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The Food Service Industry Environment: Market Volatility Analysis

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The Food Service Industry Environment: Market Volatility Analysis

Abstract

In their dialogue entitled - The Food Service Industry Environment: Market Volatility Analysis - by Alex F. De Noble, Assistant Professor of Management, San Diego State University and Michael D. Olsen, Associate Professor and Director, Division of Hotel, Restaurant & Institutional Management at Virginia Polytechnic Institute and State University, De Noble and Olson preface the discussion by saying: "Hospitality executives, as a whole, do not believe they exist in a volatile environment and spend little time or effort in assessing how current and future activity in the environment will affect their success or failure. The authors highlight potential differences that may exist between executives' perceptions and objective indicators of environmental volatility within the hospitality industry and suggest that executives change these perceptions by incorporating the assumption of a much more dynamic environment into their future strategic planning efforts. Objective, empirical evidence of the dynamic nature of the hospitality environment is presented and compared to several studies pertaining to environmental perceptions of the industry."

That weighty thesis statement presumes that hospitality executives/managers do not fully comprehend the environment in which they operate. The authors provide a contrast, which conventional wisdom would seem to support and satisfy.

"Broadly speaking, the operating environment of an organization is represented by its task domain," say the authors. "This task domain consists of such elements as a firm's customers, suppliers, competitors, and regulatory groups." These are dynamic actors and the underpinnings of change, say the authors by way of citation.

"The most difficult aspect for management in this regard tends to be the development of a proper definition of the environment of their particular firm. Being able to precisely define who the customers, competitors, suppliers, and regulatory groups are within the environment of the firm is no easy task, yet is imperative if proper planning is to occur," De Noble and Olson further contribute to support their thesis statement.

The article is bloated, and that's not necessarily a bad thing, with tables both survey and empirically driven, to illustrate market volatility.

One such table is the Bates and Eldredge outline; Table-6 in the article. "This comprehensive outline... should prove to be useful to most executives in expanding their perception of the environment of their firm," say De Noble and Olson. "It is, however, only a suggested outline," they advise.

"...risk should be incorporated into every investment decision, especially in a volatile environment," say the authors.

De Noble and Olson close with an intriguing formula to gauge volatility in an environment.

Keywords

Alex F. De Noble, Michael D. Olsen, The Food Service Industry Environment: Market Volatility Analysis, Uncertainty

The Food Service Industry Environment: Market Volatility Analysis

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Hospitality executives, as a whole, do not believe they exist in a volatile environment and spend little time or effort in assessing how current and future activity in the environment will affect their success or failure. The authors highlight potential differences that may exist between executives' perceptions and objective indicators of environmental volatility within the hospitality industry and suggest that executives change these perceptions by incorporating the assumption of a much more dynamic environment into their future strategic planning efforts. Objective empirical evidence of the dynamic nature of the hospitality environment is presented and compared to several studies pertaining to environmental perceptions of the industry.

The working environment of the hospitality industry executive today is far more dynamic than ever imagined. This dynamic nature poses various concerns for those trying to plan strategically for the future. Many attempts have been made to define the environment and to seek its incorporation into management thinking, especially as it relates to strategic management. Broadly speaking, the operating environment of an organization is represented by its task domain.¹ This task domain consists of such elements as a firm's customers, suppliers, competitors, and regulatory groups. Management, in order to plan successfully, must gain as much knowledge as possible about each of these elements of the environment.² The most difficult aspect for management in this regard tends to be the development of a proper definition of the environment of their particular firm. Being able to precisely define who the customers, competitors, suppliers, and regulatory groups are within the environment of the firm is no easy task, yet is imperative if proper planning is to occur.

Part of the problem in defining the environment is that, for most managers, the environment is a perceived phenomenon. For example, if a manager perceives a shift in customer mood or competitive activity, then it is so; if he/she doesn't perceive it, then it is ignored. Thus as Child suggests,³ the environment can only have an impact if it is

perceived as having an impact. Accordingly, the responsibility of the firm's management becomes one of attempting to develop accurate perceptions about the activities taking place within the key elements of the firm's task environment.

In order to develop accurate perceptions, a need exists for concepts which will be useful in helping management describe activities taking place in the environment. In general, the key concepts employed to enhance this understanding of the environment are the dimensions of uncertainty and complexity.⁴

The uncertainty dimension is generally defined as the unpredictability and variability of events taking place in the environment. A highly dynamic or uncertain environment presents management with a tremendous challenge when it attempts to understand and/or predict future events taking place in the environment, especially those which are likely to affect the firm. Stable, more placid environments would be far more desirable by management when it is engaged in planning future activities.

Part of the challenge facing management in highly uncertain environments is the difficulty associated with getting the right information necessary to interpret events taking place in the environment and then understanding the causal relationships between and among these events as they affect the firm. This problem is best illustrated by Lawrence and Lorsch⁵ (who identified the following three key elements associated with management's problem of dealing with an uncertain environment:

- lack of clarity of information about the environment obtained by organizations
- general uncertainty of causal relationships which exist between the environment and the organization and different factors in the environment itself
- the unpredictable nature of the time span of feedback regarding results associated with efforts to manage the environment

The complexity dimension, the second concept utilized to define the environment, relates to the range of issues in the environment likely to be relevant to the organization's operations.⁶ For example, the overall environment of a diversified hospitality organization such as Marriott or ARA is likely to be more complex than that of a small, independent, privately-held hotel or food service operation. These diversified organizations, as they operate on a worldwide basis, must deal with, for example, hundreds of different legal and jurisdictional issues depending upon the location of their operation, in addition to varying monetary exchange rates and labor pools. Increased competition and confounding economic issues, both fiscal and monetary, also contribute to a more complex environment. The complexity dimension, like the uncertainty dimension, demands from the hospitality executive increased attempts at trying to develop accurate perceptions of these important concepts of the environment.⁷

When considering the environment of today, the uncertain and com-

Table 1
Market Volatility: A Measure of Environmental Uncertainty
For Seven Industries

Standard Industrial Code Number	Industry	Market Volatility
5812	Food service	.3634
3573	Electronic computing equipment	.2759
3679	Electronic components	.2439
2833	Medical chemicals and botanical products	.2363
3011	Tires and inner tubes	.2029
2011	Meatpackers	.1728
2065	Confectionary products	.1474

plex nature currently being experienced by industry participants bears no resemblance to prior years. This implies that past environmental experiences – which are highly familiar to today’s hospitality executive – will not suffice for use as a model for the future. Yet, in order to survive, today’s executive must consider this environment in order to take advantage of strategic opportunities in the future.⁸ This viewpoint requires that management must take on a much broader perspective of the environment, in other words, expand its perception of what its task environment is and what affects each of the elements within that environment.⁹

It could easily be argued by some that today’s environment is neither uncertain nor complex for all elements of the hospitality firm’s task domain. On the other hand, strong arguments could be given for the opposite view as well. Until recently, there was little empirical evidence available which could support either case. However, within the past five years, a series of research efforts have attempted to shed light on this issue.¹⁰ These earlier studies were primarily directed at ascertaining the hospitality executive’s perceptions of environmental volatility. The current focus is on obtaining an objective assessment of just how volatile the environment of the food service segment of the industry actually is.

To do this, an objective measure of market volatility, originally developed by Tosi, Aldag and Storey,¹¹ and later validated by Snyder and Glueck,¹² is applied to the food service industry. This measure of market volatility in the food service industry is then compared to six in-

dustries previously ranked by Snyder and Glueck as being either highly market volatile or highly market stable. As Table 1 indicates, the market volatility measure for the food service industry far exceeds the measure previously obtained by Snyder and Glueck for electronic computing equipment, which was considered to be the most volatile industry in their sample. This preliminary evidence seems to imply that the food service segment of the hospitality industry is also one of the most dynamic elements of the business enterprise system.

Food Service Segment Is Dynamic

Since there is some evidence to support the argument that at least the food service segment of the hospitality industry is dynamic, this should then be compared to the current perceptions of hospitality industry executives regarding the nature of their environment. In order to do this, the results from previous studies were employed to help demonstrate that the current perception of the industry environment held by industry executives is one which is very narrow and myopic.

In the first study, 881 questionnaires were sent to firms in the food equipment manufacturing, restaurant, and lodging segments of the hospitality industry; 231 usable responses were received. Although the survey had several objectives not related to environmental assessment, a series of questions were included to determine to what extent the respondent was investigating and attempting to learn more about his/her environment. Respondents were asked to indicate whether or not they conducted any research and development of the "Impact of the environment upon company directions," with three choices: not performed, moderately performed or extensive efforts performed.¹³ As can be seen in Table 2, the results are rather discouraging. It appears from this evidence that there is some environmental assessment taking place regarding economic matters and changing demographics, but what is quite disappointing is the percentage of firms doing nothing at all, especially with regard to technological changes affecting the industry.

Table 2
Percentage of Total Respondents According to the Emphasis
Placed Upon Research and Development Efforts in
Environmental Assessment

Categories of Research and Development Efforts Focusing Upon the Impact of the Environment Upon Company Directions	Not Performed (%)	Moderate Efforts (%)	Extensive Efforts (%)
1. Economic conditions	43.4	36.9	19.7
2. Demographic trends	45.1	41.0	13.9
3. Technological changes	61.5	27.9	10.6
4. Social/cultural trends	50.8	36.1	13.1
5. Political/legal factors	62.3	31.1	6.6

In a second study, 130 executives of the nation's top food service chains were asked to respond specifically about their perceptions of the environments of those key elements of their task domain: customers, competitors, and suppliers. In this study, 27 usable responses were obtained. Each respondent was asked to indicate his/her feelings on a "strongly agree, strongly disagree" continuum regarding the two previously mentioned environmental concepts of uncertainty and complexity. As in the aforementioned study, respondents generally exhibited a rather narrow view of the environment relative to the key elements of their task domain. The evidence in Table 3 illustrates this clearly, wherein over half of the respondents perceive the environment of their customer base as stable and certain, a seemingly unjustified conclusion given the economic realities of today. They did, however, feel it was quite complex.

Table 3
Executives Perceptions' Regarding the Uncertainty and Complexities
of the Environment of the Key Elements in Their Task Domains

Category	n	Strongly Agree	Agree	Disagree	Strongly Disagree
Customers					
Stable and certain	27	3.7%	48.2%	33.3%	14.8%
Simple and uncomplicated	26	3.9	19.2	34.6	42.3
Competitors					
Stable and certain	25	0	28.0	60.0	12.0
Simple and uncomplicated	25	0	24.0	56.0	20.0
Suppliers					
Stable and certain	22	4.5	59.1	31.8	4.5
Simple and uncomplicated	20	0	45.0	40.0	15.0

Similar feelings were expressed regarding the environment of the supplier, with 63.6 percent perceiving their environment to be stable and certain, although complex. Given the recent mergers and acquisitions with the supplier segment, along with the entry of large firms like Dart-Kraft into the supply/distribution business, these perceptions seem to be questionable.

Environment Of Competition Viewed As Uncertain

In contrast to the perceptions about the environment of the customer and the supplier, the environment of the competition was viewed as uncertain and highly complex. This finding is in agreement with the aforemen-

tioned measure of volatility developed for the food service segment of the hospitality industry. It is, however, based upon a rather narrow perception of the environment. As Table 4 demonstrates, executives are most interested only in information about environmental activities in the firm's industry segment and less interested in the general industry environment. More disappointing is the little interest shown in information about technological innovation or the overall environment. This narrow perception could lead to a failure to consider important broad environment issues such as interest rate movements, general economic conditions, governmental regulatory moves, and/or opportunities to improve productivity through the acquisition of new, technologically innovative production and/or management tools.

Table 4
Types of Information Sought about the Environment
by Executive Respondents

Type of Information Sought About the Environment	n	Most Important.....Least Important				
		1	2	3	4	5
Current activity in industry environment	21	33.3%	52.4%	14.3%	0%	0%
Current activity affecting the firm's industry segment	26	73.1	23.1	3.8	0	0
Relevant technological innovations	20	10.0	20.0	35.0	30.0	5.0
Current activity in overall environment	23	8.7	17.4	34.8	34.8	4.3
Leads regarding acquisitions, mergers and joint ventures	12	0	8.3	16.7	16.7	58.3

Risk Adjustments Must Be Considered

With an environment that is dynamic and complex, the risks associated with capital investments would seemingly be intuitively obvious. Risk is defined in this case as the potential variability in cash flow projections resulting from various investment alternatives. Sound principles of financial management suggest that risk should be incorporated into every investment decision, especially in a volatile environment. This does not appear to be the case, however, as is shown in Table 5 which resulted from a survey of 131 chief financial officers representing the largest firms in the hospitality industry; 58 usable responses were available, yielding a 44.2 percent response rate.¹⁵

Table 5
Risk Adjustment Techniques of Food Service
and Lodging Organizations by Annual Sales Volume

Method of Risk Adjustment	Less than \$78 Million n = 19	\$79 Million to \$197 Million n = 14	\$198 Million to \$400 Million n = 14	\$401 Million to \$6 Billion n = 11
Increase required of return for high risk projects	38%	23%	21%	20%
Shorten payback period	16	7	14	10
Use expected values of cash flows	61	61	78	70
Subjective adjustment of cash flows	11	-	7	10
Risk is not taken into account	22	23	14	40
Some combination of the above	11	-	7	10

Note: Column percentages do not total 100 percent as a result of some respondents checking more than one technique.

If the assumption is made that a dynamic, volatile environment results in greater risk to the firm, it would seem logical that most executives, if they perceived their environment as dynamic, would incorporate some method for risk adjustment into their capital investment decision. But, as can be seen in Table 5, 40 percent of the chief financial officers of the industry's largest firms do not consider risk at all in their investment decision process. It would appear to be only a guarded conclusion from these results that perhaps, at least for the firms in the study, the environment is viewed as rather stable. Whatever the reasons for this unusual response, it is curious that risk is considered lightly by the larger corporations.

The results indicate that the hospitality executive fails to see anything other than a narrow, limited view of the environment. This is further supported by two recent examples from the lodging segment of the hospitality industry. A recent Wall Street Journal article indicated that a major hotel chain was going to build its third hotel in Denver, Colorado, and a recent Business Week article noted that another hotel chain had an ambitious expansion program. If the executives of these firms considered such issues as a projected sluggish economy through 1986 leading to cut-backs in business travel, and advancements in communications resulting in the increased likelihood of teleconferencing, would they have announc-

ed such ambitious expansion programs? Perhaps they considered these issues and decided that they could not realistically determine the impact of these trends on their expansion plans, or maybe they didn't perceive these issues as part of their environment at all, and thus wouldn't have considered them in making these decisions. Whatever the case, the executive should make every attempt to gather more information about all elements of a broader, more dynamic, and complex environment if successful strategic decisions regarding the future are to be made.

Several Factors Should Be Considered In An Environment Analysis

Since it seems that the environment of the hospitality executive is likely to remain uncertain and complex, a framework for analyzing the environment from its broadest perspective may be appropriate. Such a framework has been suggested by Bates and Eldredge,¹⁶ and is presented in Table 6 as an outline that could be easily adopted by the hospitality executive.

This comprehensive outline for performing a general environmental analysis should prove to be useful to most executives in expanding their perception of the environment of their firm. It is, however, only a suggested outline. What should be in the mind of each individual utilizing this approach is that the environment should be considered as expansive as feasible. All possible developments in this broadened environment should be carefully considered in any strategic planning activities.

Table 6
Factors to be Considered in a General Environment Analysis

1. **Technology:** Supplier, Industry, Competitor, and Customer Variables
 - stage of technological development
 - future form of product group
 - future raw-material form
 - future processing technology
 - developments in unrelated areas
 2. **Political:** Supplier, Industry, Competitor, and Customer Variables
 - sources of political force
 - groups exerting political force
 - types of influence
 3. **Social:** Supplier, Industry, Competitor, and Customer Variables
 - population characteristics
 - a. age distribution
 - b. geographic distribution
 - c. mobility
 - d. education
 - family values
 - a. attitude toward marriage
 - b. family formations
 - c. women in child-bearing age
 - purchase attitudes
 - a. whom the customer emulates
 - b. who influences emulators
 - c. amount of discrimination exercised in purchases
 - work and business attitudes
 - a. structure of labor force
 - b. behavior at work
 4. **Economic:** Supplier, Industry, Competitor, and Customer Variables
 - exogenous variables
 - a. employment policies
 - b. inflation control policies
 - c. import-export policies
 - endogenous variables
 - a. consumption
 - b. investment
-

Appendix A

For purposes of comparing the objective measure of market volatility for the food service industry to that of the six industries in Snyder and Glueck's sample, their methodology was replicated exactly. Market volatility in this case is defined as the average of the coefficients of variation of sales divided by average sales revenue for individual firms in the industry.

The applicable formula used in both Snyder and Glueck's project and this current project is as follows:

$$\text{Market Volatility} = \frac{\sqrt{\frac{\sum_{i=1}^X \frac{(Y_i - \bar{Y})^2}{X}}{Y}} + \dots + \sqrt{\frac{\sum_{i=1}^X \frac{(Y'_i - \bar{Y}')^2}{X}}{Y'}}}{Z}$$

where:

X = # years being considered

Y = sales for firm in each of the X years

\bar{Y} = average sales for firm Y over X years

Y' = sales for firm Y' over X years

Z = # of firms in the industry used to calculate the volatility measure

The following steps were then applied, to obtain the necessary data to calculate market volatility for the food service industry:*

- 1) Five firms were randomly selected from *Standard and Poors Register of Corporations, Directors, and Executives, 1982, Vol. 3* that were listed under SIC #5812 - eating places.
- 2) 10-K reports for the years 1972-1977 on each selected firm were obtained to get the needed financial information.
- 3) A market volatility measure was calculated for the food service industry using the data in Exhibit 1.

*Special appreciation for Gail Wise Baron, a recent graduate of the Division of Hotel, Restaurant and Institutional Management, Virginia Polytechnic Institute and State University, for performing those critical steps.

Exhibit 1
Annual Sales Information (in thousands) for
Five Randomly Selected Food Service Firms

Company	1972 (000)	1973 (000)	1974 (000)	1975 (000)	1976 (000)	1977 (000)	Average Sales (72-77)
Pizza Hut, Inc.	\$52,478.4	\$74,827.9	\$106,347.0	\$245,655.2	\$199,203.1	\$242,922.8	\$136,905,720
Hardee's	40,645.8	63,673.0	86,820.0	100,938.0	112,131.0	130,776.0	89,163,967
Denny's	172,671.0	199,385.0	251,870.0	312,870.0	376,841.0	454,836.0	244,631,670
ARA	895,359.0	1,034,440.0	1,138,916.0	1,307,341.0	1,307,341.0	1,539,933.0	1,188,467,700
Saga's Restaurant Division	24,100.0	39,000.0	68,000.0	90,200.0	111,400.0	127,200.0	76,650,000

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