

# Middle-up-down and top-down approaches: Strategy implementation, uncertainty, structure, and foodservice segment

Robert J. Harrington

K. W. Kendall

**SUMMARY** *This study explores the relationship between various profiles of the strategy implementation process and managers' perception of the task environment, complexity and dynamism. This study addresses the following research questions: Do differences exist between levels of perceived environmental change/uncertainty and users of middle-up-down and top-down strategy implementation approaches? And, does this relationship become more meaningful when ownership, firm structure and foodservice segment characteristics are considered? There has been very little research on the food service industry that assesses the relationship between eleven task environment measures of complexity and dynamism and the use of a predominately top-down or middle-up-down approach to the implementation of strategies. Using a sample of food industry managers, multiple discriminate analysis (MDA) was used to predict the use of implementation strategies. Substantive differences appear to exist between levels of perceived environmental change/uncertainty and users of middle-up-down and top-down strategy implementation approaches for foodservice firms. The ability to correctly classify users of middle-up-down and top-down approaches using a multivariate combination of environmental variables is improved radically when ownership, firm structure, and market segment classifications were are considered. Taken as a whole, the findings are most convincing and support the basic hypotheses. Study findings indicate that a broad brushstroke approach to determining whether a middle-up-down or top-down is used or appropriate based on the perceived task environment may not be valuable. The results support previous findings in other industries in that the prediction is better for market segments served and the public versus private nature of the firms involved.*

**Key words:**

*middle-up-down; top-down; implementation; change; uncertainty; foodservice*

## INTRODUCTION

A critical notion to consider when discussing strategy making and implementation is the distinction between corporate level and strategic business unit level strategy. The latter is generally considered to be the "core"

strategy which describes how the firm will compete in its markets (Hitt, Ireland and Hoskinsson 2003). The latter level is generally the point of analysis and discussion when strategy decision making and implementation is most commonly used in the hospitality literature.

---

**Robert J. Harrington**, PhD., School of Hospitality and Tourism Management, University of Guelph, Canada  
E-mail: rharring@uoguelph.ca

**K. W. Kendall**, PhD., School of Hospitality Business Management College of Business and Economics, Washington State University, Pullman, USA  
E-mail: kendall@wsu.edu

Neither main stream nor the hospitality strategy literature is very clear on why the manager so desperately needs to use the theory and procedures suggested in either text books or articles. Hitt et al. (2003) never really mentions the rationale for the process although the text assumes the role of a major gospel in the literature. These authors do note that "strategy is an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage" (Hitt et al. 2003: 9). It is assumed that these stated strategy benefits are of central importance to management behavior. Harrison and Enz (2005) offer growth and prosperity as the managerial behavior benefits of accomplishing strategic management and thinking. Olsen, West and Tse (1998) claims that strategy is the tasks and decisions accomplished to satisfy managerial behavior missions and objectives. It would appear that Hunger and Wheelen (2001) are among the few who suggest a "triggering" effect to initiate the process. These triggers are suggested to be intervention by an external institution, threat of a change in ownership, or management's recognition of a performance gap. The latter represents the most common reason for working on the strategy process particularly at the SBU level of analysis.

Although the rationale for doing all of the work associated with the strategy process is not perfectly clear, the next step of the process tends to offer more general agreement among managers and researchers. The environmental scanning process occurs so that the firm can best fit or match its resources to the state of the environment for the greatest "success" of the firm (Harrington 2005). This idea of success can be defined as any critical benefit deemed important by managerial behavior. Thus, there is much literature on the environmental scanning (ES) process which may be the lynch pin of the theory (c.f. Jogaratnam and Law 2006; Okumus 2004).

The original formulation of formal environmental scanning to accomplish this matching/fit task has not been empirically documented in the literature. Although environmental scanning is still assumed to occur to perform the matching and fitting process, there are several arguments for less formal methods. Okumus (2004) did an extensive review of deterrents to employing a formal environmental scanning approach in hospitality organizations. Deterrents there are, but it is conspicuous that environmental variables are considered for the matching/fit process in business organiza-

tions (Harrington 2004, 2005; Harrington and Kendall 2005) given certain market and organization conditions. More recently, Jogaratnam and Law (2006) reviewed the empirical evidence on environmental scanning and suggested that formal environmental scanning may not be appropriate for a number of reasons, primarily because the scanning was more important for the task environment and the specific industry for domain navigation of the strategic business unit. However, they concentrated on their findings related to general external and internal sources of information which could be collected and applied to the matching/fit task. Thus, there is still a moderate void in understanding the level of management and organizational structures which may require the collection and use of environmental information for the matching/fit process. A still finer consideration is the specific information that is or should be collected and used within these parameters.

The purpose of this study is to concentrate on the level and involvement of management and structural organization variables which relate to the collection and use of environmental information for the matching/fit process. The notion of top-down and bottom-up management styles is pervasive in management research and the popular press. Implicit in the idea of a top-down or bottom-up approach to management is the concept of both the type and level of involvement across the organization in the management process. In addition to these two generic approaches, researchers have theorized and empirically supported the value of involvement by middle management, franchisees or multi-unit managers in the strategy implementation process (Harrington 2004; Parsa 1999; Ritchie and Riley 2004). For this particular study, a management approach is considered that does not fit the traditional top-down/bottom-up continuum and is described as "middle-up-down." Basically, the middle-up-down concept orientation is linked to a conceptually improved ability to process information by multiple levels of the organization as well as a potential to increase a firm's ability to adapt to change. In this approach, the vital role of middle management as a synthesizer of information up, down and across the organization is the central tenet of the theory (Nonaka 1988). This information synthesizer ability is theorized to be particularly valuable in complex and dynamic environments. Another value of this approach is it emphasizes an increased ability to identify and exploit opportunities before they disappear (Forbes 2005).

While the concepts of top-down, bottom-up and middle-up-down strategy implementation approaches are implicit in the hospitality literature, few empirical tests have been presented to assess the value of these differing approaches for application in a foodservice environment (Harrington 2004). For this study, only top-down and middle-up-down strategy implementation approaches are considered due to a low response from firms using the bottom-up approach. Therefore, this study takes an exploratory approach to assess the relationships between top-down and middle-up-down implementation approaches and perceived environmental change/uncertainty in the foodservice industry for the matching/fit process to achieve the goals of the organization. Specifically, this study addresses the following research questions: Do differences exist between levels of perceived environmental change/uncertainty and users of middle-up-down and top-down strategy implementation approaches? And, does this relationship become more meaningful when ownership, firm structure and foodservice segment characteristics are considered?

## BACKGROUND

A variety of specific approaches to the strategic process and strategy implementation have been presented in the literature (Bourgeois and Brodwin 1984; Hart 1992; Mintzberg, Ahlstrand and Lampel 1998; Nonaka 1988; Nutt 1989; Okumus and Roper 1999; Stacey 2003). While these have been defined in a variety of terms, Harrington (2005) developed a typology to more clearly separate the concepts. One of the main continuums included individualistic to collective styles. He defines a purely individualistic approach as one in which only the chief executive and/or strategic analyst(s) are solely involved in the process of strategy-making. The individualistic approach is often described as "top-down" and has been purported to have a number of advantages. In particular, in an environment of low complexity and either low or high time constraints, the top-down approach is generally considered to be the most effective. The top-down style allows decision-makers to quickly scan the environment, formulate a strategy and implement it (Bourgeois and Brodwin 1984; Nonaka 1988). This assumes that in such an environment cause-and-effect relationships can generally be understood (Mintzberg 1973), that the knowledge needed to understand these relationships is not specific to other areas or components of the organization

(Clouthury and Sampler 1997), and that lower levels of the organization are generally willing to accept decisions and consequences from upper level management (Bryson and Bromiley 1993).

The need for greater participation or a more collective approach has been suggested and described frequently in strategy-making process models (e.g., Harrington 2005; Okumus and Roper 1999). A synthesis of these models and earlier research studies suggests that environmental complexity has a main effect on the individualistic-collective dimension requiring a more collective approach in an environment of higher complexity or uncertainty (Harrington 2004; Ritchie and Riley 2004; Schmelzer and Olsen 1994). Additionally, the unique nature of service organizations with the variances in the operational-level and unexpected market contingencies may create a variety of adaptability and communication needs (Ritchie and Riley 2004). Foodservice firms operate under a variety of ownership structures, vastly differing organizational sizes, geographically-dispersed business units, and in significantly different competitive environments (market segments and locations). This variance and disparity in foodservice firm types has important implications on managers' selection of strategy implementation approaches in particular.

Due to these characteristics in the generic foodservice industry, it seems likely that foodservice firms may utilize multiple levels in the organization for the implementation process to simultaneously synthesize information across the organization. Ritchie and Riley (2004) found that lower levels of the hierarchy in multi-unit firms was the organization level where firms coped with uncertainty in the environment to shield the market uncertainty from higher levels of the organization. Bradach (1997) found that quick service restaurant chains utilized multiple forms of management in the strategic process to simultaneously balance a need for control and adaptability. These findings illustrate the need to utilize an approach at the unit level that maintains adaptability and an approach at the corporate level of a firm to maintain control and, perhaps, linear strategic direction. Such considerations may strongly suggest the potential impact of dynamism (volatility), complexity, type of ownership, market segment, and organizational size on the type of strategic implementation process used (Bradach 1997; Parsa 1999; Ritchie and Riley 2004; Schmelzer and Olsen 1994).

While researchers have indicated that hospitality managers may have difficulty in accurately evaluating the environment (Okumus 2004), Harrington and Kendall (2005) found that informed managers' self-reported assessment of environmental dynamism and complexity closely matched archival measures when a similar domain was ensured. Other researchers have concluded that informed managers do, indeed, provide a reliable view of organizational processes and the firm's task environment (Powell 1992). The ability to define, interpret and respond to the external environment has been described as a tacit capability that provides managers with intuitive insights into the state of the environment (i.e. Stacey 2003).

Therefore, knowledgeable managers should have a reasonable ability to evaluate the state of the task environment and design processes to maximize strategic implementation success. This ability may lead industry leaders to utilize differing strategic process models based on industry segment, degree and type of dynamism or complexity, the level of the hierarchy involved and the level of strategy or tactic. Harrington and Kendall (2004) found that quick service restaurants were more likely than full-service restaurants to use individualistic processes when implementing strategies. In addition to the consideration of industry segment membership and the general environment, the decision to select a particular implementation model could also be determined by the task environment of the individual geographically-dispersed unit and the managerial level and involvement in strategy decision making.

## DEFINITIONS

**Top-down.** The "top-down" style uses position power and inducements to facilitate the implementation of the strategic plan across the firm. The approach has greater centralization in the implementation process and appears most useful when a firm operates in an environment with a low level of complexity (e.g., Bourgeois and Brodwin 1984; Hart 1992, Harrington 2004) and either high (Nonaka 1988; Nutt 1989) or low volatility (Bourgeois and Brodwin 1984; Hart 1992). When high environmental volatility is present, this approach allows decision-makers to quickly respond to environmental change if organizational members are willing to quickly accept and implement decisions from upper level managers (Nonaka 1988). Thus, for this study, a predominately top-down implementation

approach is defined with managers from the highest levels of the organization having the greatest involvement during the implementation process.

**Bottom-up.** This approach to strategy implementation is the least centralized of the potential strategies. Lower levels of management have the highest level of involvement in the implementation process of strategic means. While this style is generally conceived of as having ideas and initiatives pushed up through the hierarchy (Hart 1992), other explanations indicate the value of this approach for constricting uncertainty levels to the lower echelons of the organization (Ritchie and Riley 2004). Thus, bottom-up is defined as a higher level of involvement by lower levels of management in the implementation of strategy and the ideas for strategy filter up from the interaction with the market constituents.

**Middle-up-down.** This approach is defined as having ongoing involvement and planning throughout multiple management levels of the organization (Nonaka 1988). The middle-up-down approach can be described as having information creation occurring with middle management synthesizing demands and utilizing input from top management and operational-level actors throughout the implementation process. The approach is used to quickly formulate and implement strategy in a reciprocal process (e.g., Bourgeois and Brodwin 1984). The middle-up-down approach is defined by the middle management levels having the highest levels of involvement in the implementation process and generating synergy to the upper and lower levels of the organization.

## METHODS

The sample for this study was randomly selected from members of a restaurant association following a Dillman (2000) survey procedure. The initial mailing went out to 1600 members of a restaurant organization. This procedure resulted in four hundred and twenty four usable responses (26.5% response rate) for the analysis. Only respondents indicating the organization levels of top management, middle management and lower management as well as complete information on environmental variables, firm ownership, firm structure, and primary foodservice segment were included in the analysis for this study. Since only 28 cases were classified as using a predominately bottom-up invol-

vement approach as the construct was operationalized (lower levels of management involvement reported than at higher levels), the analysis for this study focused on two strategic implementation groups: foodservice firms using top-down and middle-up-down approaches. Thus, a total of two hundred and thirty six responding foodservice firm respondents are processed for the analysis.

**Implementation approach.** A main characteristic defining the process of implementation is the extent to which organizational members from differing hierarchical management levels participate in strategy implementation (Harrington 2004; Nutt 1989; Barringer and Bluedorn 1999). For this study, involvement is defined as the extent to which managerial hierarchical levels are involved in their firm's strategy implementation process. Respondents rated the level of implementation involvement by these 3 organizational levels as low, medium and high which was coded as 1, 2 or 3 respectively. Involvement was measured using a 10 point scale from 0, no involvement to 10, very involved, as a traditional psychometric scale for each of three management levels. The strategy implementation approach (top-down, bottom-up or middle-up-down) was based on an assessment of the profile of the level of involvement across 3 organizational levels: top management, middle management, and lower-level management. The coding decision rules were specified as follows: 1) Top-down - if the top management level or the top and middle management levels reported higher involvement than the lower level on an individual case basis, the implementation approach was coded as a predominately top-down strategic implementation approach. 2) Bottom-up - if the lower level management or the lower and middle levels reported higher involvement than the top level on an individual case basis, the implementation process was coded as a predominately bottom-up strategic implementation approach. 3) Middle-up-down - if the middle management level reported higher involvement than both the top and lower levels or if all levels were equal on an individual case basis, the implementation process was coded as predominately middle-up-down strategic implementation approach. Based on this coding system, 49.6% of respondents use a predominately top-down approach, 39.8% use a predominately middle-up-down approach, and 10.6% use a predominately bottom-up approach. The environmental variables and other designated organizational variables were measured accordingly: 1) Environmental change/uncertainty - the survey

instrument contained 11 items of perceived environmental change. These measures were generated from previous research assessing perceived levels of environmental dynamism and complexity (Brews and Hunt 1999; Harrington 2004). 2) Ownership considerations - respondents classified the ownership of their firm as a sole proprietorship, partnership, private corporation, or public corporation. 3) Firm structure - respondents classified the firm structure as single unit, multi-unit corporate, or multi-unit franchise. 4) Foodservice segment - respondents defined the primary foodservice segment of their firm as quick service restaurant, causal-dining, mid-scale dining, fine-dining, on-site or other.

**Tests.** In the analysis, the data include a categorical dependent variable (top-down or middle-up-down) and several metric environmental change/uncertainty variables. Therefore, to test the research questions addressed by the study, multiple discriminant analysis (MDA) was used for the analysis. For this test, a linear combination of the environmental change variables was used as the independent variables to predict the strategy implementation approach, the dependent variable. MDA was run for the entire sample as well as grouping by ownership type, firm structure, and primary foodservice segment. While this process provided many interesting relationships, some of these groupings resulted in small cell sizes. Due to the exploratory nature of this study, the results presented below provide interesting relationships that require additional study and a few of the analyses did not satisfy all of the basic statistical assumptions for MDA. (Hair, Black, Babin, Anderson and Tatham 2006).

## RESULTS

The initial run of MDA was tested using two strategy implementation approaches: middle-up-down and top-down. The dependent variable classification was based on the level of involvement between the three levels of management as previously described. The multiple independent variables were 11 items measuring the task environmental complexity and dynamism. The results for this analysis are shown in Table 1 (all of the statistical assumptions were satisfied). Across the entire sample, the correct classification for the top-down group was nearly 85%. However, the correct classification for the middle-up-down group, even if using the assumption of unequal variances, was as low as 30%.

Because of unequal cell sizes, the a priori chance of classifying firms correctly without a discriminant function is considered. Based on the cell sizes in the total sample, the top-down proportional chance criterion of 61.6% indicates that a prediction of membership in the top-down group by the model of perceived environmental complexity and dynamism variables is quite high. Conversely, the middle-up-down proportional chance criterion of 39.5% indicates that a prediction of membership in this group by the function of perceived environment variables is quite low.

This result indicated that, while environmental variables had a strong relationship with the ability to correctly predict membership in the top-down implementation approach group, the classification was less accurate for the middle-up-down group. The overall results provided little support for the hypothesis that one can explain middle-up-down from top-down strategy involvement practitioners by their orientation and perception of the environment, complexity and dynamism for their company.

However, the literature suggests other factors which may dictate and predict involvement levels in strategy implementation such as organizational structure characteristics (Clouthury and Sampler 1997; Harrington 2005; Nutt 1989) and foodservice segment membership (Harrington 2001).

Thus, market segment served, firm type, and ownership characteristics, as classifications, were considered as they related to the strategic implementation approaches taken by the companies: 1) firm ownership, 2) firm type as single unit, multi-unit company, or multi-unit franchise structure, and 3) market segments served (quick service restaurants, casual/mid-scale, fine dining, and on-site foodservice). To evaluate the accuracy of classification relative to chance, a proportional chance criterion was calculated for each company characteristic of interest. The percentages of those correctly classified are compared with this criterion as well as with a proportional chance criterion that is 25% greater than chance to provide an estimate of the acceptability of the classification (Hair et al. 2006).

Table 1  
TOTAL SAMPLE - MIDDLE UP DOWN AND TOP DOWN STRATEGY INVOLVEMENT WITH COMPLEXITY AND DYNAMISM AS PREDICTOR VARIABLES

	Actual Group	Predicted Group		Actual Total	Group Classification Percentage*
		Middle -up-down	Top Down		
<b>Hit-Ratio: 60.2%</b>	<b>MUD</b>	31	74	105	29,50% (39.6%, 49.5%)
	<b>Top Down</b>	20	111	131	84,70% (61.6%, 77%)

\* The proportional chance criterion and the +25% proportional criterion are shown in parenthesis, respectively.

Table 2  
RESULTS BASED ON OWNERSHIP TYPE CATEGORIES

Ownership Type	Actual Group	Predicted Group		Actual Total	Group Classification Percentage*
		Middle -up-down	Top Down		
<b>Sole Proprietor Firms</b>	<b>MUD</b>	28	51	79	35,40% (29.9%, 37.4%)
	<b>Top Down</b>	29	74	103	71,80% (50.9%, 63.7%)
	<b>Ungrouped Cases</b>	8	14	22	
<b>Non-Sole Proprietor Firms</b>	<b>MUD</b>	31	33	64	48,40% (32%, 40%)
	<b>Top Down</b>	25	53	78	67,90% (47.5%, 59.4%)
	<b>Ungrouped Cases</b>	6	12	18	
<b>Private Corporations</b>	<b>MUD</b>	17	34	51	33,30% (30.3%, 37.9%)
	<b>Top Down</b>	12	58	70	82,90% (57.1%, 71.4%)
	<b>Ungrouped Cases</b>	3	7	10	
<b>Public Corporations</b>	<b>MUD</b>	12	1	13	92,30% (50%, 62.5%)
	<b>Top Down</b>	1	7	8	87,50% (18.9%, 23.6%)
	<b>Ungrouped Cases</b>	3	5	5	

\* The proportional chance criterion and the +25% proportional criterion are shown in parenthesis, respectively.

## Ownership considerations

Ownership characteristics (Table 2) are divided into 4 types: sole proprietor, non-sole proprietor (partnerships and corporations), private corporations and public corporations.

Sole proprietors had the lowest overall hit-ratio (56%) and public corporations had the highest (90.5%). While the overall group classification percentage was higher for the top-down group, the middle-up-down classification percentage was above the proportional chance criterion in all cases and above the +25% proportional chance criterion for non-sole proprietor and public corporation respondents. These findings point to potential differences in the use of perceived environmental change/uncertainty variables by owners and managers in structuring the strategy implementation process.

## Firm structure

Firm structure or type characteristics (Table 3) are divided into 3 groups: single-unit firms, multi-unit company owned, and multi-unit franchised. All three firm structure categories had an overall hit-ratio (percentage correctly classified) in the +60%, ranging from 61.2 to 67.6%. It is interesting to note that the multi-unit franchise group had a substantially higher correct classification for the middle-up-down group (64.3%). Dividing the respondents into groups by firm structure provided an increased ability to correctly predict middle-up-down and top-down membership based on a relationship with the degree of environmental change/uncertainty across all groups. The middle-up-down classification percentage was above the proportional chance criterion in all cases and above the +25% proportional chance criterion for multi-unit company and multi-unit franchise respondents.

Table 3  
RESULTS BASED ON FIRM STRUCTURE CATEGORIES

Firm Type/Structure	Actual Group	Predicted Group		Actual Total	Group Classification Percentage*
		Middle -up-down	Top Down		
<i>Single Unit Respondents</i>	MUD	20	38	58	34,50% (32.4%, 40.6%)
	Top Down	14	62	76	81,60% (55.7%, 69.6%)
	Ungrouped Cases	7	3	10	
<b>Hit-Ratio: 61.2%</b>					
<i>Multi-Unit Company</i>	MUD	13	16	29	44,80% (29.9%, 37.4%)
	Top Down	6	27	33	81,80% (38.7%, 48.4%)
	Ungrouped Cases	4	9	13	
<b>Hit-Ratio: 64.5%</b>					
<i>Multi-Unit Franchised</i>	MUD	9	5	14	64,30% (27.1%, 33.9%)
	Top Down	6	14	20	70,00% (55.4%, 69.3%)

\* The proportional chance criterion and the +25% proportional criterion are shown in parenthesis, respectively.

Table 4  
RESULTS BASED ON PRIMARY FOODSERVICE SEGMENT CATEGORIES

Foodservice Segment	Actual Group	Predicted Group		Actual Total	Group Classification Percentage*
		Middle -up-down	Top Down		
<i>QSR Firms</i>	MUD	8	6	14	57,10% (18.5%, 23%)
	Top Down	2	30	32	93,80% (96.7%, 100%)
<b>Hit-Ratio: 82.6%</b>					
<i>Casual/Mid-Scale Dining</i>	MUD	18	59	77	23,40% (32.8%, 41.1%)
	Top Down	15	98	113	86,70% (70.7%, 88.4%)
<b>Hit-Ratio: 61.1%</b>					
<i>Fine-Dining Firms</i>	MUD	5	5	10	50,00% (34.7%, 41.1%)
	Top Down	3	11	14	78,60% (68.1%, 85.1%)
<b>Hit-Ratio: 66.7%</b>					
<i>On-Site Foodservice</i>	MUD	4	0	4	100,00% (50%, 62.5%)
	Top Down	0	4	4	100,00% (50%, 62.5%)
<b>Hit-Ratio: 100%</b>					

\* The proportional chance criterion and the +25% proportional criterion are shown in parenthesis, respectively.

The top-down classification percentage was above the proportional chance criterion in all cases and above the +25% proportional chance criterion for all 3 firm structure categories.

### **Primary foodservice segment**

Respondents were asked to indicate the primary foodservice segment in which their firm operates. These foodservice segments are divided into quick service restaurants, casual or mid-scale dining, fine dining firms and on-site foodservice firms (Table 4). Categorizing the respondent firms into foodservice segment resulted in excellent, high, hit-ratios ranging from 61.1% to 100%. Quick service restaurant firms and on-site foodservice firms had the highest hit-ratios of 82.6% and 100%, respectively. Overall, 6 of 8 group classifications were above the proportional chance criterion and 4 of 8 above the +25% proportional chance criterion.

## **DISCUSSION AND CONCLUSION**

The findings from this study provide interesting and useful evidence on the type of implementation process used by firms in the foodservice industry. The results have important implications for managers operating in environments of high volatility, change and unpredictability. As suggested in the literature, the utilization of top-down or middle-up-down management approaches has significant impacts on a firm's ability to adapt to environmental change and competitive actions as well as speeding implementation through greater information processing. Further, the results support the contention that foodservice managers' perceptions of environmental change should impact the firm implementation process, the matching/fit process task does occur.

In regards to the overall sample of firms, the results indicate a strong relationship between the perceived environment and the use of a predominately top-down implementation approach across foodservice firms with the top-down group obtaining an 85% correct classification. Across all foodservice firms in the sample, the middle-up-down approach was correctly classified less accurately than if it had been done by chance. The results, in terms of correct predictions, are improved radically when ownership, firm structure, and primary market segment are considered.

For different ownership categories, non-sole proprietor and public corporations had a much clearer separation between top-down and middle-up-down groups than did the sole-proprietor and private corporation categories. Because the discriminant scores are based on maximizing the variance in the environmental variables between groups (i.e. middle-up-down and top-down) and minimizing the variance in environmental variables within groups, these findings indicate that non-sole proprietor and public corporations have a stronger connection between the perception of environmental dynamism/complexity and the type of implementation process used. Sole proprietor and private corporations' decisions to utilize a predominately top-down or middle-up-down approach may be less related to the task environment and more closely related to other organizational characteristics. For example, life course theory (Benson 2001) and human capital theory (Pfeffer 1996) indicate the strategic process may be influenced by social and historical conditions, knowledge, education and experience. This situation may be particularly true of entrepreneurs (Forbes 2005), which are likely to make up a large portion of sole proprietor and private corporation firms.

Categorizing firms by the type and number of units provides support for the contention of Bradach (1997) and Parsa (1999) that franchise organizations have a unique structure that demands involvement by multiple layers of the organizations to synthesize information across disparate interest groups and to balance a need for control and adaptability. Multi-unit franchise firms in this study had a clear and convincing separation between the middle-up-down and top-down groups based on the environment that they perceived to be operating in. Single-unit and multi-unit company owned firms created a strong ability to classify top-down users but created a situation where middle-up-down users were classified correctly slightly better than mere chance.

When separated by primary foodservice segment, quick service restaurants, fine-dining and on-site foodservice firms created a clear separation for middle-up-down and top-down users based on the task environment. The casual/mid-scale dining category had a less clear separation in this regard. The middle-up-down group was correctly classified less than the meaningful percentage based on the proportional chance criterion by casual/mid-scale dining firm respondents.

Taken as a whole, these findings are most convincing and support the basic hypotheses. Substantive differences appear to exist between levels of perceived environmental change/uncertainty and users of middle-up-down and top-down strategy implementation approaches for foodservice firms. This relationship became more meaningful when separated by ownership type, firm structure and foodservice segment characteristics. This finding indicates that a broad brushstroke approach to determining whether a middle-up-down or top-down is used or appropriate based on the perceived task environment may not be valuable. The approach is also greatly determined by the organizational structure, norms of the market segment in which they operate, and, potentially, the environmental scanning process that is used by the firm. Curiously, a predominately bottom-up implementation approach was rarely used by the foodservice firms in this sample. The majority of firms used a top-down approach to strategy implementation followed closely by a predominately middle-up-down approach. This finding in itself provides information about the foodservice task environment or how managers view it.

## LIMITATIONS AND FUTURE RESEARCH

The results of this study should be interpreted with caution. While the results have interesting implications, several of the discriminant functions were based on rather small cell sizes. Because of this issue, a statistically meaningful validation of the discriminant function was not appropriate for all tests. Further, the process of making substantive interpretations of the findings (i.e. determining the relative importance of each of the independent environmental variables in discriminating between groups) was not available.

However, there seems to be some preliminary evidence that using the environmental variables to explain certain categories of implementation strategies given the ownership issues, firm structure, and foodservice segment characteristics is an appropriate model. Therefore, additional tests should be completed to determine the specific relationship between a top-down or middle-up-down approach and environmental measures. For example, questions on whether the relationship is with volatility measures or complexity issues and whether a top-down approach in foodservice is driven by higher levels or lower levels in these areas have yet to be answered.

While researchers have suggested that organizations should match the internal complexity with the complexity and nature of the task environment (Ashmos, Duchon, McDaniel and Huonker 2002), other researchers have pointed to a need to match organizational processes with the degree of environmental change (Mintzberg et al. 1998), market segment (Harrington 2001), and organizational structure (Okumus 2003). Ritchie and Riley (2004) suggest that the level of communication complexity in the process is driven by the source of the problem, its severity, and the character of the organization. The strengthening of the correct classification in the middle-up-down group when market segment and organizational structure characteristics are considered may provide further evidence to tie disparate research streams together as a more cohesive whole.

While many researchers have indicated that managers have a substantive ability to access the environment (Harrington and Kendall 2004; Powell 1992), it is important to note that the inability to correctly classify the involvement levels may be due to the respondents' lack of ability to determine, observe, or take into account and apply the issues associated with the complexity and dynamism in their respective industries. This is strongly suggested by the type of ownership and the ability of the environmental variables to discriminate between middle-up-down and top-down involvement by the different levels of employees in a firm.

One further note should be considered for future research on the relationship between implementation strategy and environmental variables. The environmental scanning literature, in general, especially the formal system theorists, suggests that multiple variables should be considered for the matching/fit strategic decision making process. The strategy text books, more particularly, tend to suggest a multitude of economic environmental variables be considered as well as government regulations, demography, social trends, technological changes, and industry structure. Although this may allow for comprehensiveness for the general descriptive study of strategy decision making, it is clearly not as feasible as it may be suggested by the texts. Okumus (2004) certainly has shown that there are a number of deterrents to using a formal system. Furthermore, formal systems may tend to be controlled by higher levels of managers and the knowledge of lower level managers may not be available or considered with these systems.

Jogarathnam and Law (2006), reviewing the literature on environmental scanning, suggest that future research be directed to the sources of information. Certainly this is a viable option if there are no management information system available or built into a habitual managerial behavioral pattern. However, there is some evidence that different industries and sub industries may tend to use different clues from the environment to accomplish the matching/fitting element of the strategy process depending on the unique characteristics of their circumstances (Harrington and Kendall 2006). Thus, more fruitful results may be found with more specific measures of environmental variables, particularly volatility (dynamism) and complexity variables which have not been traditionally used by economists or managers and may have diagnostic and relevance in the market place.

## REFERENCES

- Ashmos D. P., Duchon D., McDaniel R. R., Jr. and Huonker J. W. (2002) *What a mess! Participation as a simple managerial rule to complexify organizations.* *Journal of Management Studies*, 39, 189-206.
- Barringer B. R. and Bluedorn A. C. (1999) *The relationship between corporate entrepreneurship and strategic management.* *Strategic Management Journal*, 20, 421-444.
- Benson M. (2001) *Crime and the life course.* Los Angeles: Roxbury.
- Bourgeois III, L. J. and Brodwin D. R. (1984) *Strategic implementation: Five approaches to an elusive phenomenon.* *Strategic Management Journal*, 5, 241-264.
- Bradach J. L. (1997) *Using the plural form in the management of restaurant chains.* *Administrative Science Quarterly*, 42 (2), 276-303.
- Brews P. J. and Hunt M. R. (1999) *Learning to plan and planning to learn: Resolving the planning school/learning school debate.* *Strategic Management Journal*, 20, 889-913.
- Bryson J. M. and Bromiley P. (1993) *Critical factors affecting the planning and implementation of major products.* *Strategic Management Journal*, 14, 319-337.
- Clouthury V. and Sampler J. L. (1997) *Information specificity and environmental scanning: An economic perspective.* *Management Information Systems Quarterly*, 21, 25-53.
- Dillman D. A. (2000) *Mail and telephone surveys: The total design method.* 2<sup>nd</sup> Ed. New York: John Wiley & Sons, Inc.
- Forbes D. P. (2005) *Managerial determinants of decision speed in new ventures.* *Strategic Management Journal*, 26, 355-366.
- Hair J. F., Black W. C., Babin B. J., Anderson R. E., and Tatham R. L. (2006) *Multivariate Data Analysis.* 5<sup>th</sup> Ed. NJ: Pearson Prentice Hall.
- Harrington R. J. (2005) *The how and who of strategy-making: Models and appropriateness for firms in hospitality and tourism industries.* *Journal of Hospitality & Tourism Research*, 29 (3), 372-395.
- Harrington R. J. (2004) *The environment, involvement, and performance: Implications for the strategic process of food service firms.* *International Journal of Hospitality Management*, 23 (4), 317-341.
- Harrington R. J. (2001) *Environmental uncertainty within the hospitality industry: Exploring the measure of dynamism and complexity between restaurant segments.* *Journal of Hospitality & Tourism Research*, 25, 386-398.
- Harrington R. J. and Kendall K. W. (2005) *How certain are you measuring environmental dynamism and complexity? A multitrait-multimethod approach.* *Journal of Hospitality & Tourism Research*, 29 (2), 245-275.
- Harrington R. J. and Kendall K. W. (2004) *Firm performance and strategy implementation success: Direct and moderating effects of size and involvement.* *Proceedings of Asia-Pacific CHRIE*, 2, 290-302.
- Harrison J. S. and Enz C. A. (2005) *Hospitality Strategic Management.* NY: John Wiley & Sons, Inc.
- Hart S. (1992) *An integrative framework for strategy-making processes.* *Academy of Management Review*, 17, 327-351.
- Hitt M. A., Ireland R. D. and Hoskisson R. E. (2003) *Strategic Management Competitiveness and Globalization.* 5<sup>th</sup> ed. Thomson South-Western.
- Hunger J. D. and Wheelen T. L. (2001) *Essentials of Strategic Management.* NJ: Prentice Hall.
- Jogarathnam G. and Law R. (2006) *Environmental Scanning and Information Source Utilization: Exploring the Behavior of Hong Kong Hotel and Tourism Executives.* *Journal of Hospitality and Tourism Research*, 30 (2), 170-190.
- Mintzberg H. (1973) *Strategy-making in three modes.* *California Management Review*, 16 (2), 44-53.
- Mintzberg H., Ahlstrand B., and Lampel J. (1998) *Strategic safari.* New York: The Free Press.
- Nonaka I. (1988) *Toward middle-up-down management: Accelerating information creation.* *Sloan Management Review*, 29, 9-18.
- Nutt P. C. (1989) *Selecting tactics to implement strategic plans.* *Strategic Management Journal*, 10, 145-161.

- Okumus F. (2004) Potential challenges of employing a formal environmental scanning approach in hospitality organizations. *International Journal of Hospitality Management*, 23, 123-143.
- Okumus F. (2003) A framework to implement strategies in organizations. *Management Decision*, 41 (9), 871-882.
- Okumus F. and Roper A. (1999) A review of disparate approaches to strategy implementation in hospitality firms. *Journal of Hospitality & Tourism Research*, 23, 21-39.
- Olsen M. D., West J. and Tse E. C. (1998) *Strategic management in the hospitality industry*. 2nd ed. New York: John Wiley & Sons, Inc.
- Parsa H. G. (1999) Interaction of strategy implementation and power perceptions in franchise systems: An empirical investigation. *Journal of Business Research*, 45, 173-185.
- Pfeffer J. (1996) *Competitive advantage through people*. Boston: Harvard Business School Press.
- Powell T. C. (1992) Organizational alignment as competitive advantage. *Strategic Management Journal*, 13, 119-134.
- Ritchie B. and Riley M. (2004) The role of the multi-unit manager within the strategy and structure relationship; Evidence from the unexpected. *International Journal of Hospitality Management*, 23 (2), 145-161.
- Schmelzer C. D., and Olsen M. D. (1994) A data based strategy implementation framework for companies in the restaurant industry. *International Journal of Hospitality Management*, 13, 347-359.
- Stacey R. D. (2003) *Strategic management and organisational dynamics*. 4<sup>th</sup> Ed. Essex: Pearson Education Limited.

Submitted: 03/24/2006

Accepted: 10/19/2006