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The relationship between employee turnover and customer service quality in casino restaurants

Karl D Brandmeir
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**THE RELATIONSHIP BETWEEN EMPLOYEE TURNOVER
AND CUSTOMER SERVICE QUALITY
IN CASINO RESTAURANTS**

By

Karl D. Brandmeir

**Bachelor of Arts
Washington State University, Pullman
1969**

**A thesis submitted in partial fulfillment
of the requirements for the**

**Master of Science Degree
William F. Harrah College of Hotel Administration**

**Graduate College
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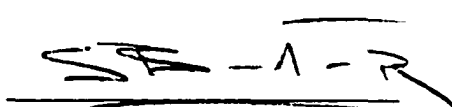
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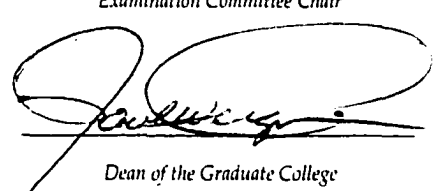
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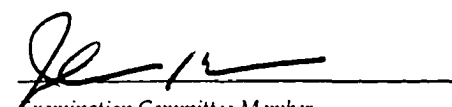
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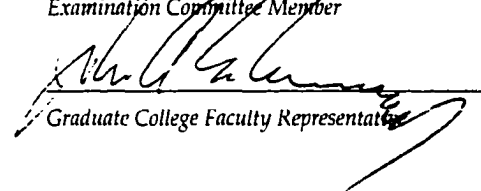
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ABSTRACT

The Relationship between Employee Turnover and Customer Service Quality in Casino Restaurants

by

Karl D. Brandmeir

**Dr. Seyhmus Baloglu, Examination Committee Chair
Assistant Professor of Tourism and Conventions
University of Nevada, Las Vegas**

This study investigates the relationship between employee turnover and perceived service quality in casino restaurants. The restaurants were buffets, steakhouses, and coffee shops in casinos in three geographic locations. The study uses both cross-sectional and time-series data in a linkage model. It then analyzes the nature of this relationship on both a concurrent and consecutive periods over ten months. The data were analyzed with descriptive statistics, one-way ANOVA with Scheffe Post-Hoc tests, Pearson's product moment correlations. Hypotheses were tested by correlations and time-lagged correlations.

The results show that steakhouses have the lowest turnover and the lowest poor and failure ratings by customers. Buffet restaurants had the highest mean scores for wait-time-to-be-seated. Front-of-the-House turnover has a strong correlation to customer service quality. The correlations and time-lagged correlations showed that employee

turnover is related to customer service quality over several time periods. This study shows that employee turnover, particularly in the Front-of-the-House positions, has a significant relationship with customer service quality not only in concurrent periods but also in consecutive periods. The significant correlation in consecutive time periods has implications for restaurant management. First, employee turnover continues to have a negative effect on customer service quality in consecutive time periods. Second, the continued loss of customers over several time periods could have a negative impact on revenue as well as sales and promotional expenses.

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None of this would have been a reality without the support of my family.

CHAPTER 1

INTRODUCTION

Employee turnover has been a major concern in the hospitality industry. Many industry leaders have considered turnover as a necessary evil. Hinkin and Tracey (2000) found that the cost of employee turnover rose nearly 400% from 1983 to 2000. Turnover has been studied by researchers to try to understand its causes (Pizam and Thornburg, 2000; Deery, et al, 1999; Gilbert, 1998; Laker and Shimko, 1991; Hawk, 1976).

Wasmuth and Davis (1983) studied voluntary employee turnover in twenty hotels in the United States and Europe and five departments in each hotel, and concluded that employee turnover was primarily a result of dissatisfaction with the current job rather than the attraction to another job.

Woods and Macaulay (1989) examined employee turnover for six restaurant companies and six hotel companies. Their study found nearly the same reasons for employee turnover as the Wasmuth and Davis (1983) study. These and other studies found that employee turnover in the hospitality industry was an accepted fact by management.

The cost of employee turnover has been a question of considerable debate. Wasmuth and Davis (1983) estimated the average turnover cost for an hourly employee was \$1,500. By 1991, Woods and Macaulay revised the estimated cost of turnover to be about \$2,500 for an hourly employee. A study of turnover costs by Hinkin and Tracey

(2000) has been the latest study to quantify employee turnover cost. Their estimate of the turnover cost for a front desk clerk is \$6,000. Their study grouped the costs into five major categories: separation costs, recruiting and attracting costs, selection costs, hiring costs, and low productivity costs. However, the lost revenue that results from customers not returning because of dissatisfaction with service has not been taken into account.

Conceptual Framework

The service profit chain developed and studied by Heskett, Sasser, and Schlesinger (1997) served as the conceptual framework for this study (Figure 1).

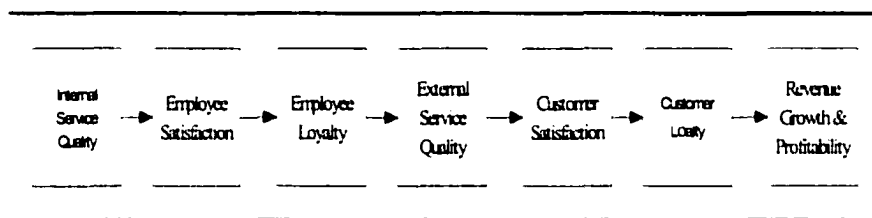


Figure 1. The Service Profit Chain

From Loveman, G.W., (1998). Employee Satisfaction, Customer Loyalty, and Financial Performance. *Journal of Service Research*, 1 (1), p.19.

As Figure 1 clearly illustrates, employee satisfaction leads to employee loyalty, which leads to the service quality the employees deliver. The service quality, on the other hand, influences customer satisfaction which, then, influences customer loyalty. This study focuses on a portion of that chain by examining the relationship between employee loyalty and perceived service quality. Leonard Schlesinger found a direct link between employee and customer satisfaction (Sasser and Lytle, 1987). This was the result of his Partner/Manager Program during the time he was COO of Au Bon Pain. The link became a part of the book *The Service Profit Chain* by Heskett, et al, 1997.

Statement of Problem

Although significant research in the hospitality field has focused on employee turnover or satisfaction and perceived service quality independently, little research has been conducted on the nature of the relationship between employee turnover and perceived service quality. In addition, the business and marketing literature revealed that most studies have examined the relationship between employee satisfaction, customer satisfaction, service quality, and business performance by using cross-sectional data rather than longitudinal data (time series data). As suggested by Bernhardt, Donthu, Kenneth (2000), these linkages may have been masked by many factors in a one-shot study, and therefore time series data and time-lagged analysis are needed to uncover the nature of relationship between employee satisfaction, customer satisfaction, and company performance. Similar calls have been made by Wiley (1996) who has suggested that the relationship between employee satisfaction and customer satisfaction be investigated in both concurrent and successive time periods by time-lagged correlation analysis for a linkage. More awareness is needed by restaurant management regarding the relationship of employee turnover and guest experience. This study attempts to identify some characteristics of that relationship.

Purpose

The purpose of this study is to examine the relationship between employee turnover and perceived service quality in casino restaurants in three regions. Specifically, this study will examine this relationship for three restaurant concepts (steakhouse, coffee shop, and buffet) over a 10-month period. In that respect, the links in both concurrent

and successive months will be examined to reveal short-term and long-term relationship between the two constructs. Additionally, the study will treat employee turnover in both disaggregated and aggregated nature by linking front-of-the-house, back-of-the-house, and overall employee turnover to perceived service quality.

Research Questions

1. What is the nature of relationship between employee turnover and perceived service quality in casino restaurants?
2. How does this relationship, if any, vary in concurrent and successive time periods?
3. To what extent does this relationship, if any, show variations due to different restaurant concepts such as steakhouse, coffee shop, and buffet?

Hypotheses

This study will investigate the relationship between employee turnover and perceived service quality in three types of restaurants in the casino environment. As pointed out before, by using time series data, the study will examine this relationship in both concurrent [employee satisfaction(t), perceived service quality(t)] and successive periods [employee satisfaction($t+1$), perceived service quality($t+1$)]. The hypotheses are stated below:

H₁: Front-of-the-House employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{1A}: Front-of-the-House employee turnover in the buffet restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{1B}: Front-of-the-House employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{1C}: Front-of-the-House employee turnover in the coffee shop restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H₂: Back-of-the-House employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{2A}: Back-of-the-House employee turnover in the buffet restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{2B}: Back-of-the-House employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{2C}: Back-of-the-House employee turnover in the coffee shop restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H₃: Average employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{3A}: Average employee turnover in the buffet restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{3B}: Average employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H_{3C}: Average employee turnover in the coffee shop restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores).

H₄: Front-of-the-House employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{4A}: Front-of-the-House employee turnover in the buffet restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{4B}: Front-of-the-House employee turnover in the steakhouse restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{4C}: Front-of-the-House employee turnover in the coffee shop restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H₅: Back-of-the-House employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{5A}: Back-of-the-House employee turnover in the buffet restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{5B}: Back-of-the-House employee turnover in the steakhouse restaurant time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{5C}: Back-of-the-House employee turnover in the coffee shop restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H₆: Average employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{6A}: Average employee turnover in the buffet restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{6B}: Average employee turnover in the steakhouse restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$.

H_{6c}: Average employee turnover in the coffee shop restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period t+1.

Significance of the Study

Employee turnover is a significant problem in the restaurant industry. Measuring the cost of employee turnover has been attempted by several studies, some of which were noted above. Loveman (1998), by using customer loyalty and satisfaction curve, demonstrates that dissatisfaction with service results in loss of the customer. In other words, a company is less likely to retain the customer if service levels fall below the expectations. If guest satisfaction is related to employee turnover, then the number of guests who do not return because of service failure is also related to employee turnover. Such a relationship could give restaurant management a more complete understanding of the cost of losing an employee.

The study contributes to hospitality, marketing, and management literature from several perspectives. First, this study examines the linkage between employee turnover and perceived service quality for casino restaurants. Second, the study examines this link through the use of time series data in both concurrent and successive months by using time-lagged assessment. Third, the study utilizes front-of-the-house, back-of-the-house, and overall employee turnover to understand how they are related to perceived service quality. Finally, this study uses actual employee turnover data rather than self-stated employee satisfaction and/or intention to leave.

Limitations

Only data from three regions was used. The generalization of the results to other regions is therefore limited by this restriction. All data are from a single gaming corporation, which in turn limits the generalization of results to other companies.

The survey instrument also asks the customer about other experiences during their visit. These other variables may have influenced the dining experience or influenced the answers given about dining satisfaction. There may be other variables not included in the questionnaire that influenced the dining experience and guest satisfaction. In addition, there may be a third variable, such as operational climate, influencing both turnover rate and dining experience. The data is also limited to what is measured by the questionnaire. The service quality measures are all single item measures; therefore the reliability of measure cannot be assessed.

The study assumes that both customer satisfaction and employee turnover data handled by the corporation have been accurately recorded and reported.

This study could not treat voluntary and involuntary turnover separately because of the way the turnover data were reported by the corporation.

Definition of Terms

Autocorrelation: the correlation that may occur between adjacent values of residual or error terms in a time series (Frechtling, 1996).

Back-of-the-house: a hospitality industry term for restaurant employees that do not usually have direct contact with the restaurant customer. These positions are: cook, kitchen helper, pantry, dishwasher, steward, and night cleaner.

Buffet: a style of restaurant. The food is displayed in large quantities and the customer serves their own portions. Service by the staff in the dining area is usually limited to beverages and clearing soiled dishes and service items from the customer's table. In the casino setting, the meal is paid by the customer before dining. This style of restaurant in a casino is frequently open 24 hours with short periods of closure between meal times for changing the food selections and cleaning.

Coffee Shop: usually a casual atmosphere restaurant with a large selection of food items that fit all meal periods. In a casino, these restaurants are usually open 24 hours a day since the menu lends itself to all meal times.

Employee Turnover: the ratio of number of employees who left the restaurant to total number of employees in each period (stated in percentages) (see Appendix II). For the purposes of this study, voluntary and involuntary departures from employment are included in the turnover data. However, transfers to other departments or regions are not counted as departures since they still work for the same company.

Front-of-the-House: a hospitality industry term for restaurant employees that have direct contact with the restaurant customer. These positions are: server, bus person, cashier, hostess, bartender, and cocktail server.

Perceived Service Quality: performance of restaurants on product and service attributes during service encounter.

Steakhouse: a table service restaurant that customarily specializes in steaks and seafood. The beverage selection available is usually larger than in a buffet or coffee shop. This type of restaurant is open for dinner and in some cases for lunch.

Time Lag Correlation: the correlation between variable A at time period t and variable B at time period $t+1$.

Time Series: an ordered sequence of values of a variable observed at equally spaced time intervals (Frechtling, 1996).

CHAPTER 2

REVIEW OF LITERATURE

Introduction

Employee satisfaction and employee turnover have been linked in several studies. Building on this relationship, additional studies have looked at employee satisfaction and customer satisfaction and how that can lead to customer loyalty. Some organizations have then assigned a lifetime value to the loyal customer, which quantifies the worth of the loyal customer to the organization. The chapter is organized into four sections: employee satisfaction and turnover, employee satisfaction and customer satisfaction, customer satisfaction and customer loyalty, and cost of employee turnover.

Employee Satisfaction and Turnover

Successful Meetings reported in 1997 that a PKF Consulting study found that overall employee turnover had grown from 47.8 percent in 1985 to 53.2 percent in 1995. This survey used the responses from 535 hotels that represented 53,462 employees. Robert Mandelbaum, Director of Research for PKF, stated that 50 percent of a hotel's monies are spent on employee-related costs.

Turnover rates, its causes, and strategies for employee retention have been the subjects of many studies. Less attention has been given to the impact that high employee

turnover has had on the organizational culture in the hotel industry. Deery and Shaw (1999) studied the relationship of organizational culture and employee turnover. They suggested that there is a turnover culture in the hotel industry. The implication from their work suggests that hotel management must manage the work culture. They suggested that the management must provide clear roles, job descriptions, supervisory support, the necessary equipment and less overtime. Selecting the personalities that fit into the hotel culture is of primary concern for a starting point.

Organizational behavior has an impact on a managers' behavior within the service industry. Susskind, Borchgrevink, Brymer, and Kacmar (2000) developed a model for measuring customer service behavior. In their model, "job satisfaction" and "supervisor support" have an impact upon "intent to quit". The strong positive relationship between standards of service, job satisfaction, and organizational commitment were perceived by the managers as evidence that the organization had a commitment to customer service. Such a relationship is likely to lead to increased satisfaction and commitment to their jobs.

Employee selection is a possible starting point for reducing the turnover problem. Laker and Shimko (1991) investigated the use of a realistic job preview experience (RJPE). They found use of a realistic job preview (RJP). This was usually in the form of a presentation that was verbal, a video, or even in print. They proposed that an actual experience could enhance the organization's ability to assess the individual and the potential employee's ability to determine whether the job fit their expectations. The use of a RJPE would put the applicant in a actual work environment and therefore able to experience the work conditions. Mrs. Fields Cookies

developed such a program for managerial candidates and found that one-third of the applicants decided not to be considered for the job after the RJPE.

Hobee's Franchising Corporation has developed guidelines that enhance the employee's self-esteem. They worked with Kathy Indermill, of By Design, and implemented the SEEQ System (Self-Esteem Enhancement Questionnaire). This technique was developed to influence the feelings of alienation, frustration, and resentment. They found that this program reduced their turnover and therefore the training investment.

Employee Satisfaction and Customer Satisfaction

The physical environment can influence the perception of service (Bitner 1992; Booms and Bitner 1992; Zeithaml, Parasuraman, and Berry 1985). In fact, customer satisfaction may be influenced by the environment (Bitner 1990). Bitner used the term *servicescape* to describe the service environment. Not only is the perception of service by the customer influenced by the servicescape, but also the employee perception of the work environment.

A direct link between job satisfaction and customer satisfaction was found in a study conducted in the cruise industry (Testa, Skaruppa, and Pietrzak, 1998). The results imply that hospitality and travel organizations can improve customer satisfaction by looking at three areas of employee satisfaction: employee satisfaction with the company, with their supervisor, and with their work environment. The employee perception of the company was the most significant issue. Training and motivational programs may contribute to employee "buy-in" to the company vision. Leadership training for supervisors may provide the tools necessary to improve this area. Motivational techniques, conflict resolution, moral building would enhance the supervisor's

ability to work with employee issues that effect job satisfaction. The work environment for the study included living conditions on ships. Similar to ships, time-off, equipment quality and maintenance do relate to the hospitality industry in general. They suggested that further study of land based hospitality organizations was needed to gain a better understanding of the relationship between the employee and the customer.

In 1985, Parasuraman, Zeithaml, and Berry proposed a Service Quality Model. This model identified the service perception shortfalls in service organizations. They identified four service gaps that in turn lead to a fifth gap; the difference between the customers expected service and the perceived service. Thus the employees (of financial institutions in this case) were providing services that did not meet the needs of the customers. The authors found that the banking industry did not understand their customers service expectations. This same concept can be applied to the restaurant industry. Robert Christie Mill (1996) suggested that employees should be treated as customers. His point was that the same marketing tools could be used. The needs and desires for customers and employees can be fulfilled. Under this concept, service leaders should treat their employees in the same manner as they want their employees to treat the customers.

Overall job satisfaction (which includes work, co-workers, supervision, and promotions) is positively related to customer-orientation (Hoffman and Ingram 1992). Management should be concerned about employee perceptions of the supervision they receive, working conditions, company policies, as well as monetary structure and benefits. Employee satisfaction is much more than a competitive income and perception is more determining than reality.

Spinelli and Canavos (2000) found that the top five employee satisfaction issues were employee involvement, training, safety in speaking up, an effective manager, and attractive benefits. These issues are similar in theme to other studies about employee satisfaction. The authors also found that the top five issues from the customer perspective were friendly staff, quick staff, cleanliness, responsive staff, and the hotel was recommended. Of these, staff response and value received were predictors of guest satisfaction. Of particular interest was the fact that the questionnaire used in their study was designed so that four of the questions were the same for guests and employees. If employees believe they care about the guest's stay, then the guest feels the same.

The interrelationship of service quality and customer satisfaction has been accepted as key to customer retention. The use of Guest Comment Cards (GCC) has been the usual means of identifying customer satisfaction. However, Gilbert and Horsnell (1998) found that the surveys currently in use do not adequately assess a customer's poor experience. Such an assessment needs to be both valid and reliable if management is to use the results as a basis for decisions. Three key areas of difficulty were identified in relation to comment cards: creation of a biased sample; management-made decisions about service attributes without knowing if those particular attributes were important to the customer's satisfaction: and, when the customer indicated dissatisfaction, there was insufficient detail. Identifying the service attributes that effected the dissatisfaction could affect the recovery strategies management might employ.

Customer expectations have been investigated in numerous studies involving customer satisfaction and dissatisfaction. However, the specific nature of the expectations is still in debate. Zeithaml, Berry, and Parasuraman (1993) proposed a conceptual model for customer

expectations of service. The model has three levels of customer expectations: desired service; adequate service; and predicted service. They suggest that the difficulty of empirical testing of these expectations in order to establish validity would be the wording and scales of measurement. While their earlier studies (1985, 1988) established the general standards and criteria used by customers to evaluate services, they felt that more work was needed in relation to the three levels of service.

Two obstacles face the hospitality industry with regard to improving service quality: first, knowing the aspects of a hotel experience that the customer uses for evaluation and second, having a reliable and valid measurement instrument. Gundersen, Heide, and Olsson (1996) tackled this problem. They chose business travelers as the target market. A survey instrument was developed that applied only to the hotel industry. This was done because of the inconsistencies they saw in the empirical studies using the SERVQUAL scale (Parasuraman et al., 1988) across different service industries. Tangible and intangible aspects of the customer experience were included in the survey instrument. Tangible aspects of the housekeeping department and the intangible aspects of the reception desk were the most important factors in a customer evaluation of hotel experience. The implication for hotel management is to concentrate on these two aspects to achieve an improvement in overall customer satisfaction.

It has been suggested that hospitality organizations should be proactive in building relationships (Scanlan and McPhail, 2000). Personalization, social bonding, reliability and familiarization were found to be the attributes that build guest relationships. They found that recognition of personalization and social bonding are relatively new as important attributes.

Berry (1995) included customization and personalization in social bonding. However, Parasuraman, Zeithaml, and Berry (1985, 1988) included personalization in empathy.

The difference between a satisfied customer and a loyal customer can be quite profound. Xerox found that a totally satisfied customer was six times more likely to repurchase a Xerox product than a satisfied customer (Jones and Sasser, 1995). The Xerox discovery led Jones and Sasser to conduct additional research, which confirmed the relationship between a totally satisfied customer (loyal) and a satisfied customer. One measure of customer loyalty has three categories: intent to repurchase, primary behavior, and secondary behavior. Intent to repurchase is an indicator of future behavior. Primary behavior measures the actual behavior in terms of recency, frequency amount, retention, and longevity. Secondary behavior is associated with customer referrals. Linking secondary behavior to actual purchases is difficult. Word of mouth could be a positive stimulus to prospective customers (Mangold, Miller, Brockway, 1999).

Wiley (1996) found that employee satisfaction and customer satisfaction were strongly and positively linked. He concluded that employee retention was related to the quality of service that a customer received. He suggested that additional time-lagged correlation analysis research would help establish cause and effect with respect to customer intentions and organizational changes.

Wiley (1991) found that employee and customer satisfaction were not positively related to net income of the firm. In fact, customer satisfaction was negatively related to net income. This study was cross-sectional. However, a longitudinal analysis of customer satisfaction and profitability has shown a significant relationship (Bernhardt, Donthu, and Kennett, 2000). The managerial implications suggest that investments in customer service and satisfaction need to be

evaluated over time to determine their impact upon the customer and the organizations profitability.

Benjamin Schneider (1985) proposed that people make the work organization, not the organization structure making the people. This perspective theorized that organization structure and process will change as the people change. The organizational environment is determined by its member's attributes. This grew from his earlier work (1980) with bank employees' perception of organization service to its customers and the customers' perception of the same service. Employees were sensitive to the customers' perception of the service quality.

Schneider and Bowen (1985) extended the employee and customer service perceptions. The intangibility of services makes the basis for service evaluation the context in which the service was delivered and how it was delivered. Parkington and Schneider (1979) found that if service employees felt management had a different perspective of service, then the result was low satisfaction, strong turnover intentions and that the customer had the perception of poor service quality. Customers received cues from the employees and used these cues to evaluate the quality of the service(s) received. They also found that employee turnover and customer turnover were related.

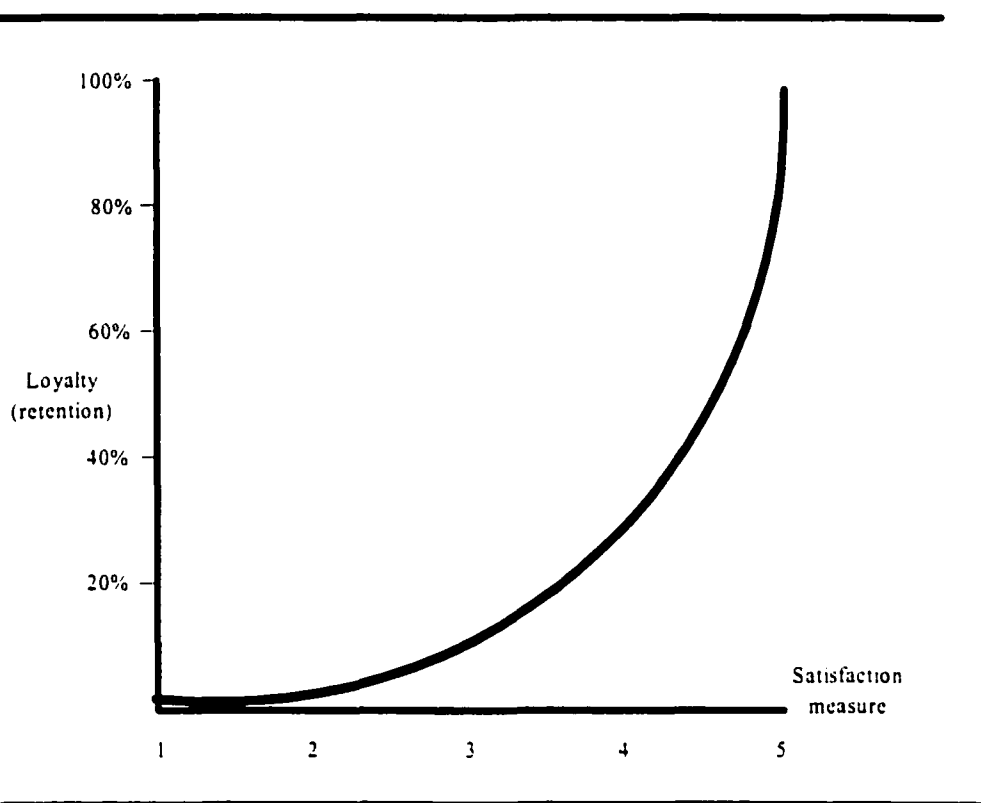
Happy employees can lead to loyal customers (Atkins, Marshall, and Javalgi, 1996). A strong relationship exists between employee satisfaction and the intent to return or recommend the service to other. The recommendation was also made that marketing must work closely with human resources to influence the work environment and job satisfaction. However, for the organization to continue improving employee and customer satisfaction continued research into perceptions of satisfaction will be necessary. Using this feedback to formulate future strategic

plans can give marketers confidence that they are heading in the direction of increasing employee and customer satisfaction.

The Cost of Turnover

Heskett, Jones, Loveman, Sasser, and Schlesinger (1994) concluded that profit and growth were the result of customer loyalty. Customer loyalty was the result of customer satisfaction and that was influenced by the value of the services received by the guest. Figure 2 illustrates the relationship between customer satisfaction and customer loyalty. The value created was the product of satisfied, loyal and productive employees. Their work on the service-profit chain was the result from analysis of successful service companies. Customer satisfaction was shown to be the key driver of company growth and profitability. The direct linking of customer satisfaction to employee productivity, loyalty, and satisfaction has given rise to internal systems to drive the employee component of their model. Employee retention and productivity was the key to creating value.

Hinkin and Tracey (2000) included low-productivity costs in their study of the cost of employee turnover. The turnover-cost categories were separation costs, recruiting and attracting costs, selection costs, hiring costs, and low-productivity costs. In fact, low-productivity costs were the largest of the five general categories: ranging from 55.5 percent to 69.4 percent of the total turnover cost for a front desk associate. They also pointed out that turnover seems to be the primary factor contributing to service quality reduction and a sense of burnout, particularly for front-line supervisors. The implication was that retention and development of supervisors could provide a competitive advantage for hotels.



Figure

2. Customer Satisfaction and Customer Loyalty Relationship

From: Loveman, G.W. , (1998). Employee Satisfaction, Customer Satisfaction, and Financial Performance, Journal of Service Research, 1 (1), 26

The five major categories of employee cost include: separation costs, recruiting and attracting costs, selection costs, hiring costs and productivity losses (Hinkin and Tracey, 2000). Not included was the loss of future revenue from the dissatisfied customers who had no intention of returning.

Absenteeism and voluntary turnover were found to be mostly work related factors versus demographic factors in a study by Pizam and Thornburg (2000). Sixty-two central Florida hotels had a voluntary turnover rate of 69.5 percent. While they did not attempt to estimate the total

cost of employee turnover, lost revenue from disgruntled guests was mentioned as an indirect cost.

The literature review did not find any research that directly studied the relationship between employee turnover and guest satisfaction as measured by the guest's intent to return.

The linking of employee satisfaction and customer satisfaction has been well documented as seen above. The linking of customer satisfaction and financial performance has mixed results. Changes in the level of quality will change the company's reputation over time (Anderson, Fornell, and Lehmann, 1994). They also found that current quality and past satisfaction are functions of current customer satisfaction. Thus, customer satisfaction in one period is carried over into future periods. Customer satisfaction also effects the return-on-investment (ROI) of the company, which also is a time-lagged variable. An increase of one point in the customer satisfaction each year for five years (five points cumulative) represented an 11.5 percent increase in ROI. It was felt that the calculations were modest since they were using Swedish firms in the study and the firm size was smaller than those in the Business Week 1000.

Wiley (1996) found that in a business services setting not only were employee and customer satisfaction positively related but also business performance. His study of a retail chain found that employee satisfaction was not positively related to business performance. Business performance was actually negatively related to customer satisfaction. It was suggested that to demonstrate causality through the use of correlation analysis, that a time lag study was needed. Correlations between employee and customer satisfaction were found to be higher in successive periods (Ashworth, Higgs, Schneider, Shepherd, and Carr, 1995).

Loveman (1998) proposes the service profit chain as a tool for improving performance in service organizations. However, he suggests that more large-sample studies are needed to show generality.

CHAPTER 3

METHODOLOGY

Introduction

This chapter consists of the research design, data collection methods, data coding, and data analysis techniques to be used in this study. All the data used for this study is secondary. Data analysis techniques and constraints are covered.

Research Design

The study uses pooled cross-sectional time-series design to understand the relationship between employee turnover and perceived service quality.

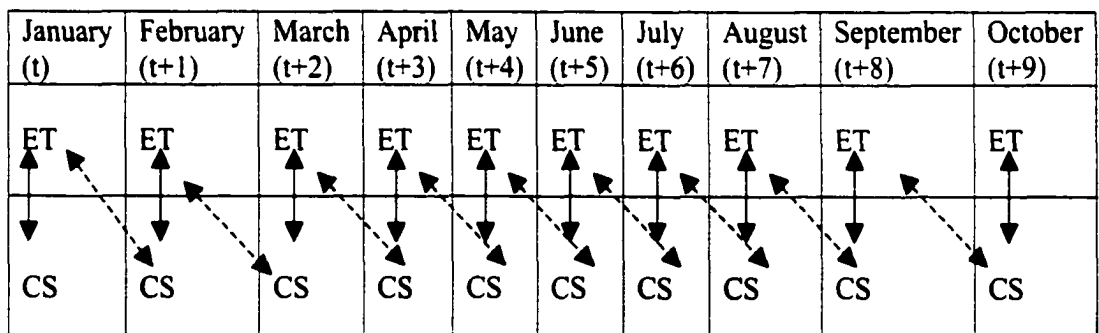


Figure 3. Correlations and Time-Lagged Correlations between Employee Turnover and Customer Satisfaction

ET: Employee Turnover

CS: Customer Satisfaction

———— Correlation between Employee Turnover (t) and Customer Satisfaction (t)

----- Time-Lagged Correlation between Employee Turnover (t) and Customer Satisfaction (t+1)

Data Collection

The study uses secondary data for employee turnover and customer satisfaction. The employee turnover data comes from human resource records of properties operating in three regions. The service quality data comes from customer satisfaction surveys from the same corporation's marketing department.

The human resources department of the casino corporation compiles the turnover data. It has been recorded and reported consistently across restaurants and regions on monthly basis. Employee turnover data for each restaurant for the study came directly from the corporation personnel records at each location. The restaurants in each of the three locations are a buffet, steakhouse, and coffee shop. The turnover data was separated into front-of-the-house and back-of-the-house categories.

The customer satisfaction data for this study were collected through the customer satisfaction survey of a casino corporation for a ten-month period of January through October. All the customers who used their frequent player card were included in the population of possible recipients for the satisfaction survey. This data is then sent to a contracted research company that handles the actual survey and tabulates the results. The contracted research company filters the data. The filtering process is conducted to remove any duplicate customer listings and removes any customers who have received a survey in the previous twelve months. This procedure ensures that the data for each month is a new set of previously un-surveyed customers. This filtered list is then used for generating a random sample for mailing of the survey instrument. The filtering process and the random selection sampling are done electronically with no human selection. A postage-paid return envelope is included in the mailing. The completed

surveys are mailed directly to the research company from the customer. The sample size for each month was about 2,700. The results are tabulated and reported back to the casino corporation by the research company.

Measurement and Data Coding

The employee turnover has been measured and reported as the ratio of number of employees that left to total number of employees for each month for three restaurants (buffet, coffee shop, and steakhouse) in each region. The figures have been reported for both back-of-the-house (BOH) and front-of-the-house (FOH) at property level in percentages (by multiplying the ratio by 100). For the purpose of the study, an overall turnover rate was also calculated by taking the average of BOH and FOH ratios.

The customer satisfaction survey included six questions about each restaurant and customers evaluated each restaurant on the same set of six attributes: friendly/helpful staff, food quality, price/value, waiting time to be seated, food variety, and ambiance/décor. They were measured by using five letters: A=Excellent, B=Good, C=Fair, D=Poor, and F=Failure. A "don't know" option has also been provided. The data for each month has been reported by showing percent of customers checking each category (frequencies for each item). In other words, the data have been aggregated at property level for each month. This study used percent of customers who checked D (poor) or F (failure) since the focus was on the lost customer. Also, the study focused on first five quality attributes by excluding atmosphere/décor because it was judged not to be related to either BOH or FOH turnover rate. In addition, an overall perceived service quality measure was computed by averaging the five individual attributes.

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Both data sets were then entered into SPSS by matching the regions, restaurants, and months. This resulted in 90 cases pooled at region and property level over time (3 restaurants X 3 regions X 10 months = 90). This allows the researcher to analyze linkages by using both pooled cross-sectional time-series data and individual restaurant data.

Data Analysis

The data analyses involve several stages. First, the data was explored for several assumptions. The data were assessed for normality, linearity, and seasonality. The seasonality is examined by autocorrelations. An autocorrelation was deemed significant at the 95% confidence level if its value falls outside of the following range (Frechtling, 1996):

$$-1.96/\sqrt{n} < r < 1.96/\sqrt{n}$$

where

n = number of data points or observations

r = autocorrelation value

Second, Analysis of Variance (ANOVA) was used to see if employee turnover and perceived service quality measures vary by regions and restaurant types. The purpose of this was to understand the data better and help interpretation of hypotheses testing at restaurant and region level. The Scheffe Post-Hoc tests were used since it is a conservative method of testing for significance of differences. The alpha level was set at 0.05.

CHAPTER 4

RESULTS

Assumptions

All variables met the normality and linearity assumptions except for the price/value variable (see Appendix C). Several transformations were attempted; however, no significant improvement in the distribution was gained. The seasonality is examined by autocorrelations. An autocorrelation was deemed significant at the 95 percent confidence level if its value falls outside of the following range (Frechtling, 1996):

$$-1.96/\sqrt{n} < r < 1.96/\sqrt{n}$$

where

n = number of data points or observations

r = autocorrelation value

Since there are 10 months ($n=10$), an autocorrelation will be significant if its value falls outside of -0.62 and 0.62 .

The autocorrelation figures at each property level are provided in Appendix D. The horizontal lines indicate standard errors on either side of zero. The vertical bars that do not exceed these lines are not significantly different from zero at the 0.05 level of significance. As the figures indicate, autocorrelation is not present, suggesting that the

series is stationary (that is, the mean of the series is constant over time). Therefore, no transformation of the data was needed.

Descriptive Statistics

Table 1 shows waiting time to be seated has the highest score at 5.23 percent, while the lowest score is for friendly/helpful staff at 2.2 percent.

Table 1 Descriptive Statistics for Variables (pooled data) N=90

Variables	Mean	Std. Dev.	Minimum	Maximum
Friendly/helpful staff (%) ¹	2.20	1.04	.00	5.10
Food Quality (%) ¹	3.48	1.50	.80	7.90
Price/value (%) ¹	4.40	1.93	1.20	17.50
Waiting time to be seated (%) ¹	5.23	2.09	.80	13.50
Food variety (%) ¹	3.10	1.65	.40	10.30
Overall experience (%) ²	3.68	1.08	1.40	6.98
FOH turnover (%) ³	3.82	3.91	.00	14.75
BOH turnover (%) ³	3.47	4.58	.00	28.57
Average turnover (%) ⁴	3.64	2.91	.00	14.29

1: Measured as the percentage of responses that is 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

2: Is an average of the individual questions.

3: Computed – (number of terminations divided by the number of employees) times 100.

4: Is the average of FOH and BOH.

The descriptive statistics for each restaurant type (buffet, steakhouse, coffee shop) are in Tables 2 through 4. Buffet restaurants have the highest mean score for Waiting time to be seated (Table 2).

Table 2 Descriptive Statistics for Buffet Restaurants – n=30

Variables	Mean	Std. Dev.	Minimum	Maximum
Friendly/helpful staff (%) ¹	2.05	.81	.80	3.64
Food Quality (%) ¹	3.94	1.62	1.50	7.90
Price/value (%) ¹	4.40	1.35	1.20	8.00
Waiting time to be seated (%) ¹	6.32	2.22	.80	13.50
Food variety (%) ¹	3.61	1.87	1.50	10.30
Overall experience (%) ²	4.06	.93	2.64	6.98
FOH turnover (%) ³	3.59	3.39	.00	13.16
BOH turnover (%) ³	2.85	3.00	.00	10.00
Average turnover (%) ⁴	3.22	2.44	.00	8.00

1: Measured as the percentage of responses that is 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

2: Is an average of the individual questions.

3: Computed – (number of terminations divided by the number of employees) times 100.

4: Is the average of FOH and BOH.

The steakhouse restaurants as a category have the lowest Wait-time-to-be-seated score of 3.50 percent (Table 3). The steakhouses also had the lowest Front-of-the-House employee turnover with 1.36 percent. Steakhouses, however, received the highest poor and failure scores for Price/value with 4.61 percent.

Table 3 Descriptive Statistics for Steakhouse Restaurants – n=30

Variables	Mean	Std. Dev.	Minimum	Maximum
Friendly/helpful staff (%) ¹	1.68	.99	.00	3.70
Food Quality (%) ¹	2.36	1.14	.80	5.80
Price/value (%) ¹	4.61	2.95	1.60	17.50
Waiting time to be seated (%) ¹	3.50	1.13	1.60	6.70
Food variety (%) ¹	2.09	1.61	.40	8.90
Overall experience (%) ²	2.85	1.07	1.40	6.16
FOH turnover (%) ³	1.36	2.86	.00	10.53
BOH turnover (%) ³	4.19	6.01	.00	28.57
Average turnover (%) ⁴	2.78	2.84	.00	14.29

1: Measured as the percentage of responses that is 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

2: Is an average of the individual questions.

3: Computed – (number of terminations divided by the number of employees) times 100.

4: Is the average of FOH and BOH.

As Table 4 shows, Coffee Shops received the highest mean scores for Friendly/helpful staff, Food quality, and FOH turnover.

Table 4 Descriptive Statistics for Coffee Shop Restaurants – n=30

Variables	Mean	Std. Dev.	Minimum	Maximum
Friendly/helpful staff (%) ¹	2.87	.97	.60	5.10
Food Quality (%) ¹	4.14	1.02	2.00	6.00
Price/value (%) ¹	4.19	.90	2.00	6.20
Waiting time to be seated (%) ¹	5.88	1.58	2.70	8.70
Food variety (%) ¹	3.60	.84	2.10	5.20
Overall experience (%) ²	4.13	.70	2.16	5.54
FOH turnover (%) ³	6.49	3.69	.00	14.75
BOH turnover (%) ³	3.36	4.28	.00	15.00
Average turnover (%) ⁴	4.93	3.05	.00	12.99

1: Measured as the percentage of responses that is 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

2: Is an average of the individual questions.

3: Computed – (number of terminations divided by the number of employees) times 100.

4: Is the average of FOH and BOH.

Descriptive Statistics by Region

Tables 5 through 7 contain the descriptive statistics for each of the three regions. Wait-time-to-be-seated was the variable that received the highest score in each region, with Region I having the highest. Region I has the highest turnover percent for Front-of-the-House, Back-of-the-House, and Average turnover for all the regions (Table 5). This region also has the highest score for Overall experience, with 3.81 percent. The only

category in which this region did not have the highest score was for Food quality; it was the lowest score across the regions.

Table 5 Descriptive Statistics for Region I – n=30

Variables	Mean	Std. Dev.	Minimum	Maximum
Friendly/helpful staff (%) ¹	2.24	1.00	.60	4.70
Food Quality (%) ¹	3.05	1.07	.80	5.80
Price/value (%) ¹	4.93	2.87	1.20	17.50
Waiting time to be seated (%) ¹	5.56	1.89	2.30	9.00
Food variety (%) ¹	3.30	1.95	1.50	10.30
Overall experience (%) ²	3.81	.76	2.16	6.16
FOH turnover (%) ³	4.57	3.69	.00	11.11
BOH turnover (%) ³	4.17	6.47	.00	28.57
Average turnover (%) ⁴	4.37	3.13	.00	14.29

1: Measured as the percentage of responses that is 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

2: Is an average of the individual questions.

3: Computed – (number of terminations divided by the number of employees) times 100.

4: Is the average of FOH and BOH.

Region II has the highest mean for Food quality but the lowest mean for Waiting time to be seated (Table 6).

Table 6 Descriptive Statistics for Region II – n=30

Variables	Mean	Std. Dev.	Minimum	Maximum
Friendly/helpful staff (%) ¹	2.23	1.30	.00	5.10
Food Quality (%) ¹	3.89	1.77	1.20	7.60
Price/value (%) ¹	4.19	1.01	1.60	6.70
Waiting time to be seated (%) ¹	4.90	1.85	1.60	8.70
Food variety (%) ¹	3.02	1.47	.60	5.20
Overall experience (%) ²	3.64	1.21	1.56	5.54
FOH turnover (%) ³	4.55	4.84	.00	14.75
BOH turnover (%) ³	3.49	3.41	.00	11.43
Average turnover (%) ⁴	4.02	3.25	.00	12.99

1: Measured as the percentage of responses that is 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

2: Is an average of the individual questions.

3: Computed – (number of terminations divided by the number of employees) times 100.

4: Is the average of FOH and BOH.

Region III had the lowest turnover percent for all three-turnover categories (Table 7). This region also had the lowest percent scores in the Waiting time to be seated, Price/value, and Friendly/helpful staff categories.

Table 7 Descriptive Statistics for Region III – n=30

Variables	Mean	Std. Dev.	Minimum	Maximum
Friendly/helpful staff (%) ¹	2.13	.80	.80	4.20
Food Quality (%) ¹	3.51	1.51	.80	7.90
Price/value (%) ¹	4.08	1.32	1.60	8.00
Waiting time to be seated (%) ¹	5.25	2.50	.80	13.50
Food variety (%) ¹	2.98	1.52	.40	6.60
Overall experience (%) ²	3.59	1.23	1.40	6.98
FOH turnover (%) ³	2.33	2.53	.00	8.82
BOH turnover (%) ³	2.75	3.14	.00	11.54
Average turnover (%) ⁴	2.54	1.92	.00	6.69

1: Measured as the percentage of responses that is 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

2: Is an average of the individual questions.

3: Computed – (number of terminations divided by the number of employees) times 100.

4: Is the average of FOH and BOH.

Differences Between Restaurant Types and Regions

Analysis of Variance by Restaurant Type

One-way analysis of variance with post hoc Scheffe test, were conducted on turnover and service quality variables. The purpose of this is to see if the relationship between employee turnover and service quality should be examined at restaurant type and region level. The letter following a score indicates the restaurant type with which it has a significant difference: i.e.; the Friendly/helpful staff score for Buffets is followed by a "C", which indicates that there is a significant difference between the Buffet score and the Coffee Shop score.

The steakhouses have a significant difference from Buffets and Coffee Shops in five of the nine variables (Food quality, Waiting time to be seated, Food variety, Overall experience, and FOH turnover) and differ only from Coffee Shops for the variables Friendly/helpful staff and Average turnover (Table 8).

Back-of-the-house turnover (BOH) and Price/value do not show any significance between restaurant types (Table 8).

Analysis of Variance by Region

ANOVA was also calculated for the regions to test for any differences between the regions. The results show that Region I is significantly different from Region III with respect to average turnover (Table 9). Because of no difference between regions on the other variables, it made sense to pool the data across regions by restaurant type.

Table 8 ANOVA: Customer experience and employee turnover by restaurant type

Variables	Buffet (B) n=30	Steakhouse (S) n=30	Coffee Shop (C) n=30	F value	Significance
Friendly/helpful staff	2.05 (C)	1.68 (C)	2.87(B, S)	12.9	.000*
Food Quality	3.94(S)	2.36(B, C)	4.14(S)	17.0	.000*
Price/value	4.40	4.61	4.19	.3	.710
Waiting time to be seated	6.32(S)	3.50(B, C)	5.88(S)	23.6	.000*
Food variety	3.61(S)	2.09(B, C)	3.60(S)	10.1	.000*
Overall experience	4.06(S)	2.85(B, C)	4.13(S)	18.7	.000*
FOH turnover	3.59(S, C)	1.36(B, C)	6.49(B, S)	17.8	.000*
BOH turnover	2.85	4.19	3.36	.6	.525
Average turnover	3.22	2.78 (C)	4.93(S)	4.9	.009*

*: significant at 0.05 or better probability level.

Note: The letters (B, S, and C) denote Buffet, Steakhouse, and Coffee Shop and indicate which ones are significantly different. For example, for friendly/helpful staff, Buffet and Steakhouse are significantly different from Coffee Shop.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

Table 9 ANOVA: Customer experience and employee turnover by region

Variables	Region I (I) n=30	Region II (II) n=30	Region III (III) n=30	F value	Significance
Friendly/helpful staff	2.24	2.23	2.13	.11	.899.
Food Quality	3.05	3.89	3.51	2.34	.100
Price/value	4.93	4.19	4.08	1.7	.181
Waiting time to be seated	5.56	4.90	5.25	.7	.484
Food variety	3.30	3.02	2.98	.3	.722
Overall experience	3.81	3.64	3.59	.4	.705
FOH turnover	4.57	4.55	2.33	3.4	.037*
BOH turnover	4.17	3.49	2.75	.7	.494
Average turnover	4.37(III)	4.02	2.54(I)	3.5	.034*

*: significant at 0.05 or better probability level.

Note: The letters (I, II, and III) denote Region I, Region II, and Region III and indicate which ones are significantly different.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

Correlations by Restaurant Type

The correlations used for hypotheses testing are reported in this section. Only concurrent and consecutive periods at t+1 (LAGS1) were used to test hypotheses. The consecutive periods t+2 (LAGS2) and t+3 (LAGS3) were reported and discussed after hypothesis testing to explore the nature of the relationship over longer periods. As Table 10 shows, front-of-the-house (FOH) turnover has significant correlations to customer experience. Average turnover (AVETURN) also has some significant correlations to customer experience variables, friendly/helpful staff in the concurrent time period. Friendly/helpful staff and Food Quality in the consecutive time period as well as LAGS1.

Table 10 Correlations: between customer experience and employee turnover – PooledData

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(N=90)	.405**	.250**	-.006	.170	.124	.249**
FOH, LAGS1	(N=81)	.350**	.291**	.182	.184	.331**	.358**
FOH, LAGS2	(N=72)	.453**	.366**	.036**	.277**	.318**	.390**
FOH, LAGS3	(N=63)	.335**	.256*	.137	.134	.345**	.332**
BOH	(N=90)	-.061	-.084	-.015	.001	.039	-.029
BOH, LAGS1	(N=81)	.020	.065	-.100	-.116	-.064	-.067
BOH, LAGS2	(N=72)	.198*	-.027	.001	.045	-.010	.047
BOH, LAGS3	(N=63)	-.054	-.066	.154	-.156	-.088	-.072
AVETURN	(N=90)	.224*	.101	-.016	.115	.114	.145
AVETURN, LAGS1	(N=81)	.245*	.242*	.040	.029	.166	.181
AVETURN, LAGS2	(N=72)	.443**	.212*	.024	.211*	.194	.285*
AVETURN, LAGS3	(N=63)	.178	.117	.211*	-.035	.158	.155

**=correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: Sample size (N's) is specified in parentheses.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

There were no significant positive correlations in buffet restaurants between employee turnover and customer service quality variables. This was an unexpected result.

Table 11 Correlations: between customer experience and employee turnover – Buffet

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(n=30)	.037	-.109	-.136	-.424**	-.209	-.357*
FOH, LAGS1	(n=27)	-.133	-.013	-.138	-.102	-.084	-.140
FOH, LAGS2	(n=24)	.264	.093	-.193	-.159	.026	-.033
FOH, LAGS3	(n=21)	.160	.096	.247	-.256	.119	.047
BOH	(n=30)	.100	-.270	-.502*	-.138	.055	-.266
BOH, LAGS1	(n=27)	.052	-.128	-.409*	-.015	-.155	-.203
BOH, LAGS2	(n=24)	-.090	-.186	-.349*	.066	-.056	-.162
BOH, LAGS3	(n=21)	-.310	-.342	-.376*	.002	-.357	-.373*
AVETURN	(n=30)	.088	-.242	-.404*	-.379*	-.111*	-.411*
AVETURN, LAGS1	(n=27)	-.064	-.088	-.350*	-.083	-.156	-.225
AVETURN, LAGS2	(n=24)	.134	-.048	-.355*	-.073	-.016	-.124
AVETURN, LAGS3	(n=21)	-.060	-.126	-.034	-.189	-.118	-.181

**=correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: sample size (N's) is specified in parentheses.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

As Table 12 illustrates, Steakhouse FOH turnover has correlation with customer experience variables: Friendly/helpful staff and Price/value. Friendly/helpful staff has a strong correlation with FOH in the current time period and the consecutive time period, LAGS1.

Table 12 Correlations: between customer experience and employee turnover – Steakhouse

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(n=30)	.474**	.163	.084	.138	.031	.207
FOH, LAGS1	(n=27)	.510**	.298	.588**	.296	.140	.518**
FOH, LAGS2	(n=24)	.343	.392*	.156	.098	.215	.305
FOH, LAGS3	(n=21)	.284	.053	.045	.382*	.235	.244
BOH	(n=30)	.037	.084	.033	.377*	.113	.157
BOH, LAGS1	(n=27)	-.144	.476**	-.106	-.367**	-.122	-.074
BOH, LAGS2	(n=24)	.203	-.062	.059	.266	.049	.130
BOH, LAGS3	(n=21)	.097	.148	.390*	-.201	.087	.199
AVETURN	(n=30)	.277	.170	.077	.467**	.135	.269
AVETURN, LAGS1	(n=27)	.113	.656**	.193	-.234	-.055	.287
AVETURN, LAGS2	(n=24)	.381*	.130	.138	.325	.158	.287
AVETURN, LAGS3	(n=21)	.245	.180	.427*	-.013	.210	.331

**=Correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: sample size (N's) is specified in parentheses.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

Overall experience in the Coffee Shops shows correlation at the 0.05 level for AVETURN in the concurrent time period (Table 13).

Table 13 Correlations: between customer experience and employee turnover – Coffee Shop

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(n=30)	.120	.010	.260	.191	-.053	.177
FOH, LAGS1	(n=27)	.021	.030	.124	-.208	.309	.038
FOH, LAGS2	(n=24)	.221	.071	.128	.329	-.051	.308*
FOH, LAGS3	(n=21)	-.130	-.080	.169	-.273	-.155	-.211
BOH	(n=30)	-.239	.036	.221	.062	.177	.072
BOH, LAGS1	(n=27)	.265	-.141	.269	.141	.230	.263
BOH, LAGS2	(n=24)	.393*	.353*	.231	-.017	.006	.451*
BOH, LAGS3	(n=21)	-.266	-.197	-.083	-.333	-.149	.312*
AVETURN	(n=30)	-.095	.031	.312*	.159	.093	.157
AVETURN, LAGS1	(n=27)	.204	-.085	.265	-.015	.341*	.213
AVETURN, LAGS2	(n=24)	.411*	.299	.241	.169	-.024	.399*
AVETURN, LAGS3	(n=21)	-.271	-.191	.037	-.403*	-.199	.419*

***=correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: sample size (N's) is specified in parentheses.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale (1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

Comparing Table 9 with Table 14 (Steakhouses and Coffee Shops only) shows similar correlations between employee turnover and customer experiences. However, the results are stronger for steakhouses and coffee shops only.

Table 14 Correlations: between customer experience and employee turnover –Steakhouse and Coffee Shop Pooled Data

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(n=60)	.508**	.444**	.026	.510**	.316*	.479**
FOH, LAGS1	(n=54)	.489**	.490**	.323**	.411**	.543**	.590**
FOH, LAGS2	(n=54)	.508**	.555**	.130	.546**	.475**	.589**
FOH, LAGS3	(n=54)	.381**	.386**	.111	.413**	.480**	.477**
BOH	(n=60)	-.107	-.002	.070	.103	.069	.057
BOH, LAGS1	(n=54)	-.001	.173	-.011	-.113	-.016	-.003
BOH, LAGS2	(n=48)	.239	.060	.098	.102	.024	.136
BOH, LAGS3	(n=42)	-.024	.038	.277*	-.185	.004	.019
AVETURN	(n=60)	.251*	.295*	.076	.462**	.269*	.367**
AVETURN, LAGS1	(n=54)	.311*	.457**	.197	.168	.333**	.374**
AVETURN, LAGS2	(n=48)	.548**	.391**	.161	.420**	.316*	.476**
AVETURN, LAGS3	(n=42)	.221	.277*	.305*	.106	.301*	.319*

**=correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: sample size (N's) is specified in parentheses.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good, 5=excellent).

Table 15 shows Front-of-the-house turnover has significant correlation to customer experience in the consecutive time period (LAGS1). This is also true for BOH and AVETURN.

Table 15 Correlations: between customer experience and employee turnover – Region I

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(n=30)	.266	.277	-.157	-.043	-.085	-.035
FOH, LAGS1	(n=27)	.256	.187	.438*	-.066	.430*	.507
FOH, LAGS2	(n=24)	.106	.159	-.104	-.038	.307	.124
FOH, LAGS3	(n=21)	.316	-.044	.005	-.092	.535**	.267
BOH	(n=30)	-.055	-.172	.031	.088	.135	.073
BOH, LAGS1	(n=27)	-.042	.359*	-.180	-.237	-.198	-.207
BOH, LAGS2	(n=24)	.144	-.051	-.093	-.019	-.012	-.032
BOH, LAGS3	(n=21)	-.121	.022	.344	-.004	-.114	.077
AVETURN	(n=30)	.100	-.015	-.060	.065	.089	.055
AVETURN, LAGS1	(n=27)	.108	.473**	.074	-.279	.052	.088
AVETURN, LAGS2	(n=24)	.204	.038	-.151	-.041	.161	.037
AVETURN, LAGS3	(n=21)	.065	.000	.341	-.057	.199	.230

**=correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: sample size (N's) is specified in parentheses.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

Region II has strong Front-of-the-house turnover correlation to customer service quality variables: Friendly/helpful staff, Food quality, Wait time to be seated, Food variety and Overall experience. This is not true with Regions I and III.

Table 16 Correlations: between customer experience and employee turnover – RegionII

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(n=30)	.604**	.447**	.147	.529**	.429*	.522**
FOH, LAGS1	(n=27)	.477**	.512**	.015	.454**	.521**	.521**
FOH, LAGS2	(n=24)	.736**	.611**	.121	.549**	.406*	.639**
FOH, LAGS3	(n=21)	.438*	.545**	.356	.164	.406*	.477*
BOH	(n=30)	-.040	-.040	-.222	-.037	.023	-.063
BOH, LAGS1	(n=27)	.022	-.012	-.100	.042	.095	.021
BOH, LAGS2	(n=24)	.320	.102	.235	.126	.114	.211
BOH, LAGS3	(n=21)	-.131	-.065	-.050	-.466*	-.125	-.248
AVETURN	(n=30)	.429**	.312*	-.007	.374*	.331*	.378*
AVETURN, LAGS1	(n=27)	.348*	.354*	-.043	.343*	.419*	.379*
AVETURN, LAGS2	(n=24)	.683**	.481**	.209	.450*	.344	.558*
AVETURN, LAGS3	(n=21)	.251	.364	.234	-.126	.230	.218

**=correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: sample size (N's) is specified in parentheses

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

Table 17 shows that Region III does not have any significant correlations between employee turnover and customer service quality.

Table 17 Correlations: between customer experience and employee turnover – Region III

		Friendly/ helpful Staff	Food Quality	Price/ value	Wait time to be seated	Food Variety	Overall Experience
FOH	(n=30)	.056	-.094	.019	-.021	-.065	-.036
FOH, LAGS1	(n=27)	.132	.040	-.104	.137	.002	.062
FOH, LAGS2	(n=24)	.217	.140	-.033	.267	.213	.195
FOH, LAGS3	(n=21)	.044	.062	-.007	.311	.102	.147
BOH	(n=30)	-.176	-.006	-.204	-.132	-.239	-.181
BOH, LAGS1	(n=27)	.118	-.159	-.044	-.171	-.081	-.124
BOH, LAGS2	(n=24)	.146	-.130	-.194	-.053	-.081	-.120
BOH, LAGS3	(n=21)	.127	-.156	-.134	.282	-.065	-.167
AVETURN	(n=30)	-.107	-.067	-.153	-.121	-.237	-.171
AVETURN, LAGS1	(n=27)	.187	-.105	-.107	-.050	-.066	-.061
AVETURN, LAGS2	(n=24)	.263	-.017	-.183	.130	-.002	.027
AVETURN, LAGS3	(n=21)	.135	-.090	-.117	-.033	.012	-.044

••=correlation is significant at 0.01 level (1 tailed).

*=correlation is significant at 0.05 level (1 tailed).

Note: sample size (N's) is specified in parentheses.

Measured as the percentage of responses that are 1 or 2 on a 5-point scale(1=failure, 2=poor, 3=fair, 4=good,5=excellent).

Hypotheses Results

Each of the six hypotheses (and the respective sub-hypotheses) are summarized below with a reference to the appropriate table; the hypotheses were tested at 0.05 significance level.

H₁: Front-of-the-House employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H₁ has support (Table 10).

H_{1A}: Front-of-the-House employee turnover in the buffet restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{1A} is not supported (Table 11).

H_{1B}: Front-of-the-House employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{1B} is supported (Table 12).

H_{1C}: Front-of-the-House employee turnover in the coffee shop restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{1C} is not supported (Table 13).

H₂: Back-of-the-House employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H₂ is not supported (Table 10).

H_{2A}: Back-of-the-House employee turnover in the buffet restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{2A} is not supported (Table 11).

H_{2B}: Back-of-the-House employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{2B} is supported (Table 12).

H_{2C}: Back-of-the-House employee turnover in the coffee shop restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{2C} is not supported (Table 13).

H₃: Average employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H₃ is supported (Table 10).

H_{3A}: Average employee turnover in the buffet restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{3A} is not supported (Table 11).

H_{3B}: Average employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{3B} is supported (Table 12).

H_{3C}: Average employee turnover in the coffee shop restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{3C} is supported (Table 13).

H₄: Front-of-the-House employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H₄ is supported (Table 10).

H_{4A}: Front-of-the-House employee turnover in the buffet restaurant in time period t will have a positive relationship to perceived service quality (as measured by the

percent of poor and failure scores) in time period $t+1$. H_{4A} is not supported (Table 11).

H_{4B} : Front-of-the-House employee turnover in the steakhouse restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{4B} is supported (Table 12).

H_{4C} : Front-of-the-House employee turnover in the coffee shop restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{4C} is not supported.

H_5 : Back-of-the-House employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_5 is not supported (Table 10).

H_{5A} : Back-of-the-House employee turnover in the buffet restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{5A} is not supported (Table 11).

H_{5B} : Back-of-the-House employee turnover in the steakhouse restaurant time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{5B} is supported (Table 12).

H_{5C} : Back-of-the-House employee turnover in the coffee shop restaurant in time period t will have a positive relationship to perceived service quality (as measured

by the percent of poor and failure scores) in time period $t+1$. H_{5C} is not supported (Table 13).

H_6 : Average employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_6 is supported (Table 10).

H_{6A} : Average employee turnover in the buffet restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{6A} is not supported (Table 11).

H_{6B} : Average employee turnover in the steakhouse restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{6B} is supported (Table 12).

H_{6C} : Average employee turnover in the coffee shop restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{6C} is supported (Table 13).

Summary

Four of the six hypotheses tested on pooled data were supported:

H_1 : Front-of-the-House employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_1 has support (Table 10).

H₃: Average employee turnover will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H₃ is supported (Table 10).

H₄: Front-of-the-House employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period t+1. H₄ is supported (Table 10).

H₆: Average employee turnover in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period t+1. H₆ is supported (Table 10).

Eight of the eighteen sub-hypotheses were supported:

H_{1B}: Front-of-the-House employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{1B} is supported (Table 12).

H_{2B}: Back-of-the-House employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{2B} is supported (Table 12).

H_{3B}: Average employee turnover in the steakhouse restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{3B} is supported (Table 12).

H_{3C}: Average employee turnover in the coffee shop restaurant will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores). H_{3C} is supported (Table 13).

H_{4B}: Front-of-the-House employee turnover in the steakhouse restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{4B} is supported (Table 12).

H_{5B}: Back-of-the-House employee turnover in the steakhouse restaurant time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{5B} is supported (Table 12).

H_{6B}: Average employee turnover in the steakhouse restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{6B} is supported (Table 12).

H_{6C}: Average employee turnover in the coffee shop restaurant in time period t will have a positive relationship to perceived service quality (as measured by the percent of poor and failure scores) in time period $t+1$. H_{6C} is supported (Table 13).

All six sub-hypotheses for the steakhouses have support. Two of the six hypotheses about the coffee shops have support. None of the hypotheses for the buffets were supported.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The descriptive statistics clearly show a difference between the types of restaurants and customer experience (Tables 2, 3, and 4). The analysis of variance (Table 8) confirms that there is a significant difference between customer experience and employee turnover by restaurant type.

The steakhouse restaurants have the lowest mean in seven of the nine variables. The steakhouses in this study are positioned in their casinos as a restaurant that provides a service level and food quality generally considered above buffets and coffee shops. This study provides empirical support for steakhouses providing a level of service quality that results in less poor and failure scores.

Buffet BOH is the lowest mean among restaurant types (Table 2), while Coffee Shops have the highest mean scores for Friendly/helpful staff, Food quality, Overall experience, and FOH turnover. Table 2 shows Wait-time-to-be-seated as the highest mean for buffets. This variable has the highest mean for poor and failure scores for all variables in the study. Casual observation of a buffet in a casino will confirm that long lines are frequent.

Indeed, the findings of hypothesis testing suggest that there are differences in the relationship of customer service quality and employee turnover between types of restaurants. The buffets do not show a positive relationship for any turnover category. In fact, several correlations were negative (Table 10): Waiting-time-to-be-seated, Price/value, Food quality, and Overall experience. Perhaps the time frame used in this study was wrong (one month). Maybe the time frame should be quarterly. The nature of buffet operations may influence this result. Buffets are not service oriented in the same manner as steakhouses and coffee shops where table service is provided. The scope of this study does not address these negative relationships. However, the steakhouses have significant correlation with Front-of-the-house turnover and customer service quality (Table 11). The customer may feel that the FOH employee has more influence on their dining experience since there is more interaction during the service encounter. Coffee Shops do not have the same level of interaction with the guest, while the buffets have very little due to the self-service nature of the operation.

Steakhouse BOH shows a relationship with customer perceptions of service quality, even when FOH did not have a significant relationship (see Table 12 under Food quality and Wait-time). Buffets and Coffee Shops do not have this same relationship. The correlation of employee turnover and customer service quality in steakhouses is much more significant.

Bernhardt, et al (1999) found that customer satisfaction influenced employee satisfaction and financial results in future time periods. A time-series approach was also

advocated by Loveman (1998). Table 9 shows a pattern of employee turnover influence on customer experience in future time periods.

FOH, BOH, and AVETURN all have strong correlations in time period $t+2$ (LAGS2). Generally, there is an increase between period $t+1$ and $t+2$, while there is a decrease from period $t+2$ to period $t+3$. This pattern in FOH implies that employee turnover continues to influence customer experience in consecutive time periods.. Further study would be necessary to see if the correlation remains significant beyond time period $t+3$.

Even BOH, which overall showed little correlation to customer experience, shows increasing correlation for the variable Friendly/helpful staff from time period t through time period $t+2$, followed by a decrease in time period $t+3$. BOH also influences the average turnover (AVETURN). While the customer may give most of the credit for poor service to the FOH, the BOH does share the results as evidenced by the AVETURN correlations.

The fact that this pattern of the correlation changes and is significant over time periods has some practical implications for managers. First, employee turnover in the concurrent time period is related to future performance results. Future customer satisfaction will be affected. Second, the type of restaurant will make a difference in the customer's perceived service quality. Steakhouse turnover has a strong correlation to perceived service quality. This relationship is not present in the buffets. Perhaps the newest, or least experienced, servers should begin working in the buffet since they will have the least effect on customer perceptions in that type of restaurant. The study results suggest that servers start their service experience in a buffet, then move into the coffee

shop, and finally, when they have learned customer interaction skills, they move to the steakhouse. Such a progression of experience allows the employee to learn service skills while having the least potential effect on customer dining experience due to turnover. Third, the geographic location of the restaurant may have an effect on employee selection and retention. Region III (Table 17) did not show any correlation between employee turnover and customer service quality. However, Region II has strong correlations between employee turnover and customer experience. The loss of a FOH employee in Region II is going have an effect on customer experience for several consecutive time periods. Whereas, the same loss in Region III will not have the same effect since the relationship is different.

Table 13 shows the correlations for steakhouses and coffee shops without the buffet data. The correlations in Table 10 are stronger than those in Table 9, which included the buffet restaurants. The correlation of employee turnover and customer experience shows the same pattern identified earlier: the correlation peaks in time period $t+2$ and remains significant in time period $t+3$. The correlation for Wait-time-to-be-seated is significant in Table 13 whereas it is not when the buffet data are included in Table 9. The strength of the correlations increased when the buffet data was not included. Intuitively, this would seem reasonable since buffets are self-service to a great extent and steakhouses and coffee shops are service oriented.

Correlations may decrease as the time lag is increased due to the loss of statistical power. Such a decrease did not occur in this case. It is also possible for correlation changes due to decreasing sample size of turnover data when lagged. However, if that

was the case, there would be a decreasing correlation as the time period increases. But this was not observed, the correlation increased over time.

It is generally accepted that obtaining a new customer costs more than retaining a current customer. Thus the dissatisfied customers that decide not to return could have an impact on the costs of doing business; increasing the expenditures for obtaining new customers to replace the lost customers.

However, there is another potential effect of lost customers: lost revenue. Casinos calculate the theoretical worth of their customers. This theoretical win by the casino is calculated using proprietary formulas and information based on the customers gaming history or projected play. Therefore, the loss of a customer has a theoretical lost revenue value to the casino. When assessing the cost of employee turnover, the amount of lost revenue from poor dining experiences should be included. This study shows that employee turnover has a correlation to customer service perception for several consecutive time periods. Losing restaurant customers obviously has a dollar value to the restaurant but if the casino lost the customers as a gamblers, the loss is much more significant.

This study suggests that casino restaurants should effectively manage employee turnover. The financial implications may be a good incentive for management to find ways to reduce employee turnover; not only from a replacement cost viewpoint but also from a lost revenue viewpoint. The \$6000 turnover cost per employee that Hinkin and Tracey (2000) estimated is low if the lifetime value of lost customers is added into the cost equation. Each casino can estimate the cost based on their individual theoretical worth calculations. Let's use a hypothetical example. A restaurant serves three hundred

people a day and a customer comes twice a year and spends \$20 each time. A 3 percent loss of customers each month (this study implies it is larger than 3 percent) would then cost the restaurant \$129,600 per year in lost revenue. However, if the casino loses those same customers as gamblers (that spend \$500 per trip), the loss escalates to \$1,620,000. The average check in a restaurant or the theoretical win for the casino will have a large influence on the calculations for lost revenue. However, it is easy to see that the revenue lost from dissatisfied customers can have a financial implication.

Future Research

Past research has suggested that service quality should be studied over a time series to best understand the financial impact. This study shows that employee turnover influences service quality in consecutive time periods. Further study will be needed to see if that relationship remains significant beyond the consecutive time periods in this study.

More empirical evidence is needed on the role that dining plays on the customer's gambling location decision. The current and future customers may look at dining differently than how it was viewed in the past. Such a change in perspective may necessitate a change in thinking about how to provide quality service in casino restaurants. The type of restaurants may also be a factor.

While the hypothetical case for lost revenue presented above is an example of the potential impact on a casino, further study is needed to quantify the cost in such a scenario.

The turnover data in this study included voluntary and involuntary turnover. It is possible that each type of turnover may have a different effect on the customer service quality experience. This study was unable to explore that possible aspect since the separate turnover data were not available.

Employee loyalty was not measured or investigated in this study. Employee loyalty may have a relationship to guest service quality. Using employee loyalty measures, employee turnover, and guest service quality in the same study could provide empirical evidence to support additional links in the service profit chain.

The fair and poor customer service scores were used in this study. However, the fair customer service scores (3 on a scale of 1 thru 5) may not be considered a satisfied customer. Additional insight may be gained if such a score were to be included with the fair and poor ratings.

The results of the study show differences in the relationship of turnover and service perception by restaurant type. The buffets in particular showed a negative relationship. This needs further investigation to understand the nature of perceived service quality in buffets. Further study of each restaurant type will help define the unique relationship between employee turnover and customer perceived service quality.

While the three types of restaurants in each region are very similar in operational style, the results show a difference between regions (Tables 15, 16, 17). Why is there a difference? Additional investigation will be needed to understand why there is a difference between locations.

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APPENDIX A

CUSTOMER SATISFACTION SURVEY

Thank you for visiting **At** your total satisfaction is our first concern.
Your opinions and recommendations are very important in helping us ensure that our products and services are constantly improving to meet and exceed your high expectations. Please take a few minutes and offer us your candid ratings from your most recent visit to **Your response will be shared with the casino management and employees, giving them valuable insight into the satisfaction of their guests.**
Thank you for your time. We hope to welcome you back again soon to any of our casinos

Cordially,

SAMPLE

Please fill in the boxes as shown: Current Mark **005** Responses with numbers **005**

1. During the past 3-4 weeks, did you visit **?** casino located in **?**

☐ Yes (Please continue)
☐ No (Please detach and mail using the enclosed postage-paid business reply envelope)

Throughout this questionnaire, please answer all appropriate questions based on your most recent visit to **?** For questions in which you are asked to grade, please use a scale where A = Excellent, B = Good, C = Fair, D = Poor and F = Failure.

Overall Casino Experience

2. How was your overall experience at **?** (Please MARK ONE answer only)

☐ A = Excellent
☐ B = Good
☐ C = Fair
☐ D = Poor
☐ F = Failure

3. How was the customer service you received from employees overall? (Please MARK ONE answer only)

☐ A = Excellent
☐ B = Good
☐ C = Fair
☐ D = Poor
☐ F = Failure

4. On your next visit to the **?** area, how likely would you be to return to **?** (Please MARK ONE answer only)

☐ Definitely would
☐ Probably would
☐ Probably would not
☐ Definitely would not

5. Would you enthusiastically recommend **Casino** to a friend or relative? (Please MARK ONE answer only)

☐ Yes
☐ No

Service Quality

6. How friendly and helpful were the staff in each of the following areas? (Please MARK ONE box for each area. If an area did not apply to your visit, please mark the "Did Not Use" column)

	(pre-visit)	A	B	C	D	F	Did Not Use
Hotel parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Card Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cashier/Service service on casino floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino cashier window (sign, envelope redemption)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino cashier window (sign, envelope redemption)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slot machine service (outlet payment, coin in, machine maintenance)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Theater Box Office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How would you rate the following items for each of the following areas? (Please MARK ONE box for each area. If an area did not apply to your visit, please mark the "Did Not Use" column)

	(pre-visit)	A	B	C	D	F	Did Not Use
Hotel parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Card Center	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cashier/Service service on casino floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change service while playing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino cashier window (sign, envelope redemption)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slot machine service (outlet payment, coin in, machine maintenance)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Theater Box Office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7a. For what reasons did you call **?** before you visited? (Please mark all that apply)

☐ Hotel reservations
☐ Show reservations
☐ Restaurant reservations
☐ Information request
☐ Didn't call **?** before I visited

Casino Gaming Environment

8. How would you rate **?** on the following? (Please MARK ONE answer only for each of the following)

	(pre-visit)	A	B	C	D	F	Did Not Use
Casino where I feel lucky	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino with lots of action and excitement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino where my gambling budget lasts longer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comfortable seating while playing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety inside the building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety in and around parking lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino with restaurants that appeal to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino with dramatic entertainment that appeals to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino with good mix of slot games	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Casino with good mix of slot machines and table game table	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX B

Region I

FOOD & BEVERAGE TURNOVER

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov
Coffee Shop - FOH	8.33	2.82	10.00	8.11	8.58	9.85	6.94	5.71	11.11	4.84	5.08
# of Employees	72	71	70	74	76	71	72	70	63	62	59
# of Terminations	6	2	7	6	5	7	5	4	7	3	3
Coffee Shop - BOH	4.55	0	0	8.33	8.33	0	0	15.00	0	0	5.00
# of Employees	22	21	21	24	24	24	24	20	20	20	20
# of Terminations	1	0	0	2	2	0	0	3	0	0	1
Steakhouse - FOH	0	5.00	0	0	9.52	10.53	0	0	5.56	0	5.88
# of Employees	20	20	19	20	21	19	19	19	18	18	17
# of Terminations	0	1	0	0	2	2	0	0	1	0	1
Steakhouse - BOH	0	0	28.57	0	0	0	0	12.55	0	12.50	28.70
# of Employees	8	8	7	8	8	9	9	8	8	8	7
# of Terminations	0	0	2	0	0	0	0	1	0	1	2
Buffet - FOH	1.72	3.64	3.77	0	5.76	1.96	0	7.55	3.92	3.92	6.25
# of Employees	58	55	53	54	52	51	53	53	51	51	48
# of Terminations	1	2	2	0	3	1	0	4	2	2	3
Buffet - BOH	6.87	10.00	3.23	3.03	3.03	6.45	2.94	0	0	0	3.03
# of Employees	30	30	31	33	33	31	34	33	33	33	33
# of Terminations	2	3	1	1	1	2	1	0	0	0	1

Region II

FOOD & BEVERAGE TURNOVER

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov
Coffee Shop – FOH	14.55	5.56	9.46	4.29	8.57	3.95	7.5	11.59	2.94	14.75	3.45
# of Employees	55	72	74	70	70	76	80	69	68	61	58
# of Terminations	8	4	7	3	6	3	6	8	2	9	2
Coffee Shop – BOH	11.43	2.70	0	0	4.32	2.38	0	6.98	0	2.33	2.44
# of Employees	35	37	40	41	41	42	43	43	44	43	41
# of Terminations	4	1	0	0	3	1	0	3	0	1	1
Steakhouse – FOH	3.33	0	0	0	0	0	0	0	0	0	0
# of Employees	30	30	30	30	30	30	30	30	30	30	30
# of Terminations	1	0	0	0	0	0	0	0	0	0	0
Steakhouse – BOH	0	3.33	6.25	0	0	6.25	6.67	0	6.67	6.25	0
# of Employees	16	30	16	15	17	16	15	14	15	16	15
# of Terminations	0	1	1	0	0	1	1	0	1	1	0
Buffet – FOH	7.89	2.50	0	9.76	0	4.76	13.16	5.	0	7.41	13.04
# of Employees	39	40	43	41	41	42	38	40	43	27	23
# of Terminations	3	1	0	4	0	2	5	2	0	2	3
Buffet – BOH	0	0	0	6.25	3.85	5.66	1.85	9.62	1.82	7.14	0
# of Employees	55	55	51	48	52	53	54	52	55	56	70
# of Terminations	0	0	0	3	2	3	1	5	1	4	0

Region III

FOOD & BEVERAGE TURNOVER

	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov
Coffee Shop - FOH	1.54	3.13	3.13	6.82	3.45	6.35	4.55	0	3.17	3.33	3.23
# of Employees	65	64	64	68	58	63	66	64	63	60	62
# of Terminations	1	2	2	6	2	4	3	0	2	2	2
Coffee Shop - BOH	11.54	1.96	7.84	4.55	0	3.77	0	0	0	1.92	12.00
# of Employees	52	51	51	44	51	53	47	48	53	52	50
# of Terminations	6	1	4	2	0	2	0	0	0	1	6
Buffet - FOH	1.61	0	0	0	1.56	3.45	7.94	1.47	6.15	3.23	1.75
# of Employees	62	55	56	59	64	58	63	68	65	62	57
# of Terminations	1	0	0	0	1	2	5	1	4	2	1
Buffet - BOH	0	0	2.44	0	0	0	1.75	1.79	3.39	4.84	3.45
# of Employees	39	45	41	36	32	41	57	56	59	62	58
# of Terminations	0	0	1	0	0	0	1	1	2	3	2
Steakhouse - FOH	0	0	0	3.45	0	3.70	0	0	0	0	0
# of Employees	29	29	29	29	27	27	26	27	28	26	28
# of Terminations	0	0	0	1	0	1	0	0	0	0	0
Steakhouse - BOH	6.67	7.14	0	0	6.67	0	5.	5.88	5.56	0	0
# of Employees	15	14	13	15	15	16	20	17	18	17	18
# of Terminations	1	1	0	0	1	0	1	1	1	0	0

APPENDIX C

Descriptive Statistics

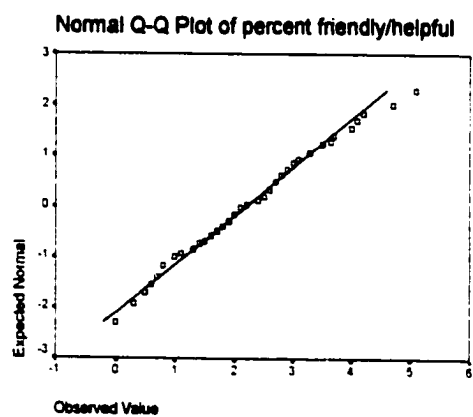
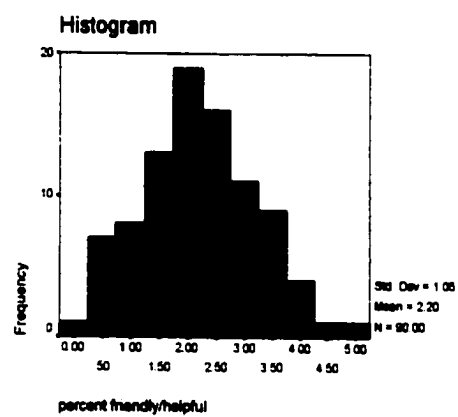
	N	Mean	Std.	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error
PFH percent friendly/helpful	90	2.2027	1.0472	.212	.254
PFQ percent food quality	90	3.4856	1.5075	.414	.254
PPV percent price/value	90	4.4033	1.9327	3.611	.254
PWT percent wait time	90	5.2378	2.0967	.651	.254
PFV percent food variety	90	3.1033	1.6538	1.369	.254

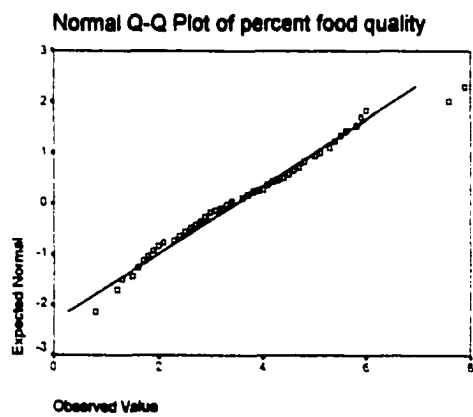
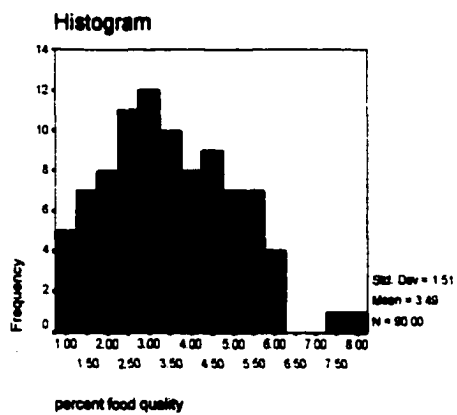
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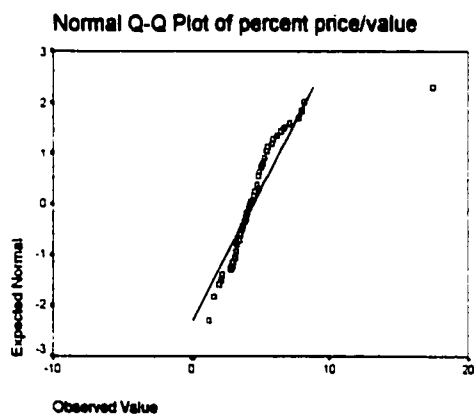
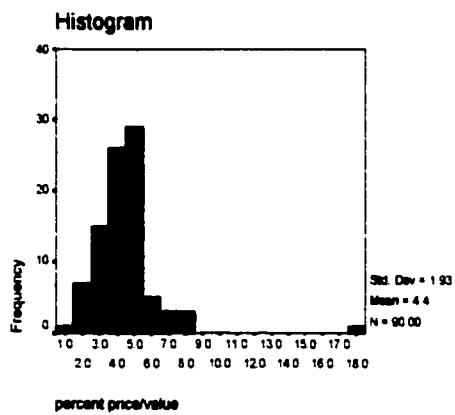
	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
PFH percent friendly/helpful	.059	90	.200*
PFQ percent food quality	.071	90	.200*
PPV percent price/value	.170	90	.000
PWT percent wait time	.076	90	.200*
PFV percent food variety	.066	90	.200*

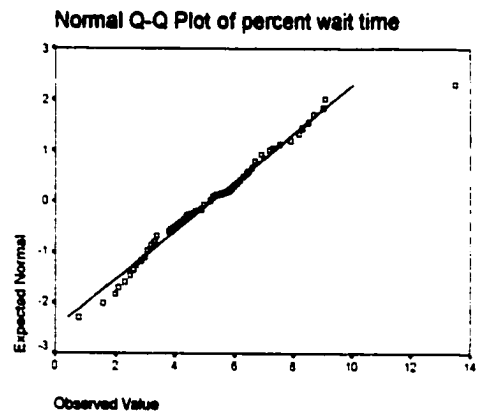
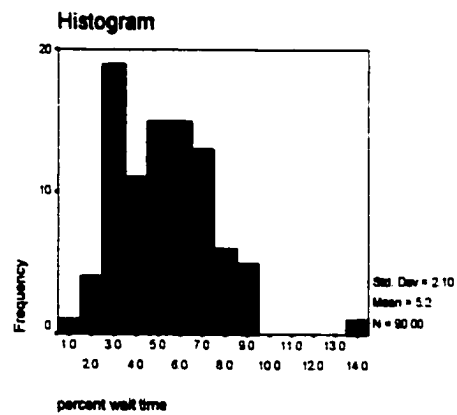
*. This is a lower bound of the true significance.

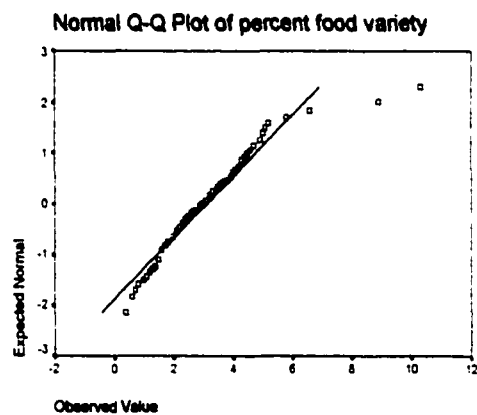
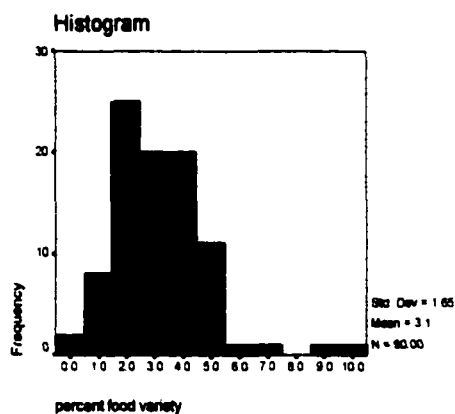
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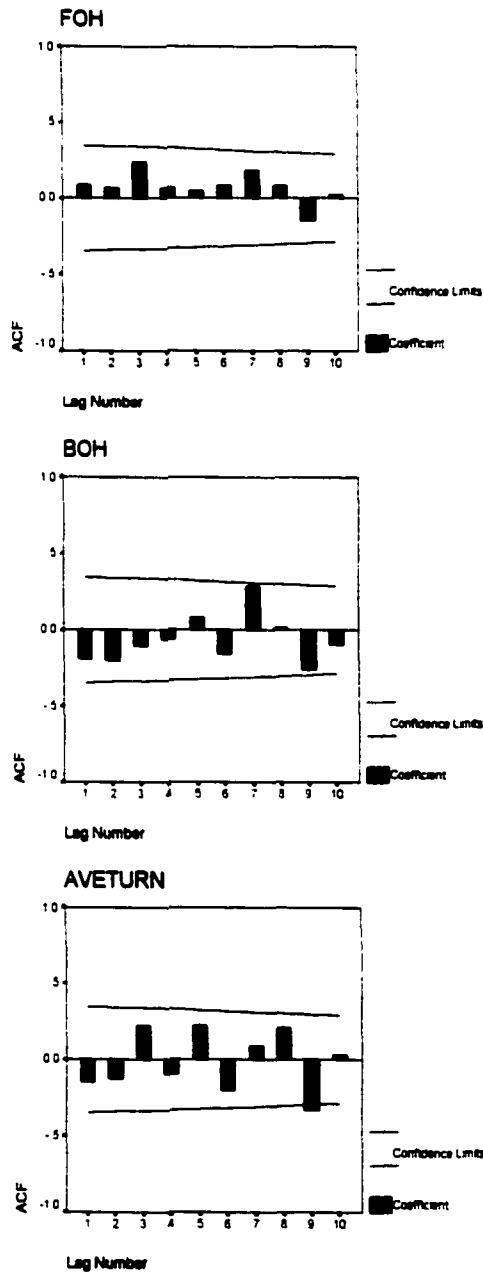




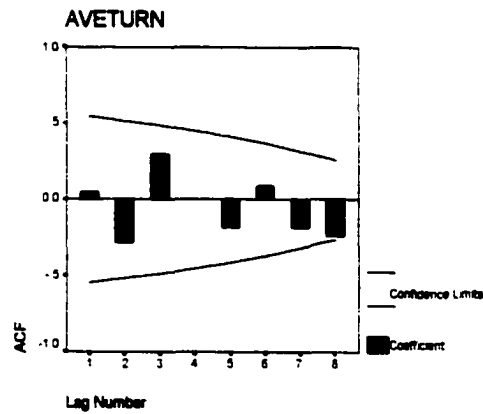
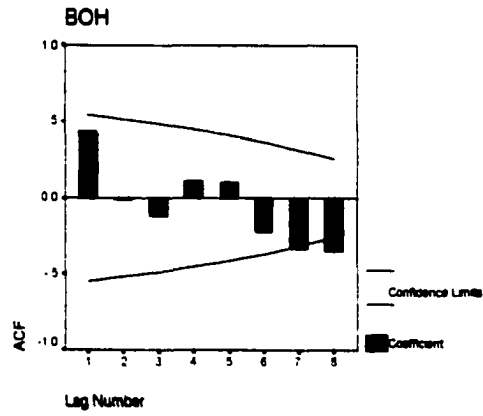
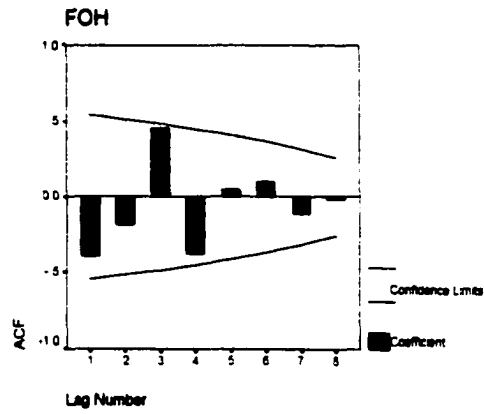


APPENDIX D

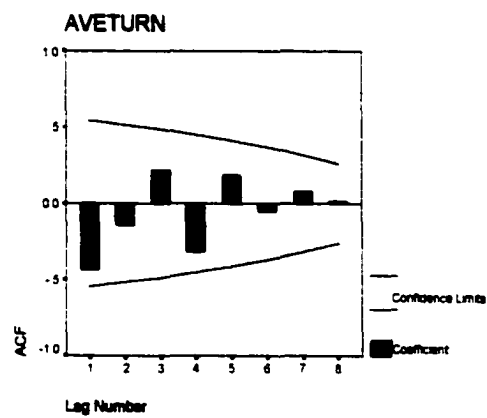
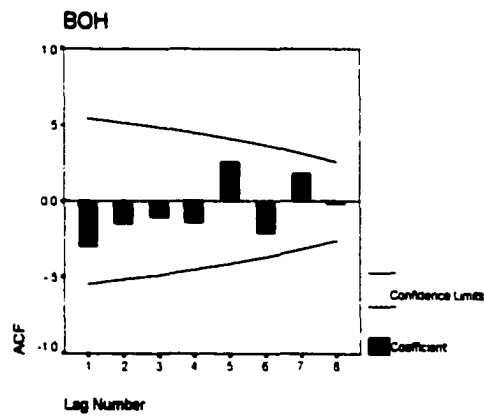
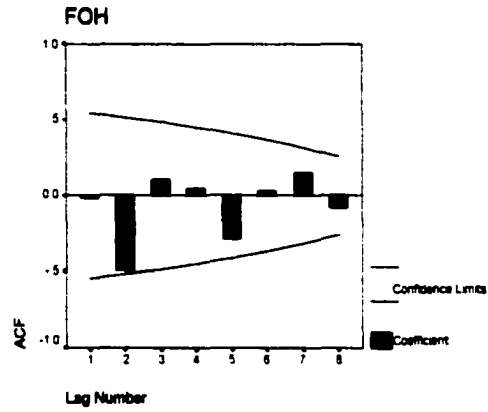
AUTO CORRELATION -REGION I



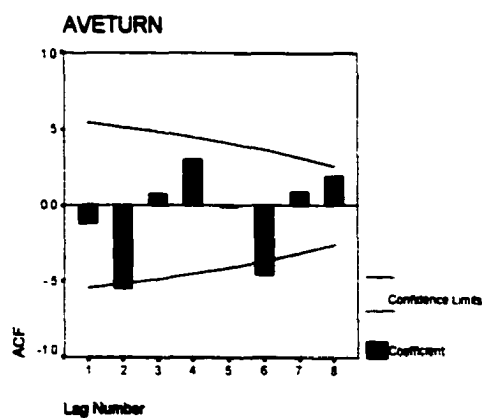
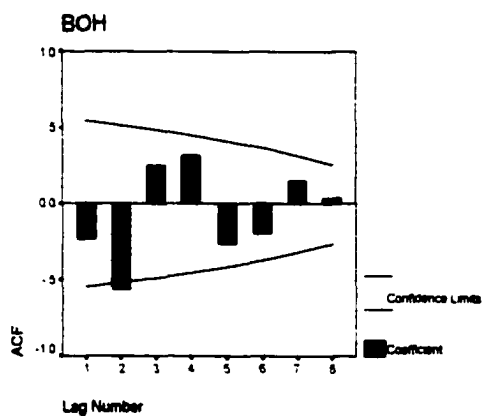
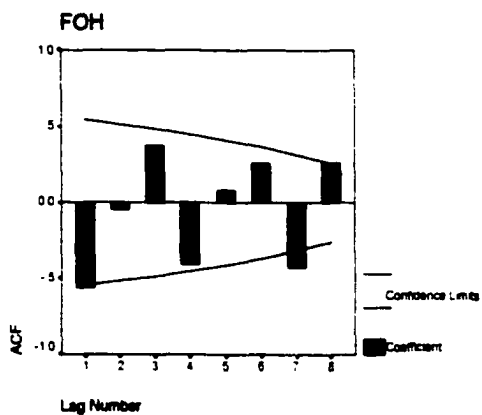
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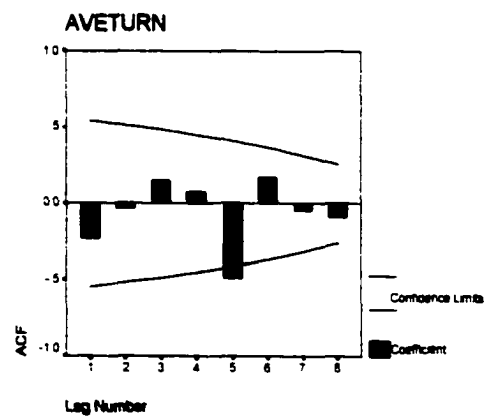
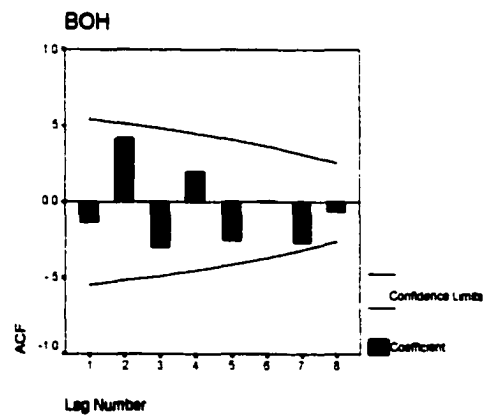
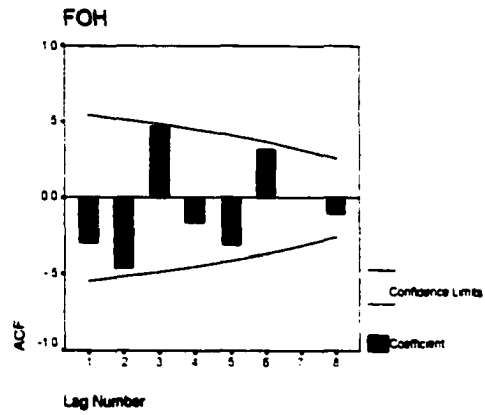
REGION I STEAKHOUSE



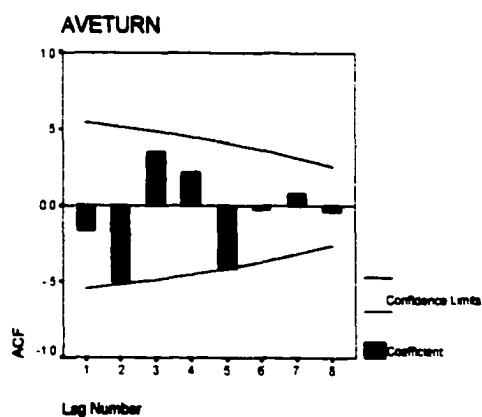
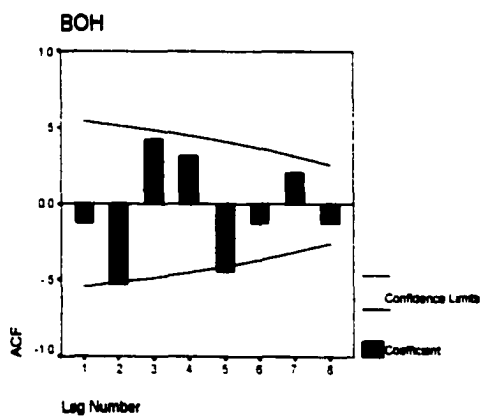
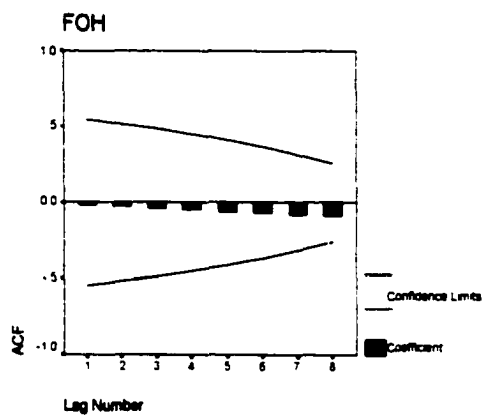
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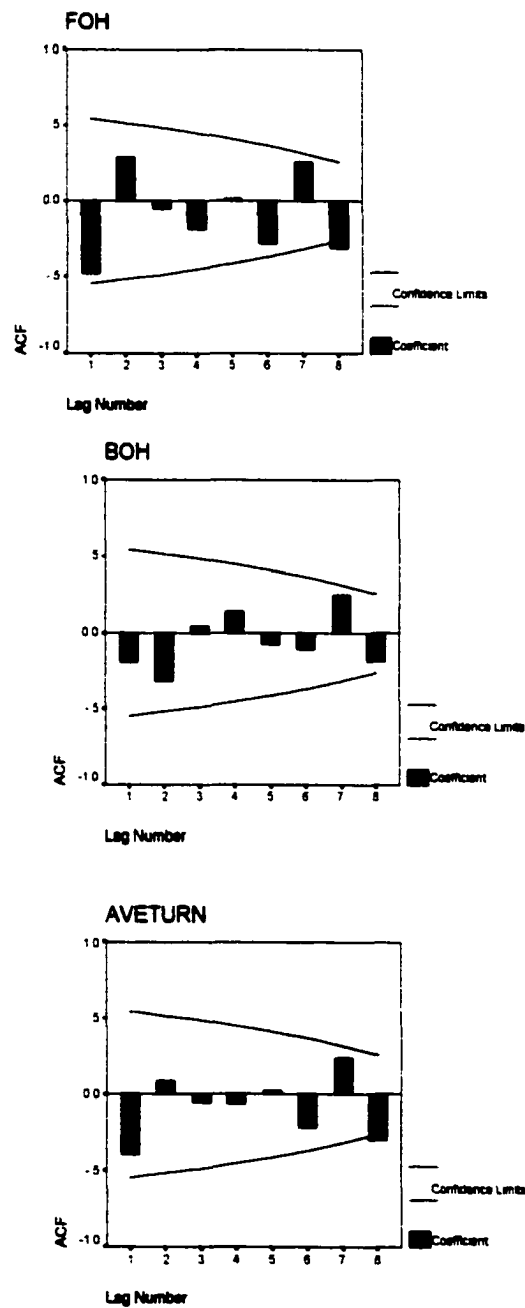
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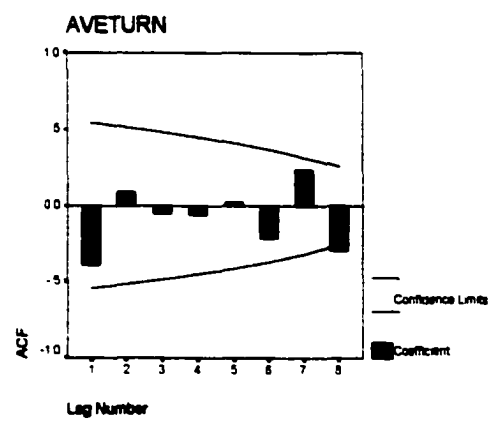
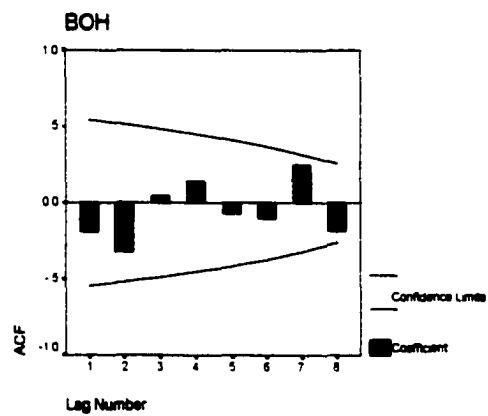
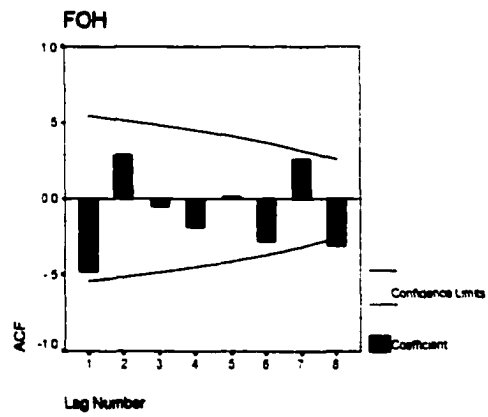
REGION II STEAKHOUSE



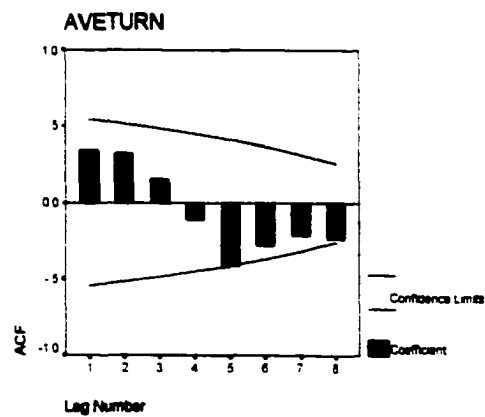
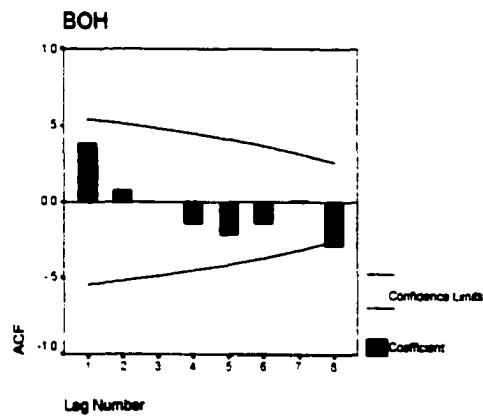
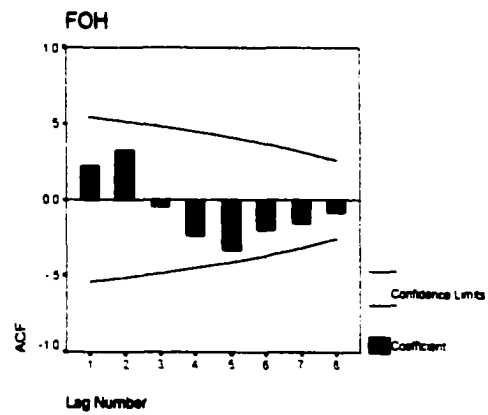
REGION II COFFEE SHOP



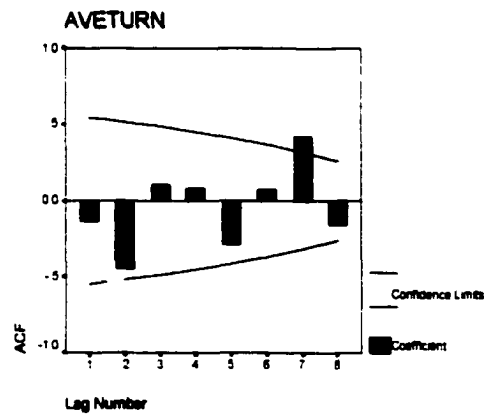
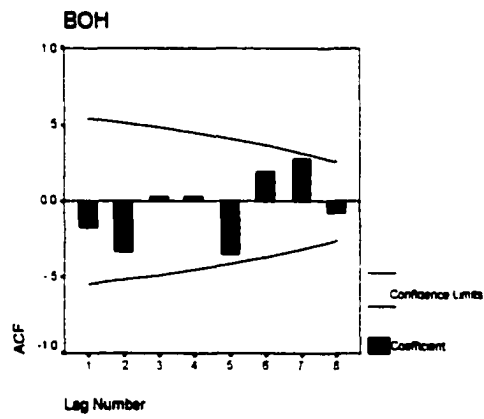
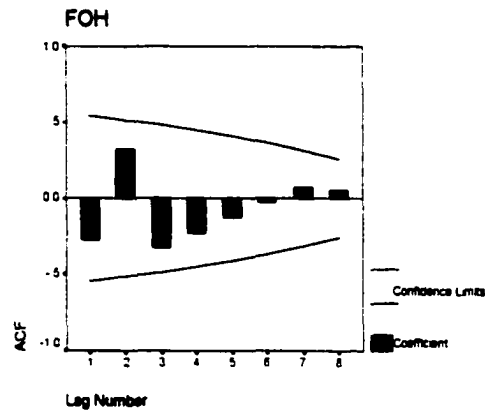
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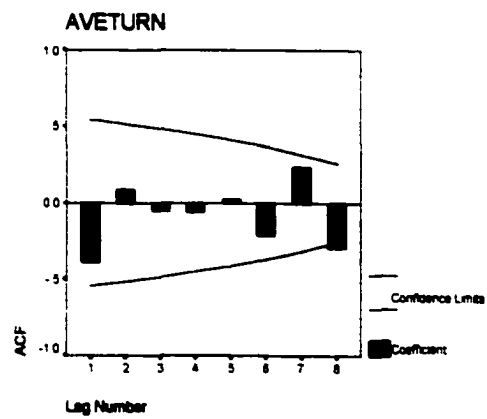
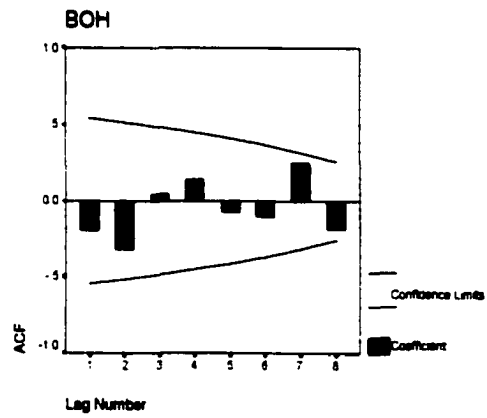
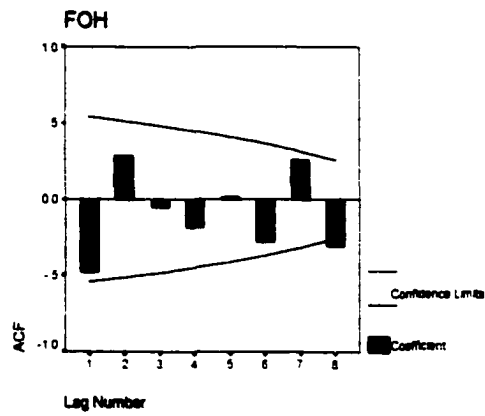
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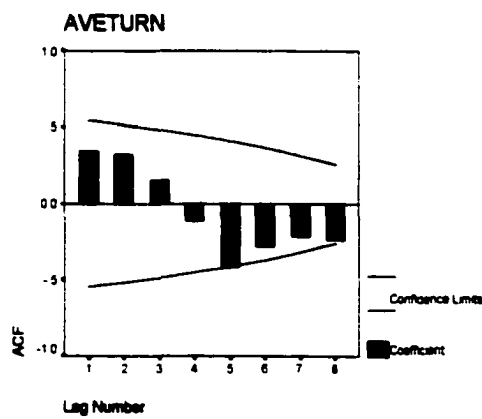
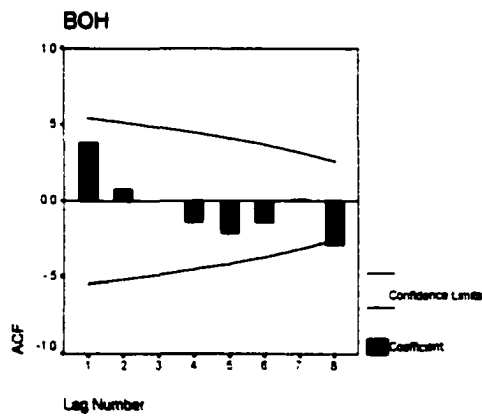
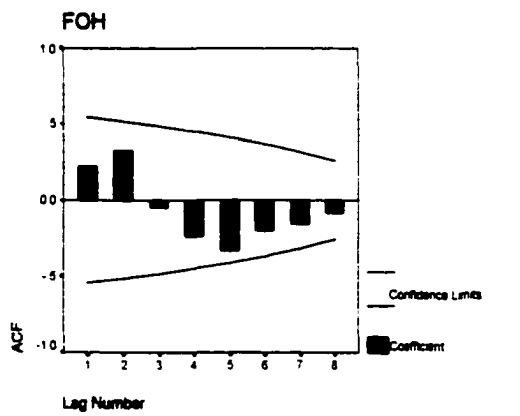
REGION III STEAKHOUSE



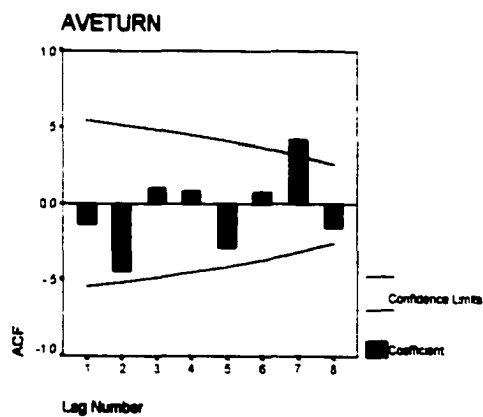
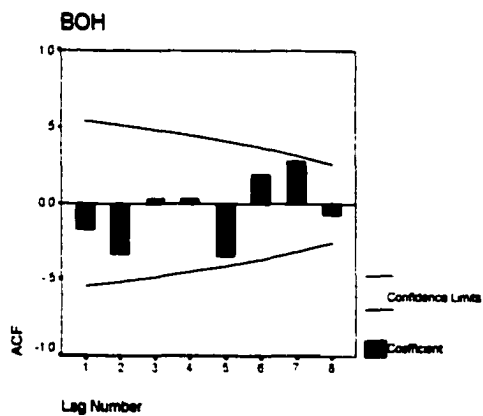
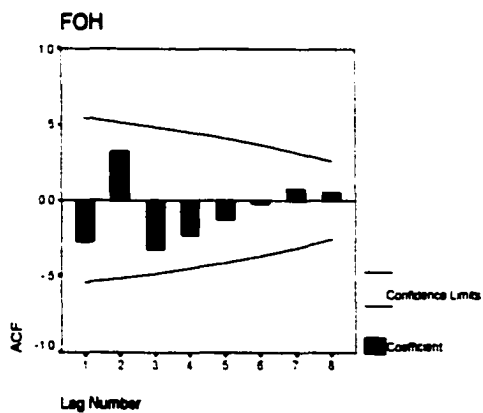
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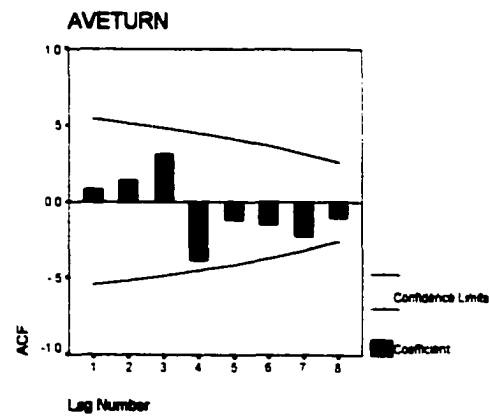
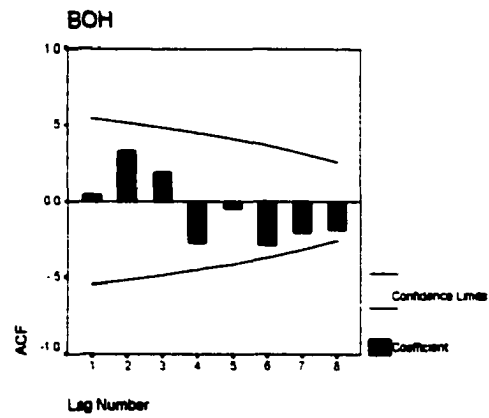
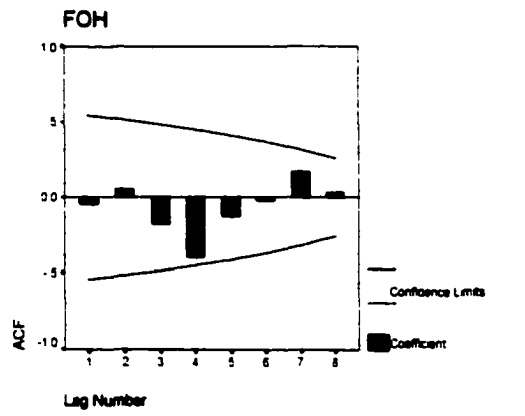
REGION III BUFFET



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