

## **Chapter IV**

### **Data Analysis: Company Overviews**

In this chapter, the data analysis and results of interviews conducted with restaurant forecasting managers will be discussed. A company summary and participant information will be given along with an overview of results for each company interview. The overview of the company interviews will be discussed in the context of each construct of the research model.

#### **Data Analysis**

After the conclusion of the pre-tests from the two companies, the protocols were refined. All the question from the new protocols were answered by the two pre-tested companies, and these companies fit the criteria outlined for the sample; therefore, they were included in the final sample. The interviewing proceeded until the criteria for redundancy was met.

Five new companies were interviewed for a total of seven companies. The interviews were recorded with the permission of the participants and were transcribed by a professional transcriptionist. After each interview the transcript was reviewed, and the researcher looked for no new information as it related to the dimensions of functional integration, approach, systems, and performance measurement. The researcher also looked for variability in the dimensions of level of accuracy of sales forecast and level of managers' satisfaction with the sales forecasting process. After the sixth interview, the researcher determined that no new information arose in the first four constructs. The participants had varying degrees of satisfaction with the sales forecasting process and gave different answers to the evaluation of the level of accuracy of the sales forecast. Thus, the conclusion was made that redundancy was reached during the sixth interview (McCracken, 1988; Patton, 1990). The seventh interview was conducted to strengthen the results.

The interview process was an evolving process. The transcripts were imported into the NUDIST 4 software (Sage Publications, 1999) for analysis. NUDIST 4 was developed for qualitative research. It allows the researcher to analyze unstructured data

(interviews). The imported transcripts were analyzed individually and as a unit for comparison. The analysis included open coding by the researcher. During the open-coding stage, certain patterns were labeled and indexed within each interview. Memos relating one interview to another were developed. Ideas and relationships were being formed between the interviews and constructs. The final stage was axial coding. During this stage, ideas were placed together in a way to present the research findings.

The research results in this chapter will be presented in two sections. In the first section the participant and company information will be discussed and in the second section the results of each interview will be discussed.

### Company and Participant Information

#### Company Information

Two criteria were used to select the restaurant companies: 1) they should be at least ten years old and 2) they should have a recorded sales history. Seven companies were interviewed and the data from these interviews was analyzed. The age of the companies that participated in the study ranged from 15 years to 66 years. The median age of the companies was 31 years, and the average age was 35.1 years. The number of restaurants within each participating company ranged from 23 restaurants to 654 restaurants. The median number of restaurants was 150, and the average number of restaurants was 244. The annual sales figures ranged from \$73 million to \$1.96 billion. The median annual sales figure for all the participating restaurant companies was \$334 million, and the average sales figure was \$640 million. The restaurant companies were classified as full-service establishments in either the casual theme (four companies) or family dining (three companies) segments.

#### Participant Information

Twelve managers were interviewed during this process. Five of the seven companies interviewed had one participant in the study. Two of the companies had multiple participants (three participants in one company and four in the other). To get an understanding of the twelve managers, who provided input into the sales forecasting processes, participant information was collected. The titles of the managers included:

Director of Operations, Senior Vice-President/Controller, Assistant Controller, Controller, Manager of Marketing Analysis, and Vice-President of Information Systems/Financial Planning and Analysis. The departments in which the managers were located were Operations/Operational Analysis, Finance/Controlling, Planning and Analysis, and Marketing Analysis.

Forecasting was a primary function for four managers (33.3%), a secondary function for four managers (33.3%), and a tertiary function for four managers (33.3%). The managers worked in the restaurant industry between 3 and 25 years. The median number of years that the managers worked in the restaurant industry was 13 years and the average was 12.5 years. The number of years that forecasting was a part of the manager’s job function ranged from one year to 22 years. The median number of years that forecasting was a part of the manager’s job function was eight years and, the average was nine years. Table 4.1 shows the company and participant information. Table 4.2 shows the job titles for the participants and departments in which the participants were located.

**Table 4.1: Company and Participant Information**

<i>Company Information (n=7)</i>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Median</b>
Age of Company	15	66	35.1	31
Annual Sales	\$73 M	\$1.96 B	\$640 M	\$334 M
Number of Restaurants	23	654	244	150
<i>Participant Information(n=12)</i>				
Years of Experience	3	25	12.5	13
Years forecasting a part of job	1	22	9	8

Individual Company Overviews

A general overview of the interview protocols for each company is presented in this section. The interview protocol contained six sections. These sections include functional integration, approach, systems, performance measurement, level of accuracy of sales forecast, and level of managers’ satisfaction with the sales forecasting process.

**Table 4.2: Job Titles and Departments of Participants**

<p><b>Job Title of Participants</b></p> <ul style="list-style-type: none"><li>• Director of Operations</li><li>• Senior Vice-President/Controller</li><li>• Assistant Controller/ Controller</li><li>• Manager of Marketing Analysis</li><li>• Vice President of Information Systems/Financial Planning and Analysis</li></ul> <p><b>Departments in which Participants Located</b></p> <ul style="list-style-type: none"><li>• Operations/ Operational Analysis</li><li>• Finance/Controlling</li><li>• Planning and Analysis</li><li>• Marketing Analysis</li></ul>
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Company A

Company A is a national restaurant company that is 52 years old. Sales at the end of 1999 reached \$73 million, and the company has 51 restaurants. The company is a full-service restaurant in the family-dining segment of the restaurant industry.

Functional Integration Dimension. The process that this company uses to develop the sales forecast includes projecting on a six-month and yearly basis at the corporate level, quarterly at the regional level, and weekly at the restaurant level. The finance department takes into account the past sales history as well as seasonality, current events, trends, new construction, and other variables along these lines. This information is entered into a numeric model. The company looks at external factors and internal factors that may affect the sales forecast. The finance and operations departments have the greatest impact and conduct the sales forecast. Middle management has actual involvement in developing the sales forecast, and upper management has a review and approval role in the sales forecast.

At the beginning of the forecasting period, the process begins with a memo from the finance department outlining the time line for the sales forecast. The necessary files are downloaded to the computers of regional managers who in turn share the information with the property managers. The business plan is based on the sales forecast. The business plan is produced annually and the forecasts are adjusted quarterly. The planning horizon is approximately 45 days. The company uses a combination of top-down and

bottom-up forecasting. The corporate managers attempt to consolidate the information from all levels.

The process for preparing the sales forecast is clear and precise with set instructions, and the managers understand the procedures; however, the participant believed that the managers may not understand how the actual forecast fits into the business. The sales forecast goals are evaluated and rewarded through the company bonus system. Minimal support exists for forecasting training. Support does exist for forecasting through adequate personnel to conduct the forecast. Support does not exist for the forecast based upon inadequate time to conduct the forecast. The participant believed the planning horizon should be longer. The sales forecasts are developed and reported in both guest counts and dollars.

Company standards exist for length of production time for each menu item; also standards exist for the length of time for appetizers, entrees, desserts, etc., (ticket times) to arrive to the guest. The menu items are made (produced) to order; however, food preparation is prepared based on the forecast. The restaurants “turn over” their inventory approximately two times a month. Sales, costs, expenditures, and controllables on the profit-and-loss (P&L) statement are forecast. The company operates two distribution centers, and the purchasing department within the corporate office manages the inventory in the distribution centers. Reputation is the driving force of demand for this company’s product. The company does not have any overseas restaurants.

**Approach Dimension.** The company uses a forecast committee to develop a forecast that all departments use (consensus approach). The departments represented in this committee are finance and operations. The participant was not very satisfied with this approach. The company forecasts sales at the restaurant, district, region, and corporate levels. The intervals in which the company forecasts are daily, weekly, period (4-weeks), quarterly, and half-year for a 6-month time horizon. The company does forecast on the regional level.

The individual forecasting techniques that the company uses include regression, jury-of-executive opinion, and moving average. The individual forecasting techniques that this company does not use include are exponential smoothing, sales force composite, box-jenkins, trend-line analysis, decomposition, straight-line projection, customer

expectations, life-cycle, simulations, expert system, and neural networks. The sales forecasting values received from any level of the company are moderately credible based on inputs. The company does not forecast menu items such as “stars,” “puzzles,” “plowhorses,” or “dogs.”

**System Dimension.** The information system used to conduct the forecast includes two AS400 mainframe computers that house the forecasting data. The mainframes house both numeric and non-numeric data. Progressive software is off-the-shelf software that was adapted for the company. The company uses Local Area Network (LAN) and Wide Area Network (WAN). The Point-of-Sales (POS) system is MICROS. The information from the sales data and the Management Information System (MIS) are not integrated. The company does not have access to Electronic Data Interchange (EDI) or Efficient Foodservice Response (EFR), but the company is investigating the use of EDI.

Forecast users can make adjustments to the sales forecast. All departments can make recommendations for the sales forecast; however, only the departments with actual involvement can make changes. The manager is somewhat satisfied with the information system used to conduct the forecast; however, he would like to see the information from the MIS more integrated into sales forecasting information.

**Performance Measurement Dimension.** The criteria used to evaluate effectiveness of the forecasts are the actual versus the theoretical forecasts. The company does not produce graphical reports on forecasting performance. The company does not use specific metrics to measure forecasting performance. Ease of use and credibility are also used to evaluate the effectiveness of the sales forecast.

**Level of Accuracy of Sales Forecast.** The company evaluates accuracy of the sales forecast when it compares the projected (theoretical) to the actual on a weekly basis. The participant used labor performance and actual sales as criteria for evaluating the level of accuracy of the sales forecast. On a scale of 5 to 1, 5= very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated labor performance as important (4) to the level of accuracy of sales forecast and rated actual sales as important (4) to the level of accuracy of sales forecast.

When given a list of criteria with which to evaluate the level of accuracy of sales forecast and using the same 5-point scale, the participant rated guest counts as very important (5) to the level of accuracy of sales forecast, promotions were rated neither important nor unimportant (3) to the level of accuracy of sales forecast, history was rated important (4) to the level of accuracy of sales forecast, upward trends was rated neither important nor unimportant (3) to the level of accuracy of sales forecast, downward trends were rated important (4) to the level of accuracy of sales forecast, and competition was rated not applicable to the level of accuracy of sales forecast.

**Level of Managers' Satisfaction with the Sales Forecasting Process.** The most important item to the participant when evaluating the current sales forecasting process was that the manager must be able to feel comfortable enough with the sales forecast to write a business plan. The criteria that the participant used to evaluate the level of managers' satisfaction with the sales forecasting process were reasonableness and reality of the sales forecast. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated reasonableness as neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, and the participant rated reality as neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process.

When given a list of criteria with which to evaluate the level of managers' satisfaction with the sales forecasting process and using the same 5-point scale, the participant rated numeric percentage of guest counts as important (4) to the level of managers' satisfaction with the sales forecasting process, sales dollars was rated neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, no report from other managers of forecasting error was rated neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, reward for using the system was rated neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, and ease of use was rated important (4) to the level of managers' satisfaction with the sales forecasting process.

The participant felt that, based on its inputs, the company is not getting out of the sales forecasting process what it expected. The participant was satisfied with the adaptability of the sales forecasting process. The participant was somewhat satisfied with the information system and forecasting system used to conduct the sales forecast. The participant was not satisfied with the approaches used to conduct the sales forecast. Overall, the participant was not satisfied with the sales forecasting process. The manager would like to see changes in the review process of the sales forecast, the methods used to evaluate the performance of the sales forecast, and the time necessary to conduct the sales forecast.

### Company B

Company B is a regional restaurant company that is 36 years old. The company reached \$73 million in sales at the end of 1999 and has 23 restaurants. The company is a full-service restaurant company in the casual-theme dining segment of the restaurant industry.

**Functional Integration Dimension.** The process that this company uses to develop their sales forecast includes taking past data and knowledge of company sales, cash flows, competition, market trends, and using this information to develop the upcoming company goals and objectives. The marketing, finance, and operations departments, and the corporate chef have input into developing the sales forecast. Middle management has actual involvement in the development of the sales forecast, and upper management has review and involvement in developing the sales forecast. Integration exists between the middle management and upper management levels when developing the sales forecast.

At the beginning of the sales forecasting period, the process is outlined at the upper and middle management levels. The company data is made available at the restaurant levels. The restaurant managers work with the middle managers to develop the forecast, which is then passed on to the upper management level for review and input. The business plan is developed annually, and the forecast is adjusted quarterly. The company uses a bottom-up approach to sales forecasting and prides itself on giving the restaurant manager the necessary tools to develop the forecast. Support exists for the

sales forecast through adequate training, personnel, and time to conduct the forecast. If a manager has questions concerning the forecast, the corporate office sends a team to assist the manager. The process for preparing the forecast is clear and precise with specific instructions. The forecasts are evaluated and rewarded through an incentive program of recognition, awards, family friendly programs, and vacations. The sales forecast is developed and reported in guest counts and dollars. The company forecasts guest counts, sales, costs (food, beverage, and labor), expenditures (marketing and administrative), and controllables on the P&L statement.

Company standards exist for length of production time for each menu item; Standards also exist for the length of time for appetizers, entrees, desserts, etc., (ticket times) to arrive to the guest. The menu items are made (produced) to order; however, food preparation is prepared based on the forecast. The company maintains a “just in time” inventory system to reduce cash flow “tied up” in inventory, thus inventory is “turned over” approximately four to five times a month. The company does not have a distribution center; however, the company has an account with a national supplier and works directly with that supplier. The corporate chef, who serves as Purchasing Director, manages the inventory through the supplier. The demand for this company’s product comes from word of mouth and reputation. The company does not have any overseas restaurants.

**Approach Dimension.** The approach that the company uses in developing its sales forecast consists of a committee at the corporate level that develops a forecast that the whole company uses (consensus approach). Represented on this committee are the departments most involved in developing the forecast. These departments are marketing, finance, operations, and the corporate chef. The president and executive financial officer also are members on this committee. The company is satisfied with this approach. The company forecasts at the guest, restaurant, district, and corporate levels. The company forecasts in quarterly intervals. The company prefers short-range planning for a time horizon. The company does not forecast at the regional level because it is a regional company.

The individual forecasting techniques that this company uses include regression, jury-of-executive opinion, decomposition, and straight-line projections. The company

has investigated but has not committed to customer expectations and neural networks. The company does not use exponential smoothing, moving average, sales force composite, box-jenkins, life-cycle, simulation or expert systems. The sales forecasting values that this company receives from all levels involved with the sales forecast are credible. The company does track menu items, but does not track “stars,” “puzzles,” “plowhorses,” or “dogs.”

**Systems Dimension.** The information system used to develop the sales forecast includes a very integrated system. Each restaurant is linked with the headquarters through a WAN. The headquarters operates through a LAN. The company uses the Windows platform and Microsoft applications. The sales database is an Access database developed with a consultant to address the company’s specific needs. The company operates an Intranet and Internet site. Sales and revenue information is automatically updated once received from the company POS system, which is Digital Dining. The MIS maintains accounting and nonaccounting information. The security in each restaurant is also automated. The forecasting system is operated on personal computers and mainframe. The company does not use EDI or EFR. The company does use ordering software provided by their supplier. The company officers, through security clearance, have access to adjust sales forecasting information. The company is very satisfied with its current information system.

**Performance Measurement Dimension.** The criteria that this company uses to evaluate forecasting effectiveness are ease of use and credibility of information received. The company uses graphs to analyze forecasting performance. In addition, the company uses variance reports and standard deviation reports to measure forecasting performance.

**Level of Accuracy of Sales Forecast.** The company does evaluate the accuracy of the sales forecast. The criteria that the company uses to evaluate level of accuracy of sales forecast are the variance reports and standard deviation reports. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and, 1=very unimportant, the participant rated variance reports as very important (5) to the level of accuracy of sales forecast and rated standard deviation reports as very important (5) to the level of accuracy of sales forecast.

When given a list of criteria in which to evaluate the level of accuracy of sales forecast and using the same 5-point scale, the participant rated guest counts as very important (5) to the level of accuracy of sales forecast, promotions was rated as unimportant (2) to the level of accuracy of sales forecast, history was rated important (4) to the level of accuracy of sales forecast, upward trends was rated neither important nor unimportant (3) to the level of accuracy of sales forecast, downward trends was rated neither important nor unimportant (3) to the level of accuracy of sales forecast and, competition was rated not applicable to the level of accuracy of sales forecast.

**Level of Managers' Satisfaction with the Sales Forecasting Process.** The items most important when evaluating the satisfaction of the current sales forecasting process are the tools used to forecast work effectively and produce the necessary information to benefit the company. These are also the criteria that the participant used to evaluate the level of managers' satisfaction with the sales forecasting process. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated tools working for the forecast as very important (5) to the level of managers' satisfaction with the sales forecasting process, and the participant rated tools producing necessary information as very important (5) to the level of managers' satisfaction with the sales forecasting process.

When given a list of criteria with which to evaluate the level of managers' satisfaction with the sales forecasting process, and using the same 5-point scale, the participant rated numeric percentage of guest counts as very important (5) to the level of managers' satisfaction with the sales forecasting process, sales dollars as very important (5) to the level of managers' satisfaction with the sales forecasting process, no report from other managers of forecasting error was rated as not applicable to the level of managers' satisfaction with the sales forecasting process, reward for using the system was rated very important (5) to the level of managers' satisfaction with the sales forecasting process, and ease of use was rated very important (5) to the level of managers' satisfaction with the sales forecasting process.

The participant felt that, based on its inputs, the company is getting out of the sales forecasting process what it expected. The participant was satisfied with the

adaptability of the sales forecasting process. The participant was satisfied with the information system and forecasting systems used to conduct the sales forecast, and the participant was satisfied with the approaches used to develop the sales forecast.

### Company C

Company C is a national restaurant company that is 15 years old. Sales at the end of 1999 reached \$150 million and the company has 67 restaurants. This company is a full-service restaurant in the casual theme-dining segment of the restaurant industry.

**Functional Integration Dimension.** The process that this company uses to develop the sales forecast begins at the individual unit level. The two components used in calculating the company-wide forecast are restaurants that are already open and restaurants that may open in the near future. Using the restaurants that are already open, the company analyzes the past history in sales and uses a trend schema to determine what the restaurants are expecting for the future. The estimated information for new restaurant openings is based on the past sales data of other new restaurant openings.

Middle management has actual involvement in the forecast while upper management has an approval function. The marketing, production management, production, research and development, and purchasing departments have no real input into the sales forecast while the planning department is involved with the menu planning aspect. The finance department is involved only in a peripheral sense that it reviews a summary of the sales forecast, and the operations department has a very active role in the sales forecasting process. The operations department would like to see more input from the finance department (i.e., the chief financial officer or the controller).

At the beginning of the sales forecast period, the forecast is generated from the regional manager's level. The corporate office communicates the deadline for conducting the forecast. The corporate office also makes the necessary files available to the regional managers via computer. The corporate office determines how final forecasts will be submitted and who will approve the information. This information is then sent to the individual restaurant level, and the restaurant managers begin the process of forecasting each individual restaurant. Regional managers dialogue with general managers and send the new information to the corporate office for approval by the

director of operations. That concludes the process. The business plan and the sales forecast are connected. Forecasts are adjusted quarterly, and the business plan is produced annually. The planning horizon is quarterly, and the company uses a bottom-up approach to forecasting.

The participant believes the process for preparing the forecast with clear and precise instructions has improved over time. However, frustrations may arise from individual restaurants or regions because of inconsistency in the sales forecast. Once the forecast is aggregated at the corporate level, the director of operations gives feedback to the restaurant or regions that may be different from what the regions/individual restaurants may have originally forecast. The restaurant or region may not see the equity across the company. The forecasting goals are evaluated, and they are tied in with the manager's bonus system. The sales forecast are developed and reported in dollars only. Each item on the P&L statement is forecast. These include smallwares, food, marketing/administrative expenses, beverages, labor, actual sales, and cost of sales. Individual menu items are not forecast.

Company standards exist for length of production time for each menu item; Standards also exist for the length of time for appetizers, entrees, desserts, etc., (ticket times) to arrive to the guest. The menu items are made (produced) to order; however, food preparation is prepared based on the forecast. Inventory is turned over once a week. The company has a distribution center but does not own it. The purchasing department manages the food inventory in the distribution center. Word of mouth, repeat business, and reputation drive the company's business, and the company does not have overseas restaurants.

**Approach Dimension.** Each department develops its own forecast (independent approach). The participant believed that this is very tedious, and the forecasts are not used in the company except to calculate manager bonuses. The product level at which the company forecasts is the restaurant level. The forecasting interval is weekly, and the time horizon for forecasting is quarterly. The company does forecast by region. The regional managers obtain the information from the property level and send it to the corporate office. The company does not forecast menu items; thus, they do not forecast the progress of "stars," "puzzles," "plowhorses," and "dogs." The sales forecast

information received from the restaurant level is credible because it relies on sales history, and the sales forecast information received from the directors' level is credible.

Of the individual forecasting techniques, the company uses regression, exponential smoothing, and sales force composite. The company does not use jury-of-executive opinion, moving averages, box-jenkins, trend analysis, decomposition, straight-line projections, customer expectations, life-cycle analysis, simulations, expert systems, or neural networks.

**Systems Dimension.** The information systems used to develop the sales forecast include a combination of seven NT servers and one Novell server (eight servers total). At the restaurant level, the MICROS point-of-sales system is used. The sales data is polled at the close of business at the restaurant level and exported into the corporate office's accounting sequel. Accounting information and nonaccounting information, for example, guest counts, are housed in the servers. The personal computers that are used are Compaq computers. The accounting software is EPICURE. Each server has a different function; one server for payroll, one server for housing the web-site, one server for accounting, one server for firewall protection, one server for e-mail, one server for communication, and one server for a gatekeeper.

Seventy-five percent of the software is off-the-shelf commercial software. The participant believed there is so much book value left on the current point-of-sales system that upgrading would not be cost efficient; thus, the point-of-sales system, in the participant's opinion, is not as updated as it could be. The company operates both a local area network and a wide area network. The corporate office does not use specific software for purchasing or inventory control nor have access to electronic data interchange from the suppliers. The company does not use the Efficient Foodservice Response system for purchasing.

**Performance Measurement Dimension.** Percentage of bonus payout is used to judge forecasting effectiveness. Another measure of forecasting effectiveness is margin of error. The forecasting numbers have never really been evaluated; thus no reports or graphs are generated or available. For example, no metrics, standard deviation, or percentage variance is used.

**Level of Accuracy of Sales Forecast.** The participant does not spend time measuring accuracy. When given a list of criteria to evaluate the level of accuracy of sales forecast, on a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated guest counts as unimportant (2) to the level of accuracy of sales forecast, promotions was rated neither important nor unimportant (3) to the level of accuracy of sales forecast, history was rated very important (5) to the level of accuracy of sales forecast, upward trends was rated very important (5) to the level of accuracy of sales forecast, downward trends was rated important (4) to the level of accuracy of sales forecast, and competition was rated as important (4) to the level of accuracy of sales forecast.

**Level of Managers' Satisfaction with Sales Forecasting Process.** The most important criteria for evaluating the managers' satisfaction of the current sales forecasting process is the satisfaction of those managers' who have to produce the forecast (i.e., the restaurant managers, the regional managers, and the director of operations). The criteria that the participant uses to evaluate the level of managers' satisfaction with the sales forecasting process is the satisfaction of the managers who produce the forecast. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated satisfaction of the managers who produce the forecast as very important (5) to the level of managers' satisfaction with the sales forecasting process.

When given a list of criteria to be used to evaluate the level of managers' satisfaction with the sales forecasting process using the same 5-point scale, the participant rated numeric percentage of guest counts as very important (5) to the level of managers' satisfaction with the sales forecasting process, sales dollars was rated as very important (5) to the level of managers' satisfaction with the sales forecasting process, no report from other managers of forecasting error was rated as unimportant (2) to the level of managers' satisfaction with the sales forecasting process, reward for using the system was rated not applicable to the level of managers' satisfaction with the sales forecasting process, ease of use was rated unimportant (2) to the level of managers' satisfaction with the sales forecasting process.

Based on its inputs, the participant believed the company is receiving what it expected from the sales forecasting process. The participant was not very satisfied with the adaptability of the forecasting process. If the participant could change anything about the overall forecasting process, the participant would trust the forecast, use the forecasts more scientifically, and have less self-involvement in the process. The participant is not quite satisfied with the systems used to conduct the forecast and not quite satisfied with the approaches used for forecasting because they are somewhat tedious.

#### Company D

Company D is a national restaurant chain that is 31 years old. Sales at the end of 1999 reached \$1.96 billion. The company has 654 restaurants. This company is a full-service restaurant in the casual-theme dining segment of the restaurant industry.

**Functional Integration Dimension.** The process that this company uses to develop the sales forecast includes analyzing key variables such as traffic and customer counts, number of new restaurant openings, and promotional activities. These aforementioned key variables are combined, and the sales forecasting process begins. The finance department is the key department conducting the forecast because it takes the information provided and compiles it. The marketing analysis department is very active in analyzing data. The operations and planning departments also have input into the sales forecast. Middle management is involved in developing the sales forecast. Upper management only reviews the sales forecast.

At the beginning of the sales forecasting process, the company sets a reasonable target. A time frame and schedule are set, and information is made available to begin the sales forecasting process. The business plan is based upon the sales forecast. The forecast is developed annually, and the typical planning horizon is three months. The company uses a combination of bottom-up and top-down approaches to forecasting. There is no formal book or manual for conducting the sales forecast; however, the participant believed that the process is clear and precise with specific instructions. Support exists for the forecasting process through adequate training, personnel, and time to conduct the forecast. The goals are formally evaluated and rewarded through the bonus plan for managers. The sales forecast is developed and reported in guest counts,

dollars, and average guest checks. Sales, costs, controllables, and expenses are included in the P&L statement; these are items that are forecast. Other items that are forecast include guest counts traffic, menu item preferences, and product usage.

Company standards exist for length of production time for each menu item; Standards also exist for the length of time for appetizers, entrees, desserts, etc., (ticket times) to arrive to the guest. The menu items are made (produced) to order; however, food preparation is prepared based on the forecast. The company “turns over” inventory approximately one and one half times per month. The company operates a distribution center, and the purchasing department manages the inventory in the distribution center. The company does not have overseas restaurants.

**Approach Dimension.** The finance department develops the forecast that the other departments use (concentrated approach). Other departments make comments and supply information, and the finance department compiles it. The company is satisfied, and this approach has worked well. The company forecasts at the guest, restaurant, regional and corporate levels. The intervals that the company uses to forecast are daily, weekly, monthly, quarterly, and yearly. The time horizons for forecasting include an extensive three-year plan, the annual plan and long range planning (ten years). The company does forecast at the regional level.

The individual forecasting techniques that the company uses include regression, jury-of-executive opinion, moving average, sales force composite, trend-line analysis, decomposition, and straight-line projections. The individual forecasting techniques that the company does not use include exponential smoothing, box-jenkins, customer expectations, life-cycle, simulation, expert systems, and neural networks. The sales forecast values received from the executive level and the channel members’ levels are credible. The company does not forecast menu items, thus they do not forecast “stars,” “puzzles,” “plowhorses,” and “dogs.”

**Systems Dimension.** The information system that the company uses to develop the sales forecast is a combination of IBM compatible personal computers and mainframe. Data is warehoused on the mainframe and pulled to the desktops to do the “number crunching.” The system operates on a LAN, and a WAN is used sparingly for remote offices. The company uses a combination of software to query from the

mainframe and the desktop. Some software was developed specifically for the company and other packages are off-the-shelf, and were tweaked for the company. The company uses Microsoft office products including Excel and Access. The company also uses Hyperian accounting software. The company uses electronic ordering at the property level, and at the property level the back office systems (BOS) have some forecasting sub-applications in the software. Automated integration exists between the forecasting tools and the corporate MIS. The company does not have access to EDI or EFR for purchasing. The company purchasing software was developed in house. The marketing department can review the forecast but cannot make changes. Any department can make recommendations to the forecast, but the finance department (who actually conducts the forecast) has access, which allows them to make changes to the sales forecast. The company is very satisfied with the information used to conduct the sales forecast.

**Performance Measurement Dimension.** The criteria the company uses to evaluate sales forecasting effectiveness are accuracy, ease of use, and credibility. The company uses percentage values and absolute values to measure forecasting performance. The company does not use specific measures of forecast error. The company does not produce graphical reports on forecasting performance.

**Level of Accuracy of Sales Forecast.** The company evaluates the accuracy of the sales forecast. The criteria that the company uses to evaluate the level of accuracy of sales forecast are percentage values and absolute values. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participants rated percentage values as very important (5) to the level of accuracy of sales forecast, and rated absolute values as very important (5) to the level of accuracy of sales forecast.

When given a list of criteria by which to evaluate the level of accuracy of sales forecast and using the same 5-point scale, the participants rated guest counts as very important (5) to the level of accuracy of sales forecast, promotions was rated very important (5) to the level of accuracy of sales forecast, history was rated very unimportant (1) to the level of accuracy of sales forecast, upward trends was rated important (4) to the level of accuracy of sales forecast, downward trends was rated

important (4) to the level of accuracy of sales forecast and, competition was rated as unimportant (2) to the level of accuracy of sales forecast.

**Level of Managers' Satisfaction with the Sales Forecasting Process.** The most important items to the participants when evaluating the current sales forecasting process were making good progress on commitments to sales flow and compiling earnings growth. The criteria that the participants used to evaluate the level of managers' satisfaction with the sales forecasting process were making good progress on commitments to sales flow and compiling earnings growth. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participants rated making progress on commitments very important (5) to the level of managers' satisfaction with the sales forecasting process, and the participant rated compiling earnings growth as very important (5) to the level of managers' satisfaction with the sales forecasting process.

When given a list of criteria by which to evaluate the level of managers' satisfaction with the sales forecasting process, and using the same 5-point scale, the participants rated numeric percentage of guest counts as very important (5) to the level of managers' satisfaction with the sales forecasting process, sales dollars was rated as very important (5) to the level of managers' satisfaction with the sales forecasting process, no report from other managers of forecasting error was rated as not applicable to the level of managers' satisfaction with the sales forecasting process, reward for using the system was rated neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, and ease of use was rated important (4) to the level of managers' satisfaction with the sales forecasting process.

Based on inputs, the participants believed the company is receiving what it expected from the sales forecasting process. The participants were very satisfied with the adaptability of the sales forecasting process. The participants were satisfied with the information systems and forecasting systems used as well as the approaches used to develop the sales forecast.

### Company E

Company E is a national restaurant company that is 18 years old. Sales at the end of 1999 reached \$1.6 billion. The company has 465 restaurants. This company is a full-service restaurant in the casual theme-dining segment of the restaurant industry.

**Functional Integration Dimension.** The process that this company uses to develop the sales forecast includes reviewing the promotional plan, which is the driver. The sales forecast is two-fold. The company looks at sales forecasts, guest counts, and average guest check forecast. The company takes into consideration remodeling of restaurants, opening of new restaurants, closings of restaurants, adjusting for weather, and seasonality. The marketing, finance and operations departments have the most input into the sales forecast. Middle management has a direct involvement in the forecasting process, while upper management has a combination of review and involvement.

The forecasting period begins with the company reviewing historical data. The company's sales forecasting process is on a continuum, which is a living and breathing process and requires constant review of the marketing calendar. The sales figures are developed and compared to previous years' figures and the objectives. Ultimately, the sales forecast comes down to the company's profitability. The business plan is not based upon the sales forecast. The sales forecast is adjusted quarterly, and the business plan is developed annually. In addition, the company has a three-year and a ten-year outlook. The planning horizon is one year and often reviewed on smaller increments. The company uses a top-down approach to forecasting. The operators of individual restaurants are well represented in the group that conducts the forecast.

The company's process for preparing the sales forecast is clear and precise with definite instructions. Support exists for an average amount of training for conducting the sales forecast. Support also exists for the sales forecast through adequate personnel to conduct the forecast. The process for conducting the sales forecast lasts for a period of about four months; thus there is enough time to conduct the forecast. The forecasting goal performance is evaluated and rewarded. The participants are rewarded on the performance of the forecast and how effective it is. The sales forecast is developed and reported in guest counts and dollars. The company forecasts all items on the P&L statement including sales, costs (food, beverage, labor), expenses (administrative and

marketing), turnover rates, cost of hires, controllables, guest counts, and average guest checks.

Company standards exist for length of production time for each menu item; standards also exist for the length of time for appetizers, entrees, desserts, etc., (ticket times) to arrive to the guest. The menu items are made (produced) to order; however, food preparation is prepared based on the forecast. The company “turns over” inventory approximately every 10 days. The company’s marketing efforts drive the demand for their product. The company uses two distribution centers across the country. The purchasing department is responsible for managing the inventory in the distribution centers. The company has a partnership with a restaurant overseas; however, the company has no input into the sales forecasting process of this restaurant.

**Approach Dimension.** The planning and analysis department develops the forecast that the other departments use (concentrated approach). The company is satisfied with this approach to sales forecasting. The company forecasts at the corporate level at daily and weekly intervals. The company maintains a forecasting continuum; thus the time horizon is weekly with adjustment to the annual plan in small increments during the year.

The individual forecasting techniques used by the company include regression, exponential smoothing, decomposition, straight-line projection, life-cycle analysis, and expert system. The individual techniques that the company does not use include simulation, trend-line analysis, box-jenkins, simulation, customer expectations, jury-of-executive opinion and neural networks. The company looks at guest satisfaction when tracking individual menu items. The company does not project “stars,” “puzzles,” “plowhorses,” and “dogs.”

**Systems Dimension.** The information systems and forecasting systems that the company uses to develop the sales forecast includes a data warehouse that stores historical data. This information is pulled into the models used for forecasting, and the models are stored in a simple Excel spreadsheet. The company uses a LAN and a WAN to connect both the office and the field. The data warehouse is stored on the company mainframe. No direct connection exists between the regional office and the corporate office; however, access exists to connect to the restaurant level to the corporate office.

The company uses purchasing software that was developed for the company's specific needs. Users cannot make adjustments to the sales forecast easily. The planning and analysis and marketing departments have access to adjust the sales forecast. The company is satisfied with its information system and forecasting system.

**Performance Measurement Dimension.** The company does not have or use any criteria to evaluate sales forecasting effectiveness. The company does not use graphical reports or specific measures of forecasting performance. The company does compare the actual to the planned forecast. The company tries to understand why it has a particular sales forecast and whether the forecast was good or bad. The company focus is on understanding the forecast.

**Level of Accuracy of Sales Forecast.** The company does evaluate accuracy of the sales forecast. The criteria that the company uses to evaluate the accuracy of the sales forecast are guest counts and average guest checks, which are the original components to this company's sales forecast. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participants rated guest counts as very important (5) to the level of accuracy of sales forecast and rated average checks as very important (5) to the level of accuracy of sales forecast.

When given a list of criteria with which to evaluate the level of accuracy of sales forecast and using the same 5-point scale, the participant rated guest count as very important (5) to the level of accuracy of sales forecast, promotions were rated very important (5) to the level of accuracy of sales forecast, history was rated very important (5) to the level of accuracy of sales forecast, upward trends were rated very important (5) to the level of accuracy of sales forecast, downward trends were rated very important (5) to the level of accuracy of sales forecast, and competition was rated as very unimportant (1) to the level of accuracy of sales forecast.

**Level of Managers' Satisfaction with the Sales Forecasting Process.** The most important items to the participant when evaluating the current sales forecasting process were ease of use and how well the outcomes are received versus the estimate. Another important item was how well the information and expectations are communicated down to the restaurant level. The aforementioned items are the criteria that the participant uses

to evaluate the level of managers' satisfaction with the sales forecasting process. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participants rated ease of use as very important (5) to the level of managers' satisfaction with the sales forecasting process, the participant rated how well the outcomes versus the estimates are viewed as very important (5) to the level of managers' satisfaction with the sales forecasting process, and the participant rated communication of information and expectations to the restaurant level as very important (5) to the level of managers' satisfaction with the sales forecasting process.

When given a list of criteria to evaluate the level of managers' satisfaction with the sales forecasting process, and using the same 5-point scale, the participants rated numeric percentage of guest counts as very important (5) to the level of managers' satisfaction with the sales forecasting process, sales dollars was rated as very important (5) to the level of managers' satisfaction with the sales forecasting process, no report from other managers of forecasting error was rated as not applicable to the level of managers' satisfaction with the sales forecasting process, reward for using the system was rated neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, and ease of use was rated very important (5) to the level of managers' satisfaction with the sales forecasting process.

Based on inputs, the participants believed the company is receiving what it expected from the sales forecasting process. The participants were satisfied with the adaptability of the sales forecasting process. The participants were satisfied with the approaches used to forecasting and the information systems used to conduct the sales forecast. The participants felt the process of passing the information down to the restaurant level and the reward for a good forecast were not done in a meaningful way and should be changed.

#### Company F

Company F is a national restaurant company that is 28 years old. Sales at the end of 1999 reached \$334 million and the company has 150 restaurants. This company is a

full-service restaurant company and part of the family-dining segment of the restaurant industry.

**Functional Integration Dimension.** The accounting department develops a five-year strategic plan from the budget as part of the process uses to develop the sales forecast. The forecast begins at the store level. Previous year's data is taken into consideration with the sales forecast. The information is sent to the corporate office and monitored weekly. The finance, marketing, and operations departments are very involved in conducting the forecast. Middle management is actually involved in producing the sales forecast, while upper management's role is to review it.

At the beginning of the forecast period, the process starts at the individual unit managers' level. Information is made available to the managers, and a time schedule is set with particular actions. This company's sales forecast is based upon the business plan. The forecast is adjusted weekly, and the business plan is produced annually. The typical planning horizon is one period (four-week cycle). The company uses a combination of bottom-up and top-down approaches to forecasting. The forecast starts at the bottom; then, it is tweaked at the top level.

The process for preparing the forecast is clear and precise with specific instructions. The participant believes that the individuals who conduct the forecast (particularly at the restaurant level) might not completely understand the process. Support does not exist for adequate training to conduct the sales forecast. Support exists for the sales forecast through adequate personnel levels and time to conduct the forecast. The forecasting goal performance is evaluated and rewarded through the managers' bonus system. The items that are forecast include five major items: food cost, payroll, maintenance, noncontrollables, and controllables. In addition, sales and items on the P&L statement are also forecast. Taking into consideration average guest checks, the forecast is developed and reported in guest counts and is then converted to dollars.

Company standards exist for length of production time for each menu item; standards also exist for the length of time for appetizers, entrees, desserts, etc., (ticket times) to arrive to the guest. The menu items are made (produced) to order; however, food preparation is prepared based on the forecast. Inventory is "turned over" about two times a month. Value and variety drive the demand for the business. The company

works with a distribution center, and the purchasing department is responsible for managing the inventory at the distribution center. The company does not have overseas restaurants.

**Approach Dimension.** The finance department develops the sales forecast that all departments use (concentrated approach). Even though the company has other departments that provide information, the finance department combines it. The company is working towards developing a consolidated weekly report that all departments can use and that all departments have input into developing. The company forecasts at the restaurant level, and the forecast intervals are thirteen four-week periods. The time horizon is a five-year strategic plan. This plan works in conjunction with the annual business plan and period forecasts. The company does forecast regionally.

The individual forecasting techniques that the company uses includes jury-of-executive opinion, exponential smoothing, moving average, sales force composite, trend-line, decomposition, straight-line projections and life-cycle analysis. The individual techniques that the company does not use include regression, box-jenkins, customer expectations, simulations, expert systems, and neural networks. The sales forecast values that are received from the restaurant level are not credible. The sales forecast values received from the other levels are credible. The company uses a menu matrix to project menu item usage; thus the company does not forecast “stars,” “puzzles,” “plowhorses,” or “dogs.”

**Systems Dimension.** The information system that is used to develop the sales forecast includes back office systems at the store level, which connect to the company POS system. The software that the company uses is a combination of canned software programs and programs that have been developed in house. The information collected feeds into the company AS400 mainframe system at the headquarters. The store level has access to sales information to produce P&L statements. The system is Windows based and the company uses Lotus, WordPerfect, and Microsoft Office programs. The company is connected via LAN and WAN. The company does not use EDI or EFR for purchasing or connecting to suppliers. Anyone can make recommendations to be used in the sales forecast, but only the people who have created the sales forecast can change it. The participant would like the company to use one platform (Windows and Microsoft

Applications) for processing to allow for more consistency. The company is moderately satisfied with its information systems.

**Performance Measurement Dimension.** The criteria used to evaluate sales forecasting effectiveness is accuracy. The company uses dollars-and-cents variance reports to measure forecasting performance. The company does not use specific metrics other than dollars-and-cents variance reports to measure forecasting error. The company does not use graphical reports.

**Level of Accuracy of Sales Forecast.** The company does not measure accuracy of the sales forecast; instead the company measures the effectiveness of the sales forecast. When given a list of criteria to evaluate the level of accuracy of the sales forecast and using a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated guest counts as very important (5) to the level of accuracy of the sales forecast, promotions were rated important (4) to the level of accuracy of the sales forecast, history was rated important (4) to the level of accuracy of the sales forecast, upward trends were rated very important (5) to the level of accuracy of the sales forecast, downward trends were rated very important (5) to the level of accuracy of the sales forecast, and competition was rated as neither important nor unimportant (3) to the level of accuracy of sales forecast.

**Level of Managers' Satisfaction with the Sales Forecasting Process.** The most important items to the participant when evaluating the current sales forecasting process were consistency and actually beating (outperforming) the forecast. On a scale of 5-1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated consistency as neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, and the participant rated actually beating (outperforming) the forecast as very important (5) to the level of managers' satisfaction with the sales forecasting process.

When given a list of criteria with which to evaluate the level of managers' satisfaction with the sales forecasting process, and using the same 5-point scale, the participant rated numeric percentage of guest counts as very important (5) to the level of managers' satisfaction with the sales forecasting process, sales dollars were rated very important (5) to the level of managers' satisfaction with the sales forecasting process, no

report from other managers of forecasting error was rated very unimportant (1) to the level of managers' satisfaction with the sales forecasting process, reward for using the system was rated neither important nor unimportant (3) to the level of managers' satisfaction with the sales forecasting process, and ease of use was rated important (4) to the level of managers' satisfaction with the sales forecasting process.

Based on inputs, the participants believed the company is receiving what it expected from the sales forecasting process. The participant was reasonably satisfied with the adaptability of the sales forecasting process. The participant was satisfied with the approaches used to forecast and moderately satisfied with the information system used to conduct the sales forecast. The one item the participant would change about the sales forecasting process is to have less control at the corporate office and more control by the people who actually use the forecast.

#### Company G

Company G is a national restaurant company that is 66 years old. Sales at the end of 1999 reached \$441 million. The company has more than 350 restaurants. This company is a full-service restaurant company and is part of the family-dining segment of the restaurant industry.

**Functional Integration Dimension.** The processes that this company uses to develop the sales forecast begins with the marketing and finance departments working together. The marketing department asks the finance department what they want sales to be and then the marketing department works toward that goal. The finance department does not want to spend any more than a fixed amount of percentage of sales on marketing promotions. The real estate department becomes involved in the process when new restaurant openings occur. The finance department has most of the sales forecasting responsibility, and they generate a top-down forecast. The marketing department is involved by maintaining positive customer counts. The operations department is very active in the forecast, and the planning/purchasing department has a small input at the end of the forecasting process. Middle management's role is to develop its own forecasts. Upper management's role is also to develop its own forecast.

At the beginning of each forecasting period, this company gathers their sales history, and the company forecasts sales for each four-week cycle. The sales are forecast two times. This information is entered into spreadsheets as the year progresses, and the actual data is entered per division (nine divisions in the company). The company examines trends in sales data to predict how the next period will perform. The business plan is generally based on the sales forecast and developed annually. The typical planning horizon is six months. The company has a disconnected combination of bottom-up and top-down forecasting. The divisions are responsible for their own forecasts (bottom-up), yet the corporate office also produces a forecast (top-down). Disconnection exists between levels of the company regarding the use of the forecast in the field.

The process for preparing the sales forecast is not clear and precise with set instructions. Many managers have an understanding in their heads or use “gut” feelings. Because the company has no instructions, preparation of the forecast is left to the individual sophistication of each individual manager. Adequate support does not exist for conducting the sales forecast through training or personnel to conduct the forecast. Some managers believe that enough time is given to conduct the forecast while others do not. Forecasting goals are not formally evaluated; there is no method to check the accuracy of the forecast. The forecast is integrated with the budget process and tied to the managers’ bonus plan. The sales forecast is generated and reported in dollars only; however, customer counts are taken into account. The company forecast every line on the P&L statement. The largest three items are food, labor, and controllables.

Company standards exist for length of production time for each menu item; standards also exist for the length of time for appetizers, entrees, desserts, etc., (ticket times) to arrive to the guest. The menu items are made (produced) to order; however, food preparation is prepared based on the forecast. Inventory “turns over” approximately twenty times a year. The unique taste profile of the menu items drives the demand for the company product. The company owns and operates a distribution center, and the purchasing department manages the inventory at the distribution center. The company does not have overseas restaurants.

**Approach Dimension.** Each department develops its own forecast (independent approach). The participant did not believe that this results in a good team effort. The participant would prefer to see a negotiated forecast used in the company. The company is not satisfied with this approach. The company forecasts at the guest, restaurant, division, and corporate level. The intervals are thirteen four-week periods and the time horizons for the forecast are six months, one year, and five years. The company does forecast at the regional level; however, these regions are called divisions.

Of the individual forecasting techniques, the company uses jury-of-executive opinion, trend analysis, decomposition, and straight-line projections. The company does not use regression, exponential smoothing, moving average, sales force composite, box-jenkins, customer expectations, life-cycle analysis, simulation, expert system, or neural networks. The sales forecasting values received from the restaurant level are credible as long as the restaurant has access to the necessary information. The sales forecasting values received from the directors' level are credible, and the sales forecasting values received from the executive members are moderately credible. This company does not monitor menu item forecasts, thus they do not forecast "stars," "puzzles," "plowhorses," or "dogs."

**Systems Dimension.** The information hardware systems used to develop the sales forecast are AS400 mainframe computers. The data from the AS400s are input into an Access database. This database is sent to the field managers in the form of an Excel spreadsheet. The information from the field managers is collected at the division level. Each division submits its forecast to the corporate office. The company originally used Lotus 123 but changed approximately six years ago to Microsoft applications and the AS400s. The software used for sales forecasting is a vendor package called Computer Associates, an accounting software. The company does not use a specific forecasting software. The information from the accounting software cannot be transmitted to the POS system. The company uses MICROS as a POS system. The forecasting system and the MIS are not integrated through automation; however, the information can be manually synthesized. The company does not have access to EDI through their suppliers, and the company does not use EFR or any other purchasing software. Field and divisional managers can to make changes easily to the forecast.

The company is very dissatisfied with the current system. The change that the company is proposing to its system is in the seventh month of an eight-month project. Currently, the system is decentralized. The company proposes to centralize the system and processes with the help of an outside vendor who is assisting with the development of a software and hardware package that is specific to the company's needs. The change gives the restaurants direct access to sales history data, and sales are automatically adjusted. Another part of the information system produces a labor schedule based on projected sales at the restaurant level. This information is then aggregated at the corporate level.

**Performance Measurement Dimension.** The company has no criteria to evaluate the effectiveness of the sales forecast. The company does not produce any graphical reports to depict sales forecasting performance. The company does not measure forecasting error, and the company does not use any specific metrics to evaluate forecasting performance.

**Level of Accuracy of Sales Forecast.** The company does not evaluate the accuracy of sales forecast. The company has no other criteria to evaluate the effectiveness of the sales forecast. When given a list of criteria with which to evaluate the level of accuracy of the sales forecast and using a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated guest counts as very important (5) to the level of accuracy of sales forecast, promotions were rated unimportant (2) to the level of accuracy of sales forecast, history was rated very important (5) to the level of accuracy of sales forecast, upward trends were rated very important (5) to the level of accuracy of sales forecast, downward trends were rated very important (5) to the level of accuracy of sales forecast, and competition was rated unimportant (2) to the level of accuracy of sales forecast.

**Level of Managers' Satisfaction with the Sales Forecasting Process.** The most important items to the participant when evaluating the current sales forecasting process were the value the shareholders have of the estimates of the company's earnings and whether the shareholders realize a return. The criteria that the participant used to evaluate the level of managers' satisfaction with the sales forecasting process were

shareholders' value of the earnings estimates and shareholders' return. On a scale of 5 to 1, 5=very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant, the participant rated shareholders valuing estimates as very important (5) to the level of managers' satisfaction with the sales forecasting process, and the participant rated shareholders return as very important (5) to the level of managers' satisfaction with the sales forecasting process.

When given a list of criteria with which to evaluate the level of managers' satisfaction with the sales forecasting process, and using the same 5-point scale, the participant rated numeric percentage of guest counts as very important (5) to the level of managers' satisfaction with the sales forecasting process, sales dollars were rated important (4) to the level of managers' satisfaction with the sales forecasting process, no report from other managers of forecasting error was rated not applicable to the level of managers' satisfaction with the sales forecasting process, reward for using the system was rated unimportant (2) to the level of managers' satisfaction with the sales forecasting process, and ease of use was rated very important (5) to the level of managers' satisfaction with the sales forecasting process.

Based on inputs, the participants believed the company is receiving what it expected from the sales forecasting process. The participant was not very satisfied with the adaptability of the sales forecasting process; however, as the company continues to change, the participant believed this satisfaction would continue to increase. The participant was not satisfied with the current systems used to develop the sales forecast. Again, as the company undergoes its upgrades, the participant believed this satisfaction would increase. The company is not satisfied with the approaches used to conduct the sales forecast. The participant would like to have better access to the field managers' information and see a more integrated process.

### **Overview of Level of Accuracy of the Sales Forecast and Level of Managers' Satisfaction with the Sales Forecasting Process**

Within the constructs of level of accuracy of sales forecast and level of managers' satisfaction with the sales forecasting process, participants were asked to rate various

criteria that related to the level of importance that the criteria had on the constructs. In the following sections, responses that were identified by the participants are summarized.

Summary of Criteria for Level of Accuracy of the Sales Forecast

In the construct level of accuracy of the sales forecast, participants were asked to rate the degree of the importance of items on a list of criteria to the level of accuracy of the sales forecast. The data Table 4.3 below shows the means for these criteria for all seven companies.

**Table 4.3: Means for Criteria for the Level of Accuracy of the Sales Forecast**

<b>Criteria</b>	<b>Mean*</b>	<b>Sample**</b>
Guest Counts	4.6	7
Upward Trends	4.3	7
Downward Trends	4.3	7
History	4.0	7
Promotions	3.4	7
Competition	2.4	5

\*On a scale of 5-1, 5 = very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant to the level of accuracy of the sales forecast

\*\*Sample sizes vary because some participants responded “not applicable” to certain criteria

The participants were also asked to identify any criteria that they use to rate the level of accuracy of the sales forecast that was not previously listed. The data in Table 4.4 shows additional criteria for the level of accuracy of the sales forecast that participants identified.

**Table 4.4: Additional Criteria for the Level of Accuracy of the Sales Forecast as Identified by Participants**

- Comparing actual sales to projected sales
- Labor performance
- Actual sales
- Variance reports
- Standard deviation reports
- Percentage values
- Absolute values
- Guest checks
- Average check
- Effectiveness

Summary of Criteria for Level of Managers’ Satisfaction with the Sales Forecasting Process

In the construct level of managers’ satisfaction with the sales forecasting process, participants were asked to rate the degree of importance of each item on list of criteria to the level of managers’ satisfaction with the sales forecasting process. The data in Table 4.5 shows the means for these criteria for all seven companies.

**Table 4.5: Means for Criteria for the Level of Managers’ Satisfaction with the Sales Forecasting Process**

<b>Criteria</b>	<b>Mean*</b>	<b>Sample**</b>
Numeric Percentage of Guest Counts	4.86	7
Sales Dollars	4.60	7
Ease of Use	4.10	7
Reward For Using System	3.20	6
No Reports of Forecast Error	2.00	3

\*On a scale of 5-1, 5= very important, 4=important, 3=neither important nor unimportant, 2=unimportant, and 1=very unimportant to the level of managers’ satisfaction with the sales forecasting process

\*\*Sample sizes vary because some participants responded “not applicable” to certain criteria

The participants were also asked to identify any criteria that they use to rate the level of managers' satisfaction with the sales forecasting process that were not previously listed. The data in Table 4.6 below shows additional criteria for the level of managers' satisfaction with the sales forecasting process that the participants identified.

**Table 4.6: Additional Criteria for the Level of Managers' Satisfaction with the Sales Forecasting Process as Identified by Participants**

- Reasonableness of sales forecast
- Reality of sales forecast
- Tools used to forecast work
- Tools for forecasting produce necessary information to benefit the company
- Satisfaction of those managers who have to produce the forecast
- Consistency of the sales forecast
- Beating the sales forecast
- Good progress on commitments to sales flow
- Compiling earnings growth
- How well outcomes are viewed versus the estimates
- How well information and expectations are communicated down to the restaurant level
- Shareholders value the estimate of the company earnings
- Shareholders realize a return

### **Chapter Summary**

In this chapter, the data analysis and results were presented. A summary of the company and participant information was presented. An overview of each company interview was presented. The company overviews were presented using each of the constructs of the research model. These constructs were functional integration, approach, systems, performance measurement, level of accuracy of the sales forecast, and level of managers' satisfaction with the sales forecasting process.