

AN INTER-INDUSTRY EMPIRICAL STUDY  
INVESTIGATING THE RELATIONSHIP  
BETWEEN ENVIRONMENT AND  
MARKETING STRATEGY  
IN SERVICES

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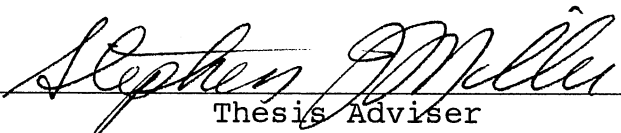
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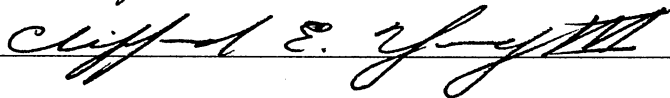
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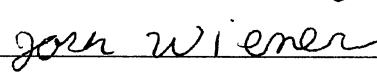
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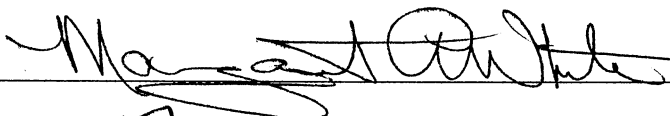
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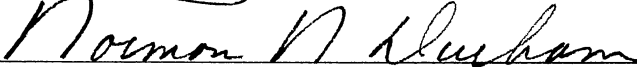
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## PREFACE

Although the service sector in the U.S. dominates the manufacturing sector in terms of employment and its contribution to the gross national product, scholars in marketing and management have paid very little attention to marketing strategies in services. Empirical studies in marketing involving services have been very limited and the studies that exist have also failed to study the relationship between the marketing environment and the marketing strategies followed by firms and industries in response to their environments. This dissertation empirically investigated this relationship based on mid-range theories which were first proposed by Hambrick in 1983, i.e. associating some common recurring environmental settings to marketing strategies employed. The study surveyed members of the American Marketing Association who worked in a variety of service sectors and asked them to provide their opinion on the environment and the marketing strategies utilized by leading organizations in their industry.

I am very grateful to all the individuals who assisted me in this project and during my tenure as a doctoral candidate at Oklahoma State University. I especially want

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## CHAPTER I

### INTRODUCTION

The service industry employs more than seventy five percent of the labor force in the United States (Employment and Earnings, August 1990) and consumers spend more than fifty percent of their total expenditures in services (Survey of Current Business, August 1990). The service sector currently outperforms the goods sector both in terms of absolute dollars and growth every year (Anderson and Golden 1984), and service industries today account for more than fifty percent of the Gross National Product (Survey of Current Business, August 1990). Despite this strong performance of the services component of the economy, management and marketing scholars have until recently focused their attention primarily on manufacturing activities in the goods industry and the marketing of manufactured goods (Booms and Bitner 1981). //

Interest in services marketing began to intensify in the 1970s and has gained momentum since then (Lovelock, 1981). However, a major criticism by Zeithaml et al., (1985) is that the literature in services marketing is primarily conceptual with empirical research being limited to a few service industries.

Service firms also lag behind manufacturing firms in pursuing a marketing orientation philosophy (Leach 1977, Weirick 1978, Parasuraman et al., 1983). For example, George and Barksdale (1974) found that manufacturing firms spent about five times more on their marketing activities than their service counterparts. Scholars suggest that service firms need to be more marketing oriented in the 1980s and beyond.

### The Unique Traits of Services

The definition of services has varied among scholars over the years. Adam Smith (1937) distinguished between goods and services and stated that services perish as soon as they are performed. Due to this instant perishability, the production of services "does not fix or realize itself in any permanent subject, or vendible commodity, which endures" (pg. 315). In earlier work on services, Judd (1964) defined a service as a transaction where the main object of the transaction is something other than a material commodity. A service has been defined as a deed, performance or an effort by Rathmell (1966), and lately by Kotler (1988) as an activity where something is rented (not owned) and where the main benefit of what is exchanged is essentially intangible. The basic definition of a service seems to revolve around the ideas (definitions) cited above, although some scholars have made some very specific distinctions.

It is widely accepted that services are different from

goods and the differences have been noted to be mainly in terms of: (a) nature of the product - i.e. services are relatively intangible (eg., Bateson 1979, Berry 1980, Lovelock 1981, Zeithaml et al., 1985); (b) perishability - services can not be inventoried since they are consumed as soon as they are produced (eg., Regan 1963, Bessom and Jackson 1975, Thomas 1978, Lovelock 1981, Uhl and Upah 1983); (c) heterogeneity - services have a high potential for variability in quality, i.e. the quality of service between providers and by the same provider have a tendency to vary across time (eg., Berry 1980, Lovelock 1981, Zeithaml et al., 1985); and (d) inseparability - i.e. the producer and the seller are the same person and usually the buyer and the provider are in intimate contact with each other, and the consumption of services takes place at the same place as the production of services (eg., Carmen and Langeard 1979, Gronroos 1980, Zeithaml 1981).

Although there are differences between products and services, marketers need not necessarily use different strategies for the two (Wyckham et al., 1975, Enis and Roering 1981). Marketers can be successful by using similar strategies for services to those that have been used for the manufacturing sector. On the other hand, Lovelock (1981) thinks that although the marketing of services may not uniquely differ from the marketing of goods, the generic and contextual differences between goods and services force a marketing manager of services to occupy and play a role that is very much different than his or her counterpart in the

goods sector. Similarly, Booms and Bitner (1981) state that these differences between goods and services are the reason that organizational structures should also be different between manufacturing firms and service firms. // Further, service firms' adaptation of their organization to their environment may have a significant affect on consumers' perception of their services (Blois 1983). Berry (1980) also thinks that the inherent differences between goods and services offer special challenges and strategic marketing opportunities to the service marketer, and this seems to be the consensus to date (Thomas 1978, Booms and Bitner 1981, Lovelock 1983, Zeithaml et al., 1985). //

In comparison to studies in the manufacturing sector, research in services marketing has been sporadic and not very intensive and it still lacks major empirical content. Some of the major problems are reported below.

#### Problems

Services marketing has been receiving greater attention lately. However, "one of the major problems is that individuals involved in the marketing of services insist that no two service industries are alike and that each service industry is unique and different (Gronroos 1978). This leads to the view that the marketing of motels, hospitals, restaurants or airlines have nothing in common with one another (Lovelock, 1983)". This view has also given rise to such journals like The Bankers Magazine, Health Care Marketing, The Cornell Hotel and Restaurant Quarterly, and

others that cater to the needs of specific service industries.

In order to alter the industry-specific thinking, scholars have attempted to classify services based on selected characteristics. Thus, marketing strategies may be viewed as common for similar industries. For instance, Rice et al., (1981) suggest that there are many similarities between hospitals and hotels and that marketing strategies may be similar. In the same vein, Lovelock (1983) proposes the segmenting of services into clusters which share certain relevant marketing characteristics and later examining the implications for strategic marketing of services. However, the latter research has not been reported to date.

A second problem in services marketing research is that scholars studying strategic marketing have failed to study the influence of environment traits on the marketing of services. There have been few attempts to study typologies (or taxonomies) of environments and their relation to strategies in such settings. There is also no consensus among marketing scholars as to which environmental variables affect marketing strategies in services. The literature in services marketing is lacking in such studies and the attempt should be made to bridge this gap in the services literature.

#### Dissertation Objectives

This study empirically addresses certain key problems, i.e. are certain service industries similar to each other

and different than others on certain environment traits and marketing strategies. Also, it assesses the effect that certain environmental traits (service characteristics and exchange traits) have on strategic marketing in the service sector. In order to achieve these objectives, the study constructed a taxonomy of environments in the service sector by which one can group (cluster) service industries on the basis of environmental commonalities. The study then compared these environments with regards to the strategies followed within the respective clusters (environments). The broad research question addressed was: how do certain key environmental traits relate to the use of marketing strategies by firms across service industries?

There are three views on strategy - (a) the universal art paradigm (b) the situational art paradigm and (c) the contingency view of strategy. The universal art paradigm states that some set of strategies are optimal for all business firms irrespective of their environmental situation (Lubatkin and Pitts 1983). In contrast to this view, the situational art paradigm advocates that no general theories of strategies can be developed since each firm operates in an environment that is unique to it alone (Andrews 1972, Buzzell and Wiersema 1981). // Finally, the contingency view of strategy states that a firm's strategy is contingent on certain external and internal (organizational) environmental forces (Hofer 1975). // It appears that by studying strategic types across different kinds of industries, one can make a contribution in developing the contingency model of



strategy.

According to Hambrick (1983), what is lacking are midrange theories that associate strategies to some commonly recurring environmental settings. The association of different strategies with stages of the product life cycle is one example of such midrange theories. Another example is the classification of manufactured goods into industrial and consumer goods such that the marketing strategies used by firms (and industries) that manufacture and market industrial goods will be quite different than those firms (and industries) that manufacture and market consumer goods. A third example is the classification of consumer goods into convenience, shopping and specialty goods such that firms that market convenience goods will use very different marketing strategies than firms that market specialty or shopping goods. With few exceptions (McMillan et al., 1982, Anderson and Zeithaml 1984), these prescriptions have not been empirically tested. In accordance with the above research orientations, Hambrick labels this view as "medium-grain" theories where the attempt is to develop a typology of environments where strategies could be examined within those environments. In his opinion:

The emphasis is on empirically identifying types of environments that appear with great frequency on the organizational landscape. The research is inductive - an attempt to build theory rather than to test theory (pg. 214).

There are several factors that influence the proper selection of a marketing strategy, and a firm should analyze these factors carefully before formulating its strategies.

Figure 1 shows the factors that influence marketing strategies of firms (adapted from Cravens, Hills and Woodruff 1987, pg. 268).

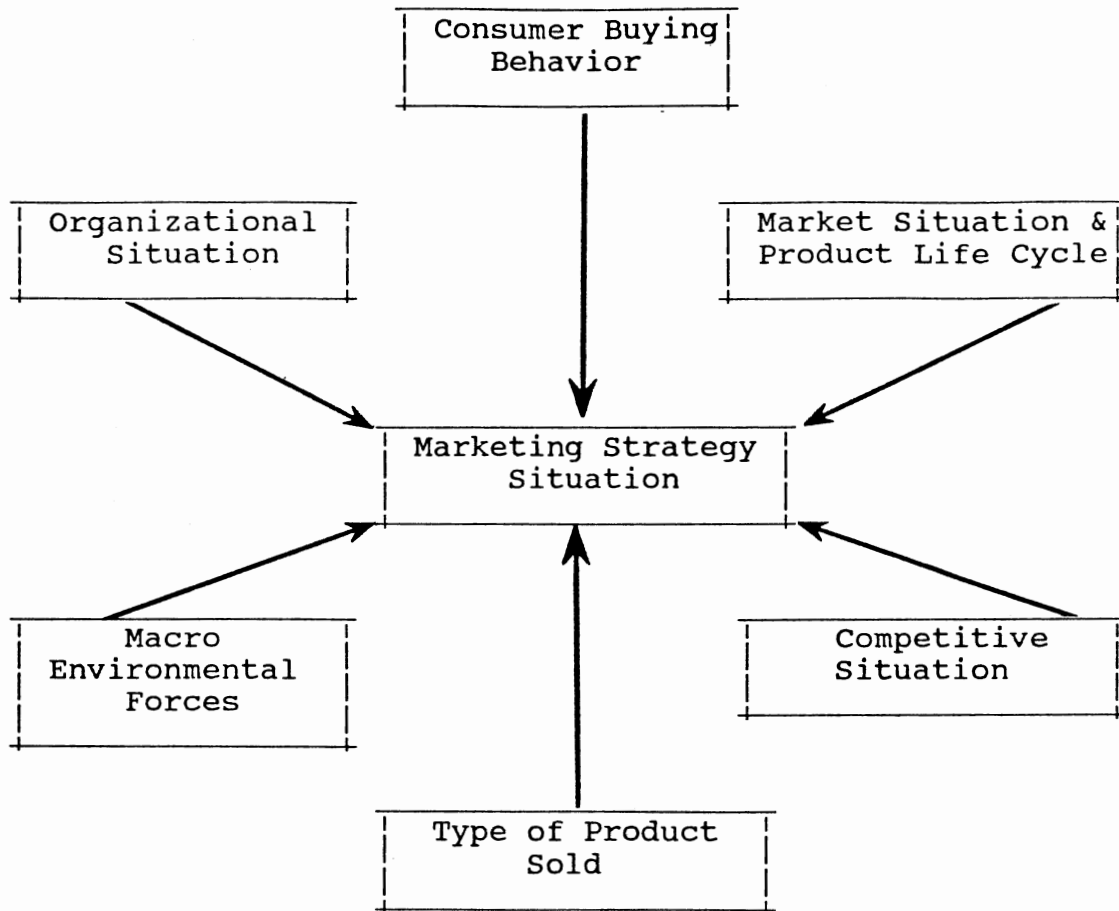


Figure 1. Environmental Factors that Affect Marketing Strategy Situations

Adapted from Cravens, Hills & Woodruff (1987, pg. 268)

The figure shows that the formulation of marketing strategies is influenced by a variety of external and internal factors. For instance, the marketing strategy of a firm needs to be tailored to the stage of the life cycle in

which the product belongs. The type of competitors a firm faces will also affect its strategy. A firm's internal resources such as its personnel, finance and its corporate culture will also have a heavy bearing on the selection of the strategy. The influence of customer traits and the type of product sold (eg, industrial, consumer, service), are also of importance. Finally, the macro environmental traits such as the state of the economy and the type of technology available, will impact the strategic options from which to choose. All of these offer opportunities and impose constraints on the organization's selection of a strategy.

This study did not attempt to study the influence of all of the aforementioned factors on strategic choice. Instead, it targeted only those environmental traits that are: (1) service characteristics - i.e. service-specific factors that influence the marketing strategies in services and (2) exchange traits - i.e. aspects of the process by which services are directly associated with exchange relationships between the provider and customer.

This study is different from other studies in that it is an inter-industry study, as opposed to intra-industry studies which have been the norm thus far in services research. Further, it empirically examined the relationship between the environments faced by industries in services and the marketing strategies used by them in response to these environmental influences.

For this study, two broad classes of variables were examined. The first class represents the environmental

variables while the second represents the marketing strategy variables. The former variables were drawn from two categories - service characteristics and exchange traits. Different marketing scholars have identified some key factors that affect marketing strategies for services, namely intangibility, heterogeneity, perishability and inseparability. It is felt that services differing on the aforementioned traits will use different marketing strategies. The service characteristic variables were selected from these above mentioned variables. Variables comprising exchange traits for service industries were selected from those variables that have been used by different marketing scholars to classify services (leading to strategic implications).

The strategy variables selected for this study were those that have been consistently used by researchers to describe marketing strategies at the business level, i.e. product (service), price, promotion and distribution. To these, three more marketing strategy descriptors, that have been used by marketing scholars in services, were added. These include personnel (participants), physical facilities (evidence), and process management (Booms & Bitner 1981, Magrath 1986).

In summary, the objectives of this study were as follows:

1. To develop multi-item scales that describe dimensions of the service environments and marketing strategies in selected service industries: (a) service trait characteristics; (b) exchange relationship characteristics and; (c) strategy characteristics.

2. To construct a taxonomy of environments in services using service characteristics and exchange traits to describe environment.
3. To investigate the relationship between alternative environment as multidimensionally defined and the marketing strategies employed in response to the environment.

### Contributions

This study is exploratory and integrates concepts from the areas of services marketing, strategic marketing and strategic management. It is one of the few empirical studies in services that investigates the relationship between the marketing environment and marketing strategies.

The broad hypothesis of this study is that firms in different service industries will use different (or similar) marketing strategies if they are confronted with different (or similar) environmental influences. This has been labeled as midrange theories by Hambrick (1983), and there are very few studies that have investigated such types of relationships in services marketing.

Although not exhaustive, this study should help in laying the foundation for similar studies in strategic marketing (both in the area of services and manufactured goods) in the future, which would use midrange theories as the basis for their work.

This Chapter is followed by Chapter II which is devoted to the review of the literature in services marketing and strategic marketing and the selection of the environmental and marketing strategy variables for this study. Chapter

III explains the research methodology used for this study and the justifications thereof. Chapter IV is devoted to the analysis and the results and provides an in-depth discussion of the findings of this study. Finally, Chapter V contains the discussion, limitations, and suggests some directions for future research.

## CHAPTER II

### LITERATURE REVIEW

The purpose of this study is to establish a theoretical link between selected key environmental factors (service characteristics and other exchange traits) in the service sector and the strategy followed in the respective industries. The literature review is thus divided into two distinct sections: (1) key environmental factors (service characteristics and other exchange traits), identified by prior researchers and; (2) key marketing strategy variables in the service sector.

#### Environmental Variables

The external environment has been defined as those uncontrollable variables that influence the operation of firms within that environment (Hatten et al., 1978). Scholars agree that the external environment has a major impact on strategy formulation (Hambrick 1983, Hambrick and Lei 1985, Jain 1990), and a firm's selection (and later success) of its strategy depends on how well it meets the demands of its external environment. A company should monitor those environmental forces that affect the business. The dominant aspect of an organization's environment exists

in and around the industry in which the firm competes, and firms have to adjust their marketing programs to adapt to these forces.

Corporations are confronted with strategic decision making at different levels within the organization and each has its own characteristics (Bourgeois 1980). Strategies have to be formulated at these different levels accordingly, i.e. (a) corporate level strategies which are formulated within the context of the general environment (b) business level strategies which address only those environments that are relevant to the industry in which the business operates and (c) product/brand level strategies which focus on selecting appropriate target markets and how to use the marketing mix to implement the business level strategy.

The environment can be divided into the global environment, the macro environment and the more immediate environment to the firm, the micro environment. The macro environment includes such factors as the political and economic conditions, the legal environment, social trends, etc. The micro environment includes industry structure, market characteristics, supplier relations, competitors and organizational resources. Formulation of strategies are significantly affected by these factors (Hofer 1975, Abell 1978, Burke 1984). Hambrick and Lei (1985) divide the environment into primary and secondary environment and suggest that industries that differ in the above mentioned environments will pursue different strategies (see Table I for a general view of environment).



TABLE I  
SOME STRATEGICALLY SIGNIFICANT  
ENVIRONMENTAL VARIABLES

Environment Level	Variables Comprising Environment	Whom Does it Affect
Global	World Economic condition World Political condition	All industries in the relevant countries.
Macro	National Economic condit. Demographic trends Political/Legal factors Social trends	All industries and all firms within the country.
Micro	Industry structure Competitors Consumers Suppliers Type of Product sold	All firms within a particular industry.
Internal	Company resources Company policies Company culture	The particular firm in question.

This study focuses only on the micro-environment. The dimensions that will be used to define the environment at this level in services will include certain service characteristics and certain exchange traits. Other aspects of the micro environment are not part of this study. The following section discusses those aspects of the micro environment that various marketing scholars have identified as being important for services, i.e. the key variables affecting marketing strategies in services.

### Service Characteristics

Service characteristics are those service-specific environmental factors that have been identified by marketing scholars as key factors that influence the marketing strategies in services. For instance, scholars like Bateson (1979), Berry (1980), Lovelock (1981), and Zeithaml (1981) think that because services are relatively intangible, service marketers have to make their services appear more tangible to their potential customers. Since services are provided using a high labor component, services have a higher potential for variability in quality, and therefore service marketers have to attempt to provide a consistent quality of service to their consumers (Berry 1980, Lovelock 1981, Zeithaml et al., 1985). Services are perishable, i.e. they are consumed as soon as they are produced and therefore cannot be stored. This forces the service marketer to be able to accurately predict demand and manage supply so that there is no shortage or excess (Sasser 1976) in the supply of the service. Finally, because services are simultaneously produced and consumed (i.e. inseparable) and there is close contact between the provider and the consumer, the service marketer should be able to manage this interaction in order to control the final service provided.

The above mentioned factors are service characteristics that lead to normative strategic implications for different types of services, i.e. different marketing strategies will be appropriate in response to these different environmental

factors. For this study, only those variables which differentiate between different service industries (and are thought to affect strategies) were selected. The following is a discussion on the selection of service characteristics variables.

Intangibility. A service is a performance (activity) and it cannot be seen, tasted, felt or touched (Zeithaml et al., 1985). Shostack (1977) classifies services along a continuum of intangibility signifying that services vary in the degree of intangibility they possess. She and others (Berry 1980 1981, Uhl and Upah 1983) suggest that offerings which are more intangible-dominant should try to make their offerings more concrete by providing evidence for tangibility where exchange and consumption takes place, using personal sources and word-of-mouth type of communication. In suggesting a retailing strategy for service, Cooke (1970) and Bessom and Jackson (1975) have noted that the intangibility factor makes it difficult for consumers to evaluate different competitive offerings. They see the solution to this problem as creating an image in the eyes of the consumers in order to differentiate itself from its competitors.

Heterogeneity. This refers to the high potential for variability in service performance for a given service provider and also between different service providers. "The quality and essence of a service varies from producer to producer, from customer to customer, and from day to day,"

(Zeithaml et al., 1985, pg. 34). It is very difficult to standardize services, even those sold by the same provider. Most services can never be standardized (Johnson 1970, Schlissel 1977), and this becomes even more pronounced when customers are involved in the production process (Sasser 1976) and then the production process can rarely be mechanized (Schlissel 1977). But some services may be standardized. For instance, services like car wash and fast food restaurants can be partially or completely automated. However, unlike products, most services are not engineerable and are therefore nonuniform (Shostack 1977). Due to this heterogeneity, the provider must control quality in the presence of the client on a continuous basis (Carmen and Langeard 1979).

Berry (1980) cites the increase in automatic teller machines as an effort to shift the banking service from a human delivery mode (potential for variability in quality) to a machine delivery mode in order to make service transactions more uniform. Although services have the potential for high variability in their performance, Levitt (1972) thinks that this potential for variability can be reduced by using different types of technologies as have been used by such companies like Kentucky Fried Chicken, McDonald's, Midas, and by banks using automatic teller machines. Because of the intangibility of services, it is difficult to mass market most services and at the same time provide uniform quality (Uhl and Upah 1983).

Perishability. Services can not be saved, i.e. they can not be produced first and inventoried for sale at a later time (Regan 1963, Rathmell 1966, Sasser 1976, Berry 1980, Uhl and Upah 1983). Since all services are perishable, service industries can not be placed on a continuum that might suggest the need for different marketing strategies among service types. Therefore, this variable can not be used to differentiate among services for strategic implications. It has not been selected as one of the variables measuring service characteristics.

Inseparability. This means that services are simultaneously produced and consumed (Sasser 1976, Upah 1980), i.e consumption can not be separated from production. However, not all services are produced and consumed simultaneously, i.e. although the process of providing the service may end, the results of a particular performance may be quite long lasting, and consequently, consumption takes place over an extended period of time. Thus, one can place different services in a continuum depending on how long the results of the performance lasts (eg, services provided by teachers, barbers, consultants, restaurants, airplanes, taxis, etc.). Accordingly, different marketing strategies will be used by different providers.

Table II below presents and summarizes the definitional nature of the concepts and authors who have supported use of them.

TABLE II  
SERVICE CHARACTERISTICS AS  
ENVIRONMENTAL VARIABLES

Variables selected to differentiate between services	Definition	Authors
Intangibility	The degree to which it can not be touched seen or felt	Shostack(1977) Berry (1977) Zeithaml et al., (1985)
Heterogeneity	Has a high potential for variability in quality	Johnson (1970) Sasser (1976) Schlissel (1976)
Inseparability	Effects of service performance do not end immediately after the service act has been performed	Rathmell (1966) Sasser (1976) Upah (1980) Zeithaml et al., (1985)

As can be seen from the above discussion, intangibility, heterogeneity and inseparability are three concepts that can be used to differentiate between different types of services, i.e. service industries that vary in intangibility, heterogeneity and inseparability will use different marketing strategies depending on the degree to which they vary in these above mentioned variables (Zeithaml et al., 1985, Berry 1980 1981, Sasser 1976, Shostack 1977, Uhl and Upah 1983, Upah 1980). Perishability is quite commonly mentioned as a trait of service. However, services

can not be placed in a continuum along the dimension of perishability since all services are equally perishable. For this reason, perishability was dropped from further consideration.

### Exchange Traits in Services

This section discusses those relevant exchange traits that are specific to the service sector, i.e. aspects of the process by which services are exchanged between the provider and consumer. The exchange process is different for different types of services and these differences necessitate the use of different marketing strategies among different service industries (Kotler 1989, Lovelock 1980 1983, Bateson 1985, Bowen 1985, Horne et al., 1986) .

Given the differences in the exchange process between different types of services, scholars in services marketing have proposed different ways of classifying services based on their exchange process. The objective of the classification scheme is to achieve a better understanding of the different types of services in order to help in the formulation of effective marketing strategies for services.

There have been a large number of classification schemes proposed for services, and a cross section of those are critically evaluated in Table 3. Although these schemes are significantly different from one another, many of them are merely descriptive and lacking in normative strategic implications. Only those classifications that represent exchange traits and have normative strategic implications

are discussed below in Table III. Although not exhaustive, the classifications reflect exchange traits that significantly affect the marketing strategies of different services. Almost no empirical work exists to support the alternative classification schemes. Additionally, few are linked to marketing strategies.

TABLE III  
THE DIFFERENT CLASSIFICATION SCHEMES  
(EXCHANGE TRAITS) IN SERVICES

Author	Classification Proposed	Comments
Judd (1964)	<ul style="list-style-type: none"> <li>- rented goods services</li> <li>- owned goods services</li> <li>- non goods services</li> </ul>	Has left out non goods services which are not experiential possessions eg, Banking, Consulting (Lovelock 1983).
Hill (1977)	<ul style="list-style-type: none"> <li>- services that affect goods</li> <li>- services that affect people</li> </ul>	Merely states that services fall in different categories. No management or marketing insight provided.
Thomas (1978)	<ul style="list-style-type: none"> <li>- people based, i.e. performed by skilled, unskilled labor or by professionals</li> <li>- equipment based, i.e. automated, operated by equipment or skilled unskilled workers</li> </ul>	Provides a dichotomy of services and gives strategy guidelines depending on whether service is people based or equipment based.



TABLE III (Continued)

Author	Classification Proposed	Comments
Chase (1978)	<ul style="list-style-type: none"> <li>- the magnitude of customer and provider contact, i.e. high or low contact</li> </ul>	Suggests strategies for those services which are high in customer contact. Quality will vary if there is high provider and consumer contact.
Kotler (1988 1989)	<ul style="list-style-type: none"> <li>- the extent of client's presence necessary</li> <li>- equipment v. people</li> <li>- purchase motives of clients</li> </ul>	Merely integrates concepts proposed by others.
Lovelock (1980 1983 1985)	<ul style="list-style-type: none"> <li>- demand characteristics</li> <li>- the delivery procedure</li> <li>- the contents and benefits offered</li> <li>- the nature of the service act</li> <li>- type of relationship between provider and customer</li> <li>- the extent of customization and judgment on the part of the provider</li> </ul>	Synthesizes earlier studies in a two dimensional matrix. Provides valuable insights.
Bateson (1985)	<ul style="list-style-type: none"> <li>- presence of customer necessary ?</li> </ul>	Suggests strategies for handling customer
Bowen (1985)	<ul style="list-style-type: none"> <li>- long or short term relationship</li> <li>- is there room for judgment by provider</li> </ul>	Synthesizes earlier classification schemes.
Solomon et al., (1985)	<ul style="list-style-type: none"> <li>- customer is usually present during</li> </ul>	Suggest strategies for

TABLE III (Continued)

Author	Classification proposed	Comments
	delivery and consumption	providing better interaction.
Bell (1986)	<ul style="list-style-type: none"> <li>- degree of tangibility</li> <li>- the extent of customization</li> </ul>	Suggests market mix strategies like differentiation and positioning depending on the degree of tangibility and the extent of customization.
Horne et al., (1986)	<ul style="list-style-type: none"> <li>- type of relationship</li> <li>- customization of service</li> </ul>	Synthesizes earlier schemes

Relationship between provider and consumer. A key issue in services is whether the consumer pays for each service separately or is there an on going long term membership relationship between the provider and the consumer. Lovelock's (1983) contention is that a provider's strategy will depend on whether the relationship with the customer is continuous and of membership (e.g., telephone, banks) or whether each consumption is a different exchange and transaction (restaurants, movies). This classification was also used by Bowen (1985) and Horne et al., (1986) in their studies.

Customization of service. Usually, the customer is involved in the production process of a service which is

simultaneously produced and consumed. Thus, there is room for judgment by the provider and customization of the service to meet the needs of the consumer (Bell 1981). However, some services may not be customized and are mass produced. Lovelock (1983) proposed that service strategies would depend on whether the services tend to be customized to meet buyer's needs or whether they are standardized and buyers had to adapt to what was offered. Additionally, Bowen (1985) and Horne et al., (1986) conclude that services which were customized do indeed follow a different strategy than those situations where the service was not customized.

#### Interaction process between provider and consumer.

Generally, the customer has to be physically present and interact with the provider when the service is provided and consumed. But the service can also be provided without the presence of the consumer and therefore there may not be any face-to-face interaction between the provider and the consumer (Lovelock 1983). If the customer has to have face-to-face interaction with the provider, then the service strategy would be different than when the transaction (exchange) is such that there is no face-to-face interaction (Lovelock 1983 1985, Bowen 1985, Zeithaml et al., 1985, Horne et al., 1986). The duration of this face-to-face interaction will also affect the marketing strategy of the service.

High attention to quality control is essential when there is high customer contact, since the extent of contact

between the customer and the provider affects the ultimate outcome (Chase 1978, Solomon et al., 1985, Mills and Morris 1986, Kotler 1988). Services can be placed in a continuum of high-low contact and strategies can be developed accordingly. Face-to-face contact between provider and consumer necessitates the manipulation of physical settings and this encounter should be planned and managed (Shostack 1985) since the quality and productivity of the service provided depends on it (Bateson 1985, Suprenant and Solomon 1987), and the attempt should be made to increase customer support (Lovelock and Young 1979). Solomon et al., (1985) also think that the interaction between buyer and seller of services will determine which attributes to emphasize.

#### Marketing Strategies

This part of the literature review will focus on marketing strategies cited in the services literature. Andrews (1972) has defined strategy as an artful alignment of environment with the resources and values of the firm. In the same vein, Hambrick and Lei (1985) state, "... the choice of strategy should be a function of the requirements of the environment and the type of performance being sought at the time," (pg. 25). Bourgeois' (1980) definition of strategy starts with a firm's selection of environmental segment(s) within which it will operate in (corporate level strategy) and culminates with how the firm will direct its activities in order to achieve its goals (business level strategy). Hofer and Schendel (1979) also define business

level strategies as "... how a business positions itself among its rivals in order to achieve its goals," (pg. 12). Table IV below shows marketing's role at different levels of the organization.

TABLE IV  
MARKETING'S ROLE IN THE ORGANIZATION

Organizational Level	Role of Marketing	Formal Name
Corporate	Provide customer and competitive perspective for corporate strategic planning	Corporate Marketing
Business Unit	Assist in the development of strategic perspective of the business unit to direct its future course	Strategic Marketing or Marketing Strategy
Product/Market	Formulate & implement marketing programs	Marketing Management

The competitive strategies of businesses can be studied based on what priorities different businesses give to the different internal controllable elements (price, promotion, R&D) when allocating resources at the business unit level (Schendel and Hofer 1979, Woo and Cooper 1981, Woo 1983). Business level strategy should be considered in terms of functional area strategies like marketing strategy, financial, manufacturing strategy, etc. (Galbraith and Schendel 1983). Kotler (1984) and Jain (1985) also consider

marketing strategy as part of the business level strategy and define it as the logic by which a business unit attempts to achieve its marketing objectives.

In summary, strategies are formulated at three different levels, i.e. at the corporate level, at the business level and at the product/market level and each level of strategy has to adapt to environmental issues at that particular level.

This study focuses on the marketing strategy at the business level. Strategy studies in services have traditionally taken the form of analyzing the four marketing mix variables (service offerings, price, distribution, promotion) and three additional mix variables (personnel, physical facility, and process management). These are reviewed below.

### ✓ Strategies in Services

Scholars studying strategic marketing in services have used the same concepts that have been used in the manufacturing sector, and most of the studies have focused at the marketing mix level. Almost all of the studies in services have focused on strategies that are designed to address the aforementioned problems of intangibility, heterogeneity and inseparability. Strategies emphasize those actions that can make services more tangible, more concrete and more consistent in quality. This section reviews the seven marketing variables that have been proposed for services marketing by Booms and Bitner (1981)

and Magrath (1986), i.e the traditional 4Ps of product (service), price, promotion and distribution, along with three more Ps, i.e. personnel (participants), physical facilities (evidence) and process management.

Service offering. When buying services, consumers purchase a package of benefits and attention should be given to the quality of service being provided. Since services require high consumer involvement there is also high consumer-provider interaction which affects the perceived quality and the perception of the quality of the service that has been received (Gronroos 1984, Bolton and Drew 1988). Thus, the marketer must attempt to influence this perception by managing the buyer-seller interaction and also match the expectation with the outcome.

The above view is also supported by Lewis and Booms (1983), and Cravens et al., (1985) who feel that service firms can influence customer expectations and perceptions of service quality by controlling the technical and interpersonal aspects of the service delivery. For example, a political candidate (considered to be a service) can formulate a marketing strategy by studying how a voter makes the decision to vote. One votes for a candidate depending on his or her perception of the candidate's stand on issues and the voter's views and the interaction between the two (Shama 1974).

Price in services. Price is a natural weapon of competition and strategy, and it directly affects the "value

for the dollar" of the benefit package. Service firms should have a behavioral understanding of their present and potential clients before pricing their services (Oxenfeldt and Kelly 1970). Service pricing should be value based and not cost based as is frequently the case for products (Shostack 1977). However, studies by Schlissel (1974) and Zeithaml et al., (1985) found that service firms were doing just the opposite. A new service might be priced based on the maturity of technology, market and competitors, yet, this pricing becomes more difficult since there is no direct material and labor cost involved and very little visible overhead (Dearden 1978).

Kaplan (1985) studied ambulatory services and suggested that the price of these services could be tied to the intensity of the service delivered which would result in a price-tier. Gultinan (1987) suggests the bundling of two or more services at a special discount in order to achieve strategic marketing objectives of the firm.

Distribution of services. Distribution provides place utility. However, due to their intangibility and inseparability, services are typically sold directly by the provider to the consumer (Shostack 1977 1987, Lewis 1985, Evans and Brown 1988). Some services are, however, not simultaneously produced and consumed and these types of services can be standardized and reproduced and can be provided using agent middlemen (Barnoff and Donnelly 1970, Donnelly 1976, Fouss 1985).



Donnelly (1976) suggests that intangible services can modify their channels of distribution by classifying services depending on whether they use direct or indirect contact to deliver the service. Usually, services using indirect contact may be able to use more intermediaries to deliver their services. Intermediaries can be selected by identifying what functions they perform and whether it would be compatible with its existing service and the needs of its customers.

The channel of distribution used in services is a function of capital intensity, durability, product-service proportion and the degree of personalization (Allmon and Troncalli 1978). The higher the capital intensiveness, the more the consumer is expected to bear transportation costs. The higher the durability of the service, the more the consumer will be expected to put effort. The higher the product component, the greater the likelihood that providers and consumers will expect the traditional product-oriented delivery system.

Promotion Strategy. Communicating the tangible aspects of a service and making it more concrete is one of the most important objective of promoting a service (Blackman 1985, Moldenhauer 1985, Stewart 1986). Services are largely intangible and they should also be advertised accordingly (George and Berry 1981). Providers should encourage and facilitate quality evaluation by making customers expect a certain standard of service quality. This can be done by

making the service more tangible by teaching buyers what to look for in a service and how to evaluate different offerings (George and Kelly 1983, Zeithaml et al., 1988).

Firestone (1983) has noted that due to the interaction between the provider and the consumer of services, "services advertising is a surrogate of the marketer," (pg. 86), and the advertiser should try to identify the company with its customers and aim to build the company's image (Gutman and Reynolds 1983).

Consumers go through a complex decision process for the consumption of professional services and rely more on personal sources for information regarding their selection, and do not consider cost as a very important element in their selection (Shimp and Dwyer 1978, Smith and Meyer 1980). For such professional services, since the provider can not control interpersonal communication, he should use educational programs that would make prospective consumers more aware of particular attributes (Kuehl and Ford 1977). It has also been suggested that professional services advertising should be very dogmatic and matter-of-fact in copy and should avoid using any hyperbole (Upah and Uhr 1981).

"An organization's advertising can affect its employees" (Acito and Ford 1980), and since most service providers promise friendly and consistent services, these advertisements, while selling a company's services also indicate to its employees how they are expected to behave. Managers of service organizations should also let employees

know of such advertising campaigns before putting it in the media. However, one should not expect employees to change overnight because of such advertising campaigns, but it may produce positive results if management shows consistency between its internal operations and what it advertises.

Service marketers can also use temporary promotions in order to entice customers (Lovelock and Quelch 1983). The promotion tools that can be used are comparable to those for products and include discounts, coupons, future discounts, premiums for higher purchase and prize promotions. In using these tools, the service firm should carefully examine the value of the promotional tools, the timing of the promotion and how it can benefit customers as well as maintain a competitive advantage.

Personnel (participants). Personnel play a major role in the marketing of services, and managing the firm's employees (customer contact personnel) becomes crucial for the success of a service firm (Hostage 1975). The performance of the contact personnel depends on one's customer consciousness and know-how and therefore training is of utmost importance (Gronroos 1983, Crosby et al., 1990). Almost all marketing scholars agree that the customer contact personnel can make or break a service firm. Therefore service marketers need to train employees in communication and how to interact with clients (George 1977, Davidson 1978, Booms and Nyquist 1981, Kelly and George 1982, Bitner et al., 1990).

Regular training seminars should be held for marketing professionals in services and emphasis should be placed on recruiting the right employees and training them properly. (Kotler and Connor 1977, Lovelock 1983, Schneider and Bowen 1984). Friendliness, politeness, competence and appearance of customer contact personnel were found to be very important in the banking industry and in maintaining guest relations in hotels (Fiebelkorn 1985, Peterson 1985, Zeithaml et al., 1985).

The quality of service is a combination of the physical, behavioral, and psychological characteristics of the provider. A provider must therefore understand this in depth so as to manage the quality of the service that is provided. The service quality therefore results due to the behavior of the agent, the behavior of the client and any interaction that may occur between them. A provider might benefit by managing his or her employees (through training, etc.,) so that it results in better interaction with customers and positively affects satisfaction (Klaus 1985). Zeithaml et al., (1985) found that service firms were very careful in selecting customer contact personnel and training them properly in order to control the quality of service.

Physical facility (evidence). Providing evidence of the service is a very important aspect in service marketing. This makes the performance process appear more tangible and also provides an image of the company at the point of delivery and consumption. It indicates to consumers that

benefits will be forthcoming and also helps them better understand the nature and characteristics of the service(s) offered (Blackman 1985, Klein and Lewis 1985). It also affects the response and performance of the employees (Bitner 1990).

Physical facilities are a prime marketing tool for providing tangible evidence and creating an atmosphere compatible to the offering (Berry 1980, George and Berry 1981, Kotler 1973-74, Nevils 1976, Reneghan 1981). Elements like color, design, etc., affect the environment and create an impression on the buyers that affect their buying behavior (Booms and Bitner 1981, Sherowski 1983, Shostack 1981 1984, Upah 1983, Upah and Fulton 1985).

Process management. Managing the process of service production and delivery has been regarded as an important element in managing the quality of the service provided. Process management should include scheduling, routinizing and supervising of activities so that it minimizes employee discretion when providing the service (so that service quality is consistent over time) and meets the pre-sold expectations of customers (Magrath 1986). One way to do this is to mechanize the service production process as has been suggested by Levitt (1972, 1976), George (1977), and Schmalensee et al., (1985).

Other suggestions to manage the process of service delivery have been to develop standards and procedures by setting up systems of controls and rewards so that

performance is consistent (Kotler and Connor 1977, Upah 1980). Shostack's (1977) suggestion was to make a blueprint so that it results in consistency and efficiency, while Uhl and Upah (1983) suggested the integration of marketing and production facilities in order to maintain a uniform quality of services.

### Summary

The introduction section and the chapter on literature review show major shortcomings of studies in the service area. First, most of the work is conceptual in nature and lack major empirical content. Secondly, almost all studies in services have been conducted within certain service industries and not across service industries, thereby limiting generalizability across industries. Finally, the literature in services marketing is devoid of studies linking service environments (of industries) to the strategies used by industries in such environments.

This study attempts to overcome such shortcomings in the services area by conducting empirical research that transcends industry boundaries and matches marketing strategies of different service industries to their environments. As stated earlier, this study is consistent with the contingency view of strategy (Hofer 1975) and with mid-range theories of strategies (Hambrick 1983) in that marketing strategies used by industries (and firms within them) are a function of one's environment.

This study does not examine the effects of all aspects

of the environment on strategies. Instead, it studies only a selected set of micro-environmental variables that are central to the development of marketing strategies in services and their relationship to marketing strategies.

Three service characteristics are examined as part of this study: intangibility; heterogeneity; and inseparability. Additionally, three exchange traits are considered: the relationship between the provider and the consumer; customization of the service, and interaction between provider and consumer. The above two groups of concepts (service characteristics and exchange traits) comprise the uncontrollable environment under investigation.

The business level marketing strategies that are influenced by the service characteristics and exchange traits consist of the 7Ps - service (product), price, promotion, distribution, physical facilities (evidence), personnel (participants), and process management. For a conceptual representation of the above, see Figure 2 below.

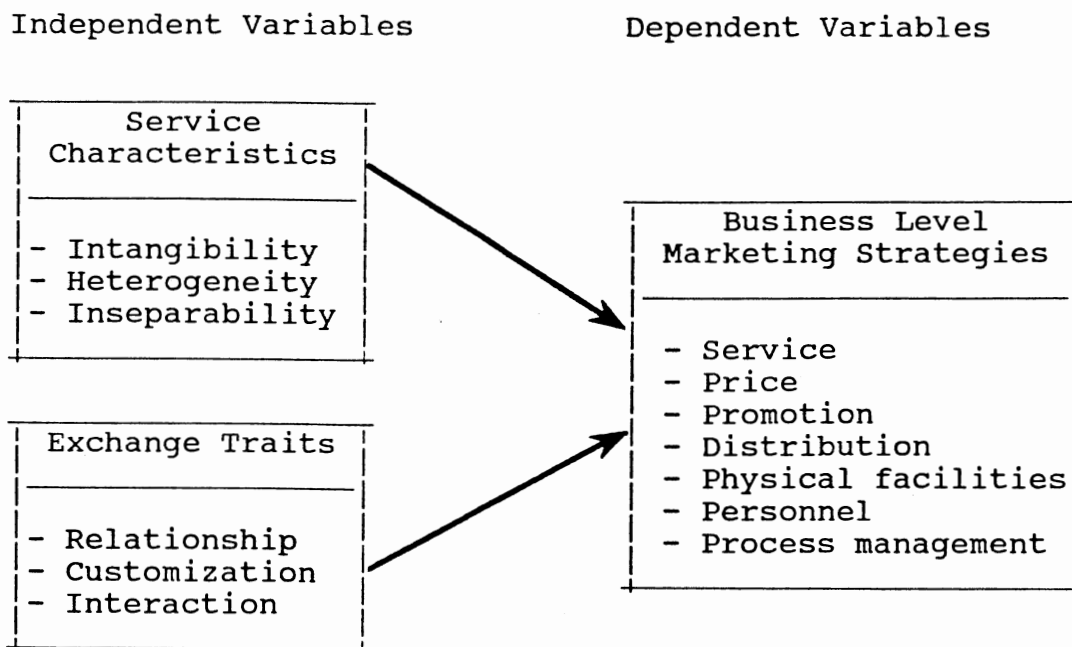


Figure 2. A Conceptual Model of this Study

The next Chapter is on research methodology and it presents the methods that were used to operationalize the constructs, collect the data and finally analyze the data to test the proposed model.



## CHAPTER III

### RESEARCH METHODOLOGY

This chapter presents the research methodology applied to investigate the relationship between the service environment (service characteristics and exchange traits) and marketing strategy selection in service industries. First, the objectives of this study are presented, followed by explanations of the data collection procedure, the sampling plan, the questionnaire design and finally the method that was used to analyze the data.

#### Research Objectives

The objectives of the research were three-fold.

1. To develop multi-item scales that describe dimensions of the service environments and marketing strategies in selected service industries: (a) service trait characteristics; (b) exchange relationship characteristics and; (c) strategy characteristics.
2. To construct a taxonomy of environments in the service sector based on the selected environmental variables (service characteristics and exchange traits).
3. To investigate the relationship between alternative environment as multidimensionally defined and the marketing strategies employed in response to the environment.

It was hypothesized that service industries can be clustered according to similarities on the proposed set of environmental variables represented by service

characteristics and exchange traits. For instance, certain service industries that might be high in intangibility, high in heterogeneity and inseparability, can be clustered together, while other service industries that are low in the above mentioned dimensions can be clustered together. These different environments should lead managers of firms to alter marketing strategies based on the environments. Consequently, within each environmental cluster, there should be similarities in marketing strategies.

A normative implication of this study is that firms in the same cluster can learn and follow successful strategies used by firms belonging to other industries but facing similar environments.

#### Data Collection Method

Data for this study was collected using a mail survey of service industry employees who have marketing responsibilities. The mail survey was used since it allowed contact with individuals from geographically dispersed firms at modest cost. Also, it allowed the use of a somewhat lengthy questionnaire that would be infeasible for a telephone survey. Eighteen diverse service industries were selected for this study such that they represented a broad cross-section of the service sector.

Typically, the response rate for earlier studies involving managerial employees have been between 30%-35% (34% for Hrebiniak and Snow 1980, 32% for Zeithaml et al., 1985, 31% for Hwang 1986, and 31% for McDaniel and Kolari

1987), and this response rate was sought. A problem with mail survey is its low response rate, and to rectify this problem, a second mailer was sent to the non-responding firms to encourage their response. To further encourage response, interested respondents were promised a summary of the findings of this study.

### Sampling Plan

The first step in the sampling plan was to construct the sampling frame. Eighteen service industries, representing the service sector, were selected for this study. These included the following: advertising, business consulting, marketing research, rental and real estate agents, banking, savings & loan, insurance, security brokers, physicians and other health services, hospital, hotel & motel, restaurants, telephone, television & radio, air transportation, motor freight transportation, automobile rental, and public utilities.

The service industries that were used for this study were selected from Rathmell's (1974) list of service industries. Since the purpose of this study was scale development and the examination of relationships, it is felt that this diversity is adequate representation of the service industry. However, as stated earlier, not all service industries proposed by Rathmell were included. For instance, service industries which are dominated by small business operations like private household services, watch, clock and jewelry repair, shoe repair shops etc., were not

included due to anticipated response problems. Another reason for not including more than 18 service industries was the cost constraint.

The sample frame for this study was The 1988 American Marketing Association's International Membership Directory and Marketing Services Guide, published by the American Marketing Association, Chicago. This directory, published by the American Marketing Association (AMA) was selected because members of the AMA are likely to be knowledgeable about the marketing environment for their respective industries and the marketing strategies employed by the leading firms in their industry.

There were drawbacks in using the AMA directory. First, it contained names of individuals belonging to manufacturing firms and also to other service industries not included in this study. Second, it was frequently difficult to identify whether the firms were manufacturing firms or service firms because the codes used in the directory were by employment, i.e. the job title of the individual rather than the industry. To rectify the identification problem, a screening question was included in the questionnaire (see Appendix A for the questionnaire) which asked respondents to identify the industry to which they belonged. Respondents belonging to manufacturing or to service industries other than the 18 listed above were not included for this study and were disregarded.

A sample size of 1,000 (representing 18 service industries) firms was selected for this study. Based on

prior response rates it was estimated that a usable sample of 300-350 would be obtained. This would allow adequate representation from the included service industries to analyze differences among them. The AMA directory from which the names were selected consisted of 301 pages, each page containing the names of approximately 65 members (totaling approximately 19,565 names). To satisfy our sample of 1,000 respondents, systematic sampling was utilized. Every nineteenth name was selected as a potential respondent. If the selected name appeared to be of an employee who belonged to a manufacturing industry or to a service industry not selected for this study, that name was dropped from further consideration and the next name (of an employee of a firm that belonged to a service industry used for this study) was substituted.

Due to the membership of the AMA, there was an overrepresentation of certain industries like marketing research, advertising and other types of marketing consultants. In order to assure diversity in representation among industries, a quota was used for each service industry. However, since this was a study of relationship between variables rather than prediction or description, no attempt was made to weight the responses with the percentage of respective respondents.

#### Measurement Issues

The questionnaire was designed to obtain relevant information from potential respondents, the service

characteristics and the exchange traits of the firm's industry, the marketing strategies used by leading firms in their industry, and regarding the nature of their firm. This is regarded as the self-typing approach in collecting data (Snow and Hambrick 1980). This, and others like investigator inference, external assessment and objective indicators have been regarded as some of the different types of methods for collecting data. Although there is a potential for response bias with the self-typing approach, this has been widely used by scholars in their studies (Hwang 1986, McDaniel and Kolari 1987). This method was used because employees in the marketing area would be well informed on the marketing strategy of the leading firms in their industry and the industry environment. Perceptions of executives have been used to collect such data, and the questions that were asked were in relative terms rather than at absolute levels (Hwang 1986).

The questionnaire was pre-tested in Pueblo, Colorado, by personally distributing it out to a convenience sample of individuals from 30 different firms belonging to the 18 service industries. This allowed examination of questionnaire wording and length. Relevant changes were made based on the comments received.

A questionnaire along with a cover letter (See Appendix A) was mailed to each potential respondent explaining the purpose of this study. The questionnaire was divided into four parts.

1. The first part of the questionnaire asked respondents to identify the industry to which they belonged.

2. The second part solicited information on the independent variables (service characteristics and exchange traits), i.e heterogeneity, intangibility, inseparability, relationship between the provider and the consumer, customization and the interaction between the provider and the customer. Respondents were asked to provide their perception on the above mentioned environmental variables within their industry in comparison to the environment for other service industries listed as part of the study.
3. The third part of the questionnaire asked respondents to identify the leading firms in their industry to provide perceptions on the marketing strategies used by these leading firms in comparison to the marketing strategies used by the leading firms in other service industries being studied. Respondents were asked to provide their perception on the degree to which the leading firms within their industry utilized strategy tools like service, price, promotion, distribution, physical facilities, personnel and process management relative to leading firms in other service industries.
4. The final part of the questionnaire solicited information on the nature of the respondent's industry and the nature of the firm where they were employed.

#### Environment Measures

Environment measures were for the concepts discussed in Chapter Four. These include service characteristics and exchange traits. The service characteristics were intangibility, heterogeneity and inseparability, while the exchange traits were relationship between the provider and the consumer, whether the service is customized or not, and the interaction between the provider and the consumer. Responses for the environment variables were measured using a 7-point semantic differential scale. Bowen (1985) has also used the same method of measuring the above mentioned variables.

### Strategy Measures

The 'strategy' construct was examined by seven variables: service, price, distribution, promotion, physical evidence, physical facilities and personnel. The rationale for this selection of variables appears in Chapter Four and will not be repeated here. Strategic marketing and strategic management scholars have typically used the first four variables to measure the strategy construct for manufactured goods (Hofer 1975, Hwang 1986). However, this is probably the first study that has measured the three new strategic service variables along with the four marketing mix variables to form 7 marketing variables in services.

As with the environment variables, these were measured using a 7-point semantic differential scale. Questions were anchored with regard to the extent to which the "leading firms" in the industry utilized the strategy tool relative to others in other service industries.

Since these variables are felt to be components of more global dimensions, it is intended that they will be combined in various ways as to form indices.

Responses for company characteristics were measured using a 5-point Likert-type scale. Questions were anchored with regard to the extent to which they strongly agreed or strongly disagreed about the characteristics of their firm in comparison to other firms in their industry. However, this section was included simply to describe the nature of the firms to which the respondents belonged and it was not a part of this study.



## Data Analysis

The collected data was analyzed as a four stage process:

1. The first stage of the data analysis utilized factor analysis as a data reduction tool to identify multi-item measures of underlying dimensions with regard to the service environment and strategy.
2. The second stage of the analysis used cluster analysis to group service industries based on the commonality of their environments.
3. The third stage of the data analysis used discriminant analysis to examine the differences among grouped industries with regard to market strategy employed.
4. For the final stage of the data analysis, multivariate analysis of variance (MANOVA) and a series of analysis of variance (ANOVA) were used to test for differences in environments and marketing strategies between the different clusters.

Factor analysis has been recommended by Harrigan (1985) for applications as sought in this research. Factor analysis is typically used to reduce the number of variables measured to a sub-set of more global dimensions of a construct without loss of information (Churchill 1979, Stewart 1981). Factor analysis can also be used as a confirmatory tool to test whether the items used for measuring their respective constructs are indeed measuring that construct (Churchill 1987). In factor analysis, the factors are rotated in order to produce some high loadings for some selected variables on a given dimension and some near zero loadings on other factor. The method of rotation utilized was orthogonal rotation, where the new set of axes are uncorrelated.

Cluster analysis enables the researcher to place

observations into diverse groups based on n-dimensional traits for each observation (Harrigan 1985). Thus, entities within a group (cluster) approach homogeneity to each other on the dimensions and heterogeneity among different groups (Frank and Green 1968). Researchers have proposed the use of various distance measures (single, complete and average linkage), correlation measures and similarity measures as measures of proximity to cluster points in multidimensional space (Frank & Green 1968). However, since there is no single most preferred method, Ward's method (which is a distance measure) is used in this study.

Discriminant analysis is typically used such that the discriminant functions provide an explanation as to which variables account for the most intergroup differences (Green & Tull 1978). Discriminant analysis can also be used to test for the classification accuracy in assigning respondents to sub-groups.

Analysis of variance (ANOVA) tests for differences between means for two or more groups. It was recently used by McDaniel and Kolari (1987) for testing for strategic differences between the different strategic groups in the Miles and Snow (1978) strategic typology. It was expected that different environments would dictate the use of different strategies. ANOVA was used to test for differences among groups on the individual environment and marketing strategy variables, while MANOVA was used to test the differences in the overall environment and the marketing strategy among the different groups.

## CHAPTER IV

### ANALYSIS AND RESULTS

This chapter provides the findings of the study. First, a statistical profile of the respondents is provided. Then, a descriptive analysis of the results is presented. Finally, the third part of this chapter examines the research questions of this study.

#### Respondent Profile

##### The Response Rate

A questionnaire, along with a cover letter explaining the purpose of the study was mailed to each of the 1,000 potential respondents selected from the 1988 AMA Directory. Those selected individuals represented employment among the 18 different service industries used for this study. The first wave of mailing yielded a total response of 159 from which 151 (15.1%) questionnaires were usable.

A second mailing was conducted among non-respondents approximately four weeks after the first mailing. Due to cost constraints, the second questionnaire was not sent to all of the non-respondents. Five hundred questionnaires were sent in the second mailing to individuals from each of the eighteen service industries. Industries which were

underrepresented in the first wave of returns were identified and a disproportionate number of questionnaires were mailed to individuals belonging to these industries. The second mailing yielded a response of 36, of which 34 were usable. Thus, the total usable response from the two mailings was 185 (response rate of 18.5%). Table V provides a comprehensive view of the response rate by mailing and industry.

TABLE V  
SURVEY OF RESPONSE

Service Industries	First Wave			Second Wave		
	Sent	Recvd. (%)		Sent	Recvd. (%)	
Advertising	58	9	15.5	30	4	4.0
Business Consulting	64	13	20.3	20	0	0.0
Marketing Research	61	7	11.5	35	5	14.3
Rental & Real Est Agents	47	4	8.5	35	2	5.7
Banking	75	13	17.3	23	1	4.3
Savings & Loan Assoc.	64	7	10.9	30	2	6.7
Insurance	53	10	18.9	25	3	12.0
Security brkrs and dlrs	60	5	8.3	35	1	2.9
Phys. & health serv.	57	4	7.0	35	0	0.0
Hospital	83	25	30.0	10	3	30.0
Hotel/Motel	83	7	8.4	35	2	5.7
Restaurants	42	2	4.8	35	2	5.7
Telephone service	49	9	18.4	30	1	3.3
TV and radio broadcast	64	8	12.5	30	3	10.0
Air transportation	27	3	11.1	25	0	0.0
Motor freight transport	24	8	33.3	25	1	4.0
Automobile rental	17	1	5.9	15	0	0.0
Public utilities	63	15	23.8	25	4	16.0
Others		1				
<u>TOTAL</u>	<u>1,000</u>	<u>151</u>	<u>15.1</u>	<u>500</u>	<u>34</u>	<u>6.8</u>

The response rate was relatively low. However, this can be attributed partially to the age of the AMA directory. Although the directory was the latest in print, it was almost a year old at the time of mailing, and many selected respondents may have moved to other organizations. Additionally, the questionnaire was relatively long which may have impeded response.

This low sample size hampers the generalizability of the study. However, since this is a study of relationships among variables and not a description of any given population, satisfactory interpretation can be made.

#### Descriptive Profile

As a benchmark for comparison among industries with regard to service industries, a summary description of the complete data set was deemed appropriate. Since the study design assumes that individuals employed within an industry should be knowledgeable of the marketing environment of their industry, these summary results can be viewed as a measure of the environmental and strategy characteristics for the service sectors included within the study. Table VI below shows the environmental characteristics of the service sectors under investigation.

TABLE VI  
SERVICE SECTOR ENVIRONMENTAL  
CHARACTERISTICS

Service characteristics and exchange traits	Mean Rating*	S.D.
Physical goods as part of service	3.12	1.90
The service offering is visible	4.40	2.12
The service can be touched, smelled, etc.,	3.15	2.16
Service quality varies over time for a provider	4.71	1.63
Service quality varies between providers	5.28	1.70
Direct benefits of service last over time	4.99	1.90
Service is not used up as soon as it is provided	4.72	2.11
Service is purchased by consumers frequently	4.14	2.24
Consumer tends to patronize a single provider	4.39	1.97
Service can be customized for consumer's needs	4.75	2.03
Service is customized using provider's judgment	4.84	1.85
Providers and consumers personally interact	5.18	2.01
The interaction lasts for a long period of time	4.56	1.90

n = 185

\* 1=Well below average    4=Average    7=Well above average

Respondents were provided a list of eighteen service industries and were to compare the environmental characteristics (service characteristics and exchange traits) of their service industry to the environmental characteristics of the other eighteen service industries. As can be seen from the above table, the mean response for two of the physical traits were near the average for all

services considered with 3.12 and 3.15 respectively. For all other traits, the mean assessments were perceived as above average. Apparently, as frequently occurs in using Semantic-differential scales, representatives from most industries felt that their industry was well "above average" relative to other industries. An upward bias occurred. The standard deviation of responses for each trait is quite high, a desirable trait, when studying interrelationship.

Respondents were asked to indicate the marketing strategies for the leading firms in their respective service industries relative to that for those in other industries. These results appear in Table VII. As with environmental traits, most strategy traits above 4.0. There was again an upward bias to the assessments.

TABLE VII  
MARKETING STRATEGY CHARACTERISTICS OF  
THE LEADING SERVICE FIRMS

Marketing Strategy Traits	Mean Rating*	S.D.
Providers regularly develop new services	4.39	1.53
Providers provide a broad variety of services	4.79	1.54
They augment primary services with new ones	4.74	1.37
Providers compete strongly on the basis of price	4.22	1.98
They rapidly respond to price changes by competitors	3.70	1.95
Providers rely on salespeople to promote service	4.63	2.04
They rely on mass media advertising to promote service	4.09	1.86
They rely on brochures, mailers to promote service	4.66	1.74

TABLE VII (Continued)

Marketing Strategy Traits	Mean Rating*	S.D.
They rely on public relation to promote service	4.40	1.67
Providers use a large number of outlets to distribute service	3.82	2.09
They consider location of outlets to be critical	4.02	2.08
They project image through decor, furnishing	4.09	1.95
They project image through design and layout	3.99	1.77
They train employees for better interaction	4.88	1.53
They train employees to provide consistent service	4.97	1.48
They plan the process of providing the service	5.14	1.41
They closely supervise the employees	4.90	1.47

n = 185

\*1 = Well below average 4 = Average 7 = Well above average

The standard deviations for strategy measures on leading firms were also quite high. This shows the diversity in the strategy used by leading firms.

#### Environmental and Strategy Traits

The first research objective for this study is as follows: To develop multi-item scales that describe dimensions of the service environments and marketing strategies in selected service industries: (a) service trait characteristics; (b) exchange relationship characteristics and; (c) strategy characteristics.

In the analysis below, the original thirteen environmental traits and the seventeen strategy traits are



analyzed separately to identify respective taxonomies represented by higher level dimensions.

#### A Taxonomy of Environments

The service environment has been described by thirteen distinct traits. A sub-objective of this research is to construct a taxonomy of environments as measured by perceived service environmental characteristics. In constructing the taxonomy, the objective was to identify key "environment" dimensions with multi-item measurements for each dimension. To accomplish this, factor analysis was used to reduce the original thirteen items into a smaller number of items without loss of significant information. This method has been used by a number of scholars like Churchill (1979), Stewart (1981) and Harrigan (1985).

The factor analysis for the environmental factors is provided in Table VIII. The factors were rotated using the varimax rotation providing maximally uncorrelated factors. Using the convention of rotation among factors with eigenvalues of 1.0 or more, five factors were generated. The cumulative variation explained by the five factors was 68.4%. Individual items were assigned to specific factors if their loadings were 0.5 or higher on that factor with low loadings on all other factors (Churchill 1987, Harrigan 1985).

TABLE VIII  
 ROTATED FACTOR MATRIX:  
 ENVIRONMENTAL VARIABLES

Environmental Traits	<u>Factors*</u>				
	1	2	3	4	5
Touch, smell	0.87	0.01	0.03	0.01	-0.05
Physical good	0.78	-0.04	-0.04	-0.03	0.14
Visible	0.75	0.13	0.04	0.19	0.15
Lasting benefits	-0.09	0.79	0.13	0.05	0.02
Used for long time	-0.05	0.61	0.09	-0.11	-0.24
Long interaction	0.12	0.74	0.09	0.17	0.04
Personal interact.	0.20	0.53	0.33	0.07	-0.15
Custom. by provid.	-0.00	0.11	0.89	0.01	-0.05
Custom. for need	0.13	0.15	0.84	0.13	0.03
Variable quality by same provider	0.04	0.03	0.03	0.84	-0.05
Variable quality across providers	0.08	0.10	0.20	0.81	-0.10
Frequent. purchas.	-0.18	-0.01	0.07	-0.21	0.80
Patronize one provider	0.12	-0.17	-0.19	0.03	0.77

\* Total variation explained by the five factors = 68.4%

Factor 1 is represented by three traits and could be labeled as a tangibility factor, (e.g. does the service have physical goods as part of the service and can the service be seen, touched and smelled). Factor 2 is primarily associated with four traits. It represents the "inseparable/interaction" component and is a combination of items in terms of the time frame, (e.g. if the service lasts for a long period of time, then it is very likely that the degree of interaction between the provider and the consumer will be quite high). Factor 3 consists of two traits that

reflect "customization", (e.g. can the service be customized and is the provider's judgment necessary for this). Factor 4, with two traits, represents the construct "heterogeneity", (e.g. does the service vary in quality by the same provider and between different providers). Finally, factor 5 consists of the construct "relationship", (e.g. is the service frequently purchased and does the buyer patronize a single provider).

All 13 of the environmental traits loaded at above 0.50 on single factors. However, groupings of traits were not completely as expected a priori. Originally, interaction and inseparability were thought to be different from one another. But the factor analysis results showed that interaction and inseparability have common underlying meaning, and therefore they were combined to form a single construct.

On further analysis, traits with a high loading on each given factor were combined to provide multi-item measurements for the respective dimensions. In summary, the constructs are: tangibility, inseparability/interaction, customization, heterogeneity, and relationship.

Prior to use of the multi-item constructs in subsequent analysis, it was felt appropriate to test the internal reliability of the items in measuring the different environmental constructs. According to Churchill (1979, pg 65), "A measure is reliable to the extent that independent but comparable measures of the same trait or construct of a given object agree". His recommendation is to use

Cronbach's Coefficient Alpha to measure reliability. A high value of Coefficient Alpha indicates that the items used for measuring the construct have all captured the essence of the construct.

Reliability coefficients were calculated for each of the dimensions derived from factor analysis. Table IX below shows that the reliability scores for the different items measuring service characteristics and exchange traits ranged from 0.55 to 0.75.

TABLE IX  
RELIABILITY SCORES FOR  
ENVIRONMENTAL VARIABLES

Service Characteristics and Exchange traits	Name of Dimension	Coefficient Alpha
Touch, smell Physical goods Visible	Tangibility	0.75
Lasting benefits Used for long Long interaction Personal interaction	Inseparability/Interaction	0.66
Customization by provider Customization to meet need	Customization	0.79
Qlty. varies by same provider Qlty. varies across provider	Heterogeneity	0.66
Frequently purchased Patronize single provider	Relationship	0.55

According to Nunnally (1967), Peter (1979) and Churchill (1979), for early stages of basic research,

reliability scores between 0.5 and 0.6 are sufficient. For example, reliability scores between 0.56 and 0.87 were reported by Ruckert and Churchill (1984) and scores of 0.46 and 0.57 were reported by Didow and Franke (1984). Thus, the reliability scores ranging from 0.55 to 0.79, for this study, should be considered sufficient to accept the multi-item scales as constructed.

### A Taxonomy of Strategies

The marketing strategy for service industries has been described by 17 traits. A sub-objective of this research is to identify salient dimensions of strategy as composites of the 17 traits identified earlier.

As in dealing with environmental traits, factor analysis was utilized to consolidate the strategy traits in more global dimensions. The varimax rotation routine was used. Table X shows the rotated factor matrix for the marketing strategy variables. Six factors had eigenvalues greater than 1.0 and these explained 74.4% of the total variation. Thus, the interpretation of the strategy dimensions was based on these. Variables were assigned to factors based on loadings of 0.50 or higher on a given factor and low loadings on all other factors. Every variable met this assignment criteria and was assigned to a factor.

Factor 1 consists of four items. These reflect similar traits, i.e. they all concentrate on training and supervising employees to provide the service.

Factor 2 represents a "service development" construct. It includes three variables, i.e. augmenting services, developing new services and providing new services.

TABLE X  
ROTATED FACTOR MATRIX: MARKETING  
STRATEGY VARIABLES

Items	<u>Factors*</u>					
	1	2	3	4	5	6
Train consist.	0.87	0.01	0.13	-0.00	0.11	0.10
Plan process	0.82	0.09	0.15	0.02	-0.06	0.02
Sup. employ.	0.81	0.13	0.01	0.11	-0.16	-0.02
Train inter.	0.75	0.01	-0.01	-0.02	0.02	0.15
Augment serv.	0.04	0.90	0.11	0.01	0.02	0.03
Dev. new serv.	0.09	0.88	0.02	0.06	0.04	0.06
Provide varty.	0.08	0.85	0.16	0.04	0.11	0.00
Decor/Furnish.	0.05	0.15	0.90	0.04	0.20	0.10
Design/Layout	0.14	0.07	0.90	0.01	0.19	0.00
Public relatn.	0.15	0.25	0.50	-0.05	-0.22	0.42
Price compete.	0.03	0.01	-0.00	0.88	0.18	0.00
Change price	-0.00	0.02	0.06	0.86	0.24	0.07
Rely on s.p.	0.07	0.07	-0.02	0.67	-0.14	0.18
No. of outlets	0.09	-0.01	0.29	0.11	0.82	0.23
Outlet locatn.	0.00	0.19	0.05	0.13	0.80	0.10
Broch., malrs.	0.12	-0.01	0.10	0.09	0.12	0.81
Media adv.	0.03	0.04	0.03	0.16	0.22	0.78

\* The six factors accounted for 74.4% of the variation

Factor 3 can be labeled as the "image" construct, (e.g. public relations, design, decor and furnishing to project an image). It again includes three variables.

Factor 4 consists of a "price" construct, (e.g. use of price or change of prices as a tool). It was surprising to

find that the "reliance on salespeople" loaded quite heavily on the price construct. Perhaps firms who are price competitive may very likely emphasize the importance of salespeople.

Factor 5 consists of the "distribution" construct, (e.g. the importance given to the number and the location of outlets). It includes two variables.

Factor 6 consists of the "promotion" construct, (e.g. reliance on the published media and air waves to promote themselves). It is also comprised of two variables.

Originally, it was thought that the "marketing strategy" consisted of 7 dimensions representing the traditional 4Ps plus person, process and physical facilities. However, the factor analysis results indicated that the constructs "person" and "process" were perceived as being highly intercorrelated by respondents. Thus, they were combined to form the construct training/supervision.

For further analysis, items that loaded heavily on one factor were combined to provide multi-item measurements for each dimension to form a single construct. This yielded six construct measures: person/process; service provision; image; price; distribution and promotion.

The scale reliability for each of the multi-item measures used to define marketing strategy constructs was examined by use of the Coefficient Alpha statistic. Table XI below shows that the Coefficient Alpha scores for the marketing strategy variables are quite high ranging from 0.64 and 0.87. As noted in earlier discussions, these are

of sufficient magnitude to accept multi-item scales as reliable.

TABLE XI  
RELIABILITY SCORES FOR MARKETING  
STRATEGY VARIABLES

Marketing Strategy Traits	Name of Dimension	Coefficient Alpha
Augment service Develop new services Provide variety of service	Service	0.87
Change price to compete Compete on price Rely on salespeople	Price	0.75
Brochures, mailers Media advertising	Promotion	0.64
Number of outlets Location of outlets	Distribution	0.74
Public relations Decor/furnishing Design/Layout	Image	0.77
Training for consistency Training for interaction Planning process Supervising employees	Training/Supervision	0.84

#### Service Sector Traits

#### With New Dimensions

Previously, the service environment variable and strategy variables were combined into multi-item scales to form 5 and 6 dimensions respectively. Based on the results of the factor analysis for environment and strategy



variables, mean scores were calculated for the multi-items measures for each observation.

For example, the "tangibility" construct consisted of 3 items, and in order to form an index for tangibility for a particular observation, the three items were combined and mean score calculated, thus resulting in a single measure for "tangibility". Similarly, "inseparable/interaction" consisted of 4 items and to form an index for an observation for this construct, the four items were added and the total divided by 4. The above was done for each construct and for each observation. Mean scores were used rather than cumulative scores since the number of items comprising each dimension differs. This process provides an average score for each construct. Table XII below shows the mean rating and the standard deviation for these environmental and marketing strategy characteristics over the entire sample.

TABLE XII  
ENVIRONMENTAL AND MARKETING  
STRATEGY CHARACTERISTICS  
OF THE SERVICE SECTOR

Variable	Mean Rating*	S.D.
<u>Environment</u>		
Tangibility	3.50	1.71
Heterogeneity	4.86	1.51
Inseparable/Interaction	4.84	1.45
Relationship	4.13	1.85
Customization	4.73	1.82

TABLE XII (Continued)

Variable	Mean Rating*	S.D.
<u>Marketing Strategy</u>		
Service	4.62	1.31
Price	4.17	1.63
Promotion	4.36	1.54
Distribution	3.89	1.88
Image	4.12	1.50
Training/Supervision	4.95	1.25

\* 1=Well below average    4=Average    7=Well above average

It is quite clear from the above table that in comparison to other service industries, the service industries included in this study perceive themselves to be higher than average (average = 4.0) on environment and strategies. As explained earlier, the Semantic differential scales usually result in an upward bias. The service industries perceive their services to be quite intangible, above average in heterogeneity, inseparability/interaction, customization and in the relationship trait. The leading firms in services appear to be above average in service, price, promotion, facility and in the training/supervision construct, and below average in the distribution construct. The standard deviation for the individual environmental and marketing strategy traits is quite large signifying the fact that the service industries are affected by very diverse environments, and the leading service firms in these service industries use diverse marketing strategies.

## Grouping Service Industries

The second research objective was to group service industries based on the selected environmental variables. In order to examine the above research objective, respondents from the various service industries were grouped on their similarities on the environmental variables as listed in Table XIII. To achieve this objective, the statistical method, cluster analysis was performed.

Within the cluster analysis, data for each respondent consisted of the individual's scores for each of the multi-item dimensions: tangibility, heterogeneity, inseparability/interaction, relationship and customization. All of the 183 observations were included in the cluster analysis. Mean scores were used for all dimensions since the number of items comprising each dimension differs. Ward's method (euclidean distance) was used for grouping of the multidimensional observations. The selection of Ward's euclidean distance method over others like average distance, single linkage and the centroid method, was somewhat arbitrary. However Dillon & Goldstein (1984, pg. 205) state, "The question of which similarity or distance measure to use is still largely unanswered", and it appears to be acceptable.

Using Ward's clustering method a dendrogram for the 183 observations was examined. It was decided that a five cluster solution provided the most interpretable result (see the dendrogram in Appendix B for a visual justification of

the five clusters). Table XIII below shows the groupings of observations over the five clusters by service industry SIC codes for the respondent's industries. Cluster sizes ranged from 26 to 54.

TABLE XIII  
CLUSTERS OF RESPONDENTS BY INDUSTRY

Industry	<u>Cluster</u>				
	1 No. (%)	2 No. (%)	3 No. (%)	4 No. (%)	5 No. (%)
Advertising	1 (7%)	3 (23%)	7 (54%)	1 (7%)	1 (7%)
Business Con.	0 (0%)	5 (38%)	2 (15%)	6 (46%)	0 (0%)
Mktg. Research	0 (0%)	2 (17%)	1 (8%)	8 (67%)	1 (8%)
Rntl. & Real Est	0 (0%)	2 (33%)	1 (17%)	3 (50%)	0 (0%)
Banking	5 (36%)	1 (7%)	1 (7%)	3 (21%)	4 (29%)
Savings & Loan	2 (22%)	3 (33%)	0 (0%)	1 (12%)	3 (33%)
Insurance	2 (15%)	2 (15%)	0 (0%)	2 (15%)	7 (47%)
Security Bkrs.	2 (33%)	1 (17%)	0 (0%)	2 (33%)	1 (17%)
Physicians	1 (25%)	2 (50%)	1 (25%)	0 (0%)	0 (0%)
Hospitals	4 (14%)	11 (39%)	6 (21%)	4 (14%)	3 (11%)
Hotel/Motel	2 (22%)	2 (22%)	2 (22%)	0 (0%)	3 (33%)
Restaurant	0 (0%)	0 (0%)	0 (0%)	0 (0%)	4 (100%)
Telephone	5 (50%)	0 (0%)	0 (0%)	0 (0%)	5 (50%)
TV & Radio	1 (9%)	0 (0%)	3 (33%)	1 (9%)	6 (55%)
Air Transport	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (100%)
Motor Freight	1 (11%)	0 (0%)	2 (22%)	3 (33%)	3 (33%)
Pub Utilities	7 (37%)	2 (11%)	0 (0%)	0 (0%)	10 (53%)
<b>TOTAL</b>	<b>33 (18%)</b>	<b>36 (20%)</b>	<b>26 (14%)</b>	<b>34 (19%)</b>	<b>54 (29%)</b>

As can be seen from Table XIII, observations from the respective industries do not group cleanly into single clusters. For instance, the respondent observations for the advertising industry were split among all of the five clusters with cluster 3 having 54% of the observations. The

observations from the restaurant and the air transportation industry did group into single clusters. However, these are exceptions and observations for all of the other industries were split among two or more different clusters.

Since the clusters represent perceived service environments, at first blush, one would expect all of the represented firms within any given industrial classification to group in single clusters. However, there are a number of alternative explanations for the diversion of observations. First, there may be differences in perceptions among respondents within the same industry as to what the environment is for their industry. This is a disturbing assumption since respondents were surveyed in anticipation that would have valid insights on their respective environments.

Another explanation, somewhat more likely, is that industry classifications as defined by SIC codes are too general to capture market condition forces. SIC codes are based primarily on production issues rather than market issues. For example firms of different sizes or those who serve different market segments may interpret the environment of their industry differently. As an illustration, firms within the security brokers industry vary on the inseparable/interaction trait. A full service security broker like Prudential Bache, Merrill Lynch and Shearson Lehman Hutton may have a high degree of face-to-face interaction with their clients while other types of discount brokers like Charles Schwab may have almost all of

their transactions over the telephone without even seeing their clients and thus be very low on inseparability/interaction.

One cannot definitively prove that one explanation for "within industry" is true. However, a perusal of open-ended responses for the questionnaire casts further light on the matter. Respondents were asked to name the leading organization(s) in their industry upon which they based their strategy descriptions. On further review of their responses, it was found that respondents within the same industry had named different companies as leaders. Further, some respondents had listed national companies as the leaders in their industry, while others listed regional (local) companies as leaders in their markets. Table 1 in Appendix C shows the number of companies by different industries who identified different leaders. Approximately 43% of the respondents identified national companies as their leader, while 37% identified a regional (local) company as their leader. Approximately 20% failed to answer the open-ended question and no assumptions can be made regarding them. This discussion implies that even though respondents within a given industry had different perceptions about their markets and the leaders within them, this does not negate the respondent's validity in reporting on the industry. If a company identified a national company as the leader, it would respond differently both for the environmental and marketing strategy variables than a company who identified a regional company as the leader.

One can also get some insight if one examined the distribution of respondents among the different clusters based on their identification of who their market leaders were. Table 2 in Appendix C shows such a distribution. The table shows that cluster 1 and cluster 5 are dominated by respondents who identified regional (local) companies as their market leaders while clusters 3 and 4 were dominated by respondents who identified national companies as their market leaders. Finally, cluster 2 was somewhat dominated by respondents who identified national companies as their leaders, although not overwhelmingly. This clearly indicates that the differences between respondents in the different clusters can also be attributed to their different points of reference based on their identification of who the leading firms were.

Looking at the distribution of respondents within clusters, the majority of the respondents from the advertising industry fell in cluster 3 which is dominated by respondents who identified a national company as their market leader. Out of 13 respondents for the advertising industry, 10 identified national companies as their market leader. Similarly, the majority of the respondents from the marketing research industry fell in cluster 4 which is dominated by respondents who identified national companies as their market leader, and 67% of the respondents from the advertising industry identified national companies as their market leader. Similar conclusions can be made for rental and real estate agents, physicians & other services, and

hospital. The majority of the respondents from the above mentioned industries identified national companies as leaders and the majority of the observations from these industries fell into clusters which were dominated by respondents who identified national companies as their leader, i.e. clusters 2, 3 and 4.

The majority of the respondents from industries like telephone, television & radio, air transportation and public utilities fell into clusters which were dominated by respondents who identified regional companies as their leader. The majority of respondents from these mentioned industries also identified regional companies as their leader.

However, respondents from the banking, savings & loan, banking, security brokers, hotel & motel, and motor freight transportation were split almost evenly among the five clusters and no definite conclusions can be made about them. Others like insurance and restaurants did not conform to the above analogy.

Table 3 in Appendix C shows that the characteristics of companies who identified different firms as their leader(s) were also different. In general, companies who identified national firms as their leader(s) had more employees, had higher revenue, higher market share, and higher return on investment in comparison to companies who identified regional firms as their leader(s).

Table 4 in Appendix C confirms the belief that different companies within the same industry had different



perceptions about their environment and the marketing strategy of their leaders, thereby reflecting that there are sub-environments within an industry. These groups are typically referred to as "strategic groups."

#### Cluster Descriptors

In order to better understand the service environment of clusters, one must explain how between-cluster differences can be explained by differences in levels of the service environment variables. A discriminant analysis was conducted to yield insights into cluster descriptors. Table XIV below shows the group means for the environmental dimensions over the five groups (clusters).

TABLE XIV  
MEAN SCORES OF CLUSTERS ON  
ENVIRONMENTAL DIMENSION

Environmental Dimension	<u>Group</u>					F Ratio*
	1	2	3	4	5	
Tangibility	2.78	3.52	5.62	2.47	3.54	20.96
Heterogeneity	4.98	4.09	5.30	5.57	4.65	5.68
Inseper/Inter.	4.70	5.36	5.76	5.18	3.93	11.93
Relationship	5.83	4.50	3.83	2.08	4.29	28.69
Customization	4.47	5.81	6.23	5.97	2.65	80.89

1=Well below average    4=Average    7=Well above average  
\* All variables were significant at the  $p < 0.01$  level

The discriminant analysis allowed testing of between-cluster differences for each dimension as a one-way ANOVA. The F-Ratios, as shown in Table XIV, ranged from 5.68 to

20.96. All of the environmental variables were statistically significant at the  $p < 0.01$  level, signifying that there was a significant difference among respondents across the groups on the environmental dimensions.

For inspection purposes, mean scores of the groups in Table XIV above should be compared to the mean score for the total sample (service sector) as whole as reported in Table XII. Total sample mean scores for the service sector were as follows: tangibility was 3.5; heterogeneity was 4.86; 4.84 for inseparability/interaction; relationship was 4.13; and customization was 4.73. A cluster with a mean score below (above) that of the service sector on any given dimension signifies that the cluster can be partially described by that dimension.

The above table shows that in comparison to others, firms belonging to group 1 are well below average in tangibility, very high in relationship, and average on other dimensions. Firms belonging to group 2 are quite below average on heterogeneity, much higher than average in inseparability/interaction and customization. Firms in group 3 are very high in tangibility, heterogeneity, inseparability/interaction and customization. Firms in group 4 are very low in tangibility and relationship and quite high in customization and heterogeneity. Finally, firms in group 5 are very low in customization and inseparability/interaction, and average on the rest of the dimensions.

Although all firms from within a service industry did

not fall into the same cluster, the groups clearly show a certain trend, i.e. certain types of service industries dominated one cluster while other clusters were dominated by other types of service industries.

The industries that dominated group 1 were banking, security brokers and telephone. This group of industries has very intangible services and the interaction between consumers and the providers in this group is continuous and long in relationship (patronage). This group (of industries) can be appropriately labeled as the "very intangible and high in patronage" group.

The industries that dominated group 2 were savings & loan, physicians & other health services, and hospitals. This group (of industries) has a high degree of interaction between the provider and the consumer and high customization to the needs of the consumer. A good label for this group can be the "highly interactive and customized" group.

Group 3 is dominated only by the advertising industry. The advertising industry is very highly customized to the needs of its clients, and is also high in inseparability/interaction, and heterogeneity. The advertising industry is typically one where the service can be greatly customized to the specific needs of the consumer. The providers and the buyers in this industry also interact quite frequently and for a long period of time and the service is also quite different between providers and by the same provider. This group can be labeled as the "highly customized, heterogeneous and interactive" group.

Group 4 is dominated by business consulting, marketing research, rental and real estate. This group is very intangible, does not have long term relationship between the customer and the provider, the service is different between different providers, and it can be customized highly to the needs of the buyer. An appropriate label for this group would be the "highly intangible, customized, heterogeneous with low patronage" group.

Finally, group 5 is dominated by the insurance, hotel/motel, restaurant, air transportation, motor freight and public utilities. This group appears to be dominated by capital intensive industries, and it is appropriate that it is very low in customization. All other traits seem to be close to average. This group of industries can be labeled as the capital intensive "low customization" group.

The discriminant analysis also allowed a test of the efficacy of the dimensions in the assignment of observations to clusters based on the environmental dimensions. A natural result of discriminant analysis is the calculation of the discriminant function as shown in Table XV below. The purpose of the discriminant functions is to find out which variables carry the most weight for the classification and in assessing the strength of the equation in predicting group membership.

TABLE XV  
STANDARDIZED CANONICAL DISCRIMINANT  
FUNCTION COEFFICIENTS

Environmental Variables	<u>Function</u> *			
	1	2	3	4
Tangibility	0.06	0.67	-0.75	0.42
Heterogeneity	-0.22	-0.32	0.00	0.98
Insep/Interact	0.25	0.23	0.09	0.05
Relationship	-0.46	0.67	0.58	0.25
Customization	0.96	0.10	0.22	-0.03

\* Fn. 1, signif. at  $p < 0.01$ , explained 69% of the variation  
 Fn. 2, signif. at  $p < 0.01$ , explained 18% of the variation  
 Fn. 3, signif. at  $p < 0.01$ , explained 11% of the variation  
 Fn. 4, signif. at  $p = 0.08$ , explained 2% of the variation

Considering the level of significance and the amount of variation explained by the first two functions, only they are examined. These two explain almost 90% of the total variation and both were significant at the 0.00 level.

Table XV also shows that for function 1, relationship (coefficient = -0.45), and customization (coefficient = 0.96), have the highest weights, while for function 2, tangibility (coefficient = 0.67), and relationship (coefficient = 0.67), have the highest weight. Thus, the classification of the firms can generally be explained through customization, tangibility and relationship. Heterogeneity and inseparability/interaction carry little weight in explaining group membership. This assessment is consistent with the previous evaluation based on a comparison of grand versus group means for the environmental

dimensions. Appendix D contains a territorial map and a cluster-plot of the discriminant analysis based on the environmental dimensions.

To see how accurately the discriminant function predicted group membership, i.e the classification results of the discriminant analysis, a "confusion" matrix was calculated. Table XVI below shows the "confusion" matrix.

The table shows the "hits" (correct classification) in its main diagonal cells and the "misses" (incorrect classification) in the off-diagonal cells. The overall percentage of cases that were correctly classified was 84.15%, with a range among groups of 72% - 94%.

TABLE XVI  
CONFUSION MATRIX FOR  
DISCRIMINANT ANALYSIS

Actual Group	No. & % Cases	<u>Predicted group membership*</u>				
		1	2	3	4	5
1	33 (18%)	29 (88%)	0 (0%)	1 (3%)	0 (0%)	3 (9%)
2	36 (20%)	1 (3%)	30 (83%)	2 (6%)	1 (3%)	2 (6%)
3	26 (14%)	0 (0%)	0 (0%)	24 (92%)	2 (8%)	0 (0%)
4	34 (19%)	0 (0%)	0 (0%)	0 (0%)	32 (94%)	2 (6%)
5	54 (29%)	12 (22%)	1 (2%)	1 (2%)	1 (2%)	39 (72%)

\* Percentage of cases correctly classified = 84.15%

### Marketing Strategy Assessment

Service industries, as encompassed by the 17 sub-industries in the study sample, have been divided into 5 groups by use of the previously identified environmental dimensions. Research objective 2b is to examine the degree to which services and marketing strategies differ among the environmental clusters. To this end, the mean scores for each of the 7 strategy variables was found for each group in order to describe the different clusters. Multivariate analysis of variance (MANOVA), along with a series of one-way analysis of variance (ANOVA) was conducted to show statistical differences among the groups.

Table XVII shows the MANOVA for the overall marketing strategy among the different groups. The results indicate that according to Pillai's, Wilk's and Hotelling's method, statistically significant differences exist at the 0.00 level for the overall marketing strategy. That is, the marketing strategies differ among the different clusters.

TABLE XVII  
MULTIVARIATE TESTS OF SIGNIFICANCE  
FOR MARKETING STRATEGY VARIABLES

Test Name	Value	Approx. F	Sig. of F
Pillai's	0.28	2.23	0.00
Hotelling's	0.34	2.42	0.00
Wilk's	0.74	2.33	0.00

Next, a series of one way ANOVA were performed to test

for differences by dimensions among groups. Table XVIII shows the results of ANOVA and the associated F-Ratios for each marketing strategy variable.

The strategy construct, service, was significant at  $p < 0.01$  level, and image was at the 0.01 level. All other variables were insignificant: price at the 0.39 level, promotion at the 0.72 level; distribution at the 0.32 level; and person/process significant at the 0.78 level.

Duncan's Multiple range test was performed on the marketing strategy variables to examine differences between pairs of clusters for the two statistically significant strategies. The asterisks in Table XVIII show that for the service trait, only group 5 was significantly different from group 1, 2, 3 and 4. For the trait image, only group 5 was significantly different from group 2, 3 and 4.

TABLE XVIII  
MEAN SCORES OF CLUSTERS ON MARKETING  
STRATEGY VARIABLES

Mktg Strategy Characteristics	Cluster					F Ratio
	1	2	3	4	5	
Service	4.88*	4.61*	5.19*	4.94*	3.98*	5.79***
Price	4.08	3.75	4.53	4.35	4.21	1.04
Promotion	4.21	4.18	4.40	4.29	4.60	0.52
Distribution	3.64	3.74	3.44	4.32	4.09	1.17
Image	3.85	4.50*	4.49*	4.48*	3.61*	3.50**
Train/Supervise	4.86	4.83	4.83	4.99	5.12	0.44

1 = Well below average    4 = Average    7 = Well below average  
 \* Significant at  $p = 0.05$  level  
 \*\* Significant at  $p = 0.01$  level  
 \*\*\* Significant at  $p < 0.01$  level



For interpretation purposes, mean scores in Table XVIII should be compared to the mean scores on marketing strategy characteristics of the leading firms in the service sector as whole, and as reported in Table XII. According to Table XII, the characteristics (mean scores) of leading firms in the service sector on service, price, promotion, distribution, image, train/supervise is 4.62, 4.17, 4.36, 3.89, 4.12, and 4.95 respectively. In comparison to these mean scores (characteristics of the market leaders for the service sector), market leaders (of respondents) in group 1 relied much less than average on image and were quite average on the other traits. Leaders of firms in group 2 relied lower than average on price and slightly higher than average on image. Leaders of service firms belonging to group 3 relied much lower than average on distribution and much higher than average on service. Leaders of service firms belonging to group 4 relied higher than average on service, distribution and image. Finally, leaders of firms belonging to group 5 relied much lower than average on image and service, slightly higher than average on promotion, and much higher than average on train/supervise.

It is surprising to find that there is not much difference in marketing strategies between the different clusters. However, one possible explanation is that almost all of the respondents who provided names of market leaders, named more than one company as their market leader. It is very likely that although the different market leaders mentioned may be national companies, they may be following

different strategies, resulting in mixed response. The same explanation can be extended to those who mentioned regional firms as their market leaders.

Since respondents were asked to compare their market leader to the market leaders of other service industries, another explanation is that respondents may not have been knowledgeable enough about the strategies of market leaders of other industries and may have simply guessed their response. Yet, a third explanation is that different respondents may have used different industries as their point of reference thereby leading to differences in response.

As mentioned earlier, different clusters were dominated by different industries, and analysis was done to examine this phenomenon. The following section reports the results of this analysis.

#### The Alternative Taxonomy

The earlier clustering of respondents did not support the hypothesis that industries can be grouped according to their similarities in environments. This is likely because various sub-groups exist within any given industry. For example, there are local v. national market segments. However, there is some value to understanding how industries differ. It was then decided to perform a cluster analysis on the mean scores (of environmental variables) for each industry. This was also done to examine the earlier clustering of observations (firms) where individual clusters

were dominated by certain types of industries, i.e. can industries, rather than individual observations, be clustered according to their SIC codes. However, this clustering of industries (rather than observations) should not infer that everyone within a given industry perceive their environment similarly.

Mean scores was calculated for the environmental and strategy variables for each industry. This yielded 17 sets of observations, 1 set for each industry, each set containing measurements on 5 environmental and 6 marketing strategy variables. Ward's method of cluster analysis was performed on the 5 environmental variables and the dendogram that resulted (See Appendix B for the alternative dendogram) showed the existence of three different clusters. Table XIX below shows the distribution of the industries by clusters.

TABLE XIX  
INDUSTRIES BY CLUSTERS

<u>Cluster</u>		
1	2	3
Banking	Marketing Research	TV & Radio
Insurance	Rental & Real Estate	Motor Freight Trpt.
Savings & Loan	Business Consulting	Hotel & Motel
Security brokers and dealers	Physicians & other health services	Restaurant
	Hospital	Telephone
	Advertising	Public Utilities
		Air Transportation

Cluster 1 contains the banking, insurance, savings & loan and security brokers and dealers' industry. Cluster 2 contains marketing research, rental and real estate, business consulting, physicians and other health services, hospital and the advertising industry. Finally cluster 3 contains television and radio, motor freight transportation, hotel & motel, restaurants, telephone, public utilities and air transportation. The table shows that clusters 1 & 2 are relatively labor intensive while cluster 3 is very capital intensive.

#### Clusters Descriptors

As done previously, in order to better understand the characteristics of the clusters, a discriminant analysis was conducted. To achieve this objective, all of the 183 observations from the different industries were classified as belonging to either cluster 1, 2 or 3. For instance, if observations came from the advertising industry, they were classified as belonging to group 2, while observations from the telephone industry were classified as belonging to group 3, and so on. Table XX below shows the group means of the clusters for the environmental dimensions based on all the 183 observations from the different industries. For interpretation purposes, Table XX should be compared to Table XII.

TABLE XX  
MEAN SCORES OF CLUSTERS ON  
ENVIRONMENTAL DIMENSIONS

Environmental Dimensions	<u>Cluster</u>			<u>F-Ratio</u>	<u>Sig.</u>
	1	2	3		
Tangibility	2.58	3.75	3.84	9.56	0.00
Heterogeneity	5.12	4.78	4.78	0.85	0.43
Insep/Interact	5.34	5.54	3.69	47.63	0.00
Relationship	4.15	3.40	4.96	14.08	0.00
Customization	4.21	5.81	3.83	29.98	0.00

1 = Well below average    4 = Average    7 = Well above average

Table XX shows that banking, insurance, savings & loan and security brokers and dealers, belonging to cluster 1 are much below average on tangibility, and much higher than average on inseparability/interaction and customization. It is quite clear that in comparison to other service industries, their services are very intangible and there is a lot of interaction between the provider and the buyer of banks, savings & loan and security brokers and dealers, and the services can be customized to the specific needs of the buyers. An appropriate label for this group could be the "very intangible, interactive and customized" group.

Marketing Research, real estate agents, business consultants, physicians and other health services, hospital and the advertising industries belonging to cluster 2 are much higher than average on inseparability/interaction and customization and much lower than average on relationship. Firms within these industries interact quite heavily with

their clients, don't tend to have a long term relationship and they can be highly customized to the needs of their consumers. A good label for this group of industries can be the "highly interactive and customized with low patronage" group.

Finally, industries belonging to group 3 are much lower than average on inseparability/interaction and much higher than average on relationship and much lower than average on customization. This characteristics can be easily explained since most of the industries belonging to this cluster can rarely be customized to meet the specific needs of the consumer, although the relationship is long lasting and consumers do interact with the providers in this industry. An appropriate label for this group could be the "highly patronized and low customized" group.

All of the variables except heterogeneity were statistically significant at the  $p < 0.01$  level signifying that there was a significant difference among industries across the different groups on four of the five environmental variables.

The discriminant function showed that two discriminant functions could explain 100% of the variation. The standardized canonical discriminant function coefficients shown in table XXI below reflect that for function 1, inseparability/interaction, relationship and customization carried the most weight in predicting group membership. For discriminant function 2, tangibility, heterogeneity, inseparability/interaction and customization carried the

most weight in determining group membership.

However, function 1 alone accounted for 77% of the variation and one could adequately account for group membership based on inseparability/interaction, relationship and customization, and can be used to explain most of the group membership. Appendix D shows the scatter-plot and the territorial map for this discriminant analysis.

TABLE XXI  
STANDARDIZED CANONICAL DISCRIMINANT  
FUNCTION COEFFICIENTS

Variables	<u>Function*</u>	
	1	2
Tangibility	-0.22	0.74
Heterogeneity	-0.25	-0.47
Insep/Interact	0.74	-0.53
Relationship	-0.55	-0.21
Customization	0.48	0.68

\* Function 1 and 2 were both signif. at the  $p < 0.01$  level  
Function 1 accounted for 77% of the variation  
Function 2 accounted for 23% of the variation

It was then decided to examine the predictability of the discriminant functions, i.e. the classification results of the discriminant analysis. A "confusion matrix" was calculated for this purpose. Table XXII shows the matrix.

The diagonal in table XXII shows the correct classifications and the off-diagonal show the mis-classification. The percentage of cases that were classified correctly were 71.58%, with a range of 64% - 75%.

TABLE XXII  
 CONFUSION MATRIX FOR THE  
 ALTERNATIVE TAXONOMY

Actual Group	No. & % of Cases	Predicted group membership*		
		1	2	3
1	45 (25%)	29 (64%)	10 (22%)	6 (13%)
2	74 (40%)	14 (19%)	54 (73%)	6 (8%)
3	64 (35%)	7 (11%)	9 (14%)	48 (75%)

\* 71.58 % of the cases were classified correctly

#### Marketing Strategy Assessment

The 17 service industries were grouped into 3 groups and one of the research objectives was to examine the degree to which services and marketing strategies differ among the environmental clusters. The mean scores for each of the 7 marketing strategy variables was found for this purpose. MANOVA and a series of ANOVA were conducted to test for statistical differences among the groups. Table XXIII below shows the results of the MANOVA.

The table below shows that the overall marketing strategy was statistically different among groups. The results indicate that according to Pillai's, Hotelling's and Wilk's methods, statistically significant differences exist at the  $p < 0.01$  level for the overall marketing strategy among groups.



TABLE XXIII  
MULTIVARIATE TESTS OF SIGNIFICANCE  
FOR MARKETING STRATEGY VARIABLES

Test Name	Value	Approx. F	Sig. of F
Pillai's	0.31	5.33	0.00
Hotelling's	0.40	5.85	0.00
Wilk's	0.70	5.59	0.00

Next, a series of one way ANOVA was conducted to test for differences by dimensions among groups. Table XXIV below shows the mean scores for the marketing strategy characteristics for the individual groups and the results of the ANOVA and the associated F-Ratios associated for each marketing strategy variable. The table below shows that there was significant difference among groups on all of the above variables at the 0.05 level.

TABLE XXIV  
MEAN SCORES OF CLUSTERS ON MARKETING  
STRATEGY VARIABLES

Marketing Strategy Characteristics	<u>Cluster</u>			F-Ratio	Sig. of F
	1	2	3		
Service	4.39	4.91	4.43	3.34	0.04
Price	4.69	3.62	4.43	7.76	0.00
Promote	4.78	3.82	4.69	8.16	0.00
Distribution	4.46	3.61	3.82	3.03	0.05
Image	4.13	4.46	3.72	4.34	0.02
Train/Supervise	4.88	4.73	5.25	3.08	0.05

1 = Well below average    4 = Average    7 = Well above average

Although this result appears to be much better than the results of the first analysis at first glance, one should not forget that the analysis started with the clustering of the environmental variables and not the marketing strategy characteristics. The cluster analysis, therefore, provided clusters based on the most significant differences on environmental variables. A comparison of the first cluster analysis with the alternative cluster analysis shows that for the first cluster analysis, all of the environmental variables were significantly different, which was not the case for the alternative cluster analysis, i.e. the trait heterogeneity was not significantly different among groups.

The above table should be compared to the results of Table XII for proper interpretation. The mean score for the marketing strategy characteristics of leading firms in the service sector was 4.62, 4.17, 4.36, 3.89, 4.12 and 4.95 for service, price, promotion, distribution, image and training/supervision respectively.

In comparison to the leading firms in the service sector, leading firms in industries belonging to cluster 1 are much lower than average on service and much higher than average on price, distribution and promotion, i.e. banks, insurance companies, savings & loan and security brokers and dealers rarely come up with new services, they compete quite strongly on price, are widely distributed and they do tend to promote themselves quit heavily through media, brochures, etc.

Leading firms of industries belonging to cluster 2 are

much higher than average on image, but much lower than average on price, promotion. That is, these industries place a lot of emphasis on the image they project through design and decor of their facilities, but don't compete on the basis of price and don't promote themselves as heavily.

Finally, leading firms in industries belonging to group 3 are much higher than average on train/supervise and much lower than average on image. In general, employees of these industries need to be trained and supervised quite heavily, and they do not use their facilities to project their image.

There were two main research objectives for this study. The first objective was to construct a taxonomy of environments in services, i.e. cluster service industries into different groups such that the environments faced by service industries belonging to one group would be different than the environments of the service industries belonging to another group. The second objective was to identify differences in marketing strategies (used by market leaders) between the different groups (clusters) of industries, i.e. do market leaders in the same group use similar marketing strategies and are these marketing strategies different than the marketing strategies used by market leaders in another group.

The first analysis that was conducted on all of the 183 observations (where observations were allowed to be clustered freely) did not support the above two propositions. However, an alternative taxonomy that forced observations into clusters (based on the industry they

represented) did support the above hypotheses.

Based on the first taxonomy (classifying observations freely), the objectives of this study were not realized. However, the study did find what can be labeled "environment groups", i.e. service firms across different service industries can be grouped on the basis of their service characteristics and exchange traits. This seems to be very similar to the concept of market segments. Different firms within an industry serve different markets (segments) and the study showed that there may be similar segments across service industries as explained by service characteristics and exchange traits. These similarities would lead firms from different service industries (although in the same "environment group") to follow similar marketing strategies which would be different than the marketing strategies of other firms in their own industry who may be serving a different segment (different "environment" group). The study was able to support the hypothesis that the overall marketing strategy was different among the different groups, but individually, only two of the marketing strategy variables were significantly different among groups.

The second (alternative) taxonomy grouped mean scores of industries (mean score of all observations within an industry). This taxonomy was successful in grouping the 17 industries based on their environmental similarities. The analysis also showed that the strategies followed by these industries were significantly different among clusters, i.e. industries within the same cluster (influenced by similar

environments) follow similar market strategies, and marketing strategies followed by industries in a different cluster are different.

The next chapter provides some discussion on the findings, the limitations and some directions for future research.

## CHAPTER V

### DISCUSSION, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This chapter discusses the findings of this study, the limitations of the study and suggests some directions for future research in the strategy area for service industries.

#### Discussion

Scholars in strategic marketing and strategic management agree that the internal and external environments affect the selection of marketing strategy for firms. However, Hambrick (1983) has observed that most views on strategy seem to lack theories that associate commonly recurring environmental settings with strategies. He has labeled these postulated relationships as "midrange theories", and suggests that theories like the product life cycle and the classification of manufactured goods into consumer goods and industrial goods fall in this theory category. Researchers in strategic management and strategic marketing have so far generally neglected this aspect of theory and development, and most of the existing midrange theories have rarely been put to empirical tests.

This study had three specific objectives:

1. To develop multi-item scales that describe dimensions

of the service environment and marketing strategies in selected service industries.

2. To construct a taxonomy of service environments.
3. To investigate the relationship among alternative environments and the marketing strategies employed in response to these environment.

The study achieved the first objective by developing multi-item scales on service traits, exchange relationship traits and strategy characteristics respectively. Service traits were described by dimensions of intangibility and inseparability/interaction. Exchange relationship traits were described by dimensions of customization, heterogeneity and relationship. Finally, strategy characteristics were described by dimensions of services, price, distribution, promotion, image and training/supervision. The scale, based on suggestions in the literature in services, had reliability scores (Coefficient Alpha) ranging from 0.55 to 0.75 for environmental variables and from 0.64 to 0.87 for marketing strategy variables. Thus, it appears to be quite reliable.

In order to achieve the second objective, cluster analysis was employed to group organizations by service traits and exchange relationships into five clusters that represent different environments. It was expected that all organizations from the same industry, as defined by SIC codes, would fall into the same environment group. However, this did not happen. Although most clusters were dominated by certain types of industries, organizations from the same industry were frequently placed in different clusters. It appears that strategic map and strategic group concepts are

reflected as organizations from the same industry (e.g. advertising) applied different strategies.

There are many reasons for these results. First, SIC codes are primarily used to classify industries based on production inputs rather than on market characteristics. A second explanation is that there are clearly sub-environments within every industry, such as the local versus national markets served or small versus large firm competition. The latter explanation was discussed on pages 68-71.

The measurement process for the study included the respondent's identification of sub-industry environments. In the questionnaire, respondents were asked to name the market leader of their respective industries and compare the marketing strategies of their market leader to the marketing strategies of market leaders in other service industries. Respondents from the same industry frequently identified different companies as the market leader - some had identified national companies, some regional (local) companies, while others did not identify any market leader. When respondents had been asked previously to compare their industry to other service industries by environment traits, they were very likely describing that subset of their industry from which they picked their market leader as the basis for comparison. Clearly, managers from the same SIC code defined industry frequently perceive themselves to be operating under different service environments.

The third objective was to identify the marketing



strategy differences for leading firms as explained by the service environments identified. The results indicated that the marketing strategies were not significantly different among environments with the exception of one of the environment groups. Although the results were disappointing, there are a number of explanations for this. First, many of the respondents mentioned more than one company as their market leader. To the extent that the market leaders follow different strategies, this may have resulted in confusion and responses that mixed strategies.

A second explanation concerns requested comparisons by the respondents. Respondents were asked to compare the marketing strategies of the market leader of their industry to the marketing strategies followed by market leaders of other service industries. Since many of the respondents were with small firms, they may not have been knowledgeable enough about the marketing strategy of leaders in their own industry. Likewise, they may have been unfamiliar with strategies in other service industries.

As an alternative form of analysis for this data, it was decided to examine whether industries, as described by SIC codes for respondents, rather than individual observations, should be grouped. Thus, scores on the measurements for all observed firms within an SIC were arranged. Subsequently, three distinct groups (clusters) were obtained using the latter measures. Then, marketing strategy differences among groups were examined. It was found that the marketing strategies for firms represented

within the different groups were significantly different from one another.

Although the results of this second form of analysis seem to be stronger than the original approach to the third objective, they should be interpreted cautiously. The first form of analysis was conducted using 183 observations and a 5-dimensional space clustering. The alternative cluster analysis was conducted on only 17 observations (i.e. average scores for each industry), with 5-dimensional clustering.

The research was quite helpful in breaking new grounds in the development of service trait and exchange relationship measures. These appear useful in describing competitive environments. There appears to be a need to more closely examine the relationship among environments and associated strategies since findings were weak in this aspect of the research.

The study was exploratory in nature. However, as one of the first to examine the service industry across a wide range of industries, it should stimulate research by others in the field.

#### Limitations

Like every study, this particular research had limitations to its generalizability and its internal validity. Many of these limitations were noted above through the discussion of the findings. Rather than repeating the latter issues, a variety of additional methodological issues are discussed below.

First, only 18 SIC code-defined service industries were selected initially to represent the service sector.

Although the service industries selected were very diverse in nature, a larger number of service industries for this study may have yielded more generalizable results.

A second limitation concerns response rates. The response rate in earlier studies reported in the literature have been between 30%-35%. However, this study yielded a response rate of 19%, and the subsequent response rate of 183 observations hampered the generalizability of this study and may have suffered from response bias. This low response rate could have been due to the age of the AMA Directory. Although the directory was the most recent in print at the time of the study, it was almost a year old and many of the potential respondents may have changed jobs or moved. Another reason for the low response rate could have been the cost constraints imposed on this study which limited the follow-up mailing of questionnaires to 500 in a second mailing.

A third limitation of the study concerned firm size among the respondents. Most of the firms represented in this study were quite small. Respondents from these firms may not have been knowledgeable about the environment and marketing strategies of major firms in their industry. Additionally, they may have been unfamiliar with the service industries included in the list for comparison. Finally, to the extent that these individuals may have very narrow responsibilities within their firms, they may have not been

fully informed on the issues addressed.

A final limitation of the study could have been the length of the questionnaire (4 pages in all). Its length may have discouraged potential respondents resulting in the low response rate.

#### Directions for Future Research

Based on the limitations cited above, there are a number of guidelines for future research that can be recommended. These include methodological issues and further research questions. This study is one of the very few studies that attempted to construct a midrange theory for services marketing. Future research can help improve our understanding of this field.

The study used only 18 service industries to represent the service sector. The first suggestion would be to use more than 18 service industries. This would allow for greater diversity of environments and strategies and likely stronger results.

The second recommendation would be to conduct the analysis on a much larger sample size. This would allow for a larger number of observations from within each industry and across industries thereby getting results which could better be generalized.

A third recommendation would be to clearly identify a specific leading firm within predetermined industries or sub-industries as the reference for individual's responses to questions. This would assure commonality of references

for all respondents within each industry and reduce variability in perceptions among them.

A fourth recommendation would be to reduce the length of the questionnaire. The questionnaire could be shortened by removal of a number of questions on the original questionnaire that were extraneous to the primary research objectives. This should yield a higher response rate.

Another area that researchers may want to investigate is the perceptions of firms with regard to the strategies used in any specific industry. For instance, in the hotel industry, should Hilton's marketing strategy be used as the yardstick for measuring success, or should it be another company like the Sheraton? Similarly in the advertising industry, should BBDO be regarded as the successful company or should it be Ogilvey & Mather?

A sixth recommendation concerns the measures of strategy. Researchers need to investigate strategy dimensions beyond the traditional 4Ps as the elements of marketing strategies, especially for services.

If the above recommendations are followed, it is very likely that future studies may be able to create and test midrange theories in the area of services. Much has been written about the services marketing field in recent years. However, relatively little research has been empirical, and even less has been submitted to within-industry analysis. Hopefully, this study will stimulate such attention.

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**APPENDIXES**

•           **APPENDIX A**

**COVER LETTER, REMINDER**

**AND QUESTIONNAIRE**



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74078-0555  
BUSINESS 201  
405-744-5064

June 10, 1989

Dear AMA member,


Services marketing has received much attention in recent years. As a member of the American Marketing Association employed in a service industry, you have been selected to participate in a survey regarding this field. We are conducting a study on how the leading service organizations formulate their marketing strategies.

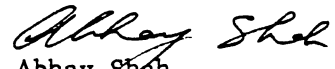
Would you please complete the enclosed questionnaire and return it in the post paid envelope. Since only a few individuals have been selected from your industry, your participation in this study is of great importance.

Your response will be kept strictly confidential. However, if you wish a summary of the study findings, please provide your name and address on page 4 of the questionnaire.

We deeply appreciate your participation in this study. Thank you in advance for your cooperation.

Sincerely,

  
Stephen Miller, Professor and Head  
Department of Marketing

  
Abhay Shah  
Ph.D candidate

Enclosure





Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74078-0555  
BUSINESS 201  
405-744-5064


August 10, 1989.


Dear AMA Member:

Some weeks back you may have received a questionnaire titled "Marketing Strategies in Services". If you have returned the questionnaire, I would like to express my appreciation for your contribution. In the event you haven't responded, would you please fill out the enclosed questionnaire and return it in the post-paid return envelope.

Since only a few individuals from your industry have been selected to take part in this study, your input is of great importance. Thank you again for your assistance.

Sincerely,

  
Stephen Miller  
Professor and Head  
Department of Marketing  
Oklahoma State University

  
Abhay Shah  
Doctoral Candidate  
Department of Marketing  
Oklahoma State University



## MARKETING STRATEGIES IN SERVICE INDUSTRIES

This study concerns strategies used by organizations in service industries. As a manager of an organization in a service industry, your views are quite important to our understanding of this area. The following pages contain questions concerning selected characteristics of your industry and the marketing strategies of leading organizations in your industry. Please read each question carefully and provide your feelings on these issues.

My organization can be best described as belonging to the following industry (Please check only one):

- Advertising
- Business consulting
- Marketing research
- Rental and real estate agents
- Banking
- Savings and loans associations
- Insurance
- Security brokers and dealers
- Physicians and other health services
- Hospital
- Hotel/Motel
- Restaurants
- Telephoneservice
- Television and radio broadcasting
- Air transportation
- Motor freight transportation
- Automobile rental
- Public utilities

Other (please specify) \_\_\_\_\_

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**I. SERVICE CHARACTERISTICS**


---

The following questions concern an understanding of how service industries differ.

Briefly scan the list of service industries provided on pg. 1. Then compare the industry within which you work to this list of service industries in responding to each of the questions below.

In considering my industry compared to the listed service industries, I feel that it is . . . . . (well below average, average, well above average) in the degree to which . . . . . [Please circle one number for each statement to reflect your feeling, (e.g. 2)].

	Well below average		Average			Well above average	
	-3	-2	-1	0	1	2	3
1. ... physical goods are provided as part of the service.	-3	-2	-1	0	1	2	3
2. ... the service offering is visible.	-3	-2	-1	0	1	2	3
3. ... the service can be physically examined (e.g., touch, smell, etc.).	-3	-2	-1	0	1	2	3
4. ... service quality varies over time for any given supplier.	-3	-2	-1	0	1	2	3
5. ... service quality varies among providers of similar services.	-3	-2	-1	0	1	2	3
6. ... the direct benefits (results) of the service last over time.	-3	-2	-1	0	1	2	3
7. ... the service provided is not used up as soon as it is provided.	-3	-2	-1	0	1	2	3
8. ... the service is purchased by consumers on a frequent basis.	-3	-2	-1	0	1	2	3
9. ... the consumer tends to patronize a single provider of the service.	-3	-2	-1	0	1	2	3
10. ... the service can be customized to meet the unique needs of each consumer.	-3	-2	-1	0	1	2	3
11. ... the service is customized using the judgment of the provider.	-3	-2	-1	0	1	2	3
12. ... providers and consumers personally interact when the service is provided.	-3	-2	-1	0	1	2	3
13. ... the interaction between the provider and the consumer lasts for a long period of time when the service is provided.	-3	-2	-1	0	1	2	3



---

## II. MARKETING STRATEGY FOR SERVICE

---

The following questions concern an understanding of how marketing strategies differ among service industries. Please list one or more organizations whom you consider to be the leading organizations in your industry (excluding your own organization): \_\_\_\_\_

---

Now, compare the marketing strategy used by these organizations to the typical leading organizations for the service industries provided earlier.

In comparing the leading organizations in my industry to the leading organizations in other service industries, I feel that those in my industry are . . . . . (well below average, average, well above average) in the degree to which . . . . . [Please circle only one answer for each statement to reflect your feeling (e.g. -1)].

	Well below average		Average			Well above average	
1. ... they regularly develop new services.	-3	-2	-1	0	1	2	3
2. ... they provide a broad variety (assortment) of services .	-3	-2	-1	0	1	2	3
3. ... they augment primary services with new (additional) services.	-3	-2	-1	0	1	2	3
4. ... they compete strongly on the basis of price.	-3	-2	-1	0	1	2	3
5. ... they rapidly respond to price changes by competitors.	-3	-2	-1	0	1	2	3
6. ... they rely heavily on individuals (salespeople) to promote their services.	-3	-2	-1	0	1	2	3
7. ... they rely heavily on media advertising to promote their services.	-3	-2	-1	0	1	2	3
8. ... they rely heavily on brochures, mailers, etc., to promote their services.	-3	-2	-1	0	1	2	3
9. ... they rely heavily on public relations activities to promote their services.	-3	-2	-1	0	1	2	3
10. ... they use a large number of business outlets to provide their services.	-3	-2	-1	0	1	2	3
11. ... they consider location of their business outlets to be critical in providing their services.	-3	-2	-1	0	1	2	3
12. ... they project an image of their service through the decor and interior furnishing of their facilities.	-3	-2	-1	0	1	2	3
13. ... they project an image of their service through the design and layout of their facilities.	-3	-2	-1	0	1	2	3
14. ... they formally train employees for better interaction with customers.	-3	-2	-1	0	1	2	3
15. ... they formally train employees to provide consistent service.	-3	-2	-1	0	1	2	3
16. ... they carefully plan the process of how the service is to be provided.	-3	-2	-1	0	1	2	3
17. ... they closely supervise the employees who provide the service.	-3	-2	-1	0	1	2	3

## III.

## COMPANY CHARACTERISTICS

Please describe your industry in some detail (e.g. the nature of competition, how rapidly the industry is growing, etc.) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Now, please compare your local business unit to other business units in your specific industry on the following statements.

In considering our business unit relative to other business units in our industry for the past 3 year period, I feel that we . . . . . (strongly disagree, neither agree nor disagree, strongly agree). [Please circle only one answer for each statement to reflect your feeling (e.g. -2)].

	Strongly disagree	Neither agree nor disagree	Strongly agree		
1. ... have a large number of employees.	-2	-1	0	1	2
2. ... have increased the number of our employees quite significantly.	-2	-1	0	1	2
3. ... have quite low sales revenues.	-2	-1	0	1	2
4. ... have increased our sales revenues quite significantly.	-2	-1	0	1	2
5. ... have a high market share within the market we serve.	-2	-1	0	1	2
6. ... have increased our market share quite significantly.	-2	-1	0	1	2
7. ... have a high return on investment (skip if non-profit).	-2	-1	0	1	2
8. ... have increased our return on investment (skip if non-profit).	-2	-1	0	1	2

Thank you for your cooperation.

Please write your name and address in the space provided below if you wish to receive a summary of the findings of this study.

Name \_\_\_\_\_

Company \_\_\_\_\_

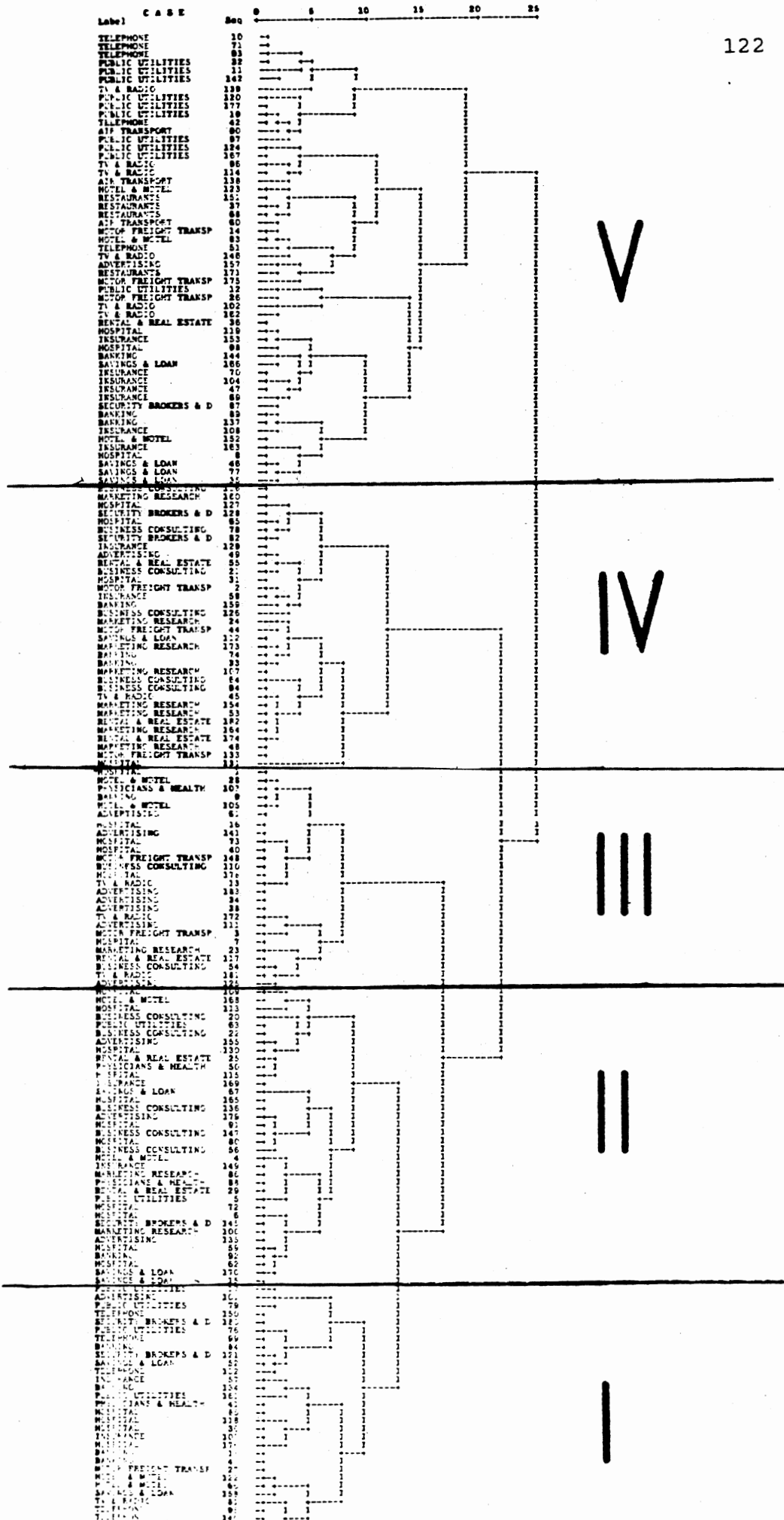
Address \_\_\_\_\_

\_\_\_\_\_

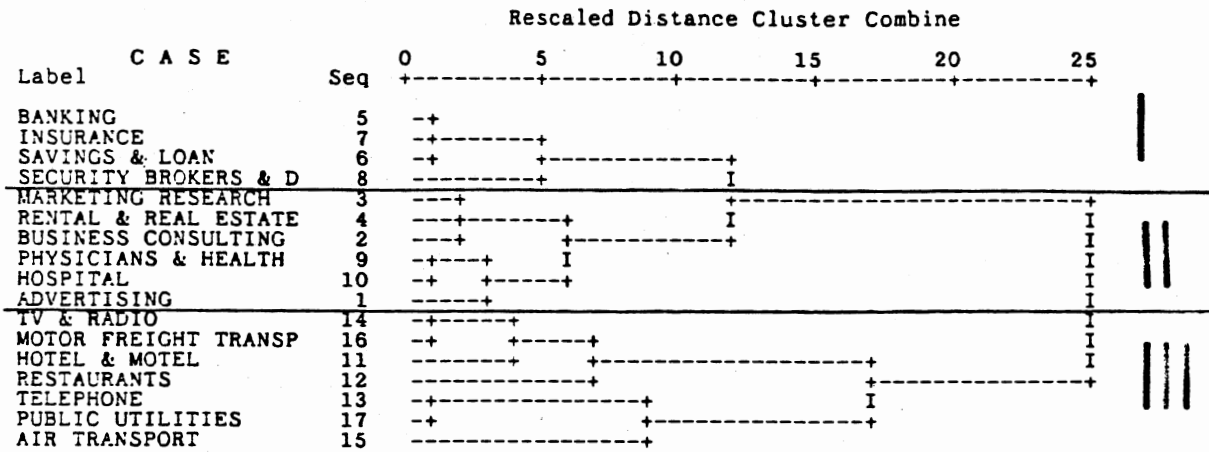
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APPENDIX B

DENDOGRAM FROM CLUSTER ANALYSIS



Dendrogram using Ward Method



DENODOGRAM FOR THE ALTERNATIVE CLUSTER

**APPENDIX C**

**LEADERS BY INDUSTRY, LEADERS BY CLUSTER,  
COMPANY CHARACTERISTICS OF RESPONDENTS**

TABLE 1  
 RESPONDENTS WHO IDENTIFIED  
 DIFFERENT LEADERS BY  
 INDUSTRY

<u>Industry</u>	<u># of Respondents who identified</u>		
	National Leader	Regional Leader	No Leader
Advertising	10	2	2
Business Consulting	5	4	4
Marketing Research	8	0	4
Rntl & Real Estate Agts.	5	0	1
Banking	6	3	5
Savings & Loan	3	4	2
Insurance	10	2	1
Security brokers	3	1	2
Phys. & other hlth serv.	2	1	1
Hospital	10	14	4
Hotel & Motel	6	1	2
Restaurants	3	1	0
Telephone	3	6	1
TV & Radio	2	8	1
Air Transportation	0	2	1
Motor freight transport.	4	2	3
Public utilities	0	17	2
<b>TOTAL</b>	<b>80 (44%)</b>	<b>68 (37%)</b>	<b>35 (19%)</b>

TABLE 2  
 DISTRIBUTION OF LEADERS BY CLUSTERS

<u>Cluster</u>	National Leader	Regional Leader	No Leader
One	12 (36%)	16 (49%)	5 (15%)
Two	14 (39%)	12 (33%)	10 (28%)
Three	18 (69%)	6 (23%)	2 (8%)
Four	19 (56%)	9 (26%)	6 (18%)
Five	17 (32%)	25 (46%)	12 (22%)

TABLE 3  
 COMPANY CHARACTERISTICS (MEAN SCORES \*)  
 OF OF THE RESPONDENTS

<u>Industry</u>	<u>Employees</u>		<u>Revenue</u>		<u>Market Share</u>		<u>ROI</u>	
	Sz.	Incr.	Sz.	Incr.	Sz.	Incr.	Sz.	Incr.
Advertising								
National	3.1	3.6	2.4	3.9	3.2	3.5	3.9	3.8
Regional	3.0	1.5	2.0	3.0	3.0	2.0	4.0	3.0
No leader	3.0	3.0	2.0	5.0	5.0	5.0	3.0	3.0
Bus. Cnslt.								
National	4.0	4.6	4.2	3.8	3.4	3.4	3.6	3.4
Regional	3.5	4.5	1.8	5.0	4.0	3.8	4.0	4.0
No leader	2.3	2.3	3.5	2.8	2.8	2.5	3.8	3.0
Mktg Reserch								
National	2.6	2.8	2.9	3.3	3.8	3.1	3.3	2.9
Regional	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No leader	2.3	4.5	2.0	4.5	3.8	3.8	4.0	3.7
Rtl. & Rl. Est.								
National	3.2	2.8	2.3	3.6	2.8	3.3	2.8	3.8
Regional	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No leader	2.0	2.0	0.0	0.0	4.0	4.0	4.0	4.0
Banking								
National	3.3	3.2	2.5	3.0	3.9	2.3	4.0	4.4
Regional	2.7	1.3	2.0	2.3	3.3	3.0	2.3	3.0
No leader	3.0	2.2	2.0	3.6	3.0	3.2	3.2	3.2
Svng. & Loan								
National	2.7	3.0	2.7	2.3	3.0	3.3	3.0	3.0
Regional	2.8	4.0	2.3	3.3	3.3	3.0	3.3	3.3
No leader	4.5	3.0	2.5	4.5	5.0	5.0	2.0	3.0
Insurance								
National	3.9	3.7	2.4	3.8	3.0	3.0	3.5	3.9
Regional	1.5	3.0	2.0	3.5	5.0	3.5	5.0	3.0
No leader	5.0	4.0	3.0	4.0	2.0	2.0	3.0	3.0
Security bkrs. and dealers								
National	4.0	2.3	1.3	2.7	3.3	3.3	2.3	2.7
Regional	1.0	4.0	4.0	3.0	1.0	1.0	1.0	1.0
No leader	2.5	4.0	2.5	3.5	2.5	3.5	3.5	3.5
Physicians & health serv.								
National	4.5	3.5	2.5	3.5	4.5	3.5	4.0	4.0



TABLE 3 (Continued)

Industry	Employees		Revenue		Market Share		ROI	
	Sz.	Incr.	Sz.	Incr.	Sz.	Incr.	Sz.	Incr.
Regional	5.0	5.0	1.0	5.0	5.0	5.0	5.0	5.0
No leader	2.0	4.0	4.0	5.0	5.0	5.0	4.0	4.0
Hospital								
National	3.7	2.6	2.1	3.4	3.8	3.5	5.0	4.0
Regional	3.6	2.7	2.6	2.9	3.1	2.9	2.6	2.6
No leader	4.0	3.3	3.3	3.0	3.8	3.5	4.5	4.5
Hotel.Motel								
National	3.7	2.7	2.2	3.5	3.8	3.3	3.0	2.8
Regional	4.0	4.0	3.0	5.0	4.0	4.0	5.0	5.0
No leader	3.0	2.0	2.0	4.0	4.0	4.0	3.0	3.0
Restaurant								
National	4.0	3.7	3.3	4.3	3.3	4.0	3.7	3.7
Regional	3.0	3.0	1.0	5.0	3.0	5.0	4.0	4.0
No leader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Telephone								
National	4.0	1.3	2.3	3.3	5.0	2.3	3.7	3.0
Regional	3.8	1.8	2.2	2.8	4.3	2.3	3.3	3.2
No leader	4.0	1.0	3.0	3.0	4.0	2.0	3.0	3.0
TV & Radio								
National	3.5	1.0	1.5	2.0	4.5	2.0	3.0	3.0
Regional	3.0	3.5	2.0	3.6	3.9	3.2	3.8	4.0
No leader	5.0	3.0	1.0	4.0	5.0	4.0	5.0	5.0
Air Transport								
National	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Regional	1.5	2.5	1.5	4.0	5.0	3.0	3.0	3.0
No leader	3.0	3.0	5.0	4.0	3.0	1.0	0.0	0.0
Motor frt tpt.								
National	4.7	4.3	2.5	5.0	4.3	4.5	3.0	3.0
Regional	4.5	3.5	1.5	3.0	5.0	2.5	3.5	3.0
No leader	4.7	4.0	1.0	4.0	4.7	4.3	3.0	2.3
Public utility								
National	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Regional	2.8	2.0	2.1	3.1	4.3	2.8	2.9	2.8
No leader	4.0	2.5	2.0	3.0	5.0	2.0	3.0	3.0

Sz. = Size

Incr. = Increase

\* 1 = Lower than average 3 = Average 5 = Higher than average

TABLE 4

ENVIRONMENT AND MARKETING STRATEGY  
CHARACTERISTICS OF FIRMS WHO  
IDENTIFIED DIFFERENT  
LEADERS BY INDUSTRY

Industry	Environment					Marketing Strategy					
	Tan.	Het.	II.	Rel.	Cus.	Sr.	Pr.	Pm.	Ds.	Fc.	PP.
<b>Advtsg.</b>											
Natl.	5.3	5.1	5.3	3.5	6.3	4.8	3.5	3.2	3.0	4.7	4.3
Regl.	4.9	4.3	5.4	4.0	4.3	4.5	4.2	4.3	3.8	4.4	4.8
No ldr	7.0	5.5	6.3	5.5	7.0	6.0	6.7	2.0	1.5	1.7	4.5
<b>Bus. Consult.</b>											
Natl.	3.3	4.9	6.3	2.4	6.0	5.9	4.9	4.5	3.2	4.7	5.8
Regl.	2.2	4.9	6.2	3.1	6.4	4.8	3.4	4.0	4.5	5.5	5.8
No ldr	2.7	4.0	4.9	3.4	6.4	3.7	3.2	2.6	1.8	4.1	4.4
<b>Mktg. Research</b>											
Natl.	3.9	5.1	4.7	1.9	5.9	4.6	4.1	3.4	4.4	3.7	4.7
Regl.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No ldr	2.4	5.8	4.7	2.8	5.6	4.6	4.7	3.6	2.4	2.8	4.3
<b>Rtl. &amp; Rl. Est.</b>											
Natl.	4.4	5.0	5.7	2.6	5.3	5.0	4.9	5.8	5.5	5.1	5.1
Regl.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No ldr	3.0	5.0	5.0	5.0	5.0	3.3	6.0	4.0	4.0	4.0	5.0
<b>Banking</b>											
Natl.	2.2	5.5	5.2	4.3	3.9	4.1	4.2	5.3	5.3	4.7	4.3
Regl.	2.6	5.2	5.2	4.0	4.7	5.0	4.7	5.2	4.9	4.8	4.4
No ldr	3.2	5.2	4.9	4.0	3.4	5.1	4.7	5.8	5.4	4.3	5.1
<b>Svgs. &amp; Loan</b>											
Natl.	2.1	4.3	6.3	4.8	4.8	3.3	4.4	4.7	5.2	3.9	4.7
Regl.	2.4	5.0	4.3	4.3	3.3	4.8	4.4	4.8	4.3	4.8	5.5
No ldr	4.1	4.7	6.5	5.2	4.2	5.1	5.4	4.3	3.5	4.7	5.9
<b>Insurance</b>											
Natl.	1.9	4.7	5.1	3.7	3.7	4.2	5.0	4.5	5.2	3.4	4.8
Regl.	4.0	5.0	4.7	4.0	4.0	3.5	3.9	4.8	4.0	4.4	3.9
No ldr	1.0	4.0	6.0	3.0	3.5	4.3	4.7	3.5	1.0	1.3	5.3
<b>Security bkrs. and dealers</b>											
Natl.	1.7	6.0	5.8	2.3	5.2	3.9	3.7	4.2	2.2	4.4	5.9
Regl.	1.7	6.5	5.0	6.5	4.5	4.3	6.0	2.5	1.0	2.3	3.5
No ldr	2.7	6.0	5.7	5.3	6.5	5.5	5.9	4.8	4.5	4.2	4.2
<b>Ph. &amp; hlth serv.</b>											
Natl.	3.7	5.0	6.2	4.8	5.3	4.5	2.6	4.5	4.8	3.4	4.9

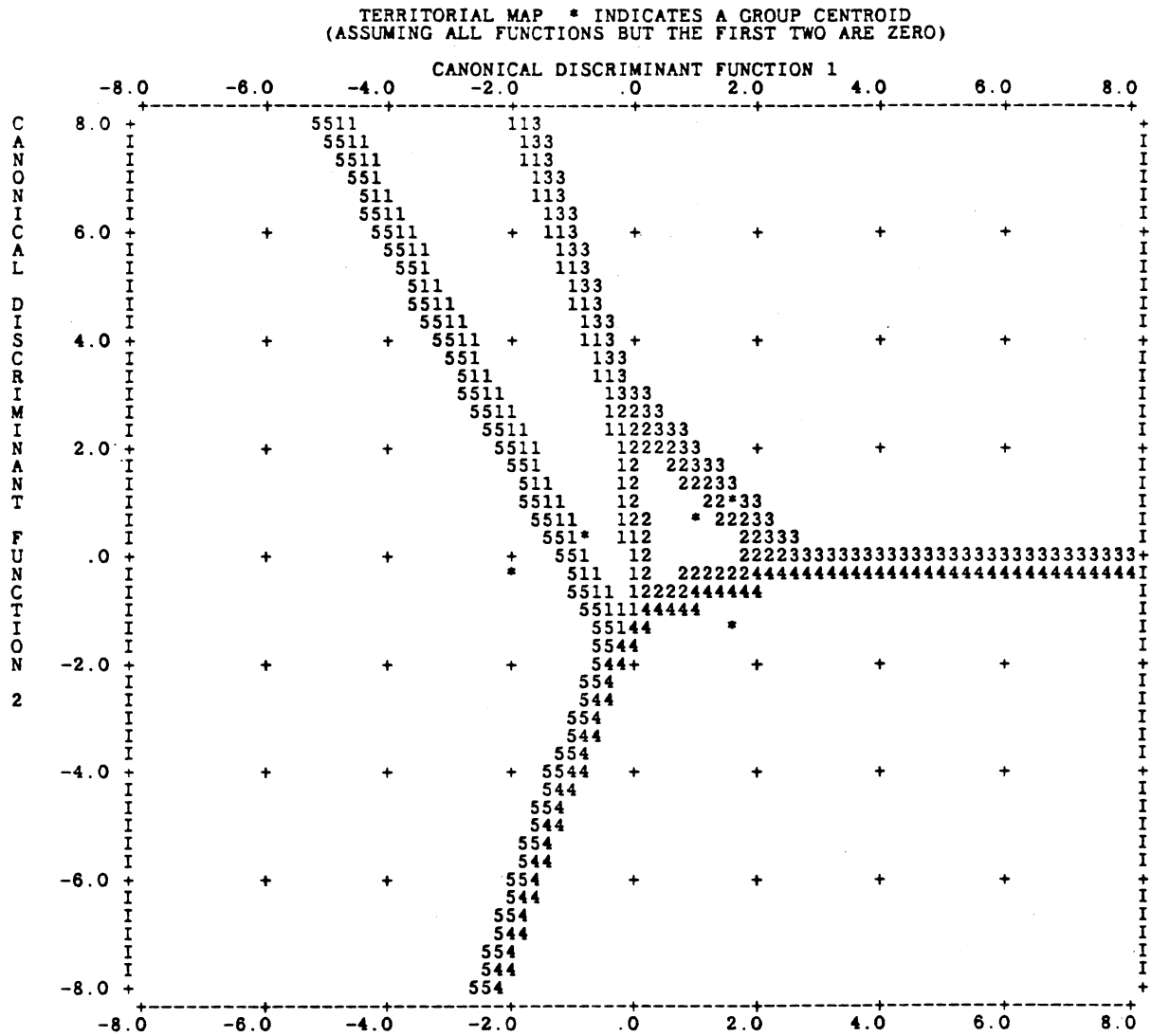
TABLE 4 (Continued)

<u>Industry</u>	<u>Environment</u>					<u>Marketing Strategy</u>					
	Tn.	Het.	II.	Rel.	Cus.	Sr.	Pr.	Ds.	Pm.	Fc.	PP.
Regl.	3.3	5.5	4.3	4.5	5.5	3.3	4.7	3.0	1.0	2.3	1.5
No ldr	4.7	4.5	5.0	5.0	5.0	5.0	4.7	4.0	4.0	4.7	4.8
Hospital											
Natl.	3.5	4.5	5.9	3.6	5.0	4.7	2.7	3.2	3.1	4.6	5.1
Regl.	3.3	4.5	5.8	4.1	6.3	5.5	3.2	4.5	3.9	5.0	4.7
No ldr	3.6	4.5	5.8	4.3	5.2	5.7	2.9	3.4	3.6	4.6	4.3
Hotel/Motel											
Natl.	5.1	4.3	4.4	5.2	4.6	4.9	5.3	5.9	4.9	5.6	5.3
Regl.	5.7	5.0	4.3	6.0	4.0	5.7	5.7	7.0	4.0	7.0	5.5
No ldr	5.3	6.3	4.8	3.3	3.8	3.9	5.9	5.7	4.3	5.5	6.0
Restaurant											
Natl.	6.4	5.8	3.0	3.0	3.3	4.3	5.1	5.7	7.0	5.3	5.6
Regl.	6.3	7.0	3.0	2.0	3.0	3.7	4.7	4.5	7.0	4.3	5.0
No ldr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Telephone											
Natl.	2.0	5.3	3.7	6.8	4.8	4.8	4.8	5.9	2.8	3.3	5.7
Regl.	2.6	4.0	3.3	6.0	3.6	4.1	3.2	4.1	2.3	3.0	5.8
No ldr	3.0	5.0	4.3	6.5	5.5	6.7	4.7	3.5	4.0	2.7	4.8
TV & Radio											
Natl.	5.2	5.7	4.9	4.5	4.7	4.8	5.6	5.0	2.8	4.5	5.1
Regl.	4.2	5.3	3.2	3.7	3.8	4.6	4.2	4.2	3.0	2.9	4.5
No ldr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air Transport											
Natl.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Regl.	6.8	5.3	4.5	6.3	3.0	6.5	6.4	6.8	5.3	5.7	6.4
No ldr	1.7	2.0	2.3	4.5	1.0	2.0	6.0	6.0	3.3	3.0	5.8
Motor fr. trpt.											
Natl.	4.8	5.6	4.7	4.0	5.4	4.9	6.4	4.1	4.6	3.4	5.0
Regl.	5.2	4.8	2.5	1.3	2.5	3.0	5.0	3.3	4.8	1.7	5.0
No ldr	3.2	5.2	2.8	2.2	3.2	4.4	6.1	4.2	5.7	2.8	4.0
Public utility											
Natl.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Regl.	3.1	4.2	3.8	6.7	4.1	4.0	3.2	4.6	3.5	3.6	5.2
No ldr	1.6	4.3	2.1	3.5	2.0	3.7	2.0	2.5	1.8	1.5	6.9

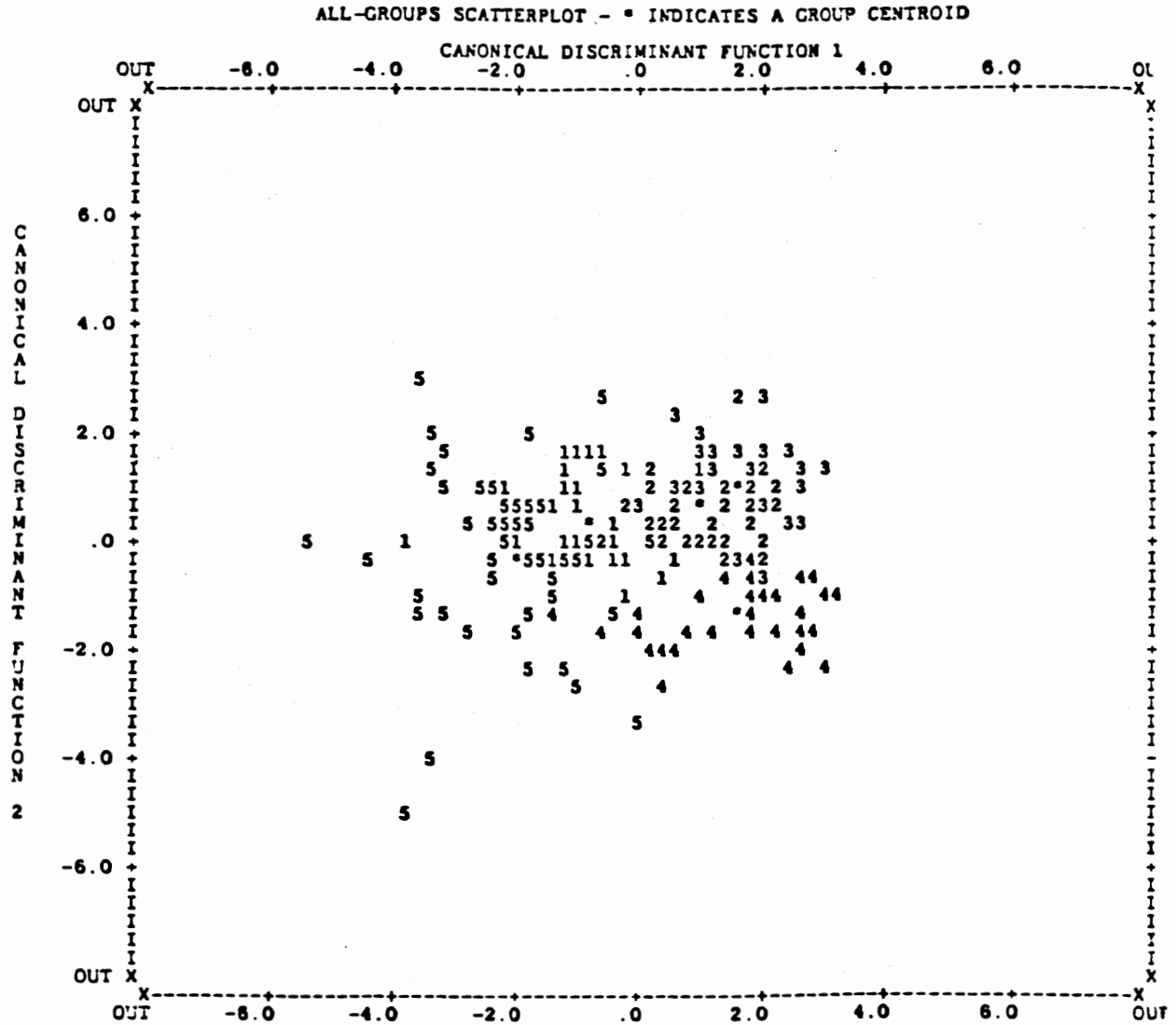
\* 1 = Well below average    4 = Average    7 = Well above average  
 Tan. = Tangibility    Het. = Heterogeneity    Rel. = Relationship  
 II = Inseparability/Interaction    Cus. = Customization  
 Sr. = Service    Pr. = Price    Ds. = Distribution  
 Pm. = Promotion    Fc. = Facility    PP = Person/Process

APPENDIX D

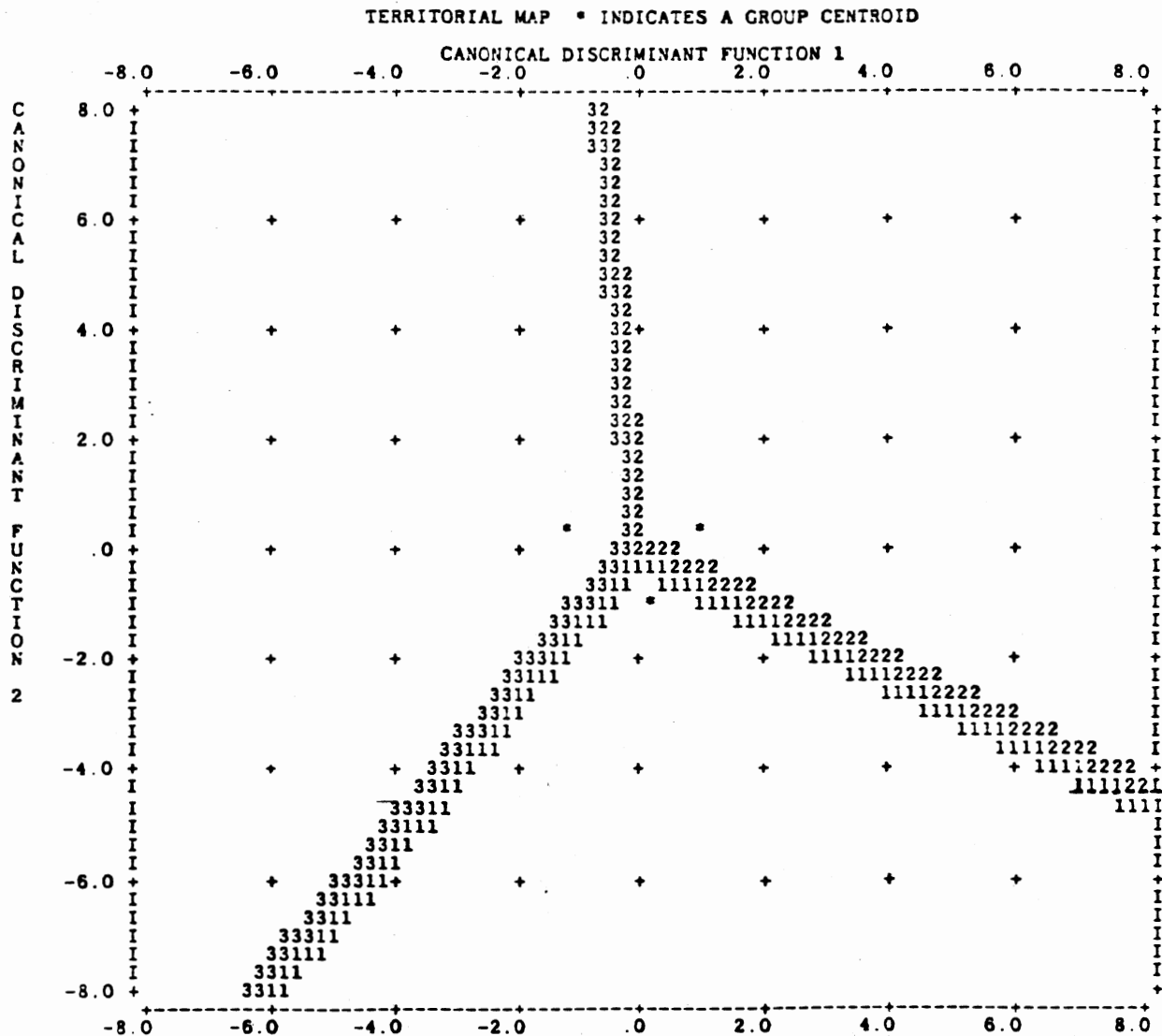
SCATTER-PLOT AND TERRITORIAL MAP  
OF OBSERVATIONS FROM  
DISCRIMINANT ANALYSIS



TERRITORIAL MAP FOR THE FIVE GROUP CLUSTER

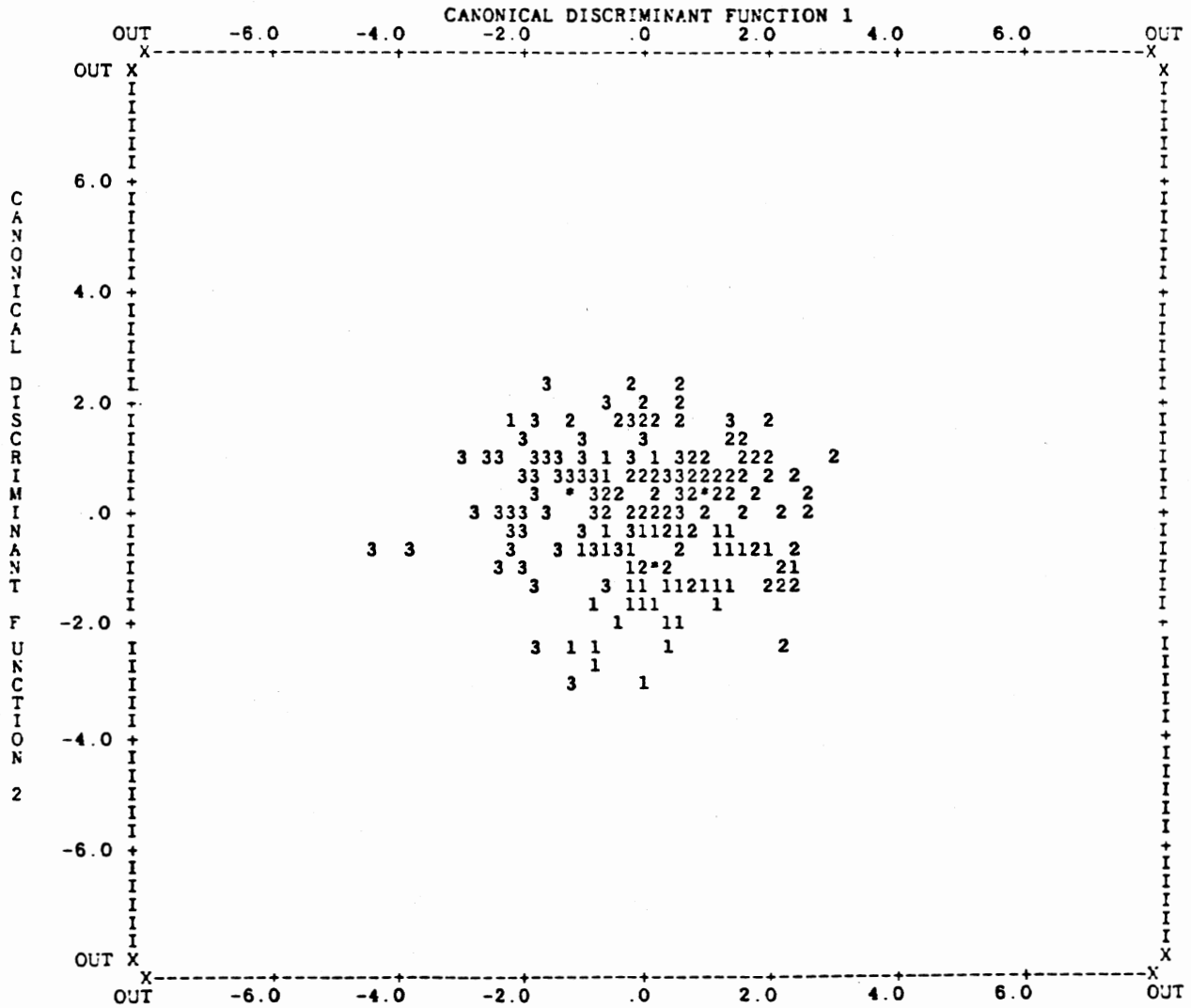


SCATTERPLOT FOR THE FIVE GROUP CLUSTER



TERRITORIAL MAP FOR THE  
ALTERNATIVE CLUSTER

ALL-GROUPS SCATTERPLOT - \* INDICATES A GROUP CENTROID



SCATTERPLOT FOR THE ALTERNATIVE CLUSTER



2

VITA

Abhay Shah

Candidate for the Degree of

Doctor of Philosophy

Thesis: AN INTER-INDUSTRY EMPIRICAL STUDY INVESTIGATING  
THE RELATIONSHIP BETWEEN ENVIRONMENT AND MARKETING  
STRATEGY IN SERVICES

Major Field: Business Administration

Area of Specialty: Marketing

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