of small business owners and managers will increasingly be a topic worthy of study.

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