AN EMPIRICAL STUDY OF THE RELATIONSHIP
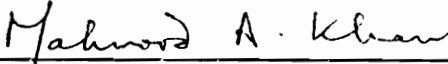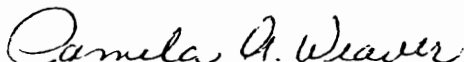# BETWEEN RESTAURANT IMAGE AND CUSTOMER LOYALTY

by

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Dissertation submitted to the Faculty of the

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Doctor of Philosophy

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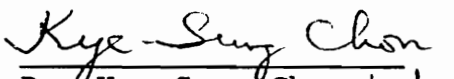Hospitality and Tourism Management

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BETWEEN RESTAURANT IMAGE AND CUSTOMER LOYALTY

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Hospitality and Tourism Management

(ABSTRACT)

The primary objective of this study was to empirically determine the relationship between restaurant images and loyalties toward seven competing casual dinnerhouse restaurant chains, and to understand the nature of their competition by matching patronage behavior toward alternative restaurant chains with perceptions of alternative restaurants on particular image attributes.

The canonical correlation analysis revealed that the measures of image had significant impact on both loyalty measures toward selected casual dinnerhouse restaurant chains: (1) patronage intentions and (2) proportions of patronage. Furthermore, the interpretation of the canonical functions revealed the nature of competition in terms of market segments and positioning. The research findings of this study imply that the obtained restaurant image is not only an analytical

device to diagnose the weaknesses and strengths possessed by each restaurant relative to other restaurants, but also a predictive tool for loyalty patterns toward alternative restaurants.

This study contributes to the existing consumer patronage behavior literature by providing empirical research results for the interrelationships between multi-store image measures and multi-store loyalty measures. Further, this research illustrates the usefulness of canonical analysis, which is a powerful technique for exploring the relationships between one set of variables and a second set of variables. Lastly, this study is of empirical value to restaurant management. In terms of offering strategic guidelines, this study shows the magnitude of the relationships and explains the nature of competition in a local market by linking consumer's loyalty behavior toward one or more restaurants with the image strengths/weaknesses of alternative restaurants on salient image dimensions. As a consequence, restaurants can use this information in their repositioning strategies to improve or change their image.

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research in hospitality and tourism management at an earlier stage of my academic endeavor.

It is also acknowledged that the general managers of casual dinnerhouse restaurants in Roanoke, Virginia provided valuable comments on a survey instrument and financial support for this study. This study was conducted for academic purposes only. Consumer's perception were assessed and data should be interpreted in relative terms only. The intent of this study is not to evaluate any restaurant mentioned in this dissertation but only to develop a systematic method for overall restaurant image. Future study is needed before any of the inferences will be ready for use by the industry.

Finally, I would like to dedicate this dissertation to my God and to my parents, Sae-Kyoo Oh and Kyoung-Ja Han: for their love and caring, for their sacrifices, and for their encouragement. My sincere appreciation is also extended to my wife, Eun Myoung Kim, whose love and patience has cherished me all the time.

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CHAPTER I

INTRODUCTION

STATEMENT OF THE PROBLEM

Ever since Martineau (1958) suggested that a retail store/outlet has a personality, store image has received a great deal of attention in the retailing industry. No academician or business person now doubts that retail stores have images that must be effectively managed to increase a store's chance for success (Downs and Haynes 1984).

Although no precise and universally accepted definition of the concept exists, store image can be defined as the overall attitude toward the store, based upon consumers' perceptions of relevant store attributes (Doyle and Fenwick 1974-75; James et al. 1976; Engel et al. 1986; Korgaonkar et al. 1985; Steenkamp and Wedel 1991). The image of a particular store is ultimately determined by the way consumers perceive the projected image. The fact that a retailer is attempting to project a certain image does not necessarily mean that consumers will perceive it in the way it was intended (Pathak et al. 1974-75). If the customer does not perceive it, it does not exist (Lewis and Chambers 1989).

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In general, store image studies require consumers to express their perceptions of various store attributes such as product, service, clientele and atmosphere. These attributes then serve as the basis of the store's image. The obtained store image is not only used as an analytical device to diagnose the weaknesses and strengths possessed by each store relative to other stores, but also serves as a predictive tool for store choice or loyalty (Wu and Petroshius 1987). With this importance of store image, the literature in retailing has addressed three key issues concerning store image. Those issues include: (1) conceptualization of retail image and identification of its dimensions; (2) measurement and analysis of retail image; and (3) examination of the relationship between the measured retail image and patronage behavior.

In the literature, most of store image studies have dealt with the store image of supermarkets (Anderson and Scott 1970; Hansen and Deutscher 1977-1978), groceries (Lessig 1973; Doyle and Fenwick 1974-75), department stores (Hansen and Deutscher 1977-1978; Hirschman 1979; Nevin and Houston 1980; Kasulis and Lusch 1981), fashion stores (Marks 1974; King and Ring 1980; Kopp et al. 1989), record stores (Malhotra 1983) or men's clothing stores (James et al. 1976; Ring 1979). Even though restaurants are an important part of the retailing industry, there is little research (Swinyard 1977; Consumer Reports

1992; Morgan 1993) dealing with restaurant image and its effect on restaurant selection and loyalty behavior. According to National Restaurant Association (1994), eating and drinking places rank first among all retailers in the number of establishments. More than one out of every four retail outlets is an eating or drinking establishment.

As disposable income and leisure time increases, consumers eat away from home more frequently and spend a greater proportion of their food dollar on meals away from home. According to the Bureau of Labor Statistics (1990) surveys, American consumers are spending 42% of their food expenditures away from home. On average, an American consumer eats away from home five to seven times a week. Dining out is no longer a novelty. Dining out at restaurants allows consumers to escape the worries of everyday life and to have a fun time (National Restaurant Association 1994). Dining out has become an integral part of consumers' lifestyles and an important leisure activity.

Such consumer spending behavior and the increased number of restaurants during recent years have resulted in severe competition for consumer dollars among restaurants serving the same markets. As the marketplace becomes more competitive, all foodservice operations now need to be concerned with local

competition and must identify their own position in a local marketplace. Lewis (1982) notes that the hospitality industry, unlike most others, has paid little attention to the concept of positioning in its marketing efforts. The concept of positioning in a marketing strategy calls for the creation and identification of an image (Lewis 1982; Renaghan 1981). How consumers perceive the restaurants on various image attributes is one factor that helps guide the positioning and repositioning strategies of each restaurant (Cullen and Rogers 1988). To compete effectively with other restaurants in a local area, a favorable restaurant image with a unique concept is one of the marketer's most valuable marketing assets, creating a competitive advantage that is not easily duplicated by other restaurants.

Meanwhile, as an isolated concept, restaurant image has limited value. Only when it is related to restaurant patronage or loyalty does restaurant image become meaningful from a strategic viewpoint (Rosenbloom 1981). By linking store image to patronage behavior, marketers can emphasize the strengths and/or minimize the weaknesses which lead to actual behavior. Literature in retailing suggests that the consumer's perception of store image is a significant construct in explaining retail store patronage or loyalty (Martineau 1958; Lessig 1973; Wu and Petroshius 1987;

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Steenkamp and Wedel 1991; Baker et al. 1994). Through the effective communication of a restaurant image, marketers can move consumers through the hierarchy of effects, such as liking (attitude), patronage intention, and behavior (Nevin and Houston 1980). It is expected that customers would always patronize the restaurants that perform best on the attributes that are most important to them.

Since a store's patronage is not only a function of consumers' images of that store but also of their images of other stores (Lessig 1973), it is essential that management understand consumer perceptions of the competitors' image. Moreover, since consumers interact over time with more than one restaurant from a given restaurant segment, a single behavioral measure (the consumer's loyalty toward only one restaurant) gives an incomplete expression of consumer loyalty. A measure capable of indicating a consumer's loyalties across alternative stores is needed to understand a consumer's multi-restaurant patronage behavior.

In spite of the importance of understanding multi-store patronage behavior (patronage intention or actual behavior) in conjunction with consumer perceptions of alternative stores (multi-store images), most empirical studies (Bass and Wilkie 1973; Darden and Erdem 1981; Darden et al. 1983; Samli and

Sirgy 1981; Sirgy and Samli 1985; Sirgy et al. 1991) dealing with the relationship between store image and patronage behavior have tested patronage behavior toward just one store. Their typical model is that the consumer's patronage behavior toward a store is a function of consumer's overall image (attitude) of this store, which is based upon the consumer's perceptions of relevant store attributes. They did not consider competitors' store images and consumers' multi-store patronage behavior in the models they tested.

The purpose of this study is to determine empirically the relationship between multi-restaurant image measures and multi-restaurant loyalty behavior (in terms of actual behavior and patronage intention) in a setting of casual dinnerhouse restaurant chains for dinner by using a canonical correlation analysis. This study will enhance understanding of the competitive nature of the existing market and offer marketing strategy guidelines for restaurant operators.

IMPORTANCE OF RESTAURANT IMAGE

Image in marketing has long been a concern for firms who must interact directly with the public. If customers are aware of a store/brand, they have feelings about it. What consumers think and know about a store constitutes that

store's image. From the store's point of view, its image consists of perceptions/attitudes held by a large group of consumers about the store.

The image of a restaurant consists of both positive and negative perceptions on the major subjective attributes of the product-service mix (Reid 1983). It is a blend of both tangible and intangible attributes. Tangible attributes are physical properties such as restaurant location, restaurant layout, price ranges, and other qualities that the consumer can somewhat objectively compare to competitors. Intangible attributes include such qualities as friendliness of restaurant personnel, atmosphere, or attractiveness of decor.

The image of a restaurant, as perceived by its actual and potential customers, plays an important role in affecting patronage or loyalty behavior as well as in determining its market position within its competitive environment. With respect to market positioning, recognition of existing images can be used to evaluate an established outlet, evaluate new types of retailing establishments, or design new types of retailing establishments (Marks 1974). For an established restaurant, ratings on image attributes can be compared with ratings of competing restaurants in the same product category. Thus established outlets can use the information from the

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ratings to capture some of the patrons of competing properties.

For the newly opened restaurant, knowledge of its own and competing restaurants is of great value. By conducting research on restaurant images, the marketer can ascertain whether the image perception of his new restaurant is consistent with the needs of a target market. If favorable images are developing, then continuance of the same marketing strategy is appropriate. If unfavorable images are developing, then examination of individual attributes will identify possible areas for revision in the strategy.

When seeking to open a new restaurant, entrepreneurs can use research into the images of pre-existing restaurants to determine how well they are serving the needs of customers. Most importantly, those areas where competitors are doing a poor job can be identified.

Moreover, the image of a restaurant, whether factual or not, represents truth to a consumer choosing one or more restaurants to patronize (Wang 1990). It serves as a guide for customers and helps them determine whether or not a restaurant fulfills his/her needs or expectations. Retail service firms are continually compelled to meet the varying

demands of prospective target customers. The more closely a store's product and service offerings meet customer expectations, the more likely the store will induce customers to become regular patrons (Kelly and Stephenson 1967). Favorable customer evaluations of the restaurant's attributes would move the trier closer to becoming a repeat customer; unfavorable evaluations would likely yield a nonrepeat response (Swinyard 1977). Thus, as a surrogate indicator of need satisfaction, restaurant image directly relates to consumer behaviors such as repeat business or consumer loyalty. Repeat business or consumer loyalty is a vital force for the success of restaurant operation. Most firms try to encourage it because repeat business ensures them stability in the marketplace. Over 80% of a restaurant's sales usually comes from repeat business. Therefore, image considerations remain important in the development of an integrated marketing strategy. Since image is so important, restaurant management must understand and control it as much as possible.

CASUAL DINNERHOUSE

In recent years casual dinnerhouse dining operations such as Bennigan's, T.G.I. Friday's, and Applebee's have been the fastest growing segment of the restaurant industry, while fine dining has been declining in relative importance.

Casualization has become a strategy for survival in the 1990s. Hundreds of fine dining restaurant operations across the country have downscaled and toned down their upscale image and prices because customers are looking for affordable but high quality food (Sanson 1992). Asked by the Gallup Poll whether they preferred a casual or fine-dining atmosphere, half of those responding preferred casual while only 18 percent chose fine dining. Twenty-three percent enjoyed both equally (NRA 1991).

Although most are also open for lunch, a casual dinnerhouse takes its name from its function as a "nice place to have dinner" (Powers 1992). Employees are usually well trained and provide good casual service. Generally, these free-standing buildings are located near easy access, high-traffic roadways (Ware and Rudnick 1989). These operations seek to attract middle-income individuals who enjoy dining out yet wish to avoid high prices and the formality of fine-dining restaurants. "Thus their prices fall in the mid-range, their atmosphere is comfortable, and the mood is relaxed. Alcohol is frequently served at casual dinnerhouses" (Chon and Sparrowe 1995). In contrast to family restaurants, which offer a wide variety of products at modest prices, dinnerhouses usually have a more distinctive, specialized menu and prices that range as high as double those of a family

restaurant.

The design of a casual restaurant begins with the careful definition of a target market and study of that market's needs and preferences. A number of casual dinnerhouses have themes built around ethnicity or culture. Chi-Chi's (Mexican style) and Olive Garden (Italian style) are prime examples.

With respect to trends, casual dinnerhouse operators are expected to continue to feel competitive pressures as customers increase their expectations regarding every aspect of dining away from home and as new units continue to proliferate. Operators of fullservice and limited-service restaurants reported that food was more important to their customers than service, price, location or ambiance (NRA 1994). For fullservice restaurant customers, service was about as important as food, and location and ambiance were similar in importance. This suggests that consumers are willing to travel extra distances to patronize fullservice restaurants if excellent food and service are offered at a reasonable price. However, no longer can casual dinnerhouse operators focus on excellent food and service offered at an attractive price. Architecture, decor, landscaping and site location are now gaining in importance among consumers as markets become saturated and competition intensifies. A

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unique ambiance can differentiate a restaurant, turning it into a "destination" restaurant that more customers will travel longer distances to patronize, resulting in a larger trading area (NRA 1994).

PROBLEM CONTEXT

Competition in a local marketplace is now intense: both from similar restaurants (intratype competition) and from other restaurant types (intertype competition). This research was conducted in the context of intratype competition for dinner among casual dinnerhouse restaurant chains in Roanoke, Virginia, which contains approximately 224,000 people (90,000 households) (Bureau of the Census 1990). The seven competitive casual dinnerhouse restaurant chains selected were Applebee's, Chi-Chi's, Ground Round, Olive Garden, Red Lobster, Steak and Ale, and Texas Steak House & Saloon, which are all represented in the area by at least one unit. These chains are all working to generate loyal customers by achieving distinct market positions in the competitive local marketplace.

Literature in retailing suggests that consumers' perception of store image is a significant construct in explaining retail store patronage behavior (Martineau 1958;

Lessig 1973; Monroe and Guiltinan 1975; Sirgy and Samli 1985; Wu and Petroshius 1987; Steenkamp and Wedel 1991; Sirgy et al. 1991; Baker et al. 1994). In previous patronage behavior models, multiple regression analysis has been commonly used to predict the value of a dependent variable (e.g., attitude, purchase intention, frequency of visit, or loyalty toward one outlet) from a linear function of a set of independent variables (e.g., perceptions on store image-related attributes). The dependent variables used in patronage behavior prediction models are either patronage behavior toward one store in the study or toward the most favorite store. However, for some research problems, interest may not center on a single dependent variable (Uysal and O'Leary 1986). Rather, the researcher may be interested in relationships between sets of multiple dependent (criterion) and multiple independent (predictor) variables.

Since consumers interact with and patronize more than one restaurant in the evoked set of alternative restaurants, understanding a consumer's loyalty behavior (in terms of psychological commitment and actual behavior) toward alternative restaurants is crucial. Therefore, loyalty was operationalized here: (1) as a behavioral, relational, continuous measure calculated as the relative percentage (proportion) of patronage allotted to each chain during the

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reporting period, and (2) as a patronage intention in terms of psychological commitment toward each alternative chain. In the meantime, a restaurant's patronage is not only a function of consumer's image of this restaurant but also of their images of other restaurants; therefore, it is essential that management understand consumer perceptions of the competitors' images.

In the above problem context, this study utilized a canonical correlation analysis to identify the nature of competition among the seven casual dinnerhouse restaurant chains in Roanoke by investigating the interrelationship between consumers' perceptions of competing restaurants on a set of image attributes and multi-restaurant loyalty behavior toward competing casual dinnerhouse restaurant chains.

OBJECTIVE OF THE STUDY

The primary objective of this study was to empirically determine the relationship between restaurant images and loyalties toward competing restaurant chains, and to understand the nature of competition by matching patronage behavior toward alternative restaurant chains with perceptions of alternative restaurants on particular image attributes. Specific objectives were (1) to identify image attributes of

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casual dinnerhouse restaurants that are salient evaluative criteria for restaurant choice and patronage, (2) to measure and analyze the variation in the outlet images of seven casual dinnerhouse restaurant chains in Roanoke as perceived by consumers whose annual household-income level is $25,000 and over, (3) to examine the relationship between multi-restaurant image measures and multi-restaurant loyalty measures (in terms of patronage intention and actual behavior) by using a canonical correlation approach, and (4) to understand the competitive nature of the existing market and examine its marketing implication.

RESEARCH QUESTIONS

Specific research questions related to the above objectives are presented below.

1. What are the restaurant (outlet) image dimensions that are salient criteria for selecting and patronizing casual dinnerhouse restaurants for dinner?
    1a. What attributes are used to form the restaurant image of casual dinnerhouse restaurant chains for dinner?
    2b. What is the perceived importance of each image attribute for selecting and patronizing casual dinnerhouse restaurants?

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2.   What are the (outlet) images of each of the casual
      dinnerhouse restaurant chains: overall image and its
      dimensions?
      2a. Do consumers perceive competitive restaurants as
          being different on each image dimension and overall
          image?
      2b. What are the restaurants' strengths and weaknesses on
          image dimensions?

3.   Are there any statistically significant relationships
      between multi-restaurant image measures and multi-
      restaurant loyalty measures toward alternative
      restaurants?   If there are significant relationships,
      what are the magnitude and nature of the relationships
      between the two sets of variables?

CONTRIBUTION OF THIS STUDY

      The potential contribution of this study can be found in
theoretical, methodological, and practical perspectives:

      1. Theoretical Advancement in Patronage Behavior Study:
         This study contributes to the existing consumer
         patronage behavior literature by providing empirical
         research results for the interrelationships between

multi-store image measures and multi-store loyalty measures.

2. Use of a Canonical Correlation Approach in Restaurant Patronage Behavior Study:

This research illustrates the u s e f u l n e s s   o f canonical analysis, which is a powerful technique for exploring the relationships between one set of variables and a second set of variables.   It is not uncommon for researchers to be confronted with research problems involving two sets of variables. Canonical analysis is receiving more attention in hospitality marketing literature (Pyo et al. 1989; Oh et al. 1994; Bosereewong and Weaver 1994; Gustin 1994), and this study further demonstrates the value of canonical analysis.

3. Practical Application for Strategic Marketing Programs:

This study is of empirical value to restaurant management.   In terms of offering strategic guidelines, the study on the relationship between multi-restaurant   loyalty   measures   and   multi-restaurant image perceptions determines the magnitude of the relationships and explains the

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nature of competition in a specific market by
linking consumer's loyalty behavior toward one or
more restaurants with the image strengths/weaknesses
of alternative restaurants on salient image
dimensions. This study helps identify factors
contributing to the success or failure of market
positioning efforts. In other words, it explains
why consumers door do not patronize one or more
restaurants over other competing restaurants. As a
consequence, restaurants can reposition themselves
to improve or change their restaurant image in their
respective target markets in order to enhance their
competitive edge.

DEFINITIONS OF TERMS

Perception. Perception is the process by which human beings
select, organize, and interpret stimuli into a meaningful and
coherent picture of the world. It has strategy implications
for marketers because consumers make decisions based upon what
they perceive, rather than on the basis of objective reality
(Schiffman and Kanuk 1983).

Store/Outlet Image. Although no precise and universally
accepted definition of the concept exists, store image can be

defined as the overall attitude toward the store, based upon the consumers' perceptions of relevant store attributes (Doyle and Fenwick 1974-75; James et al. 1976; Korgaonkar, et al. 1985).

Restaurant Image Attributes. In this study, restaurant image attributes are operationally defined as the set of features (product and service) which, when aggregated together, describe a casual dinnerhouse restaurant.

Store Loyalty. Store loyalty is usually defined as the consumers' inclination to patronize a given retailer (store) repeatedly during a specified period of time (Enis and Paul 1970). More specifically, it is defined as a biased (nonrandom), behavioral response, expressed over time, by some decision-making unit, with respect to one or more alternative stores out of a set of such stores, and as function of a psychological (decision-making, evaluative) process (Jacoby and Kyner 1973; Sirgy and Samli 1985).

Casual Dinnerhouses. This restaurant category takes its name from its function as a "nice place to have dinner." Casual dinnerhouses are classified into the moderate-upscale (or casual theme) segment which combines the broad menu appeal of midscale restaurants (family restaurants) with a service level

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borrowed from upscale restaurants (Muller and Woods 1994). These operations seek to attract middle-income individuals who enjoy dining out yet wish to avoid high prices and the formality of fine-dining restaurants. Thus, their prices fall in the mid-range, their atmosphere is comfortable, and the mood is relaxed. Alcohol is frequently served at casual dinnerhouses (Chon and Sparrowe 1995). Examples of restaurants in this segment include Olive Garden, Applebee's, Chi-Chi's, Steak and Ale, etc.

ORGANIZATION OF THE STUDY

Chapter One has provided a background context for the study, a statement of the problem, the importance of restaurant image, research objectives and research questions. In Chapter Two, retail store image literature is first reviewed, including the concept and dimensions of retail store image, measurement of the image, patronage behavior models, and the concept of loyalty. Then, hospitality literature is reviewed by focusing on image-related attributes and benefits used in the hospitality foodservice literature. Previous empirical research findings relevant to the study are also reviewed. A model of canonical correlation between multi-restaurant loyalties and multi-restaurant images is proposed in Chapter Three, based on existing concepts and theories.

Research hypotheses are presented and further described. Chapter Three also discusses research design, methodology, and data collection. Chapter Four presents and discusses the results of hypothesis testing. In Chapter Five, research findings are summarized and recommendations for future study are offered.

CHAPTER II

REVIEW OF RELATED LITERATURE

INTRODUCTION

The purpose of this chapter is to review the related literature for studying the relationship between perceptions of competing restaurants on image dimensions and multi-restaurant loyalty in the setting of casual dinnerhouses. First, retail store image literature is reviewed: (1) by presenting knowledge regarding conceptualization, dimensions, and measurement of retail store image; and (2) by discussing the literature supporting the belief that store image is a significant construct in predicting patronage or loyalty behavior. Second, hospitality foodservice literature is reviewed by focusing on image-related attributes and benefits.

SECTION 1. RETAIL STORE IMAGE LITERATURE

Retail image research has its origins in Martineau's (1958) pioneering work describing the personality of a retail store/outlet. No business person or academician now doubts that retail stores have images that must be effectively managed to increase a store's chance for success (Downs and Haynes 1984).

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While a comprehensive review of image studies and their managerial applications are provided by Lindquist (1974-75) and May (1974-75), the majority of investigations have been limited to: (1) conceptualization and discussions of the underlying dimensions of a store's image; (2) the measurement and analysis of store image; and (3) the relationship between the measured store image and store patronage behavior. Representative literature from each of these research streams is discussed in the following subsections.

CONCEPTUAL DEFINITION OF STORE IMAGE

Store image is a concept that has been recognized for many years, and a fair amount of academic and practitioner research on store image has been conducted. Nevertheless, no precise and universally accepted definition of the concept exists (Rosenbloom 1981).

In the middle 1950s, Boulding (1956) asserted that the behavior of a human was directed more by the images that the person perceived than by objective reality. Since that time, the acceptance of this position in marketing has been pervasive (Wu and Petroshius 1987). This is evidenced by the numerous image studies that have been published, particularly in those assessing store image.

The original idea that a store possesses an image can be traced to Martineau (1958). His view of the consumer's world was part of an emerging stream of psychological research in economies and business (Pessemier 1980). He defined store image as:

> the way in which a store is defined in the shopper's mind partly by its functional qualities and partly by an aura of psychological attributes.

In this definition, "functional qualities" refers to physical properties such as store location, store layout, price ranges, and other qualities that the consumer can somewhat objectively compare to competitors. "Psychological attributes" refers to such qualities as friendliness of store personnel, sense of belonging, or attractiveness of decor.

Oxenfeldt (1974-75) described image as an overall impression greater than the sum of its parts and considered image as a combination of factual and emotional material. This viewpoint stresses that many customers will not only hold factually based opinions about a store but also will feel certain ways toward it. In other words, customers react to the store's characteristics, as they view them, in an emotional way. Thus, some customers may feel that one store is a warm, trustworthy, helpful friend. Other stores may seem to these same people to be deceitful, unpleasant, and

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antagonistic.

Dichter (1985) reinforced the idea that image refers to a global or overall impression.

> It describes not individual traits or qualities, but the total impression an entity makes on the minds of others...an image is not anchored in just objective data and details. It is the configuration of the whole field of the object.

Together Oxenfeldt and Dichter's definitions agree that image is comprised of distinct dimensions and is also greater than the sum of its part.

Hirshman (1981) offered a definition of store image in terms of image development and formation. According to this definition, store image is

> a subjective phenomenon that results from the acquisition of knowledge about the store as it is perceived relative to other stores and in accordance with the consumer's unique cognitive framework.

Based on Hirchman's definition, Mazursky and Jacoby (1986) proposed a definition which addressed the process aspect of store image development. They defined image as:

> (1) a cognition and/or affect (or a set of cognition and/or affects)
> (2) which is(are) inferred
> (3) either from a set of ongoing perceptions and/or memory inputs attaching to a phenomenon
> (4) and which represent(s) what that phenomenon signifies to an individual.

This definition emphasizes two major properties of the image.

First, in many instances the image is merely cognitive (e.g.,
"it is an old-fashioned store") and does not contain an
affective component(e.g., "I like it" or "I don't like it").
Second, this definition focuses on the process of image
formation.

Other scholars defined store image as an attitude. Doyle
and Fenwick (1974-75) suggested, "the term is used
interchangeably with attitude toward the store to describe the
overall impression a consumer has of it." Bearden (1977) also
mentioned that "store image is a comprehensive concept that
reflects overall consumer attitudes toward individual stores."
James et al. (1976) defined store image as "a set of attitudes
based upon evaluation of those store attributes deemed
important by consumers." Similarly, Engel, Blackwell and
Miniard (1986) defined store image as "one type of attitude,
measured across a number of dimensions hopefully reflecting
salient attributes." Steenkamp and Wedel (1991) also defined
store image as the overall attitude toward the store, an
attitude which is based on the perceptions of relevant store
attributes.

While there appears to be much diversity among these
definitions of store image, at least four points of
commonality can be inferred from them (Rosenbloom 1981).

These are:

     (1) Store image is a complex phenomenon;

     (2) Store image is comprised of both tangible or functional dimensions and intangible or psychological dimensions;

     (3) Store image must be perceived by consumers; and

     (4) Store image is dynamic.

Complexity

Store image is comprised of many factors, including the products the store offers, its physical facilities and location, its policies and advertising, etc. These factors are the building blocks that together constitute the structure of store image. Some factors may be more important than others, but they all play some part in creating the image of the retail store (Rosenbloom 1981).

Tangible and Intangible Components of Store Image

Store image is not just the physical or tangible aspects of the retailer's operations, such as the products and the physical facilities, but also the intangibles, such as the atmosphere of the store, the store's tradition and policies, and even the attitudes and personalities of the store's employees. These intangibles may be just as important as, indeed even more important than, the tangible components of

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store image (Oxenfeldt 1974-75). The consumer's perceptions of a retail establishment as friendly, exciting, or fun to shop in can be very significant factors in attracting patrons. This is particularly so when the tangible factors of competing retail stores are very similar. In such cases, store image, especially the intangible components of store image, can offer a strong competitive edge for attracting patronage.

Perception of Store Image

The image of a particular retailer is ultimately determined by the way consumers perceive the projected image. Perhaps one of the greatest mistakes marketers make is thinking that what they perceive is also what the consumers perceive. The fact that a retailer is attempting to project a certain image does not necessarily mean that consumers will perceive it in the same way (Pathak et al. 1974-75). If the customer does not perceive it, it does not exist (Lewis and Chambers 1989). In fact, very substantial differences may exist between what the retailer is attempting to project and what is actually perceived by the consumer (Pathak et al. 1974-75). The key point that retail managers need to remember, then, is that the determination of store image must derive from an analysis of consumer perceptions, rather than from the perceptions of the retail managers.

Dynamic Nature of Store Image

Store images are not static. They change over time as a result of other changes: in retailer policies and strategies, in consumer perceptions, in competitive actions, or in the environment. Sometimes the changes that occur in a store's image reflect deliberate actions taken by the retailer to create a different image. Given the dynamic nature of store image, retail management must view store image as a "living object" that must be watched, nurtured, and protected (Rosenbloom 1981). Managers should evaluate store image on a periodic and regular basis to see what changes may have occurred.

DIMENSIONS OF STORE IMAGE

Knowledge of the relative importance of the image dimensions, as well as knowledge of what dimensions comprise the image, is valuable input to management's basic information about its business. What makes up an image is a group of dimensions whose presence and importance vary from store to store. How these dimensions are put together to form the complex image of a particular store depends on the store itself, and on the consumers who patronize it (May 1974-75). An image is made up of many different things, some measurable, some not measurable, some significant, some insignificant,

some changeable, some unchangeable (May 1974-75).

Many authors (Martineau 1958; Fisk 1961-62; Oxenfeldt 1974-75; Lindquist 1974-75) have offered their suggestions about what dimensions are used to form store image. In 1958, Martineau suggested four categories of store image: symbols and color, layout and architecture, advertising, and sales personnel.

George Fisk (1961-62), presented an early conceptual model to measure store image. His model used six different categories. Those are locational convenience, merchandise suitability, value for price, sales effort and store service, congeniality of the store, and post-transaction satisfaction. In these categories, a total of 30 specific attributes were identified.

Oxenfeldt (1974-75) suggested a classification of store image into three categories: tangible reality factors, intangible but genuine substance benefits, and fantasies:

(1) <u>Tangible Reality Factors</u>:
Quality, Breadth of assortment, Depth, Minimum out-of-stocks, Currency of styling, Quick special orders, Credit, Enough sales help, Speedy checkout, Easy return/repair, etc.

(2) <u>Intangible but genuine substantive benefits</u>:
Friendliness, Pleasurableness, Familiarity, Trust, Helpfulness, Ego-satisfaction, Cleanliness.

(3) Fantasies:
The best people shop there, Known to be the best store, You will meet fascinating people when you shop.

Lindquist (1974-75) reviewed the published results of 21 studies and synthesized their store image frameworks into nine independent categories, which he referred to as image attribute groups. They are:

(1) Merchandise: Quality, selection or assortment, styling or fashion, guarantees, and pricing. The term merchandise here refers to all the goods and services offered by the retailer.

(2) Service: Service in general, sales clerks, the presence of self-service, the ease of merchandise return, delivery service, and the credit policies of the store.

(3) Clientele: Social class appeal, self-image congruence, and store personnel.

(4) Physical facilities: Elevators, lighting, air conditioning, washrooms, store layout, aisle placement and width, carpeting, and general architecture.

(5) Convenience: General convenience, locational convenience, and parking are three dimensions of this category.

(6) Promotion: Advertising and displays, trading stamps, and symbols and colors.

(7) Store atmosphere: Attributes that contribute the customer's feeling of warmth, acceptance, or ease conveyed by the store.

(8) Institutional factors: The conservative versus modern image projected by the store, reputation, and reliability.

(9) Post-Transaction Satisfaction: Consumer satisfaction

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with merchandise and the store's policies on returns and adjustments.

These attributes of store image are not exhaustive, and of course not all of them would be relevant to all kinds of retailers under all circumstances. It is reasonable to assume that the attributes a consumer uses in selecting one type of retail outlet may differ significantly from the attributes sought in a different type of outlet (Runyon and Stewart 1987). Nevertheless, Lindquist's list does provide the most comprehensive empirically based overview of store image attributes currently available. It provides a good general base that retail managers can use in formulating store image studies for their particular stores (Rosenbloom 1981).

MEASUREMENT OF STORE IMAGE

The measurement of retail image is a topic of long-standing interest in retailing research, and considerable research exists on different approaches to studying store image. The main purpose of measuring store image is identifying a retail store's market position along with the image of its competitors by demonstrating image differences among retail stores. Measuring store image helps a store compete successfully with rival stores.

There are two types of competition: intratype and intertype competition. Intratype competition refers to competition between two identical types of retail stores (e.g., two fast-food restaurant outlets). Intertype competition refers to competition between two different types of retail stores (e.g., upscale restaurant vs dinnerhouse restaurant) that compete for patronage (Peterson and Kerin 1983).

Most research on image differences in an intratype competitive context has focused on identifying and assessing store image dimensions that consumers use to evaluate identical types of retailers. Studies on men's clothing stores (James et al. 1976), women's clothing stores (Marks 1976), department stores (Hansen and Deutscher 1977-1978; Hirschman 1979; Kasulis and Lusch 1981), supermarkets (Hansen and Deutscher 1977-1978), groceries (Lessig 1973; Doyle and Fenwick 1974-75), drugstores (Nickel and Wertheimer 1979), and restaurants (Swinyard 1977; Miller and Granzin 1979) are representative of this type of research.

Empirical research in an intertype competitive context has also shown that store images vary for different types of stores (Cardozo 1974-1975; Singson 1975; Reich et al. 1977; Schiffman et al. 1977). The major implication of these

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studies is that the importance of store image dimensions varies across different types of stores due to the different kinds of products carried.

Most approaches to the measurement of store image used in the literature has been a function of the researcher's definition of store image as well as his/her conception of what specific store dimensions compose store image (Lincoln 1978). Despite this, all store image measurement approaches can be classified as either structured or unstructured.

1. Unstructured Measurement Techniques

The unstructured approaches used in the literature are either a psycholinguistic technique or open-ended questions. An unstructured psycholinguistic technique uses similarity/ dissimilarity judgements or word association. It was used where individual consumers provided names of stores (nouns) and bases of similarity and dissimilarity (adjectives) among stores (Cardozo 1974-75).

In the studies that used open-ended questions, the focus was on what was liked or disliked about a store or what characteristics were important when choosing a store. These studies asked respondents to either:

(1) report the first word or thing that came to mind when

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the name of a particular store or store type was mentioned (Dickson and Albaum 1977);

(2) list attributes, characteristics, or terms that came to mind when a particular store type was mentioned (James et al. 1976);

(3) list factors important in selecting a store (James et al. 1976);

(4) indicate what is liked most or least about a store (McDougall and Fry 1974; and Berry 1969); or

(5) describe image or overall impression by using any type of descriptor, whether it be attribute-specific or not (Zimmer and Golden 1988).

One advantage of unstructured approaches to image measurement is that the researcher is not imposing image dimensions or language on the consumer, since the boundaries of image perception are not predetermined. However, coding is more time-consuming and difficult than for semantic differential measurement or multidimensional scaling (MDS). There is also a risk that the coding process may impose the researcher's biases, making the use of independent judges desirable (Zimmer & Golden 1988).

2. Structured Measurement Techniques
a. Semantic Differential Scales

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The semantic differential scales consist of pairs of polar adjectives with a five or seven-interval scale separating the opposite members of each pair (Kelly and Stephenson 1967). Respondents are asked to select the point on each interval scale that best represents their attitude on the dimension in question.

Semantic differential scales are the type most widely used in image measurement because of the following advantages: ease of administration, a minimum level of literacy required, ease of coding and analyzing responses, the treatment of data as intervals, and high reliability. Limitations include: a structured format wherein unimportant dimensions may be included or important dimensions excluded, and the inability to measure global or overall impressions, which is how image is often defined (e.g., Oxenfeldt 1974-75 and Dichter 1985). Semantic differential scales are most often used to study specific attributes representing component "parts of image" rather than the "whole image."

b. Multiattribute Model

The multiattribute approach to measuring a store image focuses on the importance of store attributes and performance evaluations of the same attributes. This approach can retain the advantages of the semantic differential and at the same

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time handle the problem of the differing importance of attributes. However, there has been much debate on the use of importance weight in predicting attitude, purchase intention and behavior, in particular, on whether the beliefs-importance model is superior to the beliefs-only model. Several studies have shown that multiplying beliefs (perceptions) times importance weights either does not affect or, in some cases, decreases the predictive power of the model, when compared with the beliefs-only formulation (Rogers 1979; Darden and Erdem 1981; Darden et al. 1983).

The multiattribute model is built upon the work of Rosenberg (1956) and Fishbein (1967). Both the Rosenberg and Fishbein models are approaches to the study of attitudes using the Expectancy-Value approach. However, the multiattribute model most frequently appearing in the consumer behavior literature is the Adequacy-Importance model (Mazis et al. 1975). James, Durand, and Dreves (1976) adapted the Adequacy-Importance model, often used in brand image studies, by substituting store images for brand image. The attitude model as applied to store image is as follows:

$$A_s = \sum_{i=1}^{n} B_i W_i$$

Where:

A_s = an individual's attitude toward a particular store
B_i = the individual's evaluation or belief toward attribute i for a particular store
W_i = the weight or importance of attributes i for the individual
n = number of attributes that are important in the selection of a given store

c. Multidimensional Scaling

Multidimensional scaling (MDS) is also a popular technique for studying retail store image. MDS has the advantages of allowing respondents to base their judgements on whatever criteria they choose, requiring relatively easy judgements, and enabling researchers to visually display respondent perceptions.

On the other hand, MDS is limited because: the dimensions discovered will depend on the objects included in the set, and stores may be judged similar or dissimilar on some basis other than image (Zimmer and Golden 1988). The main disadvantages of MDS approach are the difficulty of administering it and of analyzing its data. Interpreting the axis or dimensions of the perceptional map is difficult, and it is not possible to assess statistical significance with this procedure.

d. Other Multivariate Analysis

A wide variety of multivariate analytical approaches has

been applied to the study of store image, in part in response to the recognition that store image is a multivariate or multidimensional phenomenon. For example, factor analysis is applied as a means of extracting the underlying dimensions of store image (Nevin and Houston 1980; Morgan 1993). Multiple regression has also been used to assess the importance of image variables in predicting store choice or preference (Stanley and Sewall 1976, Nevin and Houston 1980; Howell and Rogers 1983). Other approaches used much less frequently include multiple discriminant analysis (Ring 1979), joint-space analysis (Pessemier 1980), and the brand-anchored conjoint approach (Louviere and Johnson 1990).

IMAGE AND PATRONAGE BEHAVIOR

Image in marketing has long been a concern for firms who must interact directly with the public. As an isolated concept, the measured image has limited value. Only when it is related to store patronage or loyalty does retail image become meaningful from a strategic viewpoint (Downs and Haynes 1984). Literature in retailing suggests that consumers' store image perception is a significant construct in explaining retail store patronage behavior (attitude, purchase intention, frequency of purchase, or store loyalty) (Martineau 1958, Lessig 1973; Doyle and Fenwick 1974-75; Monroe and Guiltinan

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1975; Sirgy and Samli 1985; Steenkamp and Wedel 1991). It is generally acknowledged that consumers form images of stores, products, and brands in their environment, and that these images are capable of exerting a strong impact on their shopping and patronage behavior (Mazursky and Jacoby 1986). Hence, an understanding of patronage behavior depends upon an understanding of consumers' perception.

In the meantime, patronage can influence a consumer's image of the store. Empirical studies (Anderson and Scott 1970; Lessig 1973) suggests that frequent patrons of a store have a "favorable" image of the store, whereas infrequent patrons or nonpatrons hold a "less favorable" image of the store or a less distinct image of the store (Acito and Anderson 1979). Thus, patronage can influence a consumer's image of the store, while store image can influence patronage behavior, or (most likely) each can simultaneously influence the other (Peterson and Kerin 1983).

Monroe and Guiltinan (1975) observed that "the major existing consumer behavior models have concentrated on brand choice behavior almost to the exclusion of retail patronage behavior." Since that time, there have been a number of attempts to model the relationship between images and retail store patronage behavior (Monroe and Guiltinan 1975; Darden

1979; Malhotra 1983; Sheth 1983; Engel et al. 1986). These models, along with other research in this area, have attempted to explain "all the possible inner features of dynamism around the patronage behavior phenomenon in terms of store choice (Laaksonen 1987)."

PATRONAGE BEHAVIOR MODELS AND EMPIRICAL STUDIES

In the literature, a great deal of material has been presented which supports the commonly held view that consumers develop images of retail outlets and that these images influence store choice. Most of the patronage behavior models suggest that whether or not consumers patronize a given outlet depends on the evaluative criteria of the consumers and on their perception of store attributes, an overall perception traditionally referred to as store image or attitude (Monroe and Guiltinan 1975; Darden 1979; Sheth 1983 ; Engel et al. 1986). According to these conceptual models, it is expected that customers would always patronize the store that performs best on the attributes that are most important to them.

In modeling patronage behavior, despite the research issue of whether the beliefs-importance model is superior to the beliefs-only model (Bass and Wilkie 1973; Wilkie and Pessimier 1973), multiattribute store choice models have

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occupied a significant position. This is because the question how consumers aggregate judgements about store attributes in forming an overall attitude (image) toward a store is basic and fundamental to the marketing process (Howell & Rogers 1981). Salient attributes and their relative influence, as well as consumers' current perceptions of competing alternatives, are identified by using a multiattribute attitude model. However, several empirical studies have shown that multiplying beliefs (perceptions) times importance weights either does not affect or, in some cases, decreases the predictive power of the model, when compared with the beliefs-only formulation (Rogers 1979; Darden and Erdem 1981; Darden et al. 1983).

Lessig (1973) examined the relationships which exist between measures of store images and store loyalties in the setting of grocery stores. Store loyalty was predicted from store image information. Empirical results suggested that there was a significant relationship between the collective store loyalty measures and the collective measures of store image obtained from a semantic differential scales (belief-only model). He also concluded that store image information had ability to predict loyalties toward a number of stores.

Monroe and Guiltinan (1975) proposed a path model of

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predicting attitude toward stores and retail patronage behavior by using a multi-attribute attitude approach. In their model, buyer characteristics affect the store attributes that lie at the heart of store image (referred to as "perception of attributes" and "attitude toward stores"). Store image, in turn, affects store choice and the eventual product or brand purchase. They pointed out that consumers do not always go through this process before each store visit. If past experiences have been satisfactory, the choice will be fairly habitual, unless other factors have changed since the last visit. Their empirical test with grocery chains added evidence to issue of whether the beliefs-importance model is superior to the beliefs-only model (Bass and Wilkie 1973). They concluded that combining attribute importance with store perceptions contributed little to the ability to predict attitudes about retail stores or retail patronage. The beliefs-only model (using only store perceptions) was stronger casual construct of store attitudes and store patronage behavior than the beliefs-importance model.

Darden (1979) proposed a patronage model of consumer behavior which is an example of a comprehensive model of the store choice process. The key to his overall model is the part that operationalizes patronage intentions. Despite the problems in operationalization and conceptualization (Wilkie

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and Pessimier 1973), a multiattribute store choice process was chosen to model this construct. In his model, store choice is made between stores that are finally available within the evoked set. Store attribute beliefs (perceptions) and store attribute salience (importance) creates patronage intentions toward alternative stores within the evoked set. Patronage intentions and inhibitors determine patronage behavior, which results in stores being visited and products being purchased.

Despite his proposed conceptual patronage model, Darden et al. (1983) used an extended beliefs-only model in empirically predicting purchase intentions regarding clothing items and kitchen appliances. They compared this model with the extended Fishbein model and the Ryan and Bonfield model, both of which were beliefs-importance models. The results showed that their extended belief-only model performed best on explaining patronage behavior.

One of the most comprehensive frameworks of patronage behavior is Sheth's (1983) integrative theory or retail store patronage preference and behavior. In his shopping preference theory, Sheth identified four basic constructs: (1) shopping motives, either functional needs or nonfunctional wants, related to the choice of outlets at which to shop for a specific product or service class; (2) shopping options-- the

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evoked set of outlets available to customers to satisfy their shopping motives for a specific class of products and services; (3) choice calculus-- the decision rules used by customers in establishing shopping predispositions toward certain outlets: and (4) shopping predispositions-- the relative shopping preferences, among an evoked set of alternative outlets, for a specific product purchase situation. Like Darden's (1979) model, shopping predispositions result from considering both the criteria for evaluating alternatives and brand comprehension (image perceptions).

Engel, Blackwell and Miniard (1986) included a theoretical model of the retail selection process in their book "Consumer Behavior." Their model attempts to describe the types and the order of decisions that a consumer will go through to arrive at a purchase choice. According to their model, store choice is a complex process consisting of four basic considerations: (1) evaluative criteria; (2) perceived characteristics of stores; (3) a comparison process; and (4) acceptable and unacceptable stores. These authors do not suggest that this process occurs at each visit to a retail store. Instead, if past experience with a store has been favorable, the store is revisited without reevaluation.

They suggest that there are eight factors in evaluative criteria, although other authors conceptualize more factors. These factors, which are determinants of store choice, are location, assortment, price, advertising and sales promotion, sales personnel, store atmosphere, store clientele, and services. Whether these factors remain the evaluative criteria, regardless of type of store, is a question not addressed by the authors. To be an acceptable store, the perceived characteristics of a store should fulfill the evaluative criteria. Compared to other models, the merit of this model comes from the fact that consumers can select a number of stores that are acceptable, rather than one favorite store that receives the vast majority of the consumer's patronage. The limitation of this model is in its difficulty to generate hypotheses due to its lack of a clear theoretical statement of the selection process.

In the meantime, attempts have been made to establish a relationship between self-concept and store image interaction and store loyalty (Samli and Sirgy 1981; Sirgy and Samli 1985; Sirgy et al. 1991). Stern, Bush and Hair (1977) demonstrated that consumers shop at stores whose images are similar to their own actual and ideal self-images. Samli and Sirgy (1981) conducted a study to test the multidimensionality notion of store loyalty. Specifically, store loyalty was

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regressed on self-image/store-image congruity (symbolic) and evaluation of store-image (functional store-image). The results showed that store-image evaluations accounted for a significant and major portion of the predicted variance in store loyalty.

In contrast to the above patronage behavior models, Malhotra (1983) proposed a stochastic or probabilistic model of store choice, rooted in the concept of preference thresholds. This concept suggests that unless the degree of preference for a store exceeds a certain threshold level, it will not result in the selection of that store. The proposed model was illustrated by empirical investigation undertaken in conjunction with a large record chain. A major objective was to explain and predict the record store choices of college students in terms of the relevant store image characteristics. The characteristics identified as salient were variety and selection, personnel and service, acceptable price, convenience of location, and physical facilities.

From the review of above patronage behavior models, several important aspects are identified for the study of patronage behavior in conjunction with the store image construct:

(1) A store's overall image (attitude) is based upon the

consumers' perceptions of this store on relevant store attributes that are salient evaluative criteria for store choice.

(2) A store's overall image is predicted by either a belief-importance multi-attribute model or a belief-only multi-attribute model.

(3) A store's patronage is not only a function of consumer's image of that store but also of their images of other stores.

(4) It is essential that management understand consumer perceptions of the competitors' stores on image attributes.

(5) Since consumers interact and patronize over time more than one store in the evoked set of alternative stores, a consumer's multi-store patronage or loyalty behavior must be understood. For this, a measure capable of indicating a consumer's loyalties across alternative stores is needed.

(6) There is a need to match consumers' perceptions of multi-store images to their multi-store patronage (loyalty) behavior.

In spite of the importance of understanding multi-store patronage (loyalty) behavior in conjunction with multi-store images, most empirical studies dealing with the relationship

between store image and patronage behavior have focused on the image of a store and its impact on a consumer's patronage behavior toward that store. These studies, except Lessig's (1973) did not consider competitors' store images and multi-store patronage behavior. These studies simply tested the hypothesis that a consumer's patronage behavior toward a store is a function of consumer's image (attitude) of the store. The purpose of this study is to empirically determine the relationship between multi-restaurant image measures and multi-restaurant loyalty behavior in a setting of the casual dinnerhouse restaurant market for dinner. This study will enhance the understanding of the competitive nature of the existing market and help marketers to plan marketing strategies for repositioning.

CONCEPT OF STORE LOYALTY

Retailers work to create and maintain a desirable level of loyalty toward their stores from the target market (Sirgy and Samli 1985). Store loyalty is perhaps the single most important concept for the retailer. If retailers could determine the nature and degree of loyalty, they could attempt to develop better retail strategies to increase or maintain satisfactory levels of store sales. Proper store loyalty measurement is extremely important from the perspective of

retail marketing strategy.

In the marketing literature, loyalty is a notion with various definitions. In a general marketing context, loyalty refers to a consumer's tendency to continue, over time, to purchase the same brand of product or shop in the same store. Brand loyalty, as a generic concept, refers to the tendency of some consumers to purchase a particular brand with a high degree of consistency. Similarly, store loyalty is usually defined as the consumers' inclination to patronize a given retailer (store) repeatedly during a specified period of time (Enis and Paul 1970). More specifically, this is defined as a biased (nonrandom), behavioral response, expressed over time, by some decision-making unit, with respect to one or more alternative stores out of a set of such stores, and as function of a psychological (decision-making, evaluative) process (Jacoby and Kyner 1973; Sirgy and Samli 1985). According to this definition, store loyalty is concerned with both behavioral and attitudinal indices.

Generally, store loyalty has been measured in one of the following ways: (1) proportion of patronage (behavioral approach), (2) brand preference (attitudinal approach), or (3) a combination of both behavioral and attitudinal approaches (Runyon and Stewart 1987).

Proportion of Patronage

This approach ignores the particular sequence of patronage that occurs and simply examines the total proportion of patronage for a single store or for a combination of stores. The degree of store loyalty can range from perfect loyalty, whereby the consumer shops only at a particular retailer for certain products during a given time period, to no loyalty, whereby the consumer does not patronize the retailer at all during the period.

This methodology has certain advantages over the store choice sequences measure. First, it is easier to quantify; second, it permits the identification of multi-store loyalty. For example, dual store loyalty would refer to the proportion of purchases devoted to two stores within a particular group, triple store loyalty, to the proportion of purchases devoted to three stores and so on. This approach has one problem: what constitutes store loyalty is highly arbitrary and somewhat ambiguous.

Raj (1982) used proportion of purchase data to define three different loyalty classifications. The first used 50% to assign a "highly loyal" label to consumers, while a second used a "multi-level loyalty" categorization to classify consumers into one of six loyalty levels: <10%, 10%-19.9%,

20%-29.9%, 30%-49.9%, 50%-69.9%, and 70%-100%. The third was a multi-brand classification, which recognized the possibility of consumers being loyal to more than one brand. A cut-off level of 60% was used to classify a consumer solely loyal to one brand.

Store Preference

This is an attempt to go beyond overt behavior (actual purchases) and define store loyalty in terms of a psychological commitment or statement of preference. In this approach, store loyalty is treated as a favorable attitude toward a particular store, often expressed in terms of an intention to purchase (likelihood of future purchase). With a view point of marketers, this measure could be an empty concept with little commercial value. This could happen when neither favorable attitudes nor intention to purchase predict actual patronage behavior.

Combination of the Two Approaches

This approach combines the behavioral and attitudinal approaches (Jacoby and Chestnut 1978). Both consumer preferences and actual purchases are measured. These two measures are weighted relatively and summed to determine each respondent's general loyalty to the store in question (Sirgy and Samli 1985; Sirgy et al. 1991).

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SECTION II.   THE HOSPITALITY FOODSERVICE LITERATURE

IMAGE PERCEPTION AND ITS IMPACT ON BEHAVIOR

Every restaurant represents a concept and projects some kind of image (Goldman 1993).   Concept components include everything that affects how the patron views the restaurant: signature items, service systems, decor, menu, food and its presentation, style of operation, appearance of the hostess, foodservers, music, atmosphere, and pricing (Lundberg and Walker 1993; Goldman 1993).

Since hospitality firms want to have a favorable image which reflects their concept, they offer their own unique marketing mix.   According to Renaghan (1981), this mix consists of three major sub-mixes: (1) the product-service mix, (2) the presentation mix, and (3) the communication mix. Consumers perceive this marketing mix in their own way.   A perception is a process by which people make sense of the world by selecting, organizing, and interpreting the stimuli they encounter (Lewis 1984).   These perceptions or images greatly impact behavior because they represent a person's subjective knowledge of the world around him.   Consumers choose brands (chains) based on their perceptions of each of their alternative brands using a set of relevant dimensions or

product characteristics. These perceptions, coupled with the importance to the individual of each characteristic, leads the customer to the determinant factors that makes one hotel or restaurant preferable to another (Lewis 1984, 1985).

In today's competitive marketing environment, therefore, it is imperative that the management of restaurants understand how they are perceived not only individually, but also with respect to their competition. Moreover, they need to know the effect of these measured images on consumer patronage or loyalty behavior toward competitive restaurants. Despite the importance of image in terms of effective positioning and predicting patronage or loyalty behavior, the study of image in hospitality literature is in its infant stage, especially in foodservice literature. In the foodservice literature, the direct relationship between restaurant image and consumer patronage or loyalty behavior has not been adequately explored.

A review of hospitality literature suggests that researchers have been more focused on segmentation studies (Swinyard 1977; Bahn and Granzin 1985; Swinyard and Struman 1988; Crawford-Welch 1990) than market positioning studies (Downey 1977; Lewis 1982; Lewis 1985; Wilensky and Buttle 1988; Cullen and Rogers 1988). Lewis (1982) notes that the

hospitality industry, unlike most others, has paid little attention to the concept of positioning in its marketing efforts.

Among the positioning studies, literature dealing with restaurant image is hard to find. Downey (1977) first introduced the multidimensional scaling (MDS) approach in the restaurant industry. He measured the images of 11 fast food restaurants by illustrating their position in similarities-preference space map. In the meantime, there has been some research in the lodging literature. For example, Cullen and Rogers (1988) conducted a survey to explore how various target segments perceive the quality and price of some hotel and motel chains. Wilensky and Buttle (1988) utilized the MDS approach to plot the perceived profile of Holiday Inn vs. the other properties in a local market.

RESTAURANT IMAGE ATTRIBUTES

Restaurant image, one specific type of retail store image, results from factual and emotional perceptions of product/service. These image attributes will be different from the general store image dimensions of supermarket, grocery, department store, or fashion store. The image of a restaurant invariably consist of both positive and negative

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perceptions of tangible (functional) and intangible (psychological) attributes. Tangible attributes are physical properties such as restaurant location, restaurant layout, price ranges, and other qualities such as food and beverage that the consumer can somewhat objectively compare to competitors. Intangible attributes refer to such qualities as friendliness of restaurant personnel, atmosphere, or attractiveness of decor.

Even though there is no comprehensive study to identify the image dimensions of each type of restaurant, some studies (Cadotte et al. 1987; Knutson and Patton 1993; Morgan 1993) utilize the product/service attributes to evaluate restaurant chains or to identify the importance of each attribute on patronage behavior.

By studying expectations and norms in models of consumer satisfaction in the context of restaurants, Cadotte et al. (1987) used seven attributes to measure consumers' expectation toward a restaurant: food quality, speed of service, employee friendliness, atmosphere/decor, cleanliness, price/value, and quality of employee service.

Readers (Consumer Union) of <u>Consumer Reports</u> (1992) rated 36 large restaurant chains that are a cut above fast food.

The 12 attributes used in the questionnaire include: taste of food, selection of food, friendly service, knowledgeable service, prompt service, pleasant atmosphere, noise level, fun atmosphere, cleanliness, ability to accommodate kids, value, and price.

By utilizing a principal-components factor analysis with the data of <u>Consumer Reports</u> (1992), Morgan (1993) identified three basic benefit dimensions which are a part of image dimensions; food-service quality, family price-value and time convenience. Morgan then investigated how these three benefit dimensions affect overall ratings for three different types of restaurant chains (family, casual-dining, and steak-house restaurants) by utilizing a multiple-regression analysis. The dimension "food-service quality" was the predominant influence on overall ratings for family, steak-house, and casual dining restaurants. The results also show that a strong score on "family price-value" adds to the overall ratings of a family-restaurant chain but not necessarily that of a steak-house or casual-dining chain. Finally, a strong performance in "time convenience" boosted overall ratings only for family restaurants and not for steak-house or casual-dining restaurants.

Knutson and Patton (1993), in their study of seniors'

eating out behaviors and their evaluation of the restaurant experience, found the four main reasons for visiting a restaurant most often. These were quality of food, quality of service, price/value, and atmosphere/cleanliness.

Ropher Starch Worldwide, a market research company in New York City, surveyed a national sample of 1,993 men and women 18 years of age and older to study why they return regularly to a table service restaurant for dinner (Restaurant Hospitality 1994). Respondents were asked to rate the importance of 13 product/service attributes in deciding whether to return to a tableservice restaurant for dinner. The 13 attributes used in the questionnaire include: cleanliness, high food quality, use of fresh food, good value for the money, prompt service, comfortable seating, relaxed atmosphere, wide menu variety, no lines or waiting, convenient location, use of unique menu items, easily accommodates kids, and being greeted by name.

SUMMARY

First, this chapter has focused on a review of literature in the context of retail store image studies, focusing on the relationship between store images and patronage behavior. This included conceptualization of retail image,

identification of image attributes and dimensions, measurement of store image, and examination of patronage behavior models where the store image is a significant construct. Second, hospitality literature has been reviewed by focusing on image-related attributes and benefits used in the hospitality foodservice literature.

Literature in retailing suggests that consumer's store image perception is a significant construct in explaining retail store patronage behavior (attitude, purchase intention, frequency of purchase, and store loyalty) (Martineau 1958, Lessig 1973; Doyle and Fenwick 1974-75; Monroe and Guiltinan 1975; Sirgy and Samli 1985; Steenkamp and Wedel 1991). A review of the literature indicates that a store's patronage is not only a function of consumer's image of that store but also of their images of other stores (Lessig 1973); therefore, it is essential that management understand consumer perceptions of the competitors' stores on image dimensions. Meanwhile, an understanding of patronage or loyalty behavior toward only one store is not enough. Since consumers interact and patronize over time with more than one store in the evoked set of alternative stores, a consumer's multi-store patronage or loyalty behavior must be understood.

In spite of the importance of understanding multi-store

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patronage behavior in conjunction with consumer perceptions of alternative stores (multi-store images), strong empirical evidence supporting the relationship between multi-store images and multi-store loyalties is lacking. Most empirical studies have tested their statistical models of patronage behavior toward either one store in the study or the most favorite store. The image studies in hospitality literature, especially in foodservice literature, is in its infant stage, despite the importance of image in terms of effective positioning/repositioning and predicting patronage or loyalty behavior toward a number of outlets/brands.

CHAPTER III

METHODOLOGY

INTRODUCTION

The preceding two chapters defined the research domain as the relationship between multi-restaurant images and multi-restaurant loyalties toward alternative restaurants in the setting of casual dinnerhouse restaurant chains for dinner. This chapter presents the framework of the research study, defines research questions and hypotheses, and defines a methodology to test this relationship.

RESEARCH FRAMEWORK

The major purpose of this study was to test the relationship between multi-restaurant image measures and multi-restaurant loyalty measures and to identify the nature of competition in the existing market by utilizing a canonical correlation analysis. The proposed model of this relationship, which is supported from the literature review of patronage behavior models is presented in Figure 1.

This model involves two sets of variables: loyalty measures and image measures toward alternative restaurant

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chains.   The criterion (dependent) variables are loyalty
behavior toward alternative restaurant chains.   According to
the store loyalty definition (Jacoby and Kyner 1973; Sirgy and
Samli 1985), two indices of loyalty measures are used
separately as criterion variables: (1) patronage intentions in
the next two months and (2) proportions of a consumer's visit
toward seven restaurant chains in the last three months.   The
predictor (independent) variables are consumer perceptions of
alternative restaurant chains' outlets on restaurant image
dimensions.

FIGURE 1

PROPOSED MODEL OF THE RELATIONSHIP BETWEEN

IMAGE MEASURES AND LOYALTY MEASURES

Composite of Independent   Composite of Dependent
(Predictor) Variables   (Criterion) Variables

```
┌─────────────────────────┐        ┌─────────────────────────┐
│  Image Perceptions of   │        │    Loyalties* toward    │
│                         │        │                         │
│      Alternative        │───────>│      Alternative        │
│                         │        │                         │
│    Restaurant Chains    │        │    Restaurant Chains    │
└─────────────────────────┘        └─────────────────────────┘
```

  (Multiple Independent   (Multiple Dependent
   Variables)   Variables)
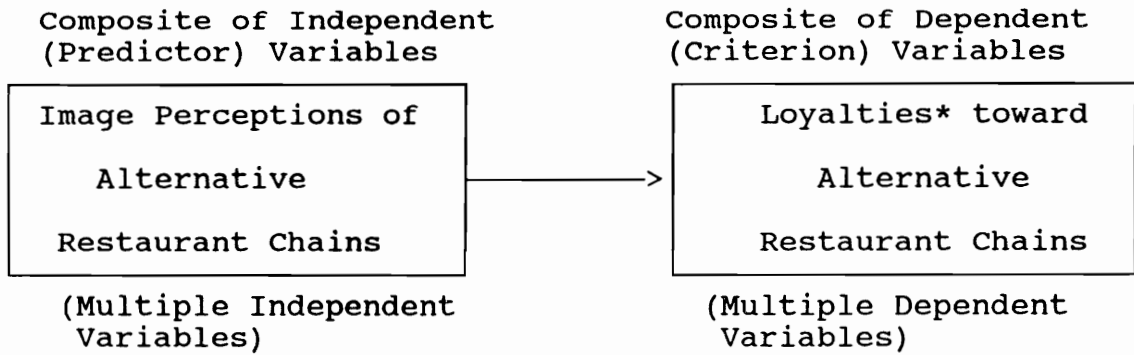
* Two sets of loyalty measures are considered separately as
  criterion variables: (1) Patronage intentions and (2)
  Proportion of visits at each restaurant chain. Each set of
  loyalty measures is correlated with image measures
  (predictor variables).

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The general form of canonical analysis for this relationship can be expressed as

$$\sum_{j=1}^{n} Y_j = \sum_{j=1}^{n} \sum_{i=1}^{m} X_{ij} \text{---------------- (1)*}$$

Where:

i = ith dimension among m image dimensions

j = jth restaurant chain's outlet(s) in the n alternative restaurant chains

m = number of image dimensions

n = number of alternative restaurant chains

X_{ij} = image perception of jth restaurant chain's outlet(s) on ith image dimension

Y_j = degree of loyalty toward jth restaurant chain.

The underlying logic of canonical correlation involves the

----

* This formula can be expressed as follows:

```
Y1                    X11 + X21 + X31 + ... + Xi1 + ... + Xm1
+                     + X12 + X22 + X32 + ... + Xi2 + ... + Xm2
Y2                    + X13 + X23 + X33 + ... + Xi3 + ... + Xm3
+                     + .     .     .     ...    .     ...    .
.          =            .     .     .     ...    .     ...    .
.                       .     .     .     ...    .     ...    .
+
Yj                    + X1j + X2j + X3j + ... + Xij + ... + Xmj
+                     + .     .     .     ...    .     ...    .
.                       .     .     .     ...    .     ...    .
.                       .     .     .     ...    .     ...    .
+
Yn                    + X1n + X2n + X3n + ... + Xin + ... + Xmn
```

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derivation of a linear combination of variables from each of the two sets of variables so that the correlation between the two linear combinations is maximized.

In previous patronage behavior models, multiple regression analysis has been commonly used to predict the value of a dependent variable (e.g., attitude, purchase intention, frequency of visit, or loyalty toward one outlet) from a linear function of a set of independent variables (e.g., perceptions on store image-related attributes). The dependent variables used in patronage behavior prediction models are either patronage behavior toward one store in the study or toward the most favorite store. However, for some research problems, interest may not center on a single dependent variable (Uysal and O'Leary 1986). Rather, the researcher may be interested in relationships between sets of multiple dependent (criterion) and multiple independent (predictor) variables.

Since consumers interact and patronize over time more than one restaurant in the evoked set of alternative restaurants, a consumer's patronage (or loyalty) behavior toward alternative restaurants must be understood. In addition, a restaurant's patronage is not only a function of consumers' image of the restaurant but also of their images of

other restaurants; therefore, it is essential that management understand consumer perceptions of the competitors' restaurants on a set of image dimensions.

The following are specific questions which this research is seeking to answer:

1. What are the restaurant (outlet) image dimensions of casual dinnerhouse restaurant chains for dinner, dimensions that are salient criteria for selecting and patronizing casual dinnerhouse restaurants?

    1a. What attributes are used to form the restaurant image of casual dinnerhouse restaurant chains for dinner?

    2b. What is the perceived importance of each image attribute for selecting and patronizing casual dinnerhouse restaurants?

2. What are the (outlet) images of each casual dinnerhouse restaurant chain: overall image and its dimensions?

    2a. Do consumers perceive competing restaurants as being different on each image dimension and overall image?

    2b. What are the restaurants' strengths and weaknesses on image dimensions?

3. Are there any statistically significant relationships

between multi-restaurant image measures and multi-restaurant loyalty measures of alternative restaurants? If there are significant relationships, what are the magnitude and nature of the relationships between the two sets of variables?

Specific research hypotheses related to the above objectives are presented in the following section.

RESEARCH HYPOTHESES

In order to address the aforementioned research questions, the following null hypotheses were developed.

Hypothesis 1:

There are no significant image variations among seven casual dinnerhouse restaurant chains on each image dimension and overall image.

In hypothesis 1, it is believed that there are significant image variations among seven casual dinnerhouse restaurant chains on each image dimension and overall image. It is assumed that each restaurant chain has its unique image on each image dimension and overall impression.

Hypothesis 2:

> Multi-restaurant image measures are not significantly related to multi-restaurant loyalty measures.

Two sub-hypotheses were developed in order to address each component of the loyalty concept: the behavioral (actual purchase) and attitudinal (purchase intentions) components:

> Hypothesis 2a:
>
> > Multi-restaurant image measures do not significantly affect purchase intentions toward alternative restaurant chains.

> Hypothesis 2b:
>
> > Multi-restaurant image measures do not significantly affect proportions of patronage toward alternative restaurant chains.

In both hypotheses 2a and 2b, it is believed that there are significant relationships between two sets of variable. It is assumed that a consumer's behavior toward one or more restaurant(s) is influenced by his/her image perceptions of those alternative restaurants.

RESEARCH DESIGN

This correlational study utilized an inferential research technique to investigate the relationship between multi-restaurant image measures and multi-restaurant loyalty measures in the setting of casual dinnerhouses. The empirical testing of the relationship was implemented through a survey research technique.

This research was conducted empirically in the context of intratype competition for dinner among casual dinnerhouse restaurant chains in Roanoke, Virginia, which has a population of approximately 224,000 people (90,000 households) (Bureau of the Census 1990). The seven competing restaurant chains selected were Applebee's, Chi-Chi's, Ground Round, Olive Garden, Red Lobster, Steak and Ale, and Texas Steak House & Salon, which were all represented in the area by at least one unit. These chains are classified into a mid-upscale (or casual-theme) segment in terms of price, service and atmosphere. Table 1 gives a brief profile of each restaurant chain. These chains are all working to generate loyal customers by achieving distinct market positions in the local marketplace.

A consumer sample drawn at random from the population

TABLE 1
PROFILES OF 7 CASUAL DINNERHOUSE RESTAURANT CHAINS

Applebee's	2 units in Roanoke. 264 units, National. Steak, chicken, trout, and salads. Something's always cooking at Applebee's, America's favorite neighbor. Bar.
Chi-Chi's	1 unit in Roanoke. 216 units, Central Atlantic. Mexican specialties. Create-your-own combos. Free-meal Birthday Club for kids. Bar.
Ground Round	1 unit in Roanoke. 201 units, Central Atlantic, New England. Beef, chicken, seafood, and salads. Some Mexican and Italian dishes. Kids' menu. Seniors' discounts. Children under 13 pay what they weigh, a penny a pound. Bar.
Olive Garden	1 unit in Roanoke. 305 units, National. Homemade pasta, regional Italian meat and seafood specialties. Extensive list of Italian wines. Kids' menu. Takeout. Catering.
Red Lobster	1 unit in Roanoke. 550 units, National. Seafood, chicken, and steak. Rotating catch-of-the-day specials. Kids' menu. Take-out. Bar.
Steak and Ale	1 unit in Roanoke. 158 units, National. Dressy eatery bills itself as "a legend in steak." Also offers seafood, pasta, and chicken. Salad bar. Bar.
Texas Steak House & Saloon	2 units in Roanoke. 9 units, Virginia, West Virginia, North House & Salon Carolina. Steak specialties. Bar.

Source: Consumer Reports (June 1992), p.362.

list of Roanoke, Virginia furnished data on their patronage of casual dinnerhouse restaurant chains over a three-month period and on their patronage intentions in the next 60 days. These consumers also provided perceptions of those restaurant chains' outlet(s) images. Respondents for the present survey were informed that the survey questions related to eating out dinner at casual dinnerhouses.

The study design employed two sets of variables: multiple criterion (dependent) variables and multiple predictor (independent) variables. The criterion variables were degree of loyalty toward the alternative seven restaurant chains. Two sets of loyalty measures were considered separately: (1) patronage intentions in the next 60 days and (2) proportions of a consumer's visits that went to the seven restaurant chains in the last three months. The predictor variables were consumer perceptions of the alternative seven chains on a set of restaurant image dimensions and overall impression.

SAMPLE DESIGN

Sample selection is a very important step in conducting research. Gay (1987) stated that the sample's merit determines the generalizability of the results. Therefore, the most important goal in this study's selection was an

increase in the validity of the study's conclusions.

The sampling frame of this study represented potential and actual customers of seven casual dinnerhouse restaurant chains in the city of Roanoke, Virginia. The major target market of casual dinnerhouse restaurant chains is middle-income individuals and families who enjoy dining out yet wish to avoid the high prices and the formality of fine-dining restaurants (Chon and Sparrowe 1995). A random sample of 1,500 households who were potential and actual customers of casual dinnerhouse restaurants, whose annual household income level was $25,000 and over, and who reside in Roanoke, Virginia were selected for the survey.

The names (the head of household) and addresses of these households were purchased from the Alvin B. Zeller Company, a New York firm specializing in mailing lists. According to a sales representative at Alvin Zeller, the company gets their figures from the National Census Data and they are updated every year to adjust for changes in the population. The cover letter instructed the head of household or someone in the household whose age was 18 or over to fill out the questionnaire.

Respondents provided their patronage intentions for the

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next 60 days, purchase data on their patronage of these seven casual restaurant chains over a three-month period, and their image perceptions of these chains. To test the research hypotheses, it was necessary to screen for respondents who could compare the images of the seven casual dinnerhouse chains based on selected image attributes. Therefore, the final sample for this study consisted of the respondents who were familiar with these seven casual dinnerhouse chains (though he/she has not been to all of them) and made three or more visits to these casual dinnerhouses for dinner in the past three months. This was to avoid giving undue emphasis to the relatively unimportant customers who made just a few visits (Miller and Granzin 1979).

SURVEY DESIGN

The primary means of data collection was the mail survey questionnaire. The study was conducted during the spring of 1995. On May 11, mail-in questionnaire surveys were sent to 1,500 households with an annual household income level of $25,000 and over in Roanoke, Virginia. To ensure an adequate response rate, two mailings were planned. The first one contained the questionnaire and a cover letter explaining the academic nature of this study. Two weeks later a follow-up postcard was to be sent as a reminder and to encourage them to

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complete their questionnaires if they have not already done so. However, the follow-up postcards were not sent because the response rate from the first wave was adequate.

The estimated minimum response rate was 30 percent based on other studies (Nickel and Wertheimer 1979; Nevin and Houston 1980) on store image, which would result in the collection of the required data (1,500 x 30% = 450). As an incentive to increase participation, a prize drawing was promised to all respondents. A total of six prizes were given since three restaurant chains participating in this study provided six tickets for dinner. Each ticket was a coupon of $30 for dinner for two persons.

INSTRUMENT AND SCALING

The survey instrument consisted of four major parts (Appendix C). The first part was designed to measure patronage behavior (frequency of visits) toward the seven casual dinnerhouse restaurant chains for dinner in the past three months. In the second part, respondents were asked to rate the importance of nine image dimensions (choice criteria) that might be used in deciding to patronize casual dinnerhouse restaurants. Then, respondents were asked to rate their perceptions of the seven casual dinnerhouse restaurant chains

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on nine image dimensions. In the third part, based on their perceptions of the seven causal dinnerhouse restaurant chains, respondents were asked to rate their overall impression of each restaurant and willingness to visit each restaurant in the next 60 days. Finally, demographic information about the respondents was gathered to describe the sample and assist in future data analyses that is beyond the scope of this dissertation.

Measurement of Restaurant Loyalty

Jacoby and Kyner (1973) defined store loyalty as a biased (nonrandom), behavioral response, expressed over time, by some decision-making unit, with respect to one or more alternative stores out of a set of such stores, and as function of a psychological (decision-making, evaluative) process. In accord with this definition, two sets of multi-restaurant loyalties toward the seven casual dinnerhouse restaurant chains were measured in terms of actual behavior and psychological commitment. These two sets of loyalty indicators were treated separately in the relationship study with restaurant image measures.

The first indicator measured each respondent's relative proportion of patronage for dinner for each of the seven dinnerhouse restaurant chains. Traditionally, a consumer's

store loyalty has been described in terms of a single behavioral characteristic, for example, the number of purchases at a given store as a percent of total purchases (Monroe and Guiltinan 1975; Sirgy et al. 1991). However, such measures describe the consumer's patronage behavior toward only one store, usually the store most visited or the store sponsoring the research. Since consumers interact over time with more than one restaurant in the given segment of casual dinnerhouses, a single behavioral measure ignores the lesser loyalties to competing restaurants and gives an incomplete expression of consumer loyalty (Miller and Granzin 1979).

To provide a relational multidimensional loyalty measure, each respondent's relative proportion of purchases was computed for each of the seven chains over the three months period. That is, the respondent's total number of visits was divided into the number of visits made to each restaurant chain to give a set of seven proportions summing to 100 percent. Treated collectively, the seven measures indicated the consumer's patronage pattern for each of the seven restaurant chains.

In addition, loyalty can be defined in terms of a psychological commitment or statement of preference. In this approach, loyalty is often expressed in terms of an intention

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to purchase. The other indicator involved a seven-point Likert scale which measured the consumer's willingness to go to each of the seven restaurant chains for dinner in the next 60 days.

Development of Image Dimensions for Casual Dinnerhouses

Restaurant image can be viewed as a combined response to factual and emotional material, e.g., a customer reacts to a restaurant's characteristics, as he or she views them, in an emotional way (Oxenfeldt 1974-75). A similar view is that restaurant image consists of tangible (functional) factors and intangible (psychological) factors perceived by the consumer to be present (Lindquist 1974-75). The tangible characteristics include such attributes as location, price, and food & beverage quality. In addition, other restaurant attributes are more intangible in nature and cannot be objectively measured. Such subjective attributes include attractiveness of decor, friendliness of employees, level of service, etc.

By its nature, restaurant image is a complex phenomenon, so appropriate measurement often requires the researcher to elicit perceptions of multiple image objects (e.g., restaurants) across multiple image attributes or dimensions. While image has frequently been examined in the context of

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specific retail stores, little has been done in the setting of restaurants. Therefore, it was necessary to develop image measures that are salient criteria for selecting and patronizing casual dinnerhouse restaurants as a prerequisite to testing the proposed model.

In the process of evaluating which stores to patronize, consumers consider a variety of factors, often referred to in the retailing literature as store choice evaluative criteria (Engel et al. 1986). In attempts to attract consumer patronage, retailers develop store images that emphasize particular factors of store image attributes (Linquist 1974-75). Rosenbloom (1983) suggests that the store image dimensions stressed by retailers should be congruent with those store choice evaluative criteria to which consumers attach the most importance.

To develop image dimensions that are congruent with salient evaluative criteria for selecting and patronizing casual dinnerhouse restaurants, a pilot study with 56 restaurant patrons was conducted. The questionnaire for a pilot study included a set of 28 attributes (Appendix A) which were identified through a review of relevant literature (Lindquist 1974-75; Reid 1983; Cadotte et al. 1987; Morgan 1993; Restaurant Hospitality 1994). Fifty-six restaurant

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patrons who were at the waiting areas of casual dinnerhouse restaurants in Roanoke were asked to indicate the importance of each attribute (evaluative criteria) on patronizing casual dinnerhouse restaurants. The respondents used a five-point scale ranging from (1) Very unimportant to (5) Very important. This data (see Table 2) was used to identify nine image dimensions (see Table 3) that are salient evaluative criteria (mean value > 3.50) for restaurant choice and patronage behavior. This phase of the study also involved in-depth interviews with professors and Ph.D candidates in the Department of Hospitality and Tourism Management at Virginia Tech.

Measurement of Restaurant Image

To assess the images of the seven casual dinnerhouse restaurant chains, consumer perceptions of these chains on nine identified image dimensions and overall impression (image) were measured by employing semantic differential techniques (see Table 3). The semantic differential is a method of measuring and comparing the connotative meaning of concepts, and is considered quite useful for assessing, among other techniques, consumer images of retail outlets, products, and brand names (Anderson and Scott 1970).

TABLE 2
IMPORTANCE OF IMAGE ATTRIBUTES FOR
SELECTING AND PATRONIZING CASUAL DINNERHOUSE RESTAURANTS
(N=56)

Attributes	Mean
1. Quality of food & beverage	4.76
2. Cleanliness	4.72
3. Taste of menu items	4.63
4. Service friendliness	4.55
5. Value for the money	4.50
6. Prompt/attentive service	4.48
7. Knowledgeable staff	4.21
8. Appearance of food presentation	4.21
9. Comfortable seating	4.19
10. Atmosphere	4.17
11. Variety of menu selection	4.14
12. Menu price	4.10
13. Reputation	3.93
14. Waiting-area for seating	3.83
15. Layout of dining area	3.83
16. Noise level	3.81
17. Nutritional quality	3.72
18. Decor	3.72
19. Parking facilities	3.64
20. Promotion/Advertising	3.64
21. Location	3.64
22. Type of patrons	3.48
23. Lighting	3.45
24. Exterior design	3.41
25. Music	3.40
26. Ability to accommodate children	3.36
27. Theme of the restaurant	3.26
28. Uniform of staff	2.88

Scale: 1= Very unimportant
       5= Very important

TABLE 3

CASUAL DINNERHOUSE IMAGE DIMENSIONS AND OVERALL IMPRESSION

Image Measures	Anchor descriptors
Friendly/Attentive Service	Poor --- Good
Decor/Design/Layout	Poor --- Good
Quality/Taste of Food & Beverage	Poor --- Good
Advertising/Promotion	Unattractive --- Attractive
Reputation	Unfavorable --- Favorable
Atmosphere	Unpleasant --- Pleasant
Price/Value	Unfair --- Fair
Cleanliness	Unclean --- Clean
Location	Inconvenient --- Convenient
Overall Image	Unfavorable --- Favorable

Respondents were instructed to circle the number from the 7-point scale that best represented their perception of each restaurant chain on the nine image dimensions and overall image (a total of ten sets of descriptive terms). The degree of intensity was distinguished by "Extremely," "Quite," and "Slightly." A neutral rating was designated as "Neither." Numerical values for each rating were established by assigning a value of "1" to the least favorable rating (e.g., extremely unfriendly) and a value of "7" to the most favorable rating (e.g., extremely friendly).

PRE-TEST OF INSTRUMENT

The first draft of the questionnaire (Appendix B) was circulated to graduate students and faculty members in the Department of Hospitality and Tourism Management at Virginia Polytechnic Institute and State University (Virginia Tech) for their feedback regarding the wording, layout and comprehensibility of the questionnaire items. Based on the feedback received from the above sources, the questionnaire was substantially revised in wording and layout.

The revised questionnaire was administered to 15 customers of casual dinnerhouse restaurants in Roanoke. Further, the questionnaire was reviewed by the general manager

of each casual dinnerhouse restaurant in the study for their assessment of the face validity of the instrument. Based on the feedback from the pre-test, the questionnaire was further modified for its final format (Appendix C).

VALIDITY AND RELIABILITY TESTS

Validity refers to the relationship between a construct and its measure. That is, validity is the degree to which the instrument measures the intended hypothetical construct, whereas reliability is an assessment of the consistency of a measurement instrument (Rosenthal and Rosnow 1984).

Validity was assessed by both face validity and predictive validity to decide whether the identified image dimensions adequately represent the domain of image in the casual-dining segment under study. The face or content validity of the casual dinnerhouse image dimensions was evaluated by the different groups described above. For the predictive validity, the consumer perceptions of each restaurant chain on image dimensions was regressed to a global measure of overall image for each restaurant chain. For this, a global measure of overall image was included on the questionnaire. Respondents indicated their "overall image" of each casual dinnerhouse restaurant chain on a 7-point scale

(extremely unfavorable to extremely favorable). On the other hand, the reliability of image dimension measures was assessed by coefficient alpha, a measure of internal consistency.

DATA ANALYSIS

All data were coded and analyzed using the statistical package SAS Version (1989). Two statistical techniques were used: (1) Descriptive statistics that included frequency descriptions and means; and (2) Inferential statistics that included correlations, regression analysis, repeated measures of ANOVA (analysis of variance), Duncan's multiple range test, and canonical correlation analysis.

1.   Frequency counts and percentages were computed on all items of the survey. Frequency of visit for each restaurant chain was computed as a relative proportion of patronage for each chain.

2.   Mean scores were computed on all items, except demographic variables. Mean scores of image perceptions of alternative dinnerhouse restaurant chains across a set of image dimensions revealed the strengths and weaknesses of each chain in a competitive local market.

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3.   Cronbach alpha correlation coefficient, a measure of
      internal consistency, was computed for the reliability of
      the image dimension measures.

4.   To test predictive validity, the overall image of each
      restaurant chain as provided by the respondents was
      regressed with consumer perceptions on its image
      dimensions. The derived R^2 explains how much the image
      dimension variables accounted for the variance in overall
      image of each restaurant chain.

5.   For the testing of hypothesis 1, a repeated measure of
      ANOVA with a Duncan's multiple range test was employed
      with each image dimension and overall impression (image).

6.   For the testing of hypotheses 2a and 2b, a canonical
      correlation analysis was employed for each hypothesis.

SUMMARY

      In this chapter the research framework was defined, broad
research questions were raised, and specific research
hypotheses related to research questions were presented.
Further, the research design, research instrument and scale,

and statistical analysis methods were discussed. The results

are presented in the following chapter.

CHAPTER IV

RESULTS AND DISCUSSION

INTRODUCTION

Chapter three has elaborated on the research methodologies that were used to investigate the research question. Through the utilization of statistical techniques, this chapter presents the results of the proposed research questions.

DATA COLLECTED

The sample population in this study was composed of actual and potential customers of seven casual dinnerhouse restaurant chains in Roanoke, Virginia. A questionnaire was mailed to a random sample of 1,500 households whose annual household income was $25,000 and over and who reside in Roanoke, Virginia. A total of 99 questionnaires were excluded from the final sample. These were undeliverable due to reasons such as "moved, left no forwarding address," or "incomplete address." The final sample thereby was reduced to 1,401 households.

Table 4 provides a summary of the response rate. By the

TABLE 4
OVERALL RESPONSE RATE

	Number	Percent
Total target population	1,500	100.0
less non-delivered	99	6.6
Total population	1,401	100.0
Total responses	471	33.6
less unusable responses	44	3.1
Total usable responses	427	30.5

Unusable response characteristics:

Returned without any completion	17
Incomplete responses	14
Responded by unqualified respondents	13

cut-off date of May 26, 1995, a total of 471 surveys were returned for an approximate response rate of 33.6%. Of those received, 44 surveys were incomplete, or filled out by unqualified respondents (who made less than three visits for dinner to these casual dinnerhouse chains). After eliminating the unusable responses, 427 responses (30.5% usable response rate) were coded for data analyses.

PROFILE OF RESPONDENTS

Demographic Characteristics of Respondents

The demographic data collected from Part IV of the survey questionnaire are presented in Table 5. The respondents were approximately half males (50.7%) and half females (49.3%). The major age group of the respondents was the 35 to 54 years old group (58.2%), followed by the 55 years and older group (22.3%) and the 25 to 34 years old group (17.4%). The majority of the respondents were married (73.7%). Fifty seven percent of the respondents had no children under the age of 18 at home, whereas 43.3% had at least one. Almost ninety-nine percent of the respondents indicated that they had at least a high school education. Approximately, sixty-two percent had attended college and 17.1% had gone on to graduate school. The median total household income level of the respondents fell between $50,000 and $74,999 annually.

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TABLE 5

DEMOGRAPHIC PROFILE OF RESPONDENTS (N=427)

	Number	Percent
Gender:		
Male	216	50.7
Female	210	49.3
Total	426	100.0
Age:		
18-24 years	9	2.1
25-34 years	741	7.4
35-44 years	128	30.0
45-54 years	120	28.2
55-64 years	51	12.0
65 years and older	44	10.3
total	426	100.0
Marital Status:		
Single	39	9.2
Married	314	73.7
Widowed	29	6.8
Divorced/Separated	44	10.3
Total	426	100.0
Number of children under the age of 18:		
No	241	56.7
One	97	22.8
Two	67	15.8
Three or more	20	4.7
Total	425	100.0
Education:		
Less than high school	5	1.2
High school	83	19.4
Junior college	117	27.4
Four year college	149	34.9
Graduate school	73	17.1
Total	427	100.0
Household income:		
$25,000-34,999	98	24.1
$35,000-49,999	88	21.7
$50,000-74,999	136	33.5
$75,000-99,999	47	11.6
Over $99,999	37	9.1
Total	406	100.0

Dining Characteristics of Respondents

The respondents' dining characteristics in relation to casual dinnerhouse restaurants are presented in Table 6. More than half (54.8%) of the respondents indicated that they eat dinner at least once a week at casual dinnerhouse restaurants. The respondents indicated that they would most likely have dinner at casual dinnerhouse restaurants with their children (38.6%) or spouse (38.6%). The majority of respondents (70.2%) stated that the price per person for dinner at casual dinnerhouse restaurants fell between $8.00 and $14.99.

Patronage Behavior Toward the 7 Casual Dinnerhouse Restaurants

Table 7 shows the respondents' dining experience at the 7 casual dinnerhouse restaurant chains in Roanoke. At least 71% of the respondents have had dinner at each restaurant chain. Red Lobster (86.9%) has been exposed the most widely to the respondents, followed by Applebee's (83.6%). Table 7 also presents the respondents' dining experience at those restaurants over the last three month period. Applebee's and Texas Steak House & Saloon had the largest customer base, with 66.5% and 61.8% of respondents, respectively. In contrast, only 29.3% and 31.9% of respondents dined at Ground Round and Chi-Chi's, each.

Table 8 indicates the number of restaurants patronized by

TABLE 6

DINING CHARACTERISTICS OF RESPONDENTS (N=427)

	Number	Percent
Frequency of dining out for dinner at casual dinnerhouse restaurants:		
More than once a week	76	17.8
About once a week	158	37.0
About every 2 weeks	68	15.9
About every 3 weeks	30	7.0
About once a month	77	18.0
Less than once a month	18	4.2
Never	0	0.0
Total	427	99.9*
Dining companions (most likely) at casual dinnerhouse restaurants:		
With children	164	38.6
With spouse (husband/wife)	164	38.6
With friends	72	16.9
With business associates	6	1.4
Date	17	4.0
Alone	2	.5
Total	425	100.0
Price per person at casual dinnerhouse restaurants:		
Less than $8.00	60	14.1
$ 8.00-14.99	299	70.2
$15.00-24.99	55	12.9
$25.00 or more	12	2.8
Total	426	100.0

* Due to rounding does not equal 100%.

TABLE 7
RESPONDENTS' DINING EXPERIENCE AT
THE 7 CASUAL DINNERHOUSE RESTAURANT CHAINS
(N=427)

Restaurant		Dining Experience		Dining Experience (last 3 month period)		
		#	%		#	%
Applebee's	Yes	357	83.6	Yes	284	66.5
	No	70	16.4	No	143	33.5
	Total	427	100.0	Total	427	100.0
Chi-Chi's	Yes	320	74.9	Yes	136	31.9
	No	107	25.1	No	291	68.1
	Total	427	100.0	Total	427	100.0
Ground Round	Yes	303	71.0	Yes	125	29.3
	No	124	29.0	No	302	70.7
	Total	427	100.0	Total	427	100.0
Olive Garden	Yes	327	76.6	Yes	212	49.6
	No	100	23.4	No	215	50.4
	Total	427	100.0	Total	427	100.0
Red Lobster	Yes	371	86.9	Yes	227	53.2
	No	56	13.1	No	200	46.8
	Total	427	100.0	Total	427	100.0
Steak and Ale	Yes	343	80.3	Yes	159	37.2
	No	84	19.7	No	268	62.8
	Total	427	100.0	Total	427	100.0
Texas Steak House & Saloon	Yes	349	81.7	Yes	264	61.8
	No	78	18.3	No	163	38.2
	Total	427	100.0	Total	427	100.0

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TABLE 8
PATRONAGE BEHAVIOR TOWARD
THE 7 CASUAL DINNERHOUSE RESTAURANT CHAINS
(N=427)

Number of restaurants visited for the last 3 month period	Frequency	Percent
1	25	5.9
2	118	27.6
3	121	28.3
4	78	18.3
5	49	11.5
6	25	5.9
7	11	2.6
Total	427	100.0

Mean: 3.3
Median: 3.0

respondents over the three month period. The majority of respondents (94.1%) patronized more than one restaurant out of seven casual dinnerhouse restaurant chains. The median number of restaurants was three with 28.3% of respondents.

In table 9, the respondents are classified into one of five loyalty levels toward each restaurant chain by using their proportions of patronage data. If the respondents' proportion of patronage toward one restaurant chain is 50% or higher, they can be regarded as highly loyal customers of that restaurant (Raj 1982). The majority of respondents for each restaurant chain were classified into low level loyalty groups: 0%-10%, 10%-29.9%, and 30%-49.9%. In the case of all restaurant chains, less than three percent of the respondents were assigned to a loyalty level of 70%-100%, except for Applebee's (6.1%). This suggests that most of the respondents are not solely loyal to one restaurant chain. Compared to other restaurant chains, Applebee's and Texas Steak House & Saloon have more loyal customers. Meanwhile, table 10 indicates patronage intention toward each restaurant chain in the next 60 days. Respondents are more likely to patronize Texas Steak House & Saloon and Applebee's with their means of 5.07 and 4.93, respectively.

TABLE 9
PROPORTION OF PATRONAGE TOWARD EACH RESTAURANT CHAIN

| | Degree of Loyalty* | | | | | |
	less 10% N (%)	10-29.9% N (%)	30-49.9% N (%)	50-69.9% N (%)	70-100% N (%)	Total N (%)**
Applebee's	152(35.6)	106(24.8)	79(18.5)	64(15.0)	26(6.1)	427(100.0)
Chi-Chi's	310(72.6)	87(20.8)	19(4.5)	10(2.3)	1(0.0)	427(100.2)
Ground Round	321(75.2)	67(15.7)	21(4.9)	16(3.8)	2(0.0)	427(99.6)
Olive Garden	235(55.0)	106(24.8)	41(9.6)	39(9.1)	6(1.4)	427(99.9)
Red Lobster	220(51.5)	117(27.4)	50(11.7)	30(7.0)	10(2.3)	427(99.9)
Steak and Ale	282(66.0)	92(21.6)	24(5.6)	29(6.8)	0(0.0)	427(100.0)
Texas Steak House & Saloon	173(40.5)	137(32.1)	57(13.4)	47(11.1)	13(3.0)	427(100.1)

* Proportions of patronage in the last three month period toward the seven casual dinnerhouse restaurant chains.

  Calculation: The respondent's total number of visits was divided into the number of visits made to each restaurant chain to give a set of seven proportions summing to 100 percent.

** Due to rounding does not equal 100%.

TABLE 10
MEANS OF RATINGS ON PATRONAGE INTENTION*
TOWARD EACH RESTAURANT CHAIN
(N=427)

	Mean	S.D.	Number
Applebee's	4.93**	2.15	427
Chi-Chi's	3.42	2.10	426
Ground Round	3.35	2.06	425
Olive Garden	4.34	2.13	427
Red Lobster	4.67	2.05	427
Steak and Ale	4.42	2.07	427
Texas Steak House & Saloon	5.07	1.95	426

 * Willingness to visit in the next 60 days.
** 7-point Likert scale: (1) Extremely unlikely, (7) Extremely
   likely

VALIDITY AND RELIABILITY ESTIMATES

To determine the predictive validity of the image measures, the consumer perceptions of each restaurant chain on nine image measures were regressed to a global measure of overall impression (image) for each restaurant chain. Table 11 summarizes the R-Square of each regression. Together, the nine image variables accounted for an average of 73 percent of the variance in the overall image of casual dinnerhouse restaurant chains. These results provide strong evidence of validity for the measures of image.

To establish the reliability of the image measures used in the instrument, an internal consistency reliability coefficient was estimated using a coefficient alpha measure. A coefficient alpha (Cronbach alpha) tests the internal consistency of the items in relation to a single trait within the instrument (Nunnally 1978). Therefore, the test was performed on image measures for each restaurant chain.

Table 12 summarizes the results of the tests. A coefficient alpha of 0.70 or higher is considered to be adequately reliable for group data purposes. All of the instrument's reliability scores for the seven casual dinnerhouse restaurant chains were higher than 0.70 on image

TABLE 11
PREDICTIVE VALIDITY FOR IMAGE MEASURES:
MULTIPLE REGRESSION ANALYSIS

Dependent Variables	Independent Variables	R-Square
Overall Image of Applebee's	Image Measures for Applebee's	.79450
Overall Image of Chi-Chi's	Image Measures for Chi-Chi's	.70180
Overall Image of Ground Round	Image Measures for Ground Round	.74304
Overall Image of Olive Garden	Image Measures for Olive Garden	.71105
Overall Image of Red Lobster	Image Measures for Red Lobster	.73769
Overall Image of Steak and Ale	Image Measures for Steak and Ale	.69746
Overall Image of Texas Steak House & Saloon	Image Measures for Texas Steak House & Saloon	.70245

mean = .72690

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TABLE 12
RELIABILITY COEFFICIENTS FOR IMAGE SCALE ITEMS

Scale	No. of Items	Alpha Value
Image Measures for Applebee's	9	.9124
Image Measures for Chi-Chi's	9	.8859
Image Measures for Ground Round	9	.9047
Image Measures for Olive Garden	9	.9069
Image Measures for Red Lobster	9	.9099
Image Measures for Steak and Ale	9	.8900
Image Measures for Texas Steak House & Saloon	9	.9249

measures.

RESTAURANT IMAGE PROFILES

The mean ratings on each of the nine image scales and overall image for each of the dinnerhouse restaurant chains in Roanoke are presented in Table 13. Respondents generally did not give unfavorable ratings on most of the scales and tended to rate the restaurants somewhere within the neutral to favorable end of the scale.

Texas Steak House & Saloon consistently received the most favorable ratings on all but the cleanliness, atmosphere, decor/design/layout, and advertising/promotion scales. Applebee's, Steak and Ale, Red Lobster, and Olive Garden all received similar favorable ratings. Ground Round and Chi-Chi's were rated least favorably.

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TABLE 13
MEANS OF RATINGS OF IMAGE MEASURES
FOR SEVEN CASUAL DINNERHOUSE RESTAURANTS

Image Measures	Importance	Image Perceptions of Dinnerhouse Restaurants*						
		A	C	G	O	R	S	T
Quality/Taste of Food & Beverage (Poor-Good)	4.91	5.61	4.90	4.85	5.50	5.63	5.82	5.93
Cleanliness (Unclean-Clean)	4.87	5.97	5.26	4.87	5.90	5.64	5.90	5.83
Friendly/Attentive Service (Unfriendly-Friendly)	4.75	5.55	4.91	4.84	5.44	5.49	5.55	5.77
Atmosphere (Unpleasant-Pleasant)	4.45	5.58	5.03	4.73	5.62	5.39	5.88	5.72
Price/Value (Unfair-Fair)	4.45	5.27	5.02	5.05	5.15	5.08	5.08	5.40
Reputation (Unfavorable-Favorable)	3.77	5.58	4.93	4.78	5.55	5.73	5.68	5.82
Location (Inconvenient-Convenient)	3.73	6.09	4.92	5.32	5.01	5.61	5.67	6.14
Decor/Design/Layout (Poor-Good)	3.61	5.44	5.05	4.61	5.47	5.19	5.59	5.56
Advertising/Promotion (Unattractive-Attractive)	2.47	5.25	4.55	4.24	5.12	5.39	4.92	4.74
Overall Impression (Unfavorable-Favorable)		5.51	4.75	4.61	5.44	5.50	5.63	5.72
Grand mean		5.59	4.93	4.79	5.42	5.47	5.57	5.66

Scale: Importance rating: (1) Very unimportant
                          (5) Very important
       Perception rating: (1) Extremely poor
                          (7) Extremely good

* A = Applebee's   R = Red Lobster
   C = Chi-Chi's   S = Steak and Ale
   G = Ground Round   T = Texas Steak House & Saloon
   O = Olive Garden

HYPOTHESIS TESTING

This section reports the results of the statistical tests performed on the research hypotheses. Each research question and null hypothesis is reiterated below, and then the results of the statistical analyses are reported.

Research Question 1:

1a. Do consumers perceive competing restaurants as being different on each image dimension and overall image?

1b. What are the restaurants' strengths and weaknesses on image dimensions?

Hypothesis 1:

There are no significant image variations among 7 casual dinnerhouse restaurant chains on each image dimension and overall image.

To test the above research hypothesis, an analysis of variance (ANOVA) with a repeated measure design on one factor was used on each image variable. If the analysis of variance was significant at $p < .05$, a Duncan's multiple range test was utilized to look at pairwise comparisons of the 7 casual

dinnerhouse restaurant chains. A total of ten ANOVAs with a repeated measure design and 10 Duncan's multiple range tests were performed to test ten sub-hypotheses for nine image dimensions and overall impression (image).

<u>Hypothesis 1a: for Quality/Taste of Food & Beverage (FB)</u>

<u>Mean (FB of Applebee's) = Mean (FB of Chi-Chi's) = Mean (FB of Ground Round) = Mean (FB of Olive Garden) = Mean (FB of Red Lobster) = Mean (FB of Steak and Ale) = Mean (FB of Texas Steak House & Saloon).</u>

Table 14 shows the results of an ANOVA with repeated design for the variable: quality/taste of food & beverage (FB). Since the F value was 49.11 with an associated probability of .0001, the null hypothesis, that postulates that the means are equal, was rejected. Another way of saying this is that the seven casual dinnerhouse restaurant chains are not equal in the quality/taste of their food and beverage. The results of the Duncan's multiple range test showed three restaurant chain groupings. Compared to other restaurants, Texas Steak House & Saloon and Steak and Ale have their strength on image of quality/taste of food & beverage. In contrast, Ground Round and Chi-Chi's have their weakness on this image dimension.

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TABLE 14
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR VARIABLE: QUALITY/TASTE OF FOOD & BEVERAGE

Number of observations in data set = 2687

Dependent Variable: Quality/Taste of Food & Beverage (FB)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	430	1961.9423	4.5627	3.43	0.0001
Error	2256	3000.0101	1.3298		
Corrected					
Total	2686	4961.9524			

R-Square	C.V	Root MSE	FB Mean
0.395397	21.06572	1.1532	5.4741

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	424	1570.1428	3.7032	2.78	0.0001
Restaurant	6	391.7995	65.2999	49.11	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
QUALITY/TASTE OF FOOD & BEVERAGE

Alpha=0.05   df=2256   MSE=1.329792

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	5.93384	393	7
A			
A	5.82474	388	6
B	5.62750	400	5
B			
B	5.60957	397	1
B			
B	5.49602	377	4
C	4.89702	369	2
C			
C	4.84848	363	3

*	1: Applebee's	5: Red Lobster
	2: Chi-Chi's	6: Steak and Ale
	3: Ground Round	7: Texas Steak House & Saloon
	4: Olive Garden	

Hypothesis 1b: for Cleanliness (C)

Mean (C of Applebee's) = Mean (C of Chi-Chi's) = Mean (C of Ground Round) = Mean (C of Olive Garden) = Mean (C of Red Lobster) = Mean (C of Steak and Ale) = Mean (C of Texas Steak House & Saloon).

For this hypothesis, the F value was 72.00 and the probability of .0001 (see Table 15). Consequently, the null hypothesis was rejected. Respondents did not perceive the seven casual dinnerhouse restaurant chains to be equal in their cleanliness. Four restaurant chain groupings were revealed by the Duncan's multiple range test. Applbee's, Olive Garden, Steak and Ale, and Texas Steak House & Saloon were grouped together and received quite favorable ratings. The other three restaurant chains were grouped individually. Ground Round was rated least favorably, followed by Chi-Chi's and Red Lobster.

TABLE 15
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: CLEANLINESS

Number of observations in data set = 2665

Dependent Variable: Cleanliness

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	431	2290.7673	5.3150	6.69	0.0001
Error	2233	1774.7172	0.7948		
Corrected					
Total	2717	4065.4844			

R-Square	C.V	Root MSE	Cleanliness Mean
0.563467	15.81996	0.8915	5.6353

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	425	1947.4511	4.5822	5.77	0.0001
Restaurant	6	343.3162	57.2194	72.00	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE: CLEANLINESS

Alpha=0.05   df=2233   MSE=0.794768

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	5.96962	395	1
A			
A	5.90107	374	4
A			
A	5.89791	382	6
A			
A	5.83418	392	7
B	5.64484	397	5
C	5.26027	365	2
D	4.86667	360	3

*	1: Applebee's	5: Red Lobster
	2: Chi-Chi's	6: Steak and Ale
	3: Ground Round	7: Texas Steak House & Saloon
	4: Olive Garden	

Hypothesis 1c: for Friendly/Attentive Service (FAS)

Mean (FAS of Applebee's) = Mean (FAS of Chi-Chi's) = Mean (FAS Ground Round) = Mean (FAS of Olive Garden) = Mean (FAS of Red Lobster) = Mean (FAS of Steak and Ale) = Mean (FAS of Texas Steak House & Saloon).

The null hypothesis that the means are equal was rejected with an F value of 37.15 and a probability of .0001 (see Table 16). Respondents evaluated the friendly/attentive service of the 7 casual dinnerhouse restaurant chains differently. The Duncan's multiple range test divided the restaurant chains into three groups. Texas Steak House & Saloon itself was a group and received the most favorable rating. Steak and Ale, Applebee's, Red Lobster, and Olive Garden were grouped together and were perceived quite favorably. Chi-Chi's and Ground Round received the least favorable ratings.

TABLE 16
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: FRIENDLY/ATTENTIVE SERVICE

Number of observations in data set = 2694

Dependent Variable: Friendly/Attentive Service (FAS)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	430	1739.8099	4.0461	3.46	0.0001
Error	2263	2644.0193	1.1684		
Corrected					
Total	2693	4383.8293			

R-Square	C.V	Root MSE	FAS Mean
0.396870	20.11866	1.0809	5.3727

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	424	1479.3983	3.4891	2.99	0.0001
Restaurant	6	260.4116	43.4019	37.15	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
FRIENDLY/ATTENTIVE SERVICE

Alpha=0.05   df=2263   MSE=1.168369

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	5.77330	397	7
B	5.55208	384	6
B			
B	5.54750	400	1
B			
B	5.48492	398	5
B			
B	5.43501	377	4
C	4.91444	374	2
C			
C	4.83791	364	3

*	1: Applebee's	5: Red Lobster
	2: Chi-Chi's	6: Steak and Ale
	3: Ground Round	7: Texas Steak House & Saloon
	4: Olive Garden	

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Hypothesis 1d: for Atmosphere (A)

Mean (A of Applebee's) = Mean (A of Chi-Chi's) = Mean
(A of Ground Round) = Mean (A of Olive Garden) = Mean
(A of Red Lobster) = Mean (A of Steak and Ale) = Mean
(A of Texas Steak House & Saloon).

With an F value of 57.65 and an associated probability of
.0001, the null hypothesis that the means are equal was
rejected (see Table 17). The restaurants fall into five
groups according to the Duncan's multiple range test. While
Texas Steak House & Saloon, Olive Garden, and Applebee's were
grouped together, the other four chains were grouped
individually. Steak and Ale had the most favorable image,
whereas Ground Round had the least favorable image for
atmosphere.

TABLE 17
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: ATMOSPHERE

Number of observations in data set = 2728

Dependent Variable: Atmosphere

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	432	2057.4376	4.7626	4.66	0.0001
Error	2295	2347.0492	1.0227		
Corrected Total	2727	4404.4868			

R-Square	C.V	Root MSE	Atmosphere Mean
0.467123	18.62518	1.0113	5.4296

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	426	1703.6749	3.9992	3.91	0.0001
Restaurant	6	353.7627	58.9604	57.65	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
ATMOSPHERE

Alpha=0.05   df=2295   MSE=1.022679

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	5.87980	391	6
B	5.71750	400	7
B			
B	5.61780	382	4
B			
B	5.57855	401	1
C	5.39401	401	5
D	5.03385	384	2
E	4.73442	369	3

* 1: Applebee's   5: Red Lobster
    2: Chi-Chi's   6: Steak and Ale
    3: Ground Round   7: Texas Steak House & Saloon
    4: Olive Garden

Hypothesis 1e: Price/Value (PV)

Mean (PV of Applebee's) = Mean (PV of Chi-Chi's) = Mean (PV of Ground Round) = Mean (PV of Olive Garden) = Mean (PV of Red Lobster) = Mean (PV of Steak and Ale) = Mean (PV of Texas Steak House & Saloon).

The means are not equal because the F value was 5.47 and the probability was .0001 (see Table 18). Thus the null hypothesis was discarded. The price/value of the seven casual dinnerhouse restaurant chains varied in the respondents' view. Three restaurant chain groupings resulted from the Duncan's multiple range test. All chains received somewhat favorable ratings. However, Texas Steak House & Saloon and Applebee's received slightly higher ratings compared to other chains.

TABLE 18
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: PRICE/VALUE

Number of observations in data set = 2718

Dependent Variable: Price/Value (PV)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	432	2342.6900	5.4229	4.52	0.0001
Error	2285	2740.3332	1.1993		
Corrected					
Total	2717	5083.0232			

R-Square	C.V	Root MSE	PV Mean
0.460885	21.25019	1.0951	5.1534

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	426	2303.3327	5.4069	4.51	0.0001
Restaurant	6	39.3573	6.5595	5.47	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
PRICE/VALUE

Alpha=0.05   df=2285   MSE=1.199271

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	5.40399	401	7
A			
A	5.26617	402	1
B			
B	5.15000	380	4
B C			
C	5.08440	391	6
C			
C	5.08416	404	5
C			
C	5.04918	366	3
C			
C	5.01604	374	2

*	1: Applebee's	5: Red Lobster
	2: Chi-Chi's	6: Steak and Ale
	3: Ground Round	7: Texas Steak House & Saloon
	4: Olive Garden	

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Hypothesis 1f: for Reputation (R)

Mean (R of Applebee's) = Mean (R of Chi-Chi's) = Mean
(R of Ground Round) = Mean (R of Olive Garden) = Mean
(R of Red Lobster) = Mean (R of Steak and Ale) = Mean
(R of Texas Steak House & Saloon).

According to an F value of 56.74 with an associated
probability of .0001, the null hypothesis that the means are
equal was rejected (see Table 19). The results of the
Duncan's multiple range test shows four restaurant chain
groupings. Ground Round was rated least favorably, followed
by Chi-Chi's. Other chains received favorable ratings.

TABLE 19
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: REPUTATION

Number of observations in data set = 2787

Dependent Variable: Reputation

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	427	2234.1876	5.2323	4.83	0.0001
Error	2359	2554.7560	1.0830		
Corrected Total	2786	4271.1591			

R-Square	C.V	Root MSE	Reputation Mean
0.466530	19.10501	1.0407	5.4471

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	421	1865.5175	4.4312	4.09	0.0001
Restaurant	6	368.6702	61.4450	56.74	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
REPUTATION

Alpha=0.05   df=2359   MSE=1.082983

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	5.818 1	402	7
A			
A	5.73039	408	5
A			
B A	5.67920	399	6
B			
B	5.57805	410	1
B			
B	5.55416	397	4
C	4.93095	391	2
D	4.78421	380	3

*	1: Applebee's	5: Red Lobster
	2: Chi-Chi's	6: Steak and Ale
	3: Ground Round	7: Texas Steak House & Saloon
	4: Olive Garden	

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<u>Hypothesis 1g: for Location (L)</u>

<u>Mean (L of Applebee's) = Mean (L of Chi-Chi's) = Mean (L of Ground Round) = Mean (L of Olive Garden) = Mean (L of Red Lobster) = Mean (L of Steak and Ale) = Mean (L of Texas Steak House & Saloon).</u>

This null hypothesis was disproved because the F value was 54.93 with an associated probability of .0001 (see Table 20). The results of the Duncan's multiple range test placed the restaurant chains into four groupings. While Texas Steak House & Saloon and Applebee's were rated quite favorably and grouped together, Olive Garden and Chi-Chi's were rated least favorably.

TABLE 20
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: LOCATION

Number of observations in data set = 2845

Dependent Variable: Location

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	432	2980.4074	5.3150	6.69	0.0001
Error	2412	3997.1286	0.7948		
Corrected					
Total	2844	6977.5360			

R-Square	C.V	Root MSE	Location Mean
0.427143	23.21658	1.2873	5.5448

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	426	2434.1884	5.7141	3.45	0.0001
Restaurant	6	546.2190	91.0365	54.93	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
LOCATION

Alpha=0.05   df=2412   MSE=1.657184

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	6.13592	412	7
A			
A	6.08612	418	1
B	5.66585	410	6
B			
B	5.61259	413	5
C	5.32316	393	3
D	5.01496	401	4
D			
D	4.92211	398	2

1: Applebee's	5: Red Lobster
2: Chi-Chi's	6: Steak and Ale
3: Ground Round	7: Texas Steak House & Saloon
4: Olive Garden	

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Hypothesis 1h: for Decor/Design/Layout (DDL)

Mean (DDL of Applebee's) = Mean (DDL of Chi-Chi's) = Mean (DDL of Ground Round) = Mean (DDL of Olive Garden) = Mean (DDL of Red Lobster) = Mean (DDL of Steak and Ale) = Mean (DDL of Texas Steak House & Saloon).

The null hypothesis could not be supported. The F value was 45.59 and the associated probability was .0001 (see Table 21). In addition, the restaurant chains can be divided into four sets. A Duncan's multiple range test showed that Ground Round, Chi-Chi's and Red Lobster were in the bottom-ranking set.

TABLE 21
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: DECOR/DESIGN/LAYOUT

Number of observations in data set = 2710

Dependent Variable: Decor/Design/Layout (DDL)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	430	1982.4710	4.6104	4.70	0.0001
Error	2279	2234.8559	0.9806		
Corrected Total	2709	4217.3269			

R-Square	C.V	Root MSE	DDL Mean
0.470078	18.76399	0.9903	5.2775

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	424	1714.2222	4.0430	4.12	0.0001
Restaurant	6	268.2489	44.7081	45.59	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
DECOR/DESIGN/LAYOUT

Alpha=0.05   df=2279   MSE=0.98063

Means with the same letter are not significantly different.

Duncan Grouping		Mean	N	Restaurant*
	A	5.59481	385	6
	A			
B	A	5.55639	399	7
B	A			
B	A	5.47244	381	4
B				
B		5.43609	399	1
	C	5.18546	399	5
	C			
	C	5.04749	379	2
	D	4.60598	368	3

1: Applebee's   5: Red Lobster
2: Chi-Chi's   6: Steak and Ale
3: Ground Round   7: Texas Steak House & Saloon
4: Olive Garden

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Hypothesis 1i: for Advertising/Promotion (AP)

Mean (AP of Applebee's) = Mean (AP of Chi-Chi's) = Mean (AP of Ground Round) = Mean (AP of Olive Garden) = Mean (AP of Red Lobster) = Mean (AP of Steak and Ale) = Mean (AP of Texas Steak House & Saloon).

An F value of 59.83 and a probability of .0001 allows for the rejection of the null hypothesis (see Table 22). Respondents' perceptions of the seven casual dinnerhouse restaurant chains were not equal in terms of advertising/promotion. The results of the Duncan's multiple range test indicated six groupings. Red Lobster was rated most favorably, while Ground Round was rated least favorably.

TABLE 22
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: ADVERTISING/PROMOTION

Number of observations in data set = 2564

Dependent Variable: Advertising/Promotion (AP)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	412	2408.5248	5.8459	6.75	0.0001
Error	2152	1862.6343	0.8659		
Corrected					
Total	2563	4271.1591			

R-Square	C.V	Root MSE	AP Mean
0.563904	18.96924	0.9306	4.9056

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	406	2097.6853	5.1667	5.97	0.0001
Restaurant	6	310.8395	51.8066	59.83	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
ADVERTISING/PROMOTION

Alpha=0.05   df=2151   MSE=0.865939

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	Restaurant*
A	5.39031	392	5
B	5.25255	392	1
B			
B	5.11968	376	4
C	4.91831	355	6
D	4.73864	352	7
E	4.54722	360	2
F	4.24332	337	3

* 1: Applebee's   5: Red Lobster
   2: Chi-Chi's   6: Steak and Ale
   3: Ground Round   7: Texas Steak House & Saloon
   4: Olive Garden

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Hypothesis 1j: for Overall Image (OI)

Mean (OI of Applebee's) = Mean (OI of Chi-Chi's) = Mean (OI of Ground Round) = Mean (OI of Olive Garden) = Mean (OI of Red Lobster) = Mean (OI of Steak and Ale) = Mean (OI of Texas Steak House & Saloon).

According to an F value of 54.86 with an associated probability of .0001, the null hypothesis that the means are equal was rejected (see Table 23). The results of the Duncan's multiple range test shows four restaurant chain groupings. The groups were not mutually exclusive. For example, Steak and Ale was grouped with Texas Steak House & Saloon, which was rated most favorably, and was simultaneously grouped with Applebee's and Red Lobster. Ground Round and Chi-Chi's were in the same group, which was rated least favorably.

Based on the results of the tests on ten sub-hypotheses, null hypothesis 1 was rejected. Therefore, there were significant image variations among the seven casual dinnerhouse restaurant chains on each image dimension and overall image. The Duncan's multiple range test showed the groupings and made it possible to identify each chain's strength or weakness on each image measure compared with other chains (see Table 24).

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TABLE 23
THE ONE-WAY REPEATED MEASURES OF ANOVA
FOR THE VARIABLE: OVERALL IMPRESSION

Number of observations in data set = 2852

Dependent Variable: Overall Impression (OI)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	432	2306.5229	5.3920	3.80	0.0001
Error	2419	3401.2401	1.4061		
Corrected					
Total	2851	5707.7630			

R-Square	C.V	Root MSE	OI Mean
0.404103	22.31634	1.1858	5.3155

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Subject	426	1843.6963	4.3279	3.08	0.0001
Restaurant	6	462.8266	77.1378	54.86	0.0001

DUNCAN'S MULTIPLE RANGE TEST FOR THE VARIABLE:
OVERALL IMPRESSION

Alpha=0.05   df=2419   MSE=1.406052

Means with the same letter are not significantly different.

Duncan Grouping		Mean	N	Restaurant*
	A	5.72115	416	7
	A			
B	A	5.62716	405	6
B				
B	C	5.51069	421	1
B	C			
B	C	5.50367	409	5
	C			
	C	5.43532	402	4
	D	4.74505	404	2
	D			
	D	4.61266	395	3

*	1: Applebee's	5: Red Lobster
	2: Chi-Chi's	6: Steak and Ale
	3: Ground Round	7: Texas Steak House & Saloon
	4: Olive Garden	

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TABLE 24
RELATIVE PERCEPTIONS OF RESPONDENTS (N=427)

	Most favorable	Less favorable
Applebee's	Quality/Taste of F&B Cleanliness Price/Value Location	
Chi-Chi's		Quality/Taste of F&B Friendly/Attentive Service Price/Value Location Overall Impression
Ground Round		Quality/Taste of F&B Cleanliness Friendly/Attentive Service Atmosphere Price/Value Reputation Decor/Design/Layout Advertising/Promotion
Olive Garden	Cleanliness Decor/Design/Layout	Location
Red Lobster	Reputation Advertising/Promotion	Price/Value
Steak and Ale	Cleanliness Atmosphere Reputation Decor/Design/Layout Overall Impression	Price/Value
Texas Steak House & Saloon	Quality/Taste of F&B Cleanliness Friendly/Attentive Service Price/Value Reputation Location Decor/Design/Layout Overall Impression	

Note 1. This is based on the results of Duncan's Multiple Range Tests.
   Most favorable: The restaurant was ranked in the most favorable group on each image variable.
   Less favorable: The restaurant was ranked in the least favorable group on each image variable.

2. Respondents generally did not give unfavorable ratings on most of the image measures and tended to rate the restaurants somewhere within the neutral to favorable end of the scale. Therefore, the identified perceptions for each restaurant does not mean that consumers have unfavorable image. Compared with other restaurant chains, these are relative images perceived less favorably by consumers.

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Canonical Correlation Analysis

In testing hypothesis 2 (2a and 2b), a problem exists in examining the relationship between two sets of variables, each of which is composed of more than one variable. Canonical correlation analysis is a useful and powerful technique for exploring the relationships among multiple criterion (dependent) and predictor (independent) variables. It is a multivariate statistical model that facilitates the study of the interrelationships between a set of multiple criterion variables and a set of multiple predictor variables (Christensen 1983). Canonical correlation analysis is a method of analyzing the number, magnitude, and composition of independent dimensions of the relationship between two sets of variables (Hair et al. 1992). That is, while multiple regression predicts a single dependent variable from a set of independent variables, canonical correlation predicts multiple dependent variables from multiple independent variables.

The underlying logic involves deriving a linear combination of variables, called canonical variates, from each of the two sets of variables so that the canonical correlation between the two linear combinations is maximized (Hair et al. 1992). The application of canonical correlation does not stop with the derivation of a single relationship between the two sets of variables. Instead, a number of pairs of linear

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combinations (functions) may be derived. The maximum number of functions (canonical variates) that can be extracted from the sets of variables is equal to the number of variables in the smallest set of variables. Among them, only those canonical correlations that are statistically different from zero are considered important. Canonical correlations significantly different from zero are called canonical relations (Christensen 1983). The first pair of canonical variates (function) exhibits the highest intercorrelation possible between the two sets of variables. The next pair has the second largest correlation that was not accounted for by the first function, and so forth.

In particular, the objectives of canonical analysis are summarized as follows:

1. Determining whether two sets of variables are independent of one another or, conversely, determining the magnitude of the relationships that may exist between the two sets.

2. Deriving a set of weights for each set of criterion and predictor variables such that the linear combinations themselves are maximally correlated.

3. Deriving additional linear functions that maximize the remaining correlation, subject to being independent of the preceding sets of linear composites.

4. Explaining the nature of whatever relationships exist between the sets of criterion and predictor variables, generally by measuring the relative contribution of each variable to the canonical functions that are extracted (Hair et al. 1992).

Canonical correlation analysis derives four types of information that can be used to interpret the functions: (1) the level of statistical significance of the function, (2) the magnitude of the canonical correlation, (3) the redundancy measure of shared variance, and (4) the magnitude of canonical cross-loadings and/or loadings.

The canonical analysis provides canonical correlations and their respective levels of statistical significance. The canonical correlation reflects the strength of the relationships between the pairs of variates. Each function derived in the analysis has its own canonical correlation. To be considered significant, the level of significance is generally expected to be at least .05. The redundancy measure summarizes the ability of a set of predictor variables to explain variation in the criterion variables. This measure is analogous to multiple regression's R^2 statistic. The theoretical and practical significance of the research problem being investigated determines the minimum acceptable redundancy index.

Each canonical function consists of a pair of variates, one for the criterion variables and one for the predictor variables. To determine which variables are most important in

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a given pair of canonical variates, canonical weights, canonical loadings, and/or canonical cross-loadings can be used. In most instances, however, the use of cross-loadings is the preferred approach and is provided by a SAS package. This procedure involves correlating each of the original observed dependent variables directly with the independent canonical variate. If the canonical cross-loadings are not available (the SPSS package does not provide cross-loadings), the canonical loadings approach is a second alternative. Canonical loadings measure the simple linear correlation between an original observed variable in the dependent or independent set and the set's canonical variate. Generally, a canonical loading or cross-loading greater than $+/-.30$ is considered significant (Christensen 1983; Hair et al. 1992). The larger the canonical variate coefficient, the more important the variable is in deriving the canonical variate.

Research Question 2:

Are there any statistically significant relationships between multi-restaurant image measures and multi-restaurant loyalty measures? If there are significant relationships, what are the magnitude and nature of the relationships between the two sets of variables?

Hypothesis 2:

Multi-restaurant image measures are not significantly related to multi-restaurant loyalty measures.

Two sub-hypotheses were developed in order to address each component of the loyalty concept: the behavioral (actual purchase) and attitudinal (purchase intentions) components.

Hypothesis 2a:

Multi-restaurant image measures do not significantly affect purchase intentions toward alternative restaurant chains.

The patronage intentions toward the seven casual dinnerhouse restaurant chains in the next 60 days were used as the loyalty measures (seven criterion variables). The image measures (70 predictor variables) were consumer perceptions of the alternative seven chains on the nine restaurant image dimensions and overall impression. Two sets of variables are shown in Table 27.

Table 25 shows the results of a canonical correlation analysis performed on the set of seven patronage intention

items and the 70 items of image perceptions. The multivariate tests of significance (Wilks' Lambda, Pillai's criterion, Hotelling's trace, and Roy's greatest root) for the seven canonical functions revealed that the overall relationship between the criterion composite variates and the predictor composite variates was significant at p =.0001. According to the test of significance, null hypothesis 2a was rejected. Therefore, there were significant relationships between multi-restaurant image measures and purchase intentions toward alternative restaurant chains.

In this analysis, there were seven interpretable canonical functions whose canonical correlations were significantly different than zero at the probability level of .0001 by the F statistic based on Rao's approximation. The canonical correlations ranged from .89 to .67. The overlapping variances between pairs of canonical variates, which are equal to the squared canonical correlation for each function, ranged between 79.27% and 45.05%. The redundancy index for canonical functions indicated that 62.62% of the variance in the purchase intention variables was accounted for by the variability in the image perception variables (see Table 26). This implied that image perceptions had

TABLE 25
RESULTS OF CANONICAL CORRELATION ANALYSIS*

Canonical Correlation Analysis

Function	Canonical Correlation	Canonical R^2	F Statistic	Probability
1	.8903	.7927	10.1140	.0001
2	.8684	.7541	9.1345	.0001
3	.8493	.7214	8.2563	.0001
4	.8244	.6796	7.3558	.0001
5	.7851	.6163	6.4339	.0001
6	.7522	.5658	5.6229	.0001
7	.6712	.4505	4.4843	.0001

Multivariate Test Statistics

Statistics	Value	Approximate F	Probability
Wilks' lambda	0.0004	10.1140	.0001
Pillai's criterion	4.5804	9.4655	.0001
Hotelling's trace	15.3304	10.7089	.0001
Roy's greatest root	3.8238	19.1188	.0001

* Criterion (Dependent) Variables: Loyalty measures (Purchase Intentions)
  Predictor (Independent) Variables: Image perceptions

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TABLE 26

REDUNDANCY ANALYSIS
FOR CRITERION AND PREDICTOR VARIATES*

Standardized Variance of the Criterion Variables Explained by:

| | The Predictor Variables | |
Function	Proportion	Cumulative Proportion
1	.0960	.0960
2	.1076	.2036
3	.0864	.2899
4	.0764	.3663
5	.0765	.4428
6	.0595	.5023
7	.1238	.6262

Standardized Variance of the Predictor Variables Explained by:

| | The Criterion Variables | |
Function	Proportion	Cumulative Proportion
1	.0535	.0535
2	.0538	.1073
3	.0412	.1485
4	.0350	.1835
5	.0351	.2186
6	.0260	.2446
7	.0543	.2989

* Criterion (Dependent) Variables: Loyalty measures (Purchase Intentions)
  Predictor (Independent) Variables: Image perceptions

significant affects on patronage intention measures. Conversely, only 29.89% of the variation in the image perception variables was accounted for by the purchase intention variables.

To describe the nature of the relationship between the loyalty and image measures, the canonical cross-loadings greater than the absolute value of + or - .30 were considered for the interpretation of the variates in Table 27. The first variate pair (function) showed that this consumer group is strongly disloyal to Olive Garden and loyal to Applebee's, with their canonical cross-loadings of -.65 and .47, respectively. A consumer's decision not to patronize Olive Garden and to patronize Applebee's in the next 60 days was related to: (1) the consumer's negative images of Olive Garden on overall impression, quality/taste of food and beverage, friendly/attentive service, reputation, atmosphere, price/value, decor/design/layout and cleanliness; and (2) Applebee's favorable images in general, except its advertising/promotion and location.

The second variate pair revealed a loyalty to Texas Steak House & Saloon but disloyalty to Steak and Ale and Red Lobster. Their canonical cross-loadings were .69, -.48 and -.43, respectively. This segment group has favorable images of

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TABLE 27
CANONICAL ANALYSIS:
LOYALTIES (PURCHASE INTENTIONS) VS. IMAGE PERCEPTIONS

Correlations Between the Criterion Variables
and the Canonical Variates of the Predictor Set

Criterion Set: Loyalty Measures	C1**	C2	Canonical Cross-Loadings C3	C4	C5	C6	C7
Applebee's	.47*	.27	-.52*	.53*	-.18	.10	.34*
Chi-Chi's	-.26	.12	-.29	-.13	-.37*	.70*	.43*
Ground Round	.03	.05	.27	-.10	-.68*	-.16	.65*
Olive Garden	-.65*	.12	-.24	.26	.17	-.05	.64*
Red Lobster	.01	-.43*	.48*	.59*	.06	.37*	.31*
Steak and Ale	.28	-.48*	-.12	-.25	.33*	.13	.70*
Texas Steak House & Saloon	.25	.69*	.32*	-.09	.30*	.23	.46*

Correlations Between the Predictor Variables
and the Canonical Variates of the Criterion Set

Predictor Set: Image Measures	P1**	P2	Canonical Cross-Loadings P3	P4	P5	P6	P7
Applebee's:							
Friendly/Attentive Service	.41*	.19	-.38*	.32*	-.15	.11	.20
Decor/Design/Layout	.39*	.19	-.27	.23	-.07	.08	.03
Quality/Taste of F&B	.49*	.25	-.42*	.39*	-.09	.06	.26
Advertising/Promotion	.24	.07	-.22	.24	-.14	.15	.20
Reputation	.40*	.15	-.43*	.39*	-.18	.11	.20
Pleasant Atmosphere	.42*	.27	-.28	.30*	-.12	.10	.33*
Price/Value	.45*	.23	-.36*	.39*	-.11	.04	.27
Cleanliness	.30*	.24	-.31*	.30*	-.13	.14	.22
Location	.17	.12	-.03	.17	-.10	.06	.11
Overall Impression	.49*	.22	-.46*	.43*	-.18	.17	.31*
Chi-Chi's:							
Friendly/Attentive Service	-.15	.05	-.14	-.11	-.26	.40*	.28
Decor/Design/Layout	-.18	.13	-.19	-.01	-.21	.41*	.32*
Quality/Taste of F&B	-.16	.15	-.24	-.13	-.39*	.57*	.30*
Advertising/Promotion	-.07	.10	-.18	-.04	-.24	.40*	.22
Reputation	-.10	.08	-.21	-.03	-.35*	.41*	.35*
Pleasant Atmosphere	-.18	.08	-.21	-.09	-.27	.47*	.34*
Price/Value	-.13	.14	-.25	-.04	-.17	.43*	.39*
Cleanliness	-.13	.10	-.10	-.10	-.28	.39*	.19
Location	-.10	.02	.05	.04	.07	.19	.24
Overall Impression	-.20	.09	-.26	-.11	-.36*	.62*	.36*
Ground Round:							
Friendly/Attentive Service	-.00	-.00	.21	-.10	-.56*	-.16	.38*
Decor/Design/Layout	.05	.04	.25	-.05	-.42*	-.12	.53*
Quality/Taste of F&B	.01	.05	.20	-.23	-.55*	-.11	.55*
Advertising/Promotion	-.03	.02	.09	-.09	-.36*	-.02	.32*
Reputation	.07	.03	.14	-.04	-.51*	-.18	.48*
Pleasant Atmosphere	.06	.02	.21	-.14	-.52*	-.06	.44*
Price/Value	.11	.08	.01	-.00	-.46*	-.09	.40*
Cleanliness	-.02	.01	.14	-.06	-.50*	-.05	.43*

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TABLE 27 (Continued)

Predictor Set: Image Measures	Canonical Cross-Loadings						
	P1	P2	P3	P4	P5	P6	P7
Location	.08	-.00	.03	-.19	-.30*	-.07	.26
Overall Impression	.06	.02	.21	-.07	-.60*	-.13	.58*
Olive Garden:							
Friendly/Attentive Service	-.51*	.09	-.16	.22	-.12	-.17	.40*
Decor/Design/Layout	-.43*	.12	-.15	.27	-.08	-.04	.44*
Quality/Taste of F&B	-.56*	.08	-.12	.28	.08	-.06	.51*
Advertising/Promotion	-.28	.08	-.09	.14	.05	.00	.26
Reputation	-.47*	.05	-.13	.29	.02	-.07	.32*
Pleasant Atmosphere	-.47*	.12	-.12	.24	.08	-.05	.39*
Price/Value	-.44*	.09	-.12	.22	.06	-.12	.46*
Cleanliness	-.36*	.10	-.15	.26	.04	-.03	.35*
Location	-.18	.06	.05	.14	.17	.09	.30*
Overall Impression	-.60*	.10	-.23	.32*	.08	-.11	.54*
Red Lobster:							
Friendly/Attentive Service	-.02	.29	.40*	.43*	.03	.20	.16
Decor/Design/Layout	-.01	-.24	.36*	.38*	.01	.23	.22
Quality/Taste of F&B	.03	-.29	.44*	.50*	.01	.34*	.25
Advertising/Promotion	-.00	-.19	.19	.17	-.03	.29	.22
Reputation	-.04	-.30*	.34*	.46*	-.02	.27	.21
Pleasant Atmosphere	-.01	-.27	.36*	.40*	-.04	.27	.24
Price/Value	.03	-.27	.35*	.41*	.07	.23	.24
Cleanliness	-.02	-.20	.32*	.37*	-.03	.31*	.22
Location	.07	-.21	.08	.14	-.06	.14	.20
Overall Impression	-.01	-.34*	.44*	.55*	.01	.34*	.31*
Steak and Ale:							
Friendly/Attentive Service	.28	-.38*	-.11	-.21	.19	.08	.47*
Decor/Design/Layout	.20	-.32*	-.10	-.15	.19	.14	.45*
Quality/Taste of F&B	.29	-.34*	-.08	-.18	.20	.18	.49*
Advertising/Promotion	.22	-.29	.09	-.11	.11	.13	.33*
Reputation	.28	-.43*	-.06	-.10	.24	.13	.38*
Pleasant Atmosphere	.24	-.41*	-.14	-.19	.13	.17	.53*
Price/Value	.29	-.32*	-.06	-.09	.16	.11	.48*
Cleanliness	.20	-.31*	-.04	-.05	.07	.17	.46*
Location	.12	-.24	-.11	-.12	-.03	.01	.30*
Overall Impression	.31*	-.45*	-.10	-.19	.27	.20	.57*
Texas Steak House & Saloon:							
Friendly/Attentive Service	.18	.54*	.27	-.09	.19	.07	.18
Decor/Design/Layout	.15	.48*	.29	-.07	.11	.03	.26
Quality/Taste of F&B	.21	.67*	.31*	-.09	.22	.04	.22
Advertising/Promotion	.16	.23	.22	-.08	.07	.10	.27
Reputation	.09	.44*	.31*	.00	.18	.09	.24
Pleasant Atmosphere	.21	.53*	.31*	-.03	.16	.09	.27
Price/Value	.21	.48*	.26	.00	.20	.08	.31*
Cleanliness	.20	.48*	.18	.03	.19	.11	.22
Location	.10	.31*	.13	-.03	.12	.05	.13
Overall Impression	.20	.65*	.35*	-.09	.26	.14	.37*

** C1 and P1 stand for the variates of the first canonical function; C1 = Criterion variate of the first function, and P1 = Predictor variate of the first function

Texas Steak House & Saloon on all image dimensions, except advertising/promotion. Among the image variables, quality/taste of F&B is the most favorable, followed by overall impression, friendly/attentive service, and pleasant atmosphere. Meanwhile, these customers have unfavorable images of Steak and Ale and Red Lobster, especially Steak and Ale.

The third variate pair explained a segment disloyal to Applebee's and loyal to Red Lobster and Texas Steak House & Saloon. Their canonical cross-loadings were -.52, .48 and .32, respectively. These consumers have unfavorable images of Applebee's on overall impression, reputation, and quality/ taste of F&B. In the meantime, they have favorable image perceptions in general of Red Lobster, except for its advertising/promotion and its location.

The fourth variate pair indicated strong patronage intentions toward Red Lobster and Applebee's with their canonical cross-loadings of .59 and .53, respectively. For both restaurants, image perceptions on overall impression and quality/taste of F&B are mostly related to these consumers' patronage intentions. Image perceptions on advertising/promotion and location are not significant in explaining their patronage intentions toward both restaurants.

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Moreover, this segment group does not reveal any significant disloyalty toward other restaurant chains.

The fifth variate pair explained a segment strongly disloyal to Ground Round, followed by Chi-Chi's. Their canonical cross-loadings were -.68 and -.37, respectively. This segment group has unfavorable perceptions of Ground Round on all image variables. In the case of Chi-Chi's, the unfavorable perceptions of quality/taste of F&B, overall impression, and reputation have significant impacts on their negative patronage intention.

The sixth variate pair revealed a strong loyalty to Chi-Chi's with its cross-loading of .70. All image attributes of Chi-Chi's, except its location, are perceived favorably by this segment group. This group is also loyal to Red Lobster as a result of their favorable images of Red Lobster on overall impression and quality/taste of F&B.

Finally, the seventh variate pair indicated that these consumers are loyal to all restaurant chains, especially to Steak and Ale. Steak and Ale, Ground Round, and Olive Garden are well positioned, whereas Applebee's and Chi-Chi's are positioned weakly to this segment group.

<u>Hypothesis 2b:</u>

> <u>Multi-restaurant image measures do not significantly</u>
> <u>affect proportions of patronage toward alternative</u>
> <u>restaurant chains.</u>

The loyalty measures (seven criterion variables) consisted of each respondent's relative proportions of patronage for dinner at the seven casual dinnerhouse restaurant chains. The image measures (70 predictor variables) consisted of consumer perceptions of the alternative seven chains on the nine restaurant image dimensions and overall impression.

Table 28 shows the results of a canonical correlation analysis performed on the set of seven proportion of patronage variables and the 70 image perception variables. The multivariate tests of significance (Wilks' Lambda, Pillai's criterion, Hotelling's trace, and Roy's greatest root) for the seven canonical functions revealed that the overall relationship between the criterion composite variates and the predictor composite variates was significant at $p = .0001$. According to the test of significance, null hypothesis 2b was rejected. There were significant relationships between multi-restaurant image measures and loyalty measures in terms of

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TABLE 28
RESULTS OF CANONICAL CORRELATION ANALYSIS*

Canonical Correlation Analysis

Function	Canonical Correlation	Canonical R^2	F Statistic	Probability
1	.7350	.5402	3.3766	.0001
2	.6917	.4785	3.0026	.0001
3	.6561	.4305	2.6828	.0001
4	.6103	.3724	2.3592	.0001
5	.5405	.2921	2.0509	.0001
6	.5152	.2654	1.9512	.0001

Multivariate Test Statistics

Statistics	Value	Approximate F	Probability
Wilks' lambda	0.0446	3.3766	.0001
Pillai's criterion	2.3792	3.2947	.0001
Hotelling's trace	4.2158	3.4563	.0001
Roy's greatest root	1.1750	5.8920	.0001

*   Criterion   (Dependent)   Variables: Loyalty   measures
(Proportions of patronage)
    Predictor (Independent) Variables: Image perceptions

proportions of patronage toward alternative restaurant chains.

The interpretable six canonical functions were derived with their canonical correlations ranging from .52 to .74, which are all significantly different than zero at the .0001 level by the F statistic based on Rao's approximation. The redundancy index for canonical functions indicated that 40.54% of the variance in the proportion of patronage variables was accounted for by the variability in the image perception variables (see table 29). This implied that image perceptions had significant affects on multi-loyalty measures: the proportions of patronage toward alternative casual dinnerhouse restaurants. Conversely, only 11.21% of the variation in the image perception variables was accounted for by the proportion of patronage variables.

Table 30 shows the canonical cross-loadings greater than the absolute value of + or -.30, which can be used to describe the nature of the relationship between the measures of loyalty and the measures of image. The first variate pair (function) indicated that this consumer group is disloyal to Olive Garden, Red Lobster, and Chi-Chi's with their canonical cross-loadings of -.74, -.36, and -.32, respectively. In contrast, they are loyal to Ground Round and Texas Steak House & Saloon. The canonical cross-loadings for these were .53,

TABLE 29

REDUNDANCY ANALYSIS
FOR CRITERION AND PREDICTOR VARIATES*

Standardized Variance of the Criterion Variables Explained by:

| | The Predictor Variables | |
Function	Proportion	Cumulative Proportion
1	.1034	.1034
2	.0823	.1857
3	.0781	.2639
4	.0587	.3225
5	.0434	.3659
6	.0396	.4054
7	.0000	.4054

Standardized Variance of the Predictor Variables Explained by:

| | The Criterion Variables | |
Function	Proportion	Cumulative Proportion
1	.0303	.0303
2	.0214	.0517
3	.0256	.0773
4	.0157	.0930
5	.0097	.1027
6	.0094	.1121
7	.0000	.1121

* Criterion (Dependent) Variables: Loyalty measures
                                 (Proportions of Patronage)
  Predictor (Independent) Variables: Image perceptions

TABLE 30
CANONICAL ANALYSIS:
LOYALTIES (PROPORTIONS OF PATRONAGE) VS. IMAGE PERCEPTIONS

Correlations Between the Criterion Variables
and the Canonical Variates of the Predictor Set

| Criterion Set: Loyalty Measures | Canonical Cross-Loadings | | | | | |
	C1**	C2	C3	C4	C5	C6
Applebee's	.28	.83*	-.31*	.35*	-.07	.09
Chi-Chi's	-.32*	-.13	.06	-.03	-.82*	.45*
Ground Round	.53*	-.49*	.02	.33*	.27	.54*
Olive Garden	-.74*	-.30*	-.37*	.39*	.18	-.21
Red Lobster	-.36*	.18	.44*	-.58*	.47*	.28
Steak and Ale	.10	-.10	.83*	.25	-.08	-.48*
Texas Steak House & Saloon	.43*	-.35*	-.40*	-.57*	-.16	-.43*

Correlations Between the Predictor Variables
and the Canonical Variates of the Criterion Set

| Predictor Set: Image Measures | Canonical Cross-Loadings | | | | | |
	P1**	P2	P3	P4	P5	P6
Applebee's:						
Friendly/Attentive Service	.17	.60*	-.12	.11	-.09	.03
Decor/Design/Layout	.26	.39*	-.09	.07	-.15	.03
Quality/Taste of F&B	.26	.54*	-.15	.14	-.08	.01
Advertising/Promotion	.14	.29	-.08	.02	-.20	.10
Reputation	.17	.45*	-.11	.19	-.09	.11
Pleasant Atmosphere	.23	.43*	-.12	.09	-.13	.12
Price/Value	.18	.48*	-.13	.16	-.03	.01
Cleanliness	.18	.41*	-.25	.18	-.07	.00
Location	.16	.18	-.12	.07	-.07	.14
Overall Impression	.26	.55*	-.11	.20	-.06	.02
Chi-Chi's:						
Friendly/Attentive Service	-.11	-.08	.06	-.03	-.25	.20
Decor/Design/Layout	-.08	-.08	-.03	.01	-.46*	.30*
Quality/Taste of F&B	-.07	-.12	-.01	.11	-.39*	.27
Advertising/Promotion	-.02	-.09	-.04	.01	-.50*	.21
Reputation	-.05	-.13	-.01	.09	-.31*	.21
Pleasant Atmosphere	-.12	-.13	-.02	.11	-.40*	.22
Price/Value	-.04	-.05	-.02	.21	-.39*	.18
Cleanliness	-.12	-.10	-.05	-.02	-.30*	.10
Location	-.22	-.05	.01	-.09	-.28	-.02
Overall Impression	-.09	-.16	-.06	-.10	-.45*	.23
Ground Round:						
Friendly/Attentive Service	.24	-.28	.12	.16	.17	.43*
Decor/Design/Layout	.21	-.33*	.06	.06	.05	.33*
Quality/Taste of F&B	.29	-.30*	.08	.13	.12	.41*
Advertising/Promotion	.08	-.25	.05	.09	-.03	.15
Reputation	.29	-.23	.04	.19	.10	.36*
Pleasant Atmosphere	.24	-.31*	.08	.10	.08	.37*
Price/Value	.26	-.07	.01	.25	.01	.40*
Cleanliness	.18	-.23	.26	.15	.08	.32*

TABLE 30 (Continued)

Predictor Set: Image Measures	Canonical Cross-Loadings					
	P1	P2	P3	P4	P5	P6
Location	.27	-.12	.08	.23	.08	.18
Overall Impression	.28	-.31*	.02	.20	.12	.42*
Olive Garden:						
Friendly/Attentive Service	-.36*	-.12	-.22	.30*	.13	-.06
Decor/Design/Layout	-.41*	-.06	-.20	.16	.06	.14
Quality/Taste of F&B	-.43*	-.20	-.21	.26	.18	.04
Advertising/Promotion	-.22	-.05	-.13	.11	-.06	.02
Reputation	-.33*	-.12	-.21	.23	.08	.11
Pleasant Atmosphere	-.42*	-.11	-.25	.19	.09	.04
Price/Value	-.36*	-.15	-.19	.28	.06	-.02
Cleanliness	-.31*	-.00	-.20	.20	.08	-.03
Location	-.28	-.06	-.16	-.12	-.20	-.12
Overall Impression	-.43*	-.16	-.21	.32*	.08	.01
Red Lobster:						
Friendly/Attentive Service	-.21	-.08	.26	-.40*	.27	.15
Decor/Design/Layout	-.25	-.01	.23	-.30*	.19	.10
Quality/Taste of F&B	-.23	.05	.23	-.41*	.24	.14
Advertising/Promotion	-.08	.02	.15	-.22	.01	.20
Reputation	-.25	.01	.14	-.33*	.19	.19
Pleasant Atmosphere	-.20	.00	.26	-.33*	.19	.10
Price/Value	-.26	.05	.17	-.28	.20	.11
Cleanliness	-.20	.04	.15	-.28	.17	.09
Location	.01	.12	.20	-.13	.21	.16
Overall Impression	-.24	.10	.19	-.34*	.28	.13
Steak and Ale:						
Friendly/Attentive Service	.07	-.01	.51*	.18	.02	-.26
Decor/Design/Layout	.01	.01	.42*	.13	-.07	-.11
Quality/Taste of F&B	.13	.01	.48*	-.10	-.06	-.18
Advertising/Promotion	.08	-.06	.36*	-.06	-.08	-.07
Reputation	.04	.05	.43*	.04	-.02	-.14
Pleasant Atmosphere	.09	-.06	.53*	.18	-.01	-.19
Price/Value	.05	.06	.40*	.14	-.05	-.09
Cleanliness	.11	-.02	.33*	.09	.03	-.13
Location	.20	.02	.28	.11	.06	.02
Overall Impression	.15	-.01	.55*	.08	-.03	-.19
Texas Steak House & Saloon:						
Friendly/Attentive Service	.30*	-.15	-.35*	-.33*	-.11	-.20
Decor/Design/Layout	.24	-.15	-.41*	-.25	-.05	-.01
Quality/Taste of F&B	.37*	-.17	-.49*	-.32*	-.05	-.18
Advertising/Promotion	.19	-.10	-.09	-.27	-.09	-.02
Reputation	.29	-.13	-.31*	-.32*	-.03	-.09
Pleasant Atmosphere	.35*	-.13	-.36*	-.29	-.08	-.17
Price/Value	.31*	-.06	-.30*	-.24	-.09	-.23
Cleanliness	.30*	-.02	-.31*	-.22	-.03	-.25
Location	.23	-.09	-.24	-.05	-.04	-.21
Overall Impression	.40*	-.18	-.41*	-.32*	-.12	-.20

** C1 and P1 stand for the variates of the first canonical function; C1 = Criterion variate of the first function, and P1 = Predictor variate of the first function

and .43, respectively. This consumer group's loyalty behaviors are significantly related to (1) Olive Garden's negative images in general; and (2) Texas Steak House & Saloon's favorable images on overall image, quality/taste of F&B, and pleasant atmosphere. None of the image variables of Ground Round, Red Lobster, and Chi-Chi's are strongly correlated (higher than + or -.30) with loyalty behaviors.

The second variate pair revealed a high loyalty to Applebee's but disloyalty to Ground Round, Texas Steak House & Saloon and Olive Garden. Their canonical cross-loadings were .83, -.49, -.35, and -.30, respectively. This segment group's loyalty behaviors in the last three month period were significantly related to the image perceptions of Applebee's and Ground Round. These customers have favorable perceptions of Appebee's in general, except for the images of advertising/promotion and location. Meanwhile, these customers have unfavorable images for Ground Round's decor/design/layout, atmosphere, overall impression, and quality/taste of F&B.

The third variate pair explained a segment loyal to Steak and Ale and Red Lobster, but disloyal to Texas Steak House & Saloon, Olive Garden, and Applebee's. To this segment group, Steak and Ale is well positioned with favorable images on all

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image variables, except on location. Overall image, pleasant atmosphere, and friendly/attentive service are the most significant image variables in explaining this group's loyalty behavior. In comparison, Texas Steak House & Saloon is positioned unfavorably. This group has unfavorable image perceptions in general for Texas Steak House & Saloon, especially on its quality/taste of F&B.

An examination of the fourth variate pair indicated a strong disloyalty to Red Lobster and Texas Steak House & Saloon with their cross-loadings of -.58 and -.57, respectively. Instead, it showed loyalty to Olive Garden, Applebee's, and Ground Round with their cross-loadings of .39, .35, and .33, respectively. These loyalty behaviors are significantly explained by: (1) unfavorable perceptions of Red Lobster for its quality/taste of F&B, friendly/attentive service, overall impression, reputation, atmosphere, and decor/design/layout; (2) unfavorable perceptions of Texas Steak House & Saloon on its friendly/attentive service, quality/taste of F&B, reputation, and overall impression, and (3) favorable perceptions of Olive Garden on its overall image and friendly/attentive service.

The fifth variate pair explained a segment strongly disloyal to Chi-Chi's (cross-loading of -.82) but loyal to Red

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Lobster (cross-loading of .47). Their loyalty behaviors are significantly explained only by the image of Chi-Chi's. This segment group has unfavorable perceptions for Chi-Chi's in general, except its friendly/attentive service and location.

Finally, the sixth variate pair represented a loyalty to Ground Round and Chi-Chi's, but disloyalty to Steak and Ale and Texas Steak House & Saloon. The image of Ground Round is significantly related to the loyalty behaviors of this segment group. Ground Round is positioned well to this segment group in general, but could improve its image of advertising/ promotion and location.

According to the results of both hypotheses tests (hypothesis 2a and 2b), null hypothesis 2 was rejected. Multi-restaurant image measures (predictor variables) were significantly related to multi-restaurant loyalty measures (criterion variables). However, the redundancy index revealed that image measures were more related to purchase intentions than to proportions of patronage.

Furthermore, each canonical correlation analysis yielded a number of functions. The interpretation of each canonical function provided the nature of competition in terms of a loyalty segment and positioning, by matching consumers'

loyalty behavior toward one or more restaurants with the strengths and weaknesses of alternative restaurants on salient image measures. In each canonical function, the images of alternative restaurants played an important role in affecting loyalty patterns as well as in determining each restaurant's market position within its competitive environment.

DISCUSSION

In this study, the canonical analysis revealed that the measures of image (predictive variables) had significant impact on both loyalty measures (criterion variables) toward selected casual dinnerhouse restaurant chains: (1) patronage intentions and (2) proportions of patronage. However, the image measures were more related with purchase intentions than with proportions of patronage. This finding supports the generally held view of consumer decision making process, namely, that consumers are moved through the hierarchy of effects, such as liking, patronage intention, and actual behavior (Nevin and Houston 1980). In the patronage model (Darden 1979), the actual behavior is determined by inhibitors (or situational factors) as well as by patronage intentions. Therefore, in some cases, actual patronage behavior is not predicted by intention to patronage.

In this canonical analysis, a delineated function itself implies both a loyalty segment (criterion variate) and its market positioning (predictor variate) in a local market. That is, each criterion variate shows the loyalty patterns toward 7 causal dinnerhouse restaurant chains. These loyalty patterns suggest varying degrees of success/failure for the rival chains serving each loyalty segment. Similarly, the patterns of image perceptions in each predictor variate reflect how these restaurant chains are positioned in relation to each other and to the loyalty segment of each criterion variate. Therefore, from the interpretation of the canonical functions, marketers of the seven casual dinnerhouse restaurant chains are able to identify how their restaurants are perceived differently on image measures by each loyalty segment group.

Now, from each canonical function, marketers can identify their strengths and weaknesses on image dimensions which lead to loyalty patterns of each segment group and can compare their image to those of competing restaurants. As a consequence, marketers can utilize the obtained information in their repositioning strategy in the overall market and/or their specific target markets to improve or change their product/service image by emphasizing the strengths and/or minimizing the weaknesses which are significantly related to

patronage intention or actual patronage behavior. Managers of each restaurant chain should understand the importance of image and use the identified image in their repositioning strategies.

In the most canonical functions, consumers' perception on the overall impression, quality/taste of food and beverage, and friendly/attentive service contributed the most to both patronage intentions and proportions of patronage toward the seven casual dinnerhouse restaurants. In contrast, the image measures of location and advertising/promotion contributed the least to the loyalty patterns.

These results reveal the importance of the overall image along with its specific image attributes in affecting the loyalty behaviors. To be competitive with the other restaurants, managers of each restaurant should provide and develop a high quality of food and beverage with a good taste. Training their employees is also an important factor to provide a friendly and attentive service to customers all the time. In the mean time, the efforts of each restaurant's advertising and promotions are not enough in a local market. Each restaurant needs a more effective promotions/advertising that emphasizes their identified image attributes that most appeal to their customers. All efforts regarding the image

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improvement will promise each restaurant's success in market positioning and will lead to a high customer loyalty.

SUMMARY

This chapter presented and discussed the study's results. The analysis of ANOVA with a repeated measure revealed significant image variations among seven casual dinnerhouse restaurant chains on each image dimension and overall image. Furthermore, the Duncan's multiple range test showed the groupings and made it possible to identify each chain's strengths or weaknesses on each image measure compared with other chains.

The canonical analysis revealed that the measures of image (predictive variables) affected significantly both loyalty measures (criterion variables) toward selected casual dinnerhouse restaurant chains: patronage intentions and proportions of patronage. However, the redundancy index revealed that image measures were more related to purchase intentions than proportions of patronage. A further discussion on the implications of this study's findings is presented in the next chapter.

CHAPTER V

SUMMARY AND CONCLUSION

INTRODUCTION

In the first part of this chapter, the study findings are summarized with the results of the hypotheses tests. In the following section, the implications of the research findings are discussed. The limitations of the present study and suggestions for future study directions are explored in the last two sections.

SUMMARY OF THE STUDY FINDINGS

The study was undertaken to examine the relationship between the measures of restaurant image and loyalty measures toward seven selected casual dinnerhouse restaurant chains in Roanoke, Virginia, and to explore the nature of the competition among those chains. Two major hypotheses were tested which deal with the image variations among the seven casual dinnerhouse restaurant chains on each image measure and the relationship between image measures and loyalty measures.

Surveys were sent to a sample population of 1,500 households whose annual income was $25,000 and over and who

resided in Roanoke. Four-hundred-seventy one questionnaires were returned. After eliminating the unusable responses, 427 respondents who visited the selected seven casual dinnerhouse restaurant chains at least three times in the preceding three month period were selected as the final sample for the present study.

For each of the seven casual dinnerhouse restaurant chains, judgements on ten restaurant image measures were obtained from each household using semantic differential scalings (a total of 70 measures). For loyalty measures, two sets of multi-restaurant loyalties toward the seven restaurant chains were measured in terms of patronage intention and actual behavior. The first indicator measured the consumer's willingness to go to each of the seven restaurant chains for dinner in the next 60 days (a total of seven measures). The second indicator measured each respondent's relative proportion of patronage for dinner at each of the seven dinnerhouse restaurant chains over the previous three-month period (a total of seven measures).

The following are the significant results of hypotheses tested in this study:

Hypothesis 1:

  There are no significant image variations among seven
  casual dinnerhouse restaurant chains on each image
  dimension and overall image.

  The analysis of variance (ANOVA) with a repeated measure
revealed significant image variations among the restaurant
chains on each image dimension and overall image.
Furthermore, the Duncan's multiple range test showed the
groupings and made it possible to identify each chain's
strengths or weaknesses compared with other chains as
perceived by respondents.

Hypothesis 2:

  Multi-restaurant image measures are not significantly
  related to multi-restaurant loyalty measures.

Two sub-hypotheses were developed in order to address each
component of the loyalty concept: the behavioral (actual
purchase) and attitudinal (purchase intention) components.

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Hypothesis 2a:

   <u>Multi-restaurant   image   measures   are   not
   significantly affect purchase intentions toward
   alternative restaurant chains.</u>

Hypothesis 2b:

   <u>Multi-restaurant image measures do not significantly
   affect proportions of patronage toward alternative
   restaurant chains.</u>

The canonical analysis revealed that the measures of
image (predictive variables) had significant impact on both
loyalty measures (criterion variables): purchase intentions
and proportions of patronage. However, the redundancy index
revealed that image measures were more related to purchase
intentions than proportions of patronage.

Furthermore, the interpretation of the canonical
functions explained the nature of the competition among the
restaurants in terms of market segments and positioning. The
test of hypothesis 2a yielded seven loyalty segments (in terms
of purchase intention) and showed how the seven casual
dinnerhouse restaurant chains were perceived (positioned) by

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those segment groups on each image measures. Whereas, the canonical correlation analysis with the measures of image and proportion of patronage measures indicated six loyalty segment groups with their perceptions of seven casual dinnerhouse restaurant chains on each image measure. In each canonical function, the images of alternative restaurants played an important role in affecting loyalty patterns as well as in determining each restaurant's market position within its competitive environment.

IMPLICATIONS OF THE RESEARCH FINDINGS

Since the marketplace has become more competitive, all foodservice operations now need to be concerned with local competition and must identify their own position in the local marketplace. How consumers perceive the competing restaurants on various image attributes is one factor that helps guide the positioning and repositioning strategies of each restaurant. By analyzing their existing images, restaurants can better identify factors contributing to the success or failure of their positioning efforts. As a consequence, restaurants can reposition themselves to improve or change their product/service image in the overall market and/or their specific target markets in order to enhance their competitive edge.

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In addition, when it is related to restaurant patronage or loyalty does restaurant image become more meaningful from a strategic viewpoint. By linking store image to patronage behavior, marketers can emphasize the strengths and/or minimize the weaknesses which are significantly related to patronage intention or actual patronage behavior.

Since a restaurant's patronage is not only a function of consumers' images of that store but also of their images of other restaurants, it is essential that management understand consumer perceptions of the competitors' image. Moreover, since consumers patronize more than one restaurant from a given restaurant segment, a single behavioral measure (the consumer's loyalty toward only one restaurant) gives an incomplete expression of consumer loyalty. A measure capable of indicating a consumer's loyalties across alternative restaurants is needed to understand a consumer's multi-restaurant patronage behavior.

The results of this study have several implications for image study in the hospitality foodservice industry. First, the research findings of this study imply that the obtained restaurant image not only can be used as an analytical device to diagnose the weaknesses and strengths possessed by each restaurant relative to other restaurants, but also predicts

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loyalty patterns toward alternative restaurants.

Second, patrons of casual dinnerhouse restaurants showed various image perception patterns and multi-loyalty patterns (loyalty segments). This suggests that each loyalty segment judges a restaurant differently on a set of image measures. In repositioning efforts, marketers should utilize this information with the image identified by aggregated consumers.

Third, among the ten image variables, consumers' perception on the overall impression, quality/taste of food and beverage, and friendly/attentive service contributed the most to both patronage intentions and proportions of patronage toward the seven casual dinnerhouse restaurants. This suggests that managers of the casual dinnerhouse restaurants should understand the importance of their overall image along with its attributes and should try to develop a favorable image. Specifically, they have to develop a high quality of food and beverage with a good taste and train their employees to provide a friendly and attentive service to customers all the time. In contrast, the image measures that contributed the least to the loyalty patterns were location and advertising/ promotion. This result is consistent with the mean data (see Table 13) which reveals consumers' low ratings on advertising/ promotion image of the seven casual

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dinnerhouse restaurants compared to their ratings on other image measures. This implies that each restaurant's efforts on advertising and promotions are not enough in a local market. To reposition in their competitive market better, a more effective promotions/ advertising that emphasizes their identified image attributes that most appeal to their customers is highly recommended.

Lastly, the use of multi-restaurant loyalty measures which reveal the consumer's patronage behavior toward a number of restaurant chains has advantages over the more common practice of identifying patronage behavior toward just one restaurant chain. This is because marketers can identify their primary competition.

The most significant contribution of this study is summarized as follows:

First, this study contributes to the existing consumer patronage behavior literature by providing empirical research results for the interrelationships between multi-store image measures and multi-store loyalty measures.

Second, this research illustrates the usefulness of canonical analysis, which is a powerful technique

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for exploring the relationships between one set of variables and a second set of variables. It is not uncommon for researchers to be confronted with research problems involving two sets of variables. Canonical analysis is receiving more attention in the hospitality marketing literature (Pyo et al. 1989; Oh et al. 1994; Bosereewong and Weaver 1994; Gustin 1994), and this study further demonstrates the value of canonical analysis.

Lastly, this study is of empirical value to restaurant management. In terms of offering strategic guidelines, the study on the relationship between multi-restaurant loyalty measures and multi-restaurant image perceptions determined the magnitude of the relationships and explained the nature of competition in a specific market by linking consumer's loyalty behavior toward one or more restaurants with the image strengths/weaknesses of alternative restaurants on salient image dimensions. This study helps identify factors contributing to the success or failure of market positioning efforts. In other words, it explains why consumers do patronize and do not patronize one or more restaurants over other competing restaurants. As a consequence, restaurants can reposition themselves to improve or change their restaurant image in their respective target markets in order to enhance their competitive edge.

LIMITATIONS

These study results have a number of limitations. First, the so-called halo effect presents a limitation in measuring consumer perceptions. Halo effect is the tendency of a judge to rate individual traits according to the rater's general impression of the object that is being rated. If a respondent has a quite positive attitude toward a particular (and important) attribute or the overall impression of a retail organization, he/she may project the positive feeling to other attributes covered by the scaling instrument (Kelly and Stephenson 1967; Wu and Petroshius 1987). The existence of a halo effect in the rating exercise may impair the usefulness of the store image study as a diagnostic tool.

Second, this study did not include self-concept and store image interaction (congruity) in restaurant image measures. The store image literature (Samli and Sirgy 1981; Sirgy and Samli 1985; Sirgy et al. 1991) suggests that consumers shop at stores whose images are similar to their own actual and ideal self-images. A consumer's self-image/store image congruity could have affected his/her loyalty behavior toward a number of the restaurants in this study.

Third, restaurant choice may also be influenced by

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situational factors, such as whether the consumer is dining with other family, whether the waiting lines are too long at preferred restaurants, or whether the patronage results from an emergency, which may cause the individual to eat at a type of restaurant he or she does not normally visit. However, because such situational characteristics are not controllable, they were beyond the scope of this research.

Fourth, no attempt was made to identify the size and demographic characteristics of each loyalty segment group through the simultaneous use of loyalty measures and image measures. Since this study focused on the existing relationship between loyalty measures and image measures, the assignment of respondents to each loyalty segment group was beyond the scope of this research.

Lastly, in light of the fact that the non-respondents were not contacted, the possibility of non-response bias must be considered. There is some research, however, which suggests that data collected from the questionnaires which arrive later than the majority of the group is similar to the information which might have been collected about the non-respondents (Armstrong and Overton 1977). An informal analysis of the surveys which were received after the bulk of the questionnaires had been returned did not reveal any

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dramatic differences as compared with the earlier responses.

RECOMMENDATIONS FOR FUTURE RESEARCH

A similar study is suggested for other types of restaurants (fastfood outlets or upscale restaurants) or the hotel industry in a local market or national market. The importance of image measures in predicting loyalty behaviors might be different for different types of restaurants. For each specific retail type, researchers must develop unique image item scales. Image dimensions should be congruent with salient consumer store choice evaluative criteria (Rosenbloom 1983). A lack of congruency between restaurant image and consumer restaurant choice evaluative criteria will reduce the potency of restaurant image as a strategic component of marketing.

Second, a different approach can be applied to predict loyalty behavior (patronage patterns) with the measures of image. Cluster and discriminant analysis can be used to efficiently describe the loyalty group membership, and the characteristics (images) of restaurants that attract or repel various types of patrons.

Lastly, changes in restaurant image change over time

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should be analyzed through ongoing analysis and research. Restaurant images are not static. A restaurant's market position is very time-related. It changes over time as a result of other changes: in retailer policies and strategies, in consumer perceptions, in the market positioning strategies of competitors, or in the environment in a particular marketplace. The critical question is, therefore, how is each restaurant chain's market position perceived over time by its consumer target markets compared with the firm's competitors in the local market? Managers should evaluate store image on a periodic and regular basis to see what changes may have occurred.

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APPENDICES

APPENDIX A

PILOT-STUDY QUESTIONNAIRE
(FOR IMAGE ATTRIBUTES DEVELOPMENT)

IMPORTANCE OF RESTAURANT IMAGE ATTRIBUTES

We would like to know how important the following restaurant image characteristics are to you in selecting and patronizing casual dinnerhouse restaurants (such as *Applebee's, Chi-Chi's, Ground Round, Olive Garden, Red Lobster, Steak and Ale, and Texas Steak House & Saloon*) for dinner. Please circle your responses using the scale Very Important to Very Unimportant to indicate the level of importance with each of the following attributes.

1	2	3	4	5
Very Unimportant	Somewhat Unimportant	Neither Important Nor Unimportant	Somewhat Important	Very Important

Quality of food & Beverage	1	2	3	4	5
Decor	1	2	3	4	5
Variety of menu selection	1	2	3	4	5
Service friendliness	1	2	3	4	5
Menu price	1	2	3	4	5
Parking facilities	1	2	3	4	5
Atmosphere	1	2	3	4	5
Ability to accommodate children	1	2	3	4	5
Cleanliness	1	2	3	4	5
Noise level	1	2	3	4	5
Comfortable seating	1	2	3	4	5
Appearance of food presentation	1	2	3	4	5
Layout of dining area	1	2	3	4	5
Prompt/attentive service	1	2	3	4	5
Location	1	2	3	4	5
Lighting	1	2	3	4	5
Type of patrons	1	2	3	4	5
Music	1	2	3	4	5
Taste of menu items	1	2	3	4	5
Theme of the restaurant	1	2	3	4	5
Uniform of staff	1	2	3	4	5
Nutritional quality of menu items	1	2	3	4	5
Reputation	1	2	3	4	5
Waiting area for seating	1	2	3	4	5
Exterior design	1	2	3	4	5
Knowledgable staff	1	2	3	4	5
Promotion/Advertising	1	2	3	4	5
Value for the money	1	2	3	4	5

APPENDIX B

PRE-QUESTIONNAIRE

DIRECTIONS

There is no right or wrong answer.   We are interested in your personal opinions, so please answer each question frankly.   This information will be used for statistical purposes only and it will be kept confidential.   You do not have to write your name and address on this questionnaire. Casual dinnerhouse restaurants seek to attract middle-income individuals or families who enjoy dining out yet wish to avoid high prices and the formality of fine-dining restaurants.   Thus their prices fall in the mid-to-upscale range, their atmosphere is comfortable, mood is relaxed, and alcohol is served.   Examples of these restaurants include *Applebee's, Chi-Chi's, Under Ground, Olive Garden, Red Lobster, Steak and Ale,* and *Texas Steak House & Saloon.*

Part I

1. How often do you eat <u>dinner</u> at casual dinnerhouse restaurants?

   1) More than once a week   4) About every 3 weeks
   2) About once a week   5) About once a month
   3) About every 2 weeks   6) Less than once a month

2. Whom do you usually have dinner at casual dinnerhouse restaurant with?

   1) Family (with children)   3) Friends   5) Date
   2) Spouse (husband/wife)   4) Business Associates   6) Alone

3. Approximately what <u>price per person</u> do you spend for dinner at casual dinnerhouse restaurant?

   1) Less than $8.00   3) $15.00 to $24.99
   2) $8.00 to $14.99   4) $25.00 or more

4. Have you ever had <u>dinner</u> at the casual dinnerhouse restaurants in the city of Roanoke listed
   below? If yes, how many times have you had dinner at each restaurant in the past <u>three months</u>?

	Yes	No	Number of times
Applebee's	_____	_____	_____
Chi-Chi's	_____	_____	_____
Ground Round	_____	_____	_____
Olive Garden	_____	_____	_____
Red Lobster	_____	_____	_____
Steak and Ale	_____	_____	_____
Texas Steak House & Saloon	_____	_____	_____

IF YOU HAVE EVER BEEN TO ANY OF 7 CASUAL-DINING CHAIN RESTAURANTS, PLEASE CONTINUE ON TO THE NEXT PAGE!

Part II

The purpose of this part is to obtain your opinion about the <u>importance</u> of each restaurant image attribute on selecting or patronizing a casual dining restaurant and to obtain your <u>perception</u> of the image of 7 competing casual-dining chain restaurants in Roanoke market. Please answer the questions in each of the following categories of <u>IMPORTANCE</u> and <u>PERCEPTIONS</u>.

1. IMPORTANCE OF IMAGE ATTRIBUTES

We would like to know how important the following restaurant <u>image characteristics</u> are to you in selecting and patronizing casual dinnerhouse restaurants for dinner. Please <u>circle</u> your responses using the scale <u>Very Important</u> to <u>Very Unimportant</u> to indicate the level of importance with each of the following restaurant image attributes.

1	2	3	4	5
Very Unimportant	Somewhat Unimportant	Neither Important Nor Unimportant	Somewhat Important	Very Important

Friendly/Attentive Service	1	2	3	4	5
Decor/Design/Layout	1	2	3	4	5
Quality/Taste of Food & Beverage	1	2	3	4	5
Advertising/Promotion	1	2	3	4	5
Reputation	1	2	3	4	5
Pleasant Atmosphere	1	2	3	4	5
Price/Value	1	2	3	4	5
Cleanliness	1	2	3	4	5
Location	1	2	3	4	5

Please continue on to the next page!

2. PERCEPTIONS ON IMAGE ATTRIBUTES

Following is a list of image attributes of casual-dining restaurants that affect the decision making for restaurant selection and patronage behavior. We would like to know your perceptions of 7 casual dinnerhouse restaurant chains on each item. There are no right or wrong answers. For each item, please write the number that best shows your perceptions about each restaurant.

1	2	3	4	5	6	7
Extremely	Quite	Slightly	Neither One Nor The Other	Slightly	Quite	Extremely

Friendly/Attentive Service: Poor   1 2 3 4 5 6 7   Excellent
- Applebee's _____
- Chi-Chi's _____
- Texas Steak House & Saloon _____
- Ground Round _____
- Olive Garden _____
- Red Lobster _____
- Steak and Ale _____

Decor/Design/Layout: Poor   1 2 3 4 5 6 7   Excellent
- Applebee's _____
- Chi-Chi's _____
- Texas Steak House & Saloon _____
- Ground Round _____
- Olive Garden _____
- Red Lobster _____
- Steak and Ale _____

Quality/Taste of Food & Beverage   Poor   1 2 3 4 5 6 7   Excellent
- Applebee's _____
- Chi-Chi's _____
- Texas Steak House & Saloon _____
- Ground Round _____
- Olive Garden _____
- Red Lobster _____
- Steak and Ale _____

Advertising/Promotion: Unattractive   1 2 3 4 5 6 7   Attractive
- Applebee's _____
- Chi-Chi's _____
- Texas Steak House & Saloon _____
- Ground Round _____
- Olive Garden _____
- Red Lobster _____
- Steak and Ale _____

Reputation: Unfavorable   1 2 3 4 5 6 7   Favorable
- Applebee's _____
- Chi-Chi's _____
- Texas Steak House & Saloon _____
- Ground Round _____
- Olive Garden _____
- Red Lobster _____
- Steak and Ale _____

Atmosphere: Unpleasant   1 2 3 4 5 6 7   Pleasant
- Applebee's _____
- Chi-Chi's _____
- Texas Steak House & Saloon _____
- Ground Round _____
- Olive Garden _____
- Red Lobster _____
- Steak and Ale _____

Price/Value :   Unfair   1 2 3 4 5 6 7   Fair
- Applebee's _____
- Chi-Chi's _____
- Texas Steak House & Salon _____
- Ground Round _____
- Olive Garden _____
- Red Lobster _____
- Steak and Ale _____

Please continue on to the next page!

Location:		Inconvenient	1 2 3 4 5 6 7	Convenient
Applebee's _____		Ground Round _____		Red Lobster _____
Chi-Chi's _____		Olive Garden _____		Steak and Ale _____
Texas Steak House & Saloon _____				

Cleanliness:		Unclean	1 2 3 4 5 6 7	Clean
Applebee's _____		Ground Round _____		Red Lobster _____
Chi-Chi's _____		Olive Garden _____		Steak and Ale _____
Texas Steak House & Saloon _____				

3. In the above part, you have rated each of 7 casual dinnerhouse restaurant chains along with restaurant image items. Now, would you please rate the <u>overall impression</u> of each restaurant chain based on your perceptions of its image items? Please <u>check</u> the number.

Applebee's	Unfavorable	1 2 3 4 5 6 7	Favorable
Chi-Chi's	Unfavorable	1 2 3 4 5 6 7	Favorable
Ground Round	Unfavorable	1 2 3 4 5 6 7	Favorable
Olive Garden	Unfavorable	1 2 3 4 5 6 7	Favorable
Red Lobster	Unfavorable	1 2 3 4 5 6 7	Favorable
Steak and Ale	Unfavorable	1 2 3 4 5 6 7	Favorable
Texas Steak House and Saloon	Unfavorable	1 2 3 4 5 6 7	Favorable

4. Based on your perception, to what degree do you feel like <u>eating</u> at each chain restaurant for <u>dinner</u> in the next 60 days? Please check the number.

Applebee's	Not at all	1 2 3 4 5	Very much
Chi-Chi's	Not at all	1 2 3 4 5	Very much
Ground Round	Not at all	1 2 3 4 5	Very much
Olive Garden	Not at all	1 2 3 4 5	Very much
Red Lobster	Not at all	1 2 3 4 5	Very much
Steak and Ale	Not at all	1 2 3 4 5	Very much
Texas Steak House & Saloon	Not at all	1 2 3 4 5	Very much

Please continue on to the next page!

Part III

Now to complete the survey, please provide us with some information about yourself by circling the response that best describes you.

1. Your gender?   1) Male   2) Female

2. Your age?
   1) 18 to 24   3) 35 to 44   5) 55 to 64
   2) 25 to 34   4) 45 to 54   6) 65 or older

3. Marital status?
   1) Single   3) Divorced   5) Widowed
   2) Married   4) Separated

4. Number of members in your household?
   1) One person   3) Three persons   5) Five or more persons
   2) Two persons   4) Four persons

5. Number of children at home?
   1) No children   3) Two
   2) One   4) Three or more

6. Your highest education level?
   1) High School   3) College
   2) Technical School/Junior College   4) Graduate School

7. Number of wage earners in your household?
   1) One   (2) Two   (3) Three or more

8. Household income?
   1) Under $25,000   3) $35,000 to $49,999   5) $75,000 to $99,999
   2) $25,000 to $34,999   4) $50,000 to $74,999   6) $100,000 or more

****

THANK YOU FOR YOUR COOPERATION!   Please return the completed survey using the return envelop which has been provided.   Postage are prepaid.   Please fill out the following information for the prize drawing as described in the cover letter (Will not be used for any other purposes).

Name: _____
Address: _____
         _____
         _____

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APPENDIX C

FINAL QUESTIONNAIRE

May 11, 1995

Dear Restaurant Patron:

I am a Ph.D. student in the Department of Hospitality and Tourism Management at Virginia Tech working on my dissertation on the subject of restaurant image.   I am collecting information about **customer perceptions** of seven **casual dinnerhouse restaurant chains** (*Applebee's,   Chi-Chi's,   Ground Round,   Olive Garden,   Red Lobster,   Steak and Ale,   and Texas Steak House & Saloon*) in **Roanoke**.   The results of this survey will be very helpful for completion of my Ph.D.

The success of this study depends largely on your participation.   I would very much appreciate it **you** or **someone** in your household would fill out the attached questionnaire.   All information will be strictly confidential.

As a small token of my appreciation and as an incentive to participate in the study, the names of all people who complete and return this questionnaire will be placed in a raffle and drawn for a prize.   You can be one of 21 winners who will receive a **$30 gift certificate** for dining at one of the seven casual dinnerhouse restaurants mentioned in this survey.

Once you have completed the questionnaire, please put it in the enclosed postage paid envelope and drop it in any mail box.

Thank you for your thoughtfulness and participation.

Sincerely,

Henry Oh
Ph.D. Candidate

Enclosure

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RESTAURANT SURVEY

DIRECTIONS

There are no right or wrong answers.   We are interested in your personal opinions, so please answer each question frankly.   This information will be confidential.

Definition
Casual dinnerhouse restaurants: those wish to attract individuals or families who enjoy dining out yet wish to avoid high prices and the formality of fine-dining restaurants.   Their prices fall in the mid-to-upscale range, their atmosphere is comfortable, mood is relaxed, and alcohol is served. Examples of these restaurants in **Roanoke** include *Applebee's, Chi-Chi's, Ground Round, Olive Garden, Red Lobster, Steak and Ale, and Texas Steak House & Saloon*.

Part I

1. How often do you eat <u>dinner</u> at <u>casual dinnerhouse</u> restaurants?

   1) More than once a week   4) About every 3 weeks   7) Never
   2) About once a week   5) About once a month
   3) About every 2 weeks   6) Less than once a month

2. Who would you most likely be having <u>dinner</u> at <u>casual dinnerhouse</u> restaurants with?

   1) Family (with children)   3) Friends   5) Date
   2) Spouse (husband/wife)   4) Business Associates   6) Alone

3. Approximately what <u>price per person</u> do you spend for <u>dinner</u> at <u>casual dinnerhouse</u> restaurants?

   1) Less than $8.00   3) $15.00 to $24.99
   2) $8.00 to $14.99   4) $25.00 or more

4. Have you <u>ever</u> had <u>dinner</u> at the following casual dinnerhouse restaurants in the city of **Roanoke**?
   If <u>yes</u>, approximately how **many** times have you had <u>dinner</u> at each restaurant in the <u>past three months</u>?

Restaurant	No	Yes	Number of Visits (last 3 months)
Applebee's			
Chi-Chi's			
Ground Round			
Olive Garden			
Red Lobster			
Steak and Ale			
Texas Steak House & Saloon			

PLEASE CONTINUE ON TO THE NEXT PAGE!

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1. IMPORTANCE OF IMAGE ATTRIBUTES

We would like to know how important the following restaurant <u>image characteristics</u> are to you in selecting and patronizing <u>casual dinnerhouse restaurants</u> for dinner. Please <u>circle</u> your responses using the scale <u>Very Important</u> to <u>Very Unimportant</u> to indicate the level of importance.

1	2	3	4	5
Very Unimportant	Somewhat Unimportant	Neither Important Nor Unimportant	Somewhat Important	Very Important

	Unimportant				**Important**
Friendly/Attentive Service	1	2	3	4	5
Decor/Design/Layout	1	2	3	4	5
Quality/Taste of Food & Beverage	1	2	3	4	5
Advertising/Promotion	1	2	3	4	5
Reputation	1	2	3	4	5
Pleasant Atmosphere	1	2	3	4	5
Price/Value	1	2	3	4	5
Cleanliness	1	2	3	4	5
Location	1	2	3	4	5

2. PERCEPTIONS ON IMAGE ATTRIBUTES

The following is <u>a list of image attributes</u> of casual dinnerhouse restaurants that affect the decision making for restaurant selection and patronage behavior. We would like to know your <u>perceptions</u> of the following restaurants on each item, even though you have not visited the restaurants. For each item, please <u>circle</u> the number that best represents your perceptions about <u>each restaurant</u>.

1	2	3	4	5	6	7	N/A
Extremely	Quite	Slightly	Neither One Nor The Other	Slightly	Quite	Extremely	No Perception

		Poor				**Good**	
Friendly/Attentive	Applebee's	1 2 3	4	5	6	7	N/A
Service	Chi-Chi's	1 2 3	4	5	6	7	N/A
	Ground Round	1 2 3	4	5	6	7	N/A
	Olive Garden	1 2 3	4	5	6	7	N/A
	Red Lobster	1 2 3	4	5	6	7	N/A
	Steak and Ale	1 2 3	4	5	6	7	N/A
	Texas Steak House & Saloon	1 2 3	4	5	6	7	N/A
		Poor				**Good**	
Decor/Design/Layout	Applebee's	1 2 3	4	5	6	7	N/A
	Chi-Chi's	1 2 3	4	5	6	7	N/A
	Ground Round	1 2 3	4	5	6	7	N/A
	Olive Garden	1 2 3	4	5	6	7	N/A
	Red Lobster	1 2 3	4	5	6	7	N/A
	Steak and Ale	1 2 3	4	5	6	7	N/A
	Texas Steak House & Saloon	1 2 3	4	5	6	7	N/A

PLEASE CONTINUE ON TO THE NEXT PAGE!

		Poor						Good	
Quality/Taste of	Applebee's	1	2	3	4	5	6	7	N/A
Food & Beverage	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	1	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

		Unattractive						Attractive	
Advertising/Promotion	Applebee's	1	2	3	4	5	6	7	N/A
	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	1	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

		Unfavorable						Favorable	
Reputation	Applebee's	1	2	3	4	5	6	7	N/A
	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	1	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

		Unpleasant						Pleasant	
Atmosphere	Applebee's	1	2	3	4	5	6	7	N/A
	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	1	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

		Unfair						Fair	
Price/Value	Applebee's	1	2	3	4	5	6	7	N/A
	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	1	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

		Unclean						Clean	
Cleanliness	Applebee's	1	2	3	4	5	6	7	N/A
	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	1	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

		Inconvenient						Convenient	
Location	Applebee's	1	2	3	4	5	6	7	N/A
	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	1	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

Part III

1. In the above part, you have rated each of 7 casual dinnerhouse restaurant chains. Would you please rate the <u>overall impression</u> of each restaurant chain based on your perceptions of its image? Please <u>circle</u> the number.

		Unfavorable						Favorable	
Overall Impression	Applebee's	1	2	3	4	5	6	7	N/A
	Chi-Chi's	1	2	3	4	5	6	7	N/A
	Ground Round	i	2	3	4	5	6	7	N/A
	Olive Garden	1	2	3	4	5	6	7	N/A
	Red Lobster	1	2	3	4	5	6	7	N/A
	Steak and Ale	1	2	3	4	5	6	7	N/A
	Texas Steak House & Saloon	1	2	3	4	5	6	7	N/A

2. Based on your perception, how likely are you to <u>eat</u> at each restaurant for <u>dinner</u> in the next 2 months? Please <u>circle</u> the number.

		Unlikely						Likely
Willingness	Applebee's	1	2	3	4	5	6	7
to Return	Chi-Chi's	1	2	3	4	5	6	7
	Ground Round	1	2	3	4	5	6	7
	Olive Garden	1	2	3	4	5	6	7
	Red Lobster	1	2	3	4	5	6	7
	Steak and Ale	1	2	3	4	5	6	7
	Texas Steak House & Saloon	1	2	3	4	5	6	7

PLEASE CONTINUE ON TO THE NEXT PAGE!

Part IV

Please provide us with some information about yourself by <u>circling</u> the response that best describes you.

1. Your gender?   1) Male   2) Female

2. Your age?
   1) 18 to 24   3) 35 to 44   5) 55 to 64
   2) 25 to 34   4) 45 to 54   6) 65 or older

3. Marital status?
   1) Single   3) Widowed
   2) Married   4) Divorced/Separated

4. Number of members in your household including yourself?
   1) One person   3) Three persons   5) Five or more persons
   2) Two persons   4) Four persons

5. Number of children under age of 18 at home?
   1) No children   3) Two
   2) One   4) Three or more

6. Your highest level of education?
   1) Less than High School   3) Technical School/Junior College   5) Graduate School
   2) High School   4) Four Year College

7. Number of wage earners in your household?
   1) None   2) One   3) Two   4) Three or more

8. Household income?
   1) Under $25,000   3) $35,000 to $49,999   5) $75,000 to $99,999
   2) $25,000 to $34,999 4) $50,000 to $74,999   6) $100,000 or more

****

THANK YOU FOR YOUR COOPERATION!   Please return the completed survey using the postage paid return envelope which has been provided.   Please fill out the following information for the drawing as described in the cover letter (Will not be used for any other purposes).
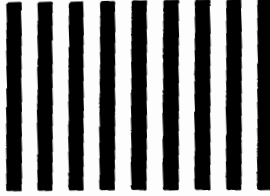
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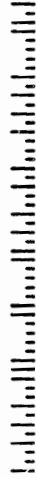NO POSTAGE
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BLACKSBURG VA   24063-9959

VITA

Heung Chul Oh, son of Sae-Kyoo Oh and Kyoung-Ja Han, was born on February 3, 1963, in Pusan, Korea. He married Eun Myoung Kim in 1992 and he is now the father of Kyoosung Oh (age 6 months).

He served in the Army from 1986 to 1988 to do his mandatory military service as a man of Korea. He graduated from the Pusan National University in Korea (1985, B.A., Economics; 1989, M.A., Regional Economics). After getting M.A. degree in Economics, he started his M.S. program in Hospitality and Tourism Management at Virginia Polytechnic Institute and State University in August, 1989. After finishing all course work for M.S., he was transferred to Ph.D program in 1992.

Since 1990, he has undertaken a number of research projects related to hospitality and tourism marketing and management, and he has been published in SECHRIE Research and Review Journal, International Journal of Hospitality Management, International Journal of Contemporary Hospitality Management, Journal of Tourism and Leisure Research (in Korea), Journal and Society of Tourism Systems and Quality Management (in Korea), and CHRIE conference proceedings.

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For practical experience, he received an intensive management training at Pusan Paradise Hotel (Summer 1990) and Pusan Hyatt Regency Hotel (Summer 1991) in Korea. Teaching experience includes a teaching assistant for several Hospitality and Tourism courses at Virginia Tech and an instructor (Fall 1992) for the Economics of Tourism course at Pusan Dong-A University in Korea.

Heung Chul Oh

July 5, 1995