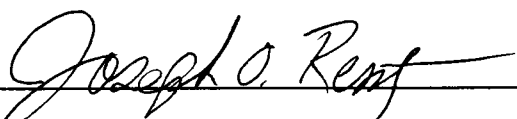
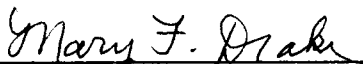
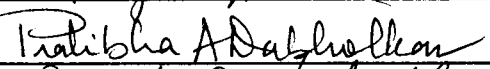
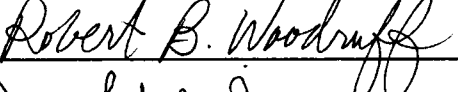
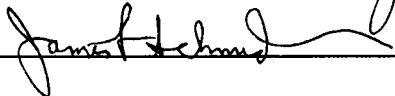


To the Graduate Council:

I am submitting herewith a dissertation written by Dayle Ingerick Thorpe entitled "Consumers' Perceptions of Retail Service Quality: Relationships with Perceived Price, Perceived Merchandise Quality, Perceived Value, Consumer Behaviors and Business Performance". I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.


Joseph O. Rentz, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:


Associate Vice Chancellor and
Dean of The Graduate School

**CONSUMERS' PERCEPTIONS OF RETAIL SERVICE QUALITY:
RELATIONSHIPS WITH PERCEIVED PRICE, PERCEIVED MERCHANDISE
QUALITY, PERCEIVED VALUE, CONSUMER BEHAVIORS AND
BUSINESS PERFORMANCE**

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Dayle Ingerick Thorpe
December 1995

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DEDICATION

This dissertation is dedicated to my mother

Mrs. Enid Morgan Ingerick

whose quiet courage gave me the strength to accomplish
this goal in my life.

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ABSTRACT

Understanding of the process that leads from service quality to the bottom line is necessary if managers are to implement service quality improvements that will have a positive influence on business performance. This research investigates the relationships between consumers' perceptions and behaviors and business performance in a retail environment that offers a mix of tangible goods and services. The constructs of consumers' perceptions of service quality, merchandise quality, price, and value, as well as the constructs of consumer responses of attitude, loyalty, word-of-mouth, and repeat purchase behavior are identified, defined, and measured. Proposed relationships among these variables and business performance are depicted in the Process Model of the Business Performance Outcomes of Service Quality. These relationships are tested using a combination of qualitative (i.e., phenomenological and depth interviews, and in-store monitoring) and quantitative methods (i.e., correlation, regression, logistic regression, analysis of covariance, confirmatory factor analysis and structural equation modeling). Findings suggest that consumers' perceptions of service quality, merchandise quality, and price influence their perceptions of value, which, in turn, influences their behavioral responses of attitude, loyalty, word-of-mouth and repeat purchase.

However, the indirect relationship between perceived service quality and business performance through the constructs of perceived value and customer retention, as hypothesized in this study, was not supported.

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CHAPTER 1

INTRODUCTION

"The belief that better service leads to higher profits is certainly widespread although much of this belief is based on anecdotal evidence. Champions of customer service programs need more than enthusiastic accounts of how well other companies have done. They need quantitative support. Truly scientific analyses of the impact of customer service programs on profits are rare."
(Zahorik and Rust 1992)

Quotes such as this appear frequently in popular marketing and management literature, as well as in academic research studies. Existing models of service quality focus on the process of service delivery and on the customer's evaluation of the service encounter, but do not include the outcomes or consequences of the delivery of service quality. The outcome is *assumed* to be financial business performance. However, this assumption has not been empirically tested or verified.

The interest in the delivery of quality service during the 1970s and 1980s focused on organizations that provide pure services. In the 1990s, organizations that offer a mix of merchandise and services are becoming equally concerned with the service component of their offering. As the marketplace becomes more undifferentiated in its tangible goods offerings, sellers are competing more and more on service; they are positioning themselves against competition using service as their differential advantage. As a result

of this strategy, a study published in 1983 by the Office of the U.S. Trade Representative found that approximately three quarters of the total value added in the goods sector was created by service activities within that sector (Grönroos 1990) .

As Peters and Austin (1985) state, rather than a measure of profit, market share, or the like, it is quantitative, systematic *measures of customer perceptions* of service quality that are the single best indicators of an organization's future health or lack thereof. These measures must above all be in the customer's terms and based on the customer's perceptions, not only on the service provider's perceptions. Webster (1994a) concurs by stating that quality should be defined by customers, not only statisticians, and that customer value is defined in the marketplace, not in the factory. Therefore, this study investigates the links between service quality and value, *from the customer's perspective*, and business performance.

To justify this emphasis on service quality, an understanding of both the theoretical and practical underpinnings of the concept is needed. Current research related to service quality is based on a collection of earlier writings categorized as services marketing literature, quality literature, and satisfaction/dissatisfaction literature. Understanding of the construct of service quality requires a familiarity with the bodies of

literature from which it has evolved. A brief review of these areas follows.

Services Marketing

The American economy is a service economy. In 1963, Regan predicted the coming of a service revolution that would parallel the physical goods market. In fact, today services account for approximately three-fourths of the gross national product and for nine out of every ten newly created jobs (Zeithaml, Parasuraman and Berry 1990). Therefore, the definition of and investigation of special characteristics of services have been topics of research for the past thirty years.

As the proliferation of service businesses developed, researchers analyzed differences and similarities between goods and services (Berry 1980; Grönroos 1978; Judd 1964; Kelly and George 1982; Rathmell 1966; Regan 1963; Shostack 1984). These researchers concluded that services are different from goods. Services possess unique characteristics: (1) they are relatively intangible; (2) their production and consumption occur simultaneously; and (3) they are nonstandardized or heterogeneous because they are labor intensive (Grönroos 1978; Parasuraman, Zeithaml and Berry 1985; Regan 1963; Zeithaml 1981).

Because of the intangible nature of a service, customers cannot touch, try on, or experience the offering in the manner a good can be evaluated. Therefore, customers evaluate the apparent tangibles and make their purchase decision based on their evaluation of variables other than the service itself. Consequently, service providers find it difficult to understand how customers perceive the service and how they evaluate the offering (Grönroos 1978; Parasuraman, Zeithaml and Berry 1985; Zeithaml 1981).

Most goods are produced, stored, sold, then consumed, whereas services are sold, then produced and consumed simultaneously (Regan 1963). Services cannot be separated from the provider or the recipient; the production and consumption are simultaneously performed. This inseparability creates the need for an interaction, or service encounter, between the customer and the contact person from the firm.

This involvement of employees of the firm results in the non-standardization, or heterogeneity, of the service. Because of the labor intensive nature of the interaction, performance of the service varies from day to day, from producer to producer, and from customer to customer. The service the firm intends to deliver often is not what the customer receives (Parasuraman, Zeithaml and Berry 1985; Zeithaml 1981). These characteristics pose problems for

marketers as they try to develop a service system to differentiate themselves from the competition.

The American Marketing Association (1963) defines services as "activities, benefits or satisfactions which are offered for sale, or are provided in connection with the sale of goods." This definition is the foundation for the continuum concept of services. All marketing offerings fall on a continuum with pure services at one end and pure goods at the other; most offerings fall somewhere in between (Grönroos 1978; Rathmell 1966; Shostack 1977). Market offerings can be comprised of goods, with or without accompanying support services, or services, which may be pure service or accompanying support services to facilitate the sale of products.

A definite borderline between a goods offering versus a service offering cannot be drawn. Levitt (1981) states that "there are no such things as services industries. There are only industries whose service components are greater than or less than those of other industries." This results in what Grönroos (1978) refers to as the faltering service concept, one of the confusions concerning the marketing of services. Berry (1980, 1986) relates this concept to retailing -- one type of marketer that offers a mix of goods and services. According to Berry, classifying retailers as goods or service retailers is misleading, because virtually all goods retailers offer services that facilitate the sale of their

merchandise. Berry (1986) states that "it is difficult to identify even one category of goods retailer that offers no services whatsoever" (p. 3).

Because many market offerings are a combination of goods and services (referred to as an integrated product by Teas 1994), the understanding of services marketing can be enhanced by the investigation of firms that offer goods with accompanying support services. Research of the phenomenon in this broader context represents a potential way to link the marketing perspective of quality to the traditional product-focused perspective. The current study addresses this need.

Quality

Early quality research investigated the tangible quality of a physical good (Garvin 1983; Leonard and Sasser 1982). This notion of quality focused on reliability and durability of the good, worker production, and zero defects. As a result, techniques such as quality assurance programs, quality circles, and extended service programs became popular in the manufacturing sector during the 1980s (Takeuchi and Quelch 1983). As the traditional product-based and manufacturing-based definitions of quality (i.e., "conformance to standards" [Crosby 1979]), began to be applied to the service sector, researchers in the field of

services marketing found them inadequate and, therefore, developed a user-based concept of quality (Holbrook and Corfman 1985; Olshavsky 1985; Takeuchi and Quelch 1983; Zeithaml 1981). Based on this market-oriented definition, quality is an individual, personal evaluation. In other words, quality "lies in the eyes of the beholder" and is highly subjective, idiosyncratic and variable (Garvin 1988).

Existing knowledge about quality, much of which has been developed in the manufactured goods sector, is insufficient for an accurate understanding of service quality (Parasuraman, Zeithaml, and Berry 1985). Quality takes on a new meaning in the context of services marketing. The basis for this different approach to quality centers on the unique characteristics that differentiate services from tangible goods. In addition to the widely accepted differentiating features of services -- intangibility, simultaneity, and heterogeneity -- Lovelock (1991) identified seven elements of the consumer's service consumption experience that are unique to a service offering. These characteristics include: (a) the delivery of a performance rather than a tangible good, (b) customer participation in the service delivery, (c) the involvement of other customers in the service delivery, (d) inability to inventory or stockpile service, (e) "realtime" delivery of service, (f) quality control which can only be performed during service delivery, and (g) distribution channels that

are nonexistent or compressed (service is delivered directly to ultimate consumer).

Researchers from the Nordic School (Grönroos 1983; Lehtinen and Lehtinen 1985) led the efforts to understand quality as it relates to services. Their research posited the concepts of physical or technical quality versus interactive or functional quality to differentiate between what is delivered to the customer (technical quality) and how it is delivered (functional quality). This distinction allowed the investigation of the *process* of service delivery (functional quality) which is characteristic of services, in addition to the *outcome* (technical quality) of the service, which had been the focus of the study of quality of tangible goods.

Holbrook and Corfman (1985) state that there is a broad range of definitions of quality in various disciplines. To progress further toward a common framework of quality, they developed a classification of quality definitions based on three dimensions: (1) Implicit/Explicit quality, (2) Mechanistic/Humanistic quality, and (3) Conceptual/Operational quality. The resulting matrix (Holbrook and Corfman 1985, p. 34) depicts the complexity of the concept by distinguishing among eight different perspectives on quality.

1. Classical economics--a production based view of quality in which product design is guided by technological innovations and engineering sophistication

2. Value analysis--quality is defined as the performance of a good's essential functions
3. Ordinary consumer language--quality is used to mean reliability or to express general approval
4. Quality control--quality is defined as a set of procedures for defining, measuring, and improving quality
5. Microeconomic--quality is defined in terms of economics (price) only but not the reasons for the numbers
6. Macroeconomics--quality is measured in terms of physical standards but not in terms of consumer quality of life
7. Philosophy--quality refers to explicit features as perceived by a subject
8. Multiattribute and Multicue Models--quality is a humanistic response to properties or characteristics of an object; quality is a perceived attribute rather than an overall evaluative judgement

However, Holbrook and Corfman (1985) concluded that none of these perspectives answered the question -- "What is quality?"

Jacoby and Olson (1985) make a further distinction between actual or objective quality and perceived or subjective quality. They state it is subjective reality, not objective reality, that determines most of human behavior. Objective (actual) quality relates to Holbrook and Corfman's definition of mechanistic quality, while subjective (perceived) relates to humanistic quality. This subjective response to objects is a "highly relativistic phenomenon that differs between judges" (Holbrook and Corfman 1985, p. 33). Zeithaml (1988) further

conceptualized perceived quality as a summary function of perceptions of lower-level attributes (such as price and reputation of the provider). Therefore, quality is a higher-order concept (or a latent variable). Her focus on the evaluations at the attribute level is consistent with the conceptualizations of goods quality and the satisfaction/dissatisfaction literature.

Consumer behavior researchers are concerned with measuring consumers' evaluations of perceived quality -- both perceived merchandise quality and perceived service quality. While emphasizing service quality, this study addresses both types of perceived quality.

Service Quality

A review of the consumer satisfaction and service quality literatures reveals a lack of consensus regarding: 1) the temporal sequence of the two constructs, and 2) the global versus transaction-specific issue (Dabholkar 1993). Consumer satisfaction researchers (Oliver 1981; Westbrook 1981) generally agree that satisfaction is a psychological construct that is the result of the evaluation of the acquisition and/or consumption of a good or service. Satisfaction (or dissatisfaction) results from the comparison of the consumer's expectations to his perceptions of the *single* experience. This confirmation/

disconfirmation concept defines the level of satisfaction/dissatisfaction which results from disconfirmation, based on the strength and directionality with which expectations (or some other standard) are confirmed or disconfirmed by a specific transaction.

Oliver (1981) states that the "surprise" associated with a series of perceived satisfactory or dissatisfactory incidents decays into one's overall attitude about the product (or service). According to this stream of research, this overall attitude is perceived quality (Holbrook and Corfman 1985; Parasuraman, Zeithaml and Berry 1988).

Parasuraman, Zeithaml and Berry (1988) state that overall service quality depends on the gap between the consumer's expectations and perceptions of how those expectations are met over time. The view of some researchers (Bitner 1990; Oliver 1981; Parasuraman, Zeithaml, and Berry 1988) has been that consumer satisfaction is situation-specific and is an antecedent to service quality which is a consumer judgement about the service provider's overall excellence that develops over time and over a series of transactions.

However, current research reports conflicting results. Some recent studies support the traditional view (Bitner 1990; Bolton and Drew 1991), while other studies find different results (Cronin and Taylor 1992; Woodside, Frey and Daly 1989). Bolton and Drew (1991) develop a multi-stage model of service quality that, when applied to

customers' assessments of local telephone service, supports the theoretical concepts of the traditional view. They found that satisfaction or dissatisfaction precedes customers' assessments of service quality and that assessments of quality are a function of the discrepancy between expected and perceived performance levels. Bitner's (1990) research also supports this view. By empirically testing her model of a service encounter through causal modeling, she found a significant causal path from satisfaction to perceived quality to behavioral intentions.

On the other hand, Cronin and Taylor's (1992) empirical test of their conceptualization of satisfaction and service quality found that service quality precedes satisfaction and that service quality is not a function of the difference between expectations and perceptions, but can be directly measured by performance (perceptions) only. Woodside, Frey and Daly (1989) call into question the finding that customer satisfaction is transaction specific and service quality is global. Results of their study in a hospital setting differentiated between satisfaction with specific acts and overall satisfaction as well as with service quality of a specific act and overall service quality.

In spite of the lack of consensus on the conceptualizations of consumer satisfaction and service quality and on the temporal relationship between the two concepts, researchers in the areas of customer service and

service quality agree that the interaction between satisfaction and service quality is linked to consumer purchase phenomena. As Oliva, Oliver and MacMillan (1992) demonstrate with their catastrophe model, however, this relationship between customer satisfaction and response is complex and, most likely, not linear.

The linkages between customer satisfaction and consumer purchase phenomena are well documented in the satisfaction literature. The relationship between customer satisfaction and repeat purchases is supported in several empirical satisfaction studies (Bearden and Teel 1983; Bitner 1990; Churchill and Surprenant 1982; Oliver 1980). LaBarbera and Mazursky's (1983) longitudinal study demonstrated the importance of satisfaction in explaining the behavior of repeat purchasers of 24 grocery products. Churchill and Surprenant (1982) and Day (1977) report a relationship between customer satisfaction and brand loyalty. Newman and Werbel's (1973) study of brand loyalty for major household appliances found positive relationships between brand loyalty and satisfaction. The link between customer satisfaction and customer loyalty is supported by the studies of Bearden and Teel (1983) and Oliva, Oliver and MacMillan (1992). Likewise, the relationship between customer satisfaction and word-of-mouth is supported by the work of Bearden and Teel (1983) and Day (1977).

The linkages or causal paths between service quality and consumer purchase phenomena are not as fully developed as the relationships between customer satisfaction and consumer responses. The Bitner (1990) study is one of the few such studies. Researchers of service quality make the assumption that since customer satisfaction leads to service quality, the consequences of customer satisfaction are also the consequences of service quality. This assumption begs empirical testing.

Research in the area of the conceptualization, modeling and measurement of service quality was initiated by Parasuraman, Zeithaml and Berry (1985, 1988). These researchers have developed the Gap model, have identified five dimensions of service quality (tangibles, reliability, responsiveness, empathy, and assurance) and have introduced SERVQUAL, a multi-item measure of service quality. Their contribution to the understanding of service quality has provided the interest and impetus for numerous researchers to become involved in this stream of research.

Parasuraman, Zeithaml and Berry (1985) conceptualize service quality in the context of the disconfirmation paradigm. Consequently, they define service quality as the difference between what the customer expects and what the customer perceives s/he receives. However, this view is not accepted by all researchers in the area of service quality. Some researchers support the notion that perception

(performance) measures may be an improved means of measuring service quality (Cronin and Taylor 1992). Diverse opinions regarding disconfirmation versus performance as measures of service quality are the basis for a current debate in the literature (Cronin and Taylor 1992, 1994; Parasuraman, Berry, and Zeithaml 1993; Parasuraman, Zeithaml, and Berry 1994b; Teas 1993, 1994).

Lack of consensus regarding the conceptualization and measurement of the constructs of customer satisfaction and perceived service quality is documented in the literature (Dabholkar 1993; Parasuraman, Zeithaml, and Berry 1994a). Both variables have been conceptualized and measured as either global or transaction-specific constructs. The causal relationship between the two has been presented in both possible ways depending on the temporal definition of the constructs (Dabholkar 1993). Parasuraman, Zeithaml, and Berry (1994a) suggest that an integrative framework that reconciles, rather than debates, these differing views, is needed to enhance our knowledge of how satisfaction and service quality interrelate (see Dabholkar 1995a, 1995b). In light of these conflicting perspectives in the literature, this dissertation, while recognizing the contributions of the customer satisfaction literature, addresses the construct of service quality only.

Gaps in Existing Literature

Research in the areas of services marketing, quality and satisfaction/dissatisfaction provides the foundation for the service quality literature. Since the early 1980s, progress has been made in integrating these three bodies of literature into a conceptualization of service quality. Various models of service quality have been developed (Grönroos 1984; Lehtinen and Lehtinen 1985; Lindqvist 1987; Parasuraman, Zeithaml and Berry 1985) which aid in the understanding of the concept. Because marketing researchers have based their work on models from consumer behavior, the customer's evaluation of the experience has become the focal point of existing models and of ongoing research in the field of service quality (Grönroos 1993). This development has led to a narrowed view of service quality and has limited research to only one aspect of the service quality delivery system -- customer evaluation of the service encounter. Consideration of the influence of the organization's processes and players on the delivery of service quality is omitted from existing models of service quality.

Existing models also do not include the reason for delivering service quality. Why should marketers and other practitioners commit the human, financial and other resources necessary to deliver service quality? What is in

it for them? Business performance outcomes, which are assumed to be the payback from service quality implementation, are obvious only in their omission from models of service quality.

Given these limitations of extant models, an expanded model of service quality is presented. Existing models have been developed and tested in the context of organizations that offer tangible goods. However, many firms in the U.S. offer an integrated product, i.e., a tangible good augmented by supporting services. To make a contribution to the service quality literature which focuses on pure services, this expanded model is investigated in the context of an organization that offers an integrated product. By incorporating both service quality and merchandise quality, the model is more widely applicable to a broader range of marketing organizations.

Gap 1--Business Performance Outcomes

Developing a conceptualization of the business performance outcomes of service quality is important to both managers and researchers. In spite of numerous anecdotes and claims in the literature that service quality leads to profitability, market share and other financial outcomes, managers still lack hard evidence linking service quality with the bottom line (Zahorik and Rust 1992). Rust and

Zahorik (1993) state that there are no published studies that discuss the entire process leading from service quality to the bottom line. Understanding of the complete chain is necessary if practitioners are to implement service quality improvements that will have a positive impact on business performance outcomes.

By viewing business performance outcome as a process, managers may be able to focus on the strategies that will be most effective in creating the behavioral outcomes that function as antecedents to the financial outcomes. Service providers should develop methods for measuring and improving the effectiveness of their strategies to engender the desired customer behavioral responses of attitude, repeat purchases and word-of-mouth communication. By monitoring these behaviors, managers will be able to determine how effectively their service quality delivery system is performing. Perhaps the results of their efforts are not evidenced in the bottom line in the early stages of service quality implementation. For this reason, during this period managers should not evaluate their service quality on financial outcomes only, but on customer behavior criteria as well. Developing desired customer behaviors is the first, and necessary step, in the process (Thorpe 1994).

Managers may have to be patient and continue to invest resources in the program with no apparent results. If managers realize business performance is a two stage

process, they will be satisfied with accomplishing the first stage and be willing to wait for the second stage -- financial outcomes. Gaining profitability and market share through service quality is a long term strategy. Often businesses "give up" on implementation of a service quality delivery system too quickly because they are evaluating the success of the system based on financial criteria only. The efforts toward successfully implementing a service quality delivery system will be in vain if top management continues to reward solely in terms of short term profitability and rate of return measures (Webster 1988).

Superior service quality requires a commitment from the top down, a continuous focus on the customer, measurement systems, an unrelenting drive for improvement, and a special dedication sustainable over time (Thompson, DeSouza and Gale 1985). But the results are worth the effort. Various experts agree that service excellence should result in greater customer loyalty, more new customers through favorable word-of-mouth, higher prices, protection from price competition, lower costs related to reperformance or correction of services, and lower marketing costs (Berry 1986, 1988; Zeithaml, Parasuraman and Berry 1990). Based on their 1987 study, Buzzell and Gale state that "in the long run, the most important factor affecting a business unit's performance is the quality of its products and services, relative to those of competitors". This conclusion is based

on their PIMS database, containing data collected from *managers* of more than 450 companies. These assertions have not been extensively empirically tested based on customer data. This dissertation expands the understanding of the linkage between service quality and business performance by investigating the question based on the *customers'* perceptions service quality.

Current studies purporting empirical support for the linkage between quality and financial outcomes usually are concerned with physical, goods quality, not service quality. This study addresses the need for research in the specific area of business performance outcomes of service quality by investigating the relationship between perceived service quality and business performance, as well as the process underlying the relationship.

Gap 2--Pure Services Versus Firms That Offer a Merchandise/Service Mix

In addition, existing empirical research in service quality is almost exclusively limited to a pure service environment. Since many U.S. marketers offer a mix of merchandise and services, the application of existing models to all U.S. firms may be limited. A conceptualization of service quality that is applicable to pure services, as well

as firms that offer a mix of merchandise and services, is needed.

Service quality cannot be investigated in isolation. The customer's evaluation of the shopping and use experience is dependent not only on perceived service quality, but also on perceived merchandise quality and perceived price. A conceptualization of service quality should include the interdependence of these three customer evaluations.

One example of this type of marketer that offers a merchandise/service mix is a retail organization, such as a department store. The retail store environment is changing more rapidly than ever before. Due to intensifying competition from both domestic and foreign companies, a spate of mergers and acquisitions and more sophisticated and demanding customers who have greater expectations related to their consumption experiences (Parasuraman, Zeithaml and Berry 1988; Smith 1989), retailers today must differentiate themselves by meeting the needs of their customers better than the competition. One purported strategy for achieving a perceptible difference is to differentiate the firm by delivering the highest level of service quality (Grönroos 1978; Thompson, DeSouza, and Gale 1985; Berry 1986; Berry, Parasuraman and Zeithaml 1988; Hummel and Savitt 1988; Burns 1989; Smith 1989; Zeithaml, Parasuraman and Berry 1990).

Recently, the Institute of Retail Management at Brigham Young University published the key research themes in

retailing for 1995-1997. These topics were identified by a panel of executives in the U.S. retail community. Customer service heads the list of key issues. Because retailing "is one of the few industries where value comes almost solely from customer service" (Institute of Retail Management 1995), service quality could be viewed as not only one differentiation strategy, but quite possibly the only road to success in the competitive marketplace (Thompson, DeSouza and Gale 1985).

This study investigates a retail environment that offers supporting services in conjunction with the sale of a physical good. For the purpose of this study, the retail environment is defined as stores that offer a mix of merchandise and services; that is, retailers that offer a pure service (with no physical good) are not included in the definition.

Purpose of Study

The purpose of this study is to investigate these two identified gaps in existing explanations of service quality. This study examines the relationship between customers' perceptions of service quality and the business performance of organizations that offer a good/service mix.

Research Objectives

The overall objective of this study is to determine the effect of service quality delivery on the business performance of a firm and to identify the process underlying the effect. As a means to that end, a model is developed that: 1) integrates the service quality delivery system, perceived service quality, perceived merchandise quality, perceived price, perceived value, customers' behaviors and business performance outcomes, and 2) identifies relationships between these variables. Portions of the model are explored in the dissertation. The following relationships are investigated: 1) the relationships among the variables of perceived price, perceived service quality, and perceived merchandise quality and their relationship to perceived value, 2) the relationship between perceived value and customer behaviors of attitude, repeat purchases, and loyalty, 3) the relationship between the customer behavioral variable of repeat purchase and business performance, 4) the relationship between the customer behavioral outcomes of attitude and word-of-mouth, and finally, 5) the relationship between customers' perceptions of service quality and business performance. Customer attraction is the one variable in the model that is not explicitly measured or investigated in this study.

Contributions of Study

Given today's intense interest in quality and delivery of value, research regarding the business performance outcomes of service quality can make a significant contribution to managers and academicians.

Implications for Managers

Webster (1994a, 1994b) suggests that goods are a bundle of benefits, that products per se may be relatively incidental to the total value provided, and expectations often focus on the service bundle. Therefore, he posits that all businesses can be defined as a service business, whether a pure service or a firm offering an integrated product. To make a contribution to the service quality literature which focuses on pure services, the model proposed in this dissertation is investigated in the context of an organization that offers an integrated product -- a tangible product supported by accompanying services. By incorporating both service quality and merchandise quality, the model is more widely applicable to a broader range of marketing organizations, that is to firms offering an integrated product, as opposed to a pure service.

Managers of firms providing a pure service or a mix of merchandise and supporting services need to develop

strategies for creating and strengthening the desired customer behavioral outcomes of positive attitude and repeat purchases. Research focusing on these customer responses in a service setting could assist managers in this task.

In addition, managers need systems for evaluating and improving these behaviors. Traditionally, businesses use financial outcomes as the measure of success of their service delivery because such figures are accessible and easy to evaluate. However, once managers realize that measuring customer behaviors is the first step in evaluating their service delivery, they will need methods to accomplish the task of monitoring customer behavior.

For practitioners to "buy in" completely to the notion of service quality, researchers must provide evidence that managers will realize a financial return on their investments in implementing, measuring, and improving the level of service they provide their customers. Champions of the implementation and improvement of service quality delivery systems within organizations must be able to justify expenditures devoted to these systems. They need more than anecdotal evidence of the outcomes of service quality; they need quantitative evidence to get the attention, and support, of management. To that end, this study provides empirical evidence that allocation of resources to the delivery of service quality will positively influence the desired customer behavioral outcomes.

In addition, the scale developed for this dissertation could be useful for managers of retail businesses, such as department or specialty stores, to use to gather benchmark data regarding current levels of quality service, as well as to conduct periodic "checks" to measure service improvement. The instrument could serve as a diagnostic tool that will allow retailers to identify service areas that are weak, compared to their competition, and need attention. From a managerial perspective, retailers will be able to formulate policies and procedures for service improvement based on customer perceptions rather than management's intuition.

Implications for Academicians

The Marketing Science Institute (1994) has identified one of their research priorities for 1994-1996 as the need to identify the links between key constructs (e.g, service quality) and business performance. In addition, the Marketing Science Institute identified the need to investigate the implications that the blending of services and goods in a market offering has on measurement issues. Researchers in the areas of service quality have the opportunity to close the gap between the claims that service quality leads to profitability in a firm and the lack of empirical evidence to support this claim. By testing specific portions of the proposed model, this dissertation

provides a deeper understanding of the relationship between service quality and business performance outcomes and the process underlying the relationship.

This study contributes to existing knowledge related to marketers that offer a mix of merchandise and services. To augment the literature on pure services, this study investigates how service quality is perceived by customers of businesses that are positioned on the service continuum somewhere between pure service and pure good.

In addition, this study contributes to our understanding of bottom line performance by examining the relationship between perceived service quality and business performance from the customer's perspective. To date, academic studies investigating the linkages between service quality and business performance have examined the issue from the managers' perceptions of the service quality that they are delivering to their customers (Kohli and Jaworski 1990, 1993; Narver and Slater 1990). Findings based on data from customers will add empirical evidence for, and lend support to, the findings of previous studies based on data from managers. Although the study conducted by Deshpande, Farley, and Webster (1993) does include marketing executives and customers in research "quadrads" used for data collection, their definition of customer is the industrial customer (a vendor firm), rather than the consumer. This

study examines the issue of perceived service quality from the perspective of the ultimate consumer.

The Process Model of the Business Performance Outcomes of Service Quality presented in this study has implications for advancing knowledge that researchers can apply to a wider range of marketing organizations. Application of previous models of service quality is limited to pure service firms. Because the model proposed in this dissertation includes perceived merchandise quality, it is applicable to all businesses that offer an integrated product, that is, a market offering that includes a product and supporting services. In addition, the model offers a richer, more complete conceptualization of the relationship between customer evaluations and ultimate business performance. As stated by Iacobucci, Grayson, and Ostrom (1994), methods and models for examining the dynamics of these evaluative concepts need to advance beyond mathematical exercises; "real 'models' would include more of the character of the consumer making the evaluations of quality" (p. 57). By including the consumer-related variables of perceived service quality, perceived merchandise quality, perceived price, perceived value, attitude, repeat purchase, loyalty, and word-of-mouth, the Process Model of the Business Performance Outcomes of Service Quality makes a contribution to this need for future research.

The Process Model of a Service Quality Delivery System also presented in this study, provides direction for future research in the area of services marketing. This model includes the organizational components of the delivery service quality identified in the literature. For the service encounter to be a positive experience for the customer, various processes must be in place and managed as interrelated components of the service quality system. The interaction of the antecedents, players, and processes in the system are necessary to the delivery of service quality.

Future investigation of the interrelationships among these components of the service quality system is critical to our understanding of the delivery of service quality to the ultimate consumer.

Organization of Dissertation

This chapter discusses the services marketing, quality, and service quality literatures that provide the foundation for this study. The importance and implications of the research questions are also posited. Chapter 2 presents and discusses the model developed to guide the research. A review of the literature related to the constructs of interest in the proposed model is presented in Chapter 3. Chapter 4 delineates the design and methodology employed in the research. Analyses and results are included in Chapter

5, while discussion, conclusions and future research are presented in Chapter 6.

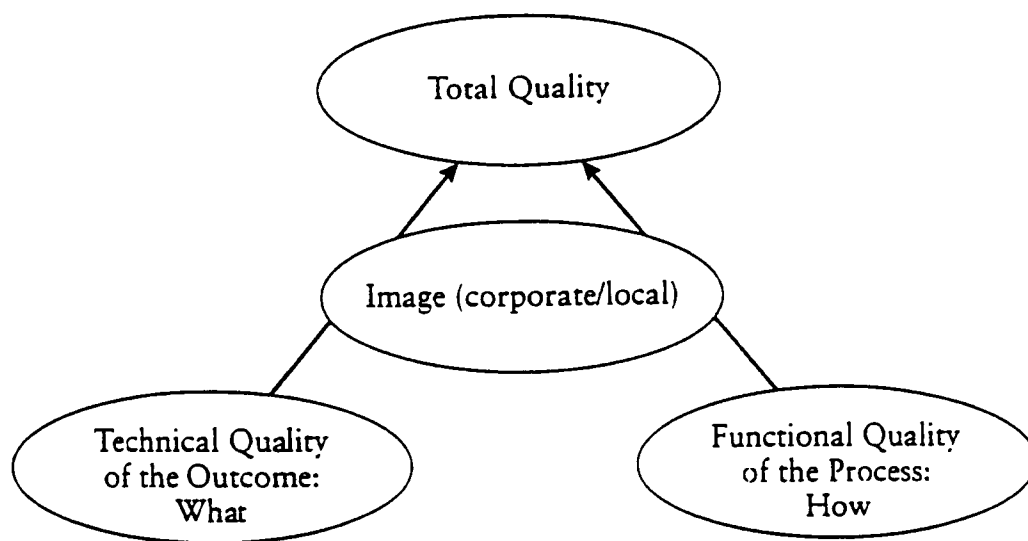
CHAPTER 2

MODEL DEVELOPMENT

The model posited to guide this study is grounded in the existing service quality literature. A review of this body of research reveals a progressive understanding and conceptualization of service quality, and at the same time, identifies opportunities to expand on this foundation. By integrating elements of existing models and adding new components, the proposed model contributes to the base of knowledge regarding consumers' evaluations of service quality and the business performance outcomes that result from the delivery of service quality.

Components of Service Quality

The earliest attempts to conceptualize service quality can be credited to the Nordic School. Grönroos (1978, 1983) led the efforts to understand quality as it relates to services (see Figure 1). His research advances the concepts of technical quality versus functional quality to differentiate between what is delivered to the customer (technical quality) and how it is delivered (functional quality). He proposed that technical and functional quality generate the image of the service provider. Since a



customer actually experiences the firm and its resources during a service encounter, image of the firm is critical to most service providers (DeSarbo, Huff, Rolandelli, and Choi 1994). Image has a three-fold impact on customer perceptions of the firm: (1) Image, together with external marketing activities of the firm, communicates expectations to the customer; if a customer has a positive image of the firm, s/he will be more receptive to advertising and word-of-mouth related to the firm, and will be less receptive to these communications if a negative image is perceived; (2) Image functions as a filter through which the customer forms perceptions of operations of the firm; a positive image will protect the image from being damaged as a result of one negative experience; and (3) Image changes over time as a result of experiences with the service provider. This early conceptualization was one of the first attempts to understand the components of service quality as opposed to product, or physical, quality (Grönroos 1990).

Grönroos (1988) later updated his earlier model to incorporate the concept of *perceived* service quality as the disconfirmation between expected quality and experienced quality (see Figure 2). He identified the "gap" between expectations and experiences as the customer's perception of service quality. Grönroos also identified antecedents to expectations, such as, market communications, image, word-of-mouth, customer needs and customer learning. In his

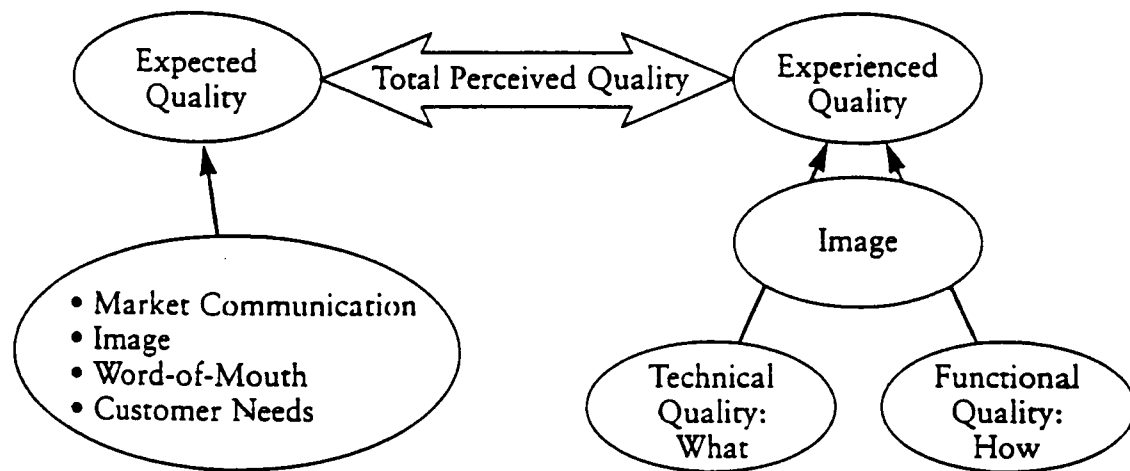


Figure 2: Grönroos' Model of Total Perceived Quality
(Grönroos 1988)

updated model, Grönroos recognized what he termed "Total Perceived Quality"; that is, he realized that manufacturers of goods provide service as part of their offering. This realization introduced into the literature the concept of the "Continuum of Service", with pure service at one extreme and pure product at the other. Since most organizations produce and sell both goods and services (albeit in different proportions), goods and services must exist in a mutually beneficial relationship. The customer is actually buying the benefit, or quality, of a total offering, comprised of actual goods and supporting services (Gummesson 1992).

Given the contribution of Grönroos' research to the understanding of service quality, it does have limitations. He does not empirically identify the dimensions of service quality. In his later work (Grönroos, 1988), he introduces Six Criteria of Good Perceived Service Quality. He describes these essential characteristics of a service provider as professionalism and skills, attitudes and behavior, accessibility and flexibility, reliability and trustworthiness, recovery, and reputation and credibility. However, these criteria are based not on his own empirical investigation but are a summary of the findings of other studies. Neither does he present a scale by which to measure his components of service quality -- technical and functional quality.

Building on the work of Grönroos, Lehtinen and Lehtinen (1985) make a further contribution to services marketing literature by exploring the dimensions of service quality. Compared to Grönroos' static, two-dimensional conceptualization of service quality (functional quality and technical quality), Lehtinen and Lehtinen propose an interactive, three-dimensional approach. They posit that service quality is the customer's subjective interpretation of the experience that is produced by the interaction between the customer and elements of the service organization (contact persons or equipment). These interactions may be face-to-face, over the telephone, by letter, or by automated means (e.g., ATM). This concept has variously been referred as the service encounter (Bitner 1990; Bitner, Booms, and Tetreault 1990, Shostack 1985), or a moment of truth (Carlzon 1987; Normann 1984).

Lehtinen and Lehtinen's (1985) three-dimensional model of service quality includes physical quality, interactive quality, and corporate quality. Physical quality is grounded in the quality of the tangible aspects of the delivery of the service. Physical elements include the goods and materials consumed during the service production process, the environment (building, layout, etc.) of the service factory, as well as the equipment used to deliver the service. Physical quality is most closely related to Grönroos' technical quality.

Interactive quality originates in the interaction between the customer and the service provider. These interactive elements or resources of the service provider include contact personnel, other customers, and physical equipment used to produce the service. Interactive quality is variable based on the momentary feelings and attitudes of the interacting persons. This dimension emphasizes the importance of managing this people-intensive aspect of service delivery. The effectiveness with which the service provider manages the resources of people and equipment during the interaction with the customer has a significant effect on the customer's perception of service quality. This interactive dimension of quality closely corresponds to Grönroos' functional quality, or the process of delivering service.

Corporate quality closely aligns with Grönroos' concept of image. Lehtinen and Lehtinen place increased significance on this element by explicitly identifying it as a dimension of service quality. This dimension of quality develops as the service organization matures and gains a reputation or image. It relates to how current and potential customers view the organization. Unlike the other two dimensions of service quality, corporate quality is stable in nature and can be experienced by the customer before participating in the service process.

Lehtinen and Lehtinen expand Grönroos' work by defining the dimensions of service quality more completely and by applying their theory qualitatively to an actual service environment (i.e., restaurants). However, proposed relationships between the dimensions, explanation of the sub-elements of the three dimensions, and scales for measuring the dimensions are lacking. The model proposed in this dissertation addresses these limitations.

Dimensions of Service Quality

Indebted to the contributions of the researchers of the Nordic school, Parasuraman, Zeithaml, and Berry (1985, 1988) have built on the foundation laid by Grönroos (1982, 1983, 1984) and Lehtinen and Lehtinen (1985) to address limitations in the existing knowledge about service quality.

In 1985, Parasuraman, Zeithaml, and Berry presented their conceptual model of service quality (see Figure 3). Although this model borrowed concepts from previous research (e.g., disconfirmation and the dimensional composition of service quality), it made several significant contributions to the understanding of service quality.

Parasuraman, Zeithaml, and Berry conceptualize service quality as an interactive process between customer and organization. By incorporating the service provider perspective into the model, the researchers were able to

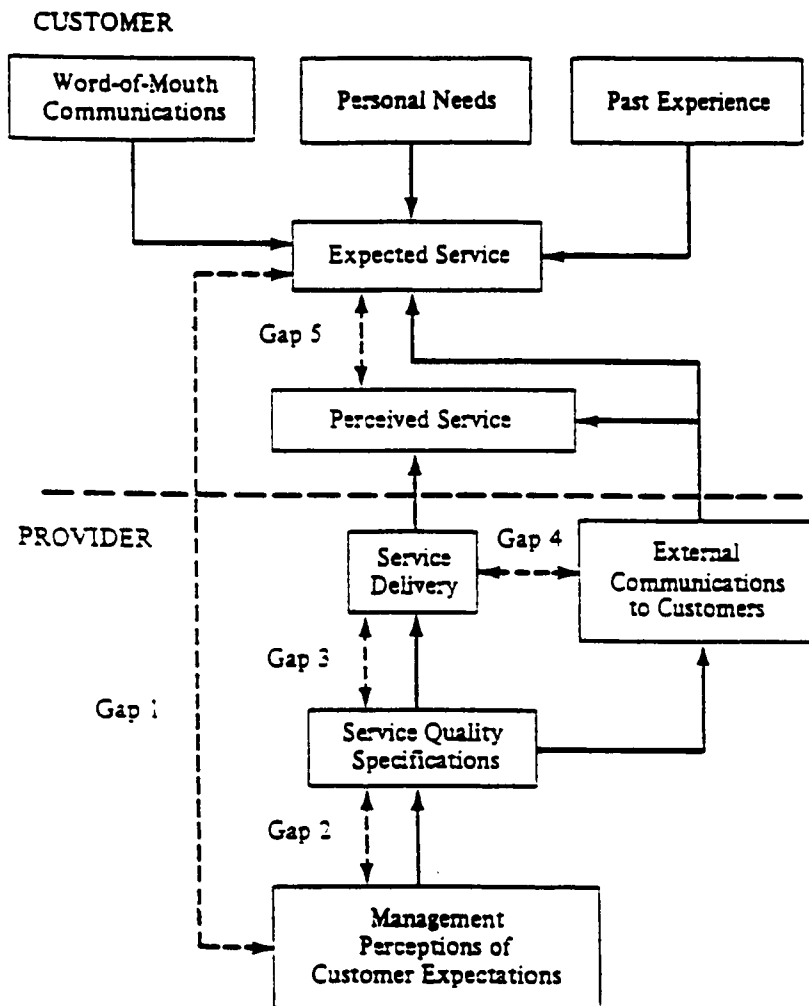


Figure 3: Conceptual Model of Service Quality (Parasuraman, Zeithaml, and Berry 1985)

identify four gaps or discrepancies between management's perception of service quality and the tasks associated with the actual service delivery to customers. These four gaps, in turn, contribute to the quality perception of the customer, i.e., service quality. By including in their model both participants in the interactive process (i.e., the service provider and the customer), they brought a managerial perspective to the concept of service quality. For the first time, service providers could understand how their own perceptions and management decisions, the organizational systems, communication strategies, and policies and procedures affect the customer's perception of service quality.

Extensive exploratory research, including executive interviews and focus groups, provided insight into the understanding of service quality. Zeithaml, Parasuraman, and Berry were able to build on the existing 2- and 3-dimension models of service quality to identify ten key criteria or determinants that customers use to evaluate service quality (see Figure 4). In addition to the determinants, antecedents to customer expectations were identified. The interviews and focus groups consistently revealed that, in addition to marketers' communication, word-of-mouth communication, personal needs, and past experience also shape the customer's service expectations. These antecedents closely parallel those introduced earlier

SERVQUAL Dimensions					
Original Ten Dimensions for Evaluating Service Quality	Tangibles	Reliability	Responsiveness	Assurance	Empathy
Tangibles					
Reliability					
Responsiveness					
Competence					
Courtesy					
Credibility					
Security					
Access					
Communication					
Understanding the Customer					

Figure 4: Correspondence Between SERVQUAL Dimensions and Original Ten Dimensions for Evaluating Service Quality (Zeithaml, Parasuraman, and Berry 1990)

by Grönroos (1982). This finding has useful managerial implications. Service providers do not have complete control over all the influencers of customers' evaluations of service quality. As a means to providing service that meets the expectations of its customers, a service organization must understand the word-of-mouth communications, as well as personal needs and past experiences of its customers, when attempting to positively impact their influence on customers' service expectations.

Measurement of Service Quality

In addition to these contributions to the understanding of service quality and its managerial implications, Parasuraman, Zeithaml, and Berry (1988) also developed a measure of service quality. Their purpose was to produce a scale that researchers can employ to better understand the service expectations and perceptions of customers and to determine gaps in service delivery. Through additional research, Parasuraman, Zeithaml, and Berry (1988) reduced the original ten determinants of service quality to five -- reliability, empathy, assurance, responsiveness, and tangibles -- and developed items to measure these dimensions (see Figure 4). They empirically tested their multiple-item scale, SERVQUAL (see Figure 5), in a number of studies involving "pure" service settings (e.g., retail

	Strongly Disagree							Strongly Agree		Strongly Disagree							Strongly Agree
1. Excellent _____ companies will have modern-looking equipment.	1	2	3	4	5	6	7		12. Employees in excellent _____ companies will always be willing to help customers.	1	2	3	4	5	6	7	
2. The physical facilities at excellent _____ companies will be visually appealing.	1	2	3	4	5	6	7		13. Employees in excellent _____ companies will never be too busy to respond to customers' requests.	1	2	3	4	5	6	7	
3. Employees at excellent _____ companies will be neat-appearing.	1	2	3	4	5	6	7		14. The behavior of employees in excellent _____ companies will instill confidence in customers.	1	2	3	4	5	6	7	
4. Materials associated with the service (such as pamphlets or statements) will be visually appealing in an excellent _____ company.	1	2	3	4	5	6	7		15. Customers of excellent _____ companies will feel safe in their transactions.	1	2	3	4	5	6	7	
5. When excellent _____ companies promise to do something by a certain time, they will do so.	1	2	3	4	5	6	7		16. Employees in excellent _____ companies will be consistently courteous with customers.	1	2	3	4	5	6	7	
6. When a customer has a problem, excellent _____ companies will show a sincere interest in solving it.	1	2	3	4	5	6	7		17. Employees in excellent _____ companies will have the knowledge to answer customers' questions.	1	2	3	4	5	6	7	
7. Excellent _____ companies will perform the service right the first time.	1	2	3	4	5	6	7		18. Excellent _____ companies will give customers individual attention.	1	2	3	4	5	6	7	
8. Excellent _____ companies will provide their services at the time they promise to do so.	1	2	3	4	5	6	7		19. Excellent _____ companies will have operating hours convenient to all their customers.	1	2	3	4	5	6	7	
9. Excellent _____ companies will insist on error-free records.	1	2	3	4	5	6	-		20. Excellent _____ companies will have employees who give customers personal attention.	1	2	3	4	5	6	7	
10. Employees in excellent _____ companies will tell customers exactly when services will be performed.	1	2	3	4	5	6	-		21. Excellent _____ companies will have the customer's best interests at heart.	1	2	3	4	5	6	7	
11. Employees in excellent _____ companies will give prompt service to customers.	1	2	3	4	5	6	-		22. The employees of excellent _____ companies will understand the specific needs of their customers.	1	2	3	4	5	6	7	

Figure 5: SERVQUAL Items (Zeithaml, Parasuraman, and Berry 1990)

banking, long distance telephone service, securities brokerage, and credit card companies). However, they did not test the instrument in a business which offers services in conjunction with a physical product. Parasuraman, Berry, and Zeithaml (1991) acknowledge that the instrument can not be treated as an "off the shelf" tool for application in all environments and encourage adaptation of their scale to the context in which the instrument is to be used. SERVQUAL has been the subject of numerous replications and continued discussion regarding the validity and reliability of the instrument (Brown, Churchill, and Peter 1993; Carman 1990; Cronin and Taylor 1992, 1994; Parasuraman, Berry, and Zeithaml 1993). In spite of the criticisms and claims that the scale has methodological and psychometric problems, no other scale has been offered in the literature as an alternative to SERVQUAL (see Dabholkar, Thorpe, and Rentz 1996, forthcoming).

Despite the significant contribution to existing knowledge made by Parasuraman, Zeithaml, and Berry, their research has not yet addressed important aspects of service quality. Their static model of service quality focuses on the process of service delivery, but does not include the outcomes or consequences of that process. Their conceptualization also omits the concepts of perceived price and perceived value, both of which impact customers' evaluations of a service provider. In addition, the

SERVQUAL scale, in its original form, includes no items designed to measure quality of goods, and therefore is applicable only to pure services. These limitations are addressed in the model proposed for the present research.

Perceived Value

In an independent study, Zeithaml (1988) examines two of the limitations to her previous work with Parasuraman and Berry. She includes consumer perceptions of price and of value in her Means End Model (see Figure 6). In an empirical study evaluating product quality, she investigates the concepts of price, quality and value and the relationships among these concepts. Perceived price is defined as what is given up or sacrificed to obtain a product. This definition of price includes both monetary and nonmonetary sacrifices. Zeithaml (1988, p. 14) defines perceived value as "the customer's overall assessment of the utility of a product based on perceptions of what is received and what is given." She conceptualizes perceived value as a higher level abstraction that differs from quality in two ways. Value is more individualistic and personal than quality and, unlike quality, it involves a tradeoff of give and get components. The challenge to marketers is to identify what benefits ("get" components)

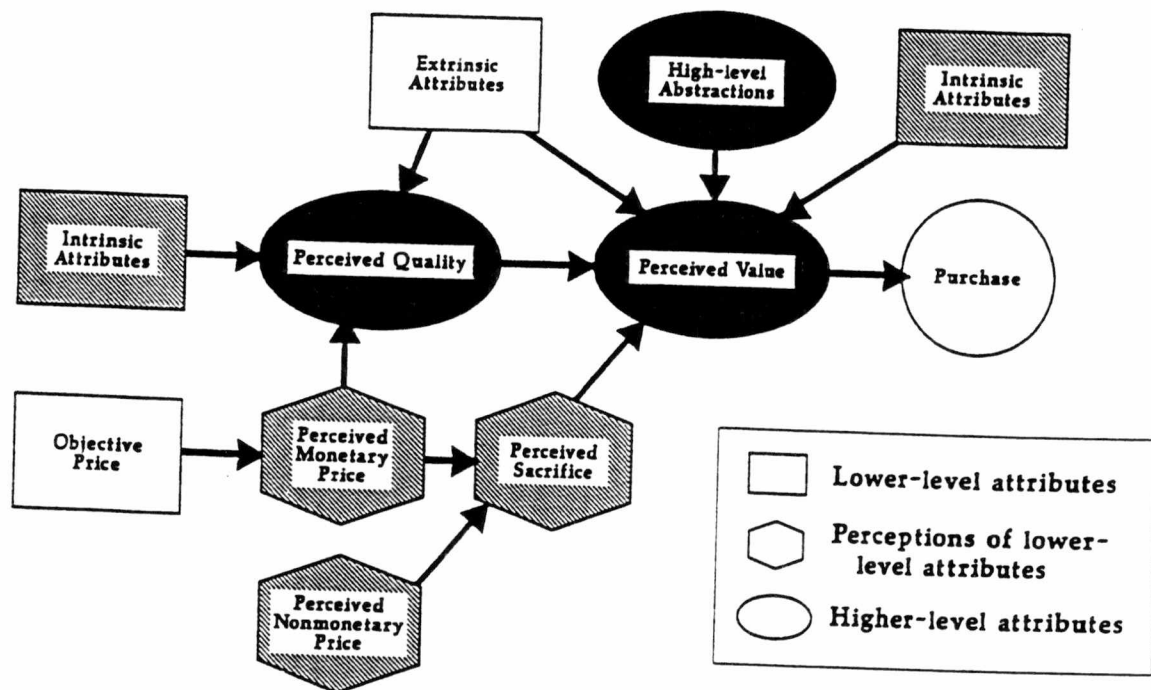


Figure 6: A Means-End Model Relating Price, Quality, and Value (Zeithaml 1988)

and sacrifices ("give" components) customers consider when determining value.

By proposing a Multistage Model of Customers' Assessments of Service Quality and Value, Bolton and Drew (1991) introduce the concept of value into the service quality literature. Their conceptual framework (see Figure 7) relates customers' assessments of service quality with perceived value which then leads to the consequences of behavior intentions and behavior. This dynamic perspective introduces the idea that a customer's overall assessment of a service can be decomposed into a series of interrelated stages: assessment of performance, service quality, and value. By identifying these stages, Bolton and Drew's research assists managers' operationalizations of a service delivery system that positively influences customers' evaluations at each stage.

This review of the development of the conceptualization of service quality demonstrates how researchers have borrowed from and built upon the knowledge contributed by fellow researchers who preceded them. Service quality models have evolved from an early explication of the components of service quality and the incorporation of disconfirmation theory into a static model offered by the Nordic School, to an understanding of the dimensions of service quality and the antecedents to expectations contributed by Parasuraman, Zeithaml and Berry (1985, 1988),

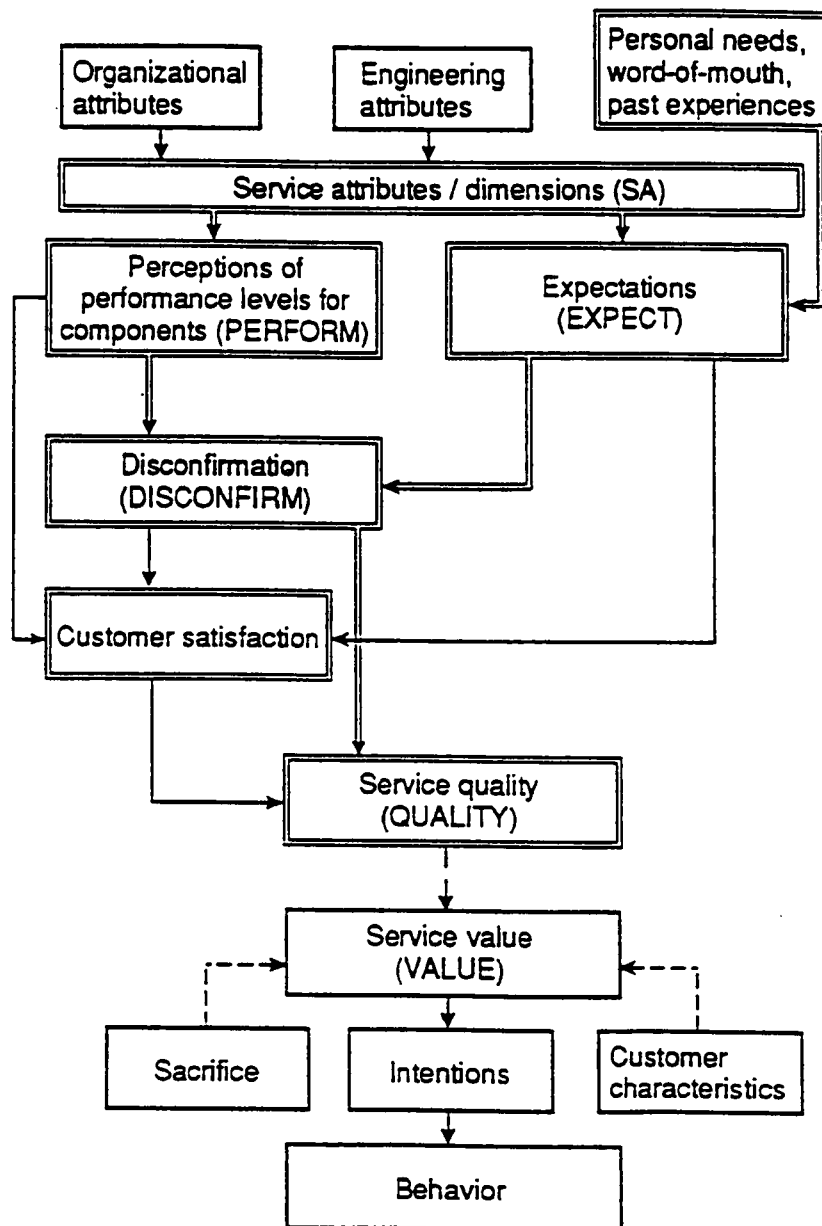


Figure 7: A Multistage Model of Customer Assessments of Service Quality and Value (Bolton and Drew 1991)

to an investigation of perceived value and perceived price by Zeithaml (1988) and Bolton and Drew (1991), and finally an emphasis on the dynamic nature of service quality, integrating outcomes or consequences of service quality into the model (Zeithaml 1988, Bolton and Drew 1991).

Models Proposed to Guide Dissertation

This review of literature related to existing models of service quality forms the basis for the two models that have been developed to guide this dissertation, as well as a future research program. First, A Model of the Service Quality Delivery System is presented in Figure 8. Although not the focus of this dissertation, this model provides a broad perspective of the holistic context in which service quality is delivered. For service quality to occur, various antecedents, organizational processes and players must be managed, evaluated and incorporated into an integrated system. The interaction of the antecedents, players, and processes in the system produces service quality. For instance, for a firm to deliver service quality to its ultimate customers, the firm must also deliver service quality to other players in the system -- managers, employees and suppliers. Everyone within an organization has a customer, at the next process, and each person's objective is to serve *his* or *her* customer with the highest

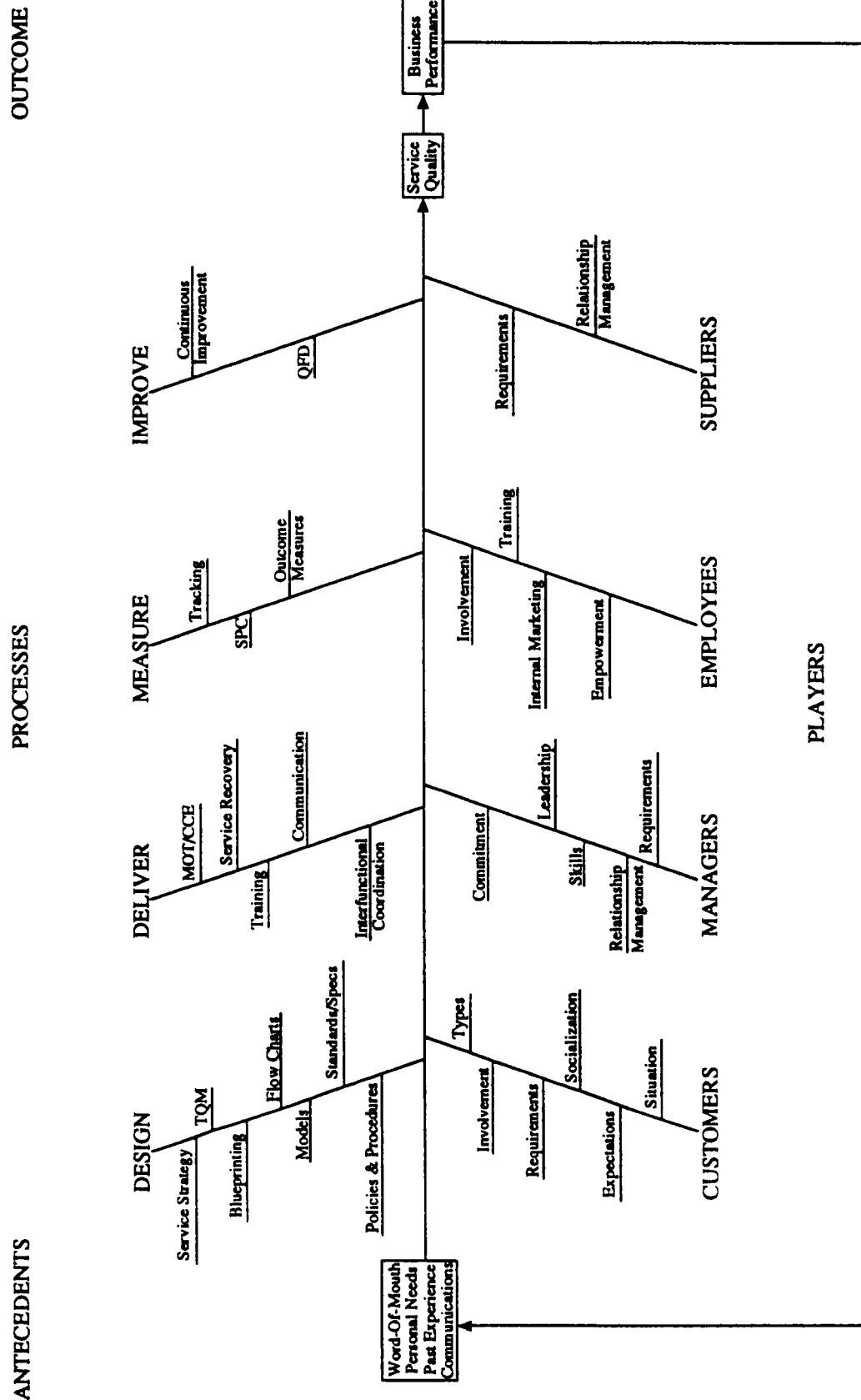


Figure 8: A Model of the Service Quality Delivery System

service quality possible. This concept of a "chain of customers" (Gummesson 1992; Schonberger 1990), characterizes the internal quality management perspective of A Model of the Service Quality Delivery System.

Heskett, Sasser, and Hart (1994) affirm the importance of one of the players in the system -- employees -- in the delivery of service quality by including organizational systems and operating strategies related to employees in their Service-Profit Chain. They include Internal Service Quality (e.g., job design, employee selection and development, employee rewards), Employee Satisfaction, Employee Retention, and Employee Productivity in their Service-Profit Chain. The Model of a Service Quality Delivery System is a more comprehensive conceptualization of the system, due to the inclusion of the other players -- vendors, managers, customers -- in addition to employees.

This dissertation focuses on the relationship between the two outcome variables depicted in A Model of the Service Quality Delivery System; that is the relationship between Service Quality and Business Performance. The Process Model of Business Performance Outcomes of Service Quality (see Figure 9) is presented as the roadmap for this dissertation research. Because successful integration of the components of the service quality delivery system into a business strategy is essential to the delivery of service quality, the Model of the Service Quality Delivery System "connects"

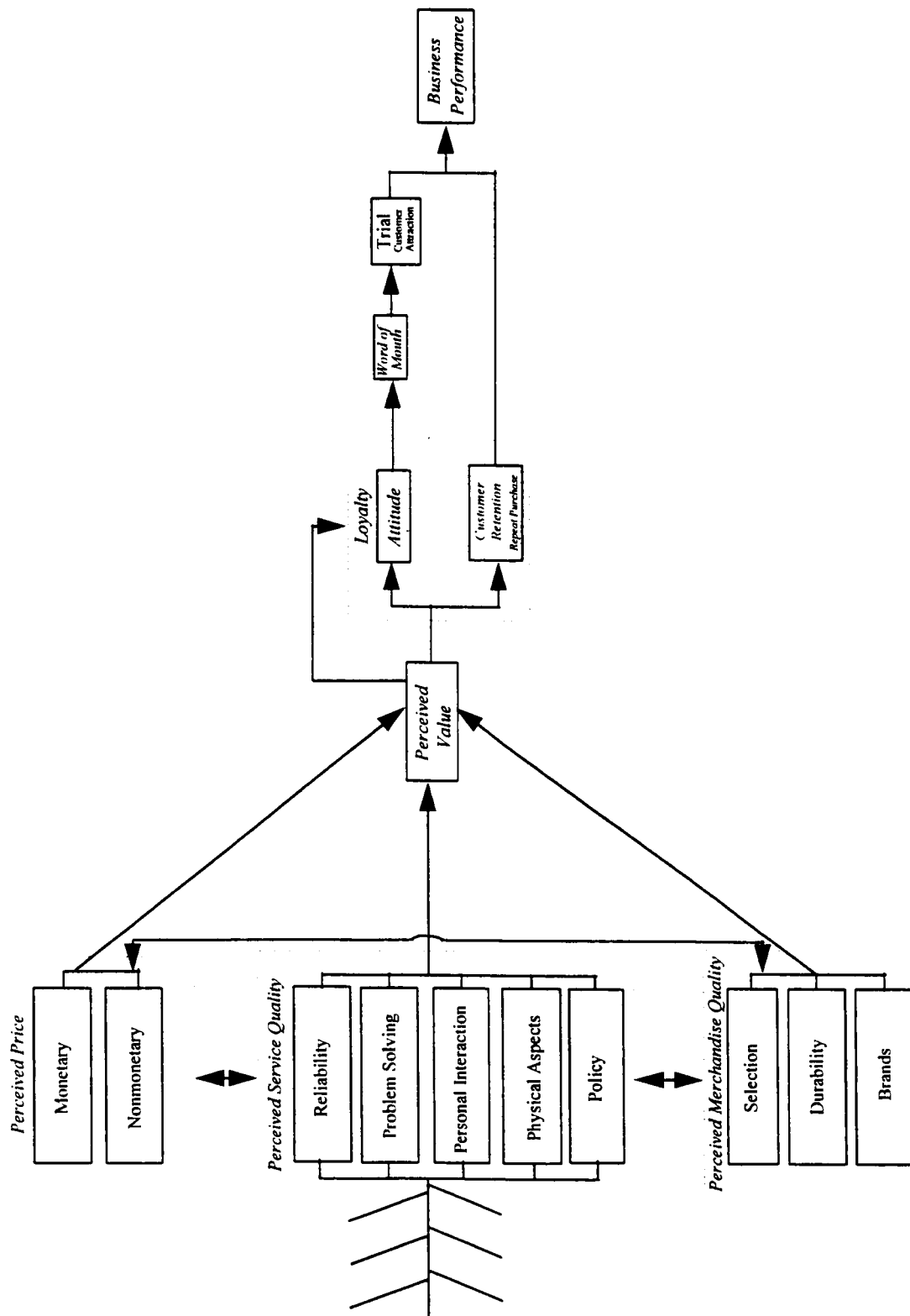


Figure 9: Process Model of Business Performance Outcomes of Service Quality

to the Process Model of Business Performance Outcomes of Service Quality at the level of Perceived Service Quality.

The Process Model of Business Performance Outcomes of Service Quality integrates concepts from the literature and extends the existing body of knowledge by adding new components to current models. The model incorporates the concept of process introduced by the Nordic school. From the research of Parasuraman, Zeithaml, and Berry (1985), the model includes the concept of the dimensions of service quality. From Zeithaml (1988), the aspects of perceived price and perceived value are included and from Bolton and Drew (1991) the concept of service value is incorporated.

The Process Model of Business Performance Outcomes of Service Quality advances the understanding of the phenomena by integrating existing concepts, by specifying relationships, and by including business performance outcomes. The proposed model is unique in that it includes perceived merchandise quality as a determinant of perceived value, in conjunction with perceived service quality and perceived price. More importantly, the proposed model incorporates the outcome of service quality that is obvious in other models of service quality only through its omission. Both customer behavioral outcomes (e.g., loyalty, word-of-mouth) and performance outcomes (e.g., profit, sales volume) are posited to be outcomes of a successful service quality delivery system.

The need exists for research in the service quality arena which will empirically link service quality with the business performance outcomes that proponents of service quality desire and assume to exist. The question: "What is business performance and how does it result from service quality?" is addressed by the Process Model of Business Performance Outcomes of Service Quality. It is the premise of the model that customer behavioral responses resulting from the delivery of service quality cannot be separated from business performance outcomes, but are actually the first step in the two stage process.

In practice, few businesses may evaluate the effectiveness of their service quality delivery systems, and those that do evaluate their service quality, base the success of their efforts to deliver service quality on financial measures only. However, as conceptualized by the model, certain customer behaviors are antecedents to the realization of the financial outcomes of profitability and sales. Implementing a service quality delivery system and reaping its benefits takes time. Customer behaviors must be developed, measured, and improved before the financial outcomes will be realized. When managers view business performance as a two-step process, they will be more willing to invest resources in creating these customer behaviors, while anticipating the desired financial outcomes.

The following chapter more fully reviews and discusses the literature related to each of the variables, the underlying structures of the constructs, and the relationships specified in the proposed Process Model of Business Performance Outcomes of Service Quality.

CHAPTER 3

REVIEW OF LITERATURE

The proposed Process Model of Business Performance Outcomes of Service Quality functions as the framework for the review of literature. In this chapter, the theoretical bases for this dissertation are supported through a discussion of studies and existing research relevant to the constructs of interest in the model and their proposed relationships. This discussion provides the justification for the model and the hypotheses that guide the study.

Perceived Price

Traditionally, price has been defined in an economic context. In a market economy, price functions as the basis for the allocation of resources among the members of the society so as to maximize the welfare of the society as a whole. This conventional view of price is based on the assumption that the consumer has a vast amount of information (Scitovszky 1945; Tull, Boring, and Gonsior 1964). Economic theory assumes the consumer has perfect information about all alternative products and services and is able to objectively evaluate the effectiveness of each of these alternatives in satisfying his needs. Economic demand theory also assumes that the consumer is rational and, when

evaluating the available alternatives, will choose the lowest priced alternative. This assumption supports the generalized belief in a negatively sloping demand curve. That is, as the price of a good increases, the demand decreases.

Objective versus Subjective Price

However, conventional economic theory may not adequately explain consumer behavior in today's marketplace. It is the subjective or perceived price, rather than the objective or actual price, that appears to have the greater effect on the consumer's evaluation of a market offering. Likewise, a positively sloped demand curve has been observed. That is, for some products under certain conditions, the higher the price, the greater the demand (Monroe 1973).

Price has both objective external properties and subjective internal representations. *Perceived price* is the result of the consumer's translation of the objective external properties into meaningful cognitions (Dodds, Monroe, and Grewal 1991; Lichtenstein, Bloch, and Black 1988). Consumers can have more than one interpretation of the price of a good or service and these interpretations may vary from consumer to consumer. For example, one may perceive a high price negatively because the "sacrifice"

that must be given up is too great in exchange for the benefit one will receive. On the other hand, another buyer may perceive the same price positively, as an indication of greater quality, greater value, or greater prestige (Leavitt 1954).

Adaption-Level Theory

Conceptualization of the subjective process of perception is enhanced by the application of adaptation-level theory (Helson 1964). According to Helson, an individual's perceptual evaluation of a stimulus (e.g., price) is expressed as the ratio between the physical (objective) value of the stimulus and the physical value of the individual's current adaptation level (AL). The current AL, or frame of reference, is determined by the pooled effect of three types of cues -- focal, contextual, and organic cues. The cues of interest to the understanding of perception are the focal and the contextual cues. The focal, or figural, cues are the stimuli currently being responded to (e.g., price); the contextual, or background, cues are the situational cues that provide the context within which the focal cues are judged. The stimulus is then compared to the consumer's current adaptation level (AL). To the degree that the stimulus is judged to be greater than the current AL, the stimulus (e.g., price) is

perceived to be "high", relative to the standard (AL) to which it is compared. To the degree that the stimulus is judged to be less than the AL, the stimulus (e.g., price) is perceived to be "low". Application of adaptation-level theory aids in the understanding of how consumers encode (i.e., interpret and evaluate) stimuli, resulting in different subjective meanings assigned to the same objective price by different individuals. In pricing theory, perceived price depends on the comparison of the actual, objective price to the consumer's reference price or AL (Monroe 1973).

Monetary versus Nonmonetary Price

The sacrifice aspect of perceived price incorporates both the monetary and nonmonetary costs that must be given up by the consumer. In addition to the actual monetary price, consumers also consider the nonmonetary costs of time, search, and mental effort (Roberts and Lattin 1991, Shugan 1980, Zeithaml 1988) when evaluating the "give" portion of the exchange with the "get". In other words, they weigh the total costs of the acquisition (monetary and nonmonetary costs) against the benefits they will receive from the purchase. Because these evaluations are dependent upon the individual's past experience, knowledge, and expectations, the subjective process of price perception can

result in different evaluations of the same objective price by different buyers. That is, the same objective price may have different psychological meaning to different customers. For example, odd-pricing is a common retailing practice originally used to reduce losses due to employee theft (i.e., the salesperson was required to open the cash register to give the customer change, rather than taking the opportunity to pocket an even amount received from the customer and never record the sale). Although there is little empirical support to indicate the effect of odd pricing on sales (Lambert 1975, Monroe 1990), there is anecdotal evidence that customers perceive a 69-cent price for a tube of toothpaste differently than they do a 71-cent price. Similarly, the related practice of prestige pricing is a form of psychological pricing. Prestige retailers -- such as Tiffany's or Neiman-Marcus -- are more likely to use a price of \$700, rather than \$699, because the customer tends to interpret an odd-price as a "discount" price.

This perceived price is of great significance to marketers, since it is the basis for behavioral responses of customers; that is, perceived price influences the "buy or not buy" decision. Therefore, it is concluded that perceived price, rather than objective price, effects the consumer's evaluation of a market offering and that consumers consider both monetary and nonmonetary costs in their perception of price.

Based on preliminary, qualitative research conducted by this researcher, perceived price is conceptualized as a construct composed of two dimensions -- monetary and nonmonetary price. Monetary price is defined as the objective, actual price of the merchandise while nonmonetary price is defined as the sacrifices made by the customer, in terms of time, search process, and mental effort, expended by the customer in the shopping and consumption experience. For the purpose of this study, items measuring these two dimensions, based on exploratory research and the review of literature, are used to measure perceived price.

Perceived Merchandise Quality

Early research in quality definition and measurement was conducted in an industrial, manufacturing context and focused on objective quality of tangible, physical products or merchandise (because the definition of "product" often includes "services", the term merchandise is used in this study to differentiate between the constructs of perceived merchandise quality and perceived service quality in the model). The manufacturing-oriented conceptualization of quality is based on conformance to standards, such as reliability and durability of the product, and zero defect production (Garvin 1983).

As with the understanding of price, the understanding of quality has evolved from the emphasis on objective quality, from the manufacturer's point to view, to a focus on subjective quality, or the evaluation of quality from the customer's perspective. Zeithaml (1988) defined *quality* as objective or actual superiority or excellence, and *perceived quality* as the consumer's judgment about a product's overall excellence or superiority. She conceptualized perceived quality as: (1) different from objective or actual quality, (2) a higher level abstraction rather than a specific attribute of a product, and (3) a global assessment or evaluation. In fact, she suggested that objective quality may not exist because all quality is perceived by someone, whether it is managers' perceptions of the reliability and durability of products or consumers' perceptions of the overall excellence or superiority of a product.

Traditionally, research into the understanding of perceived merchandise (goods) quality has focused on the evaluation of physical attributes or features of the good. Researchers, and marketers, have been interested in what attributes are of interest to the consumer and which attributes are indicators of quality. Attributes of a good can be classified as intrinsic cues -- attributes that cannot be changed or manipulated without changing the product itself (e.g. level of workmanship, color, style, etc.), and extrinsic cues -- attributes that are not a part

of the physical product (e.g., price, brand name, store name, etc.) (Olson and Jacoby 1972).

Researchers have drawn conflicting conclusions regarding which type of attribute is used by consumer's to judge the quality of the product. Valenzi and Andrews (1971) and Jacoby, Olson, and Haddock (1971) concluded from their studies that, other things being equal, intrinsic cues will be more strongly related to quality perception than will extrinsic cues. Szybillo and Jacoby (1974) in their follow-up study found additional evidence that intrinsic attributes provide the cues in the quality-determinant attribute set. That is, the actual composition of the good (in this case, ladies nylon hosiery) had a greater effect on quality perceptions than did the extrinsic cues of either price or store image information. Likewise, Bonner and Nelson (1985) concluded from their study of thirty-nine different food categories that intrinsic attributes appealing to the senses (i.e., taste, aroma, appearance) were the primary cues consumers used to evaluate quality of the products.

However, other studies have found varying results. Wheatley, Chiu, and Goldman (1981), found that in a retail setting, the physical quality of the merchandise (in this case, carpeting) is certainly an important indicator of perceived quality, but more important is the total merchandise offering of the store. This offering is

composed of intrinsic cues related to the merchandise itself, as well as extrinsic cues such as brands, variety, style, and price. This implies that, in a retail store context, the distinction between intrinsic and extrinsic cues blurs. The customer's perception of quality is dependent not only on the merchandise offered, but on the complete shopping experience. For example, even though the elements of a store's offering that consumers use to develop their store image are extrinsic cues (such as price, brand names, and store name), store image itself functions as an intrinsic cue. Store image cannot be changed or manipulated without the consumer changing their perception of the store. A change in the store layout, level of service offered, or displays is essentially a change in the merchandise offering, and therefore, affects the customer's perception of quality.

Westbrook (1981) further explicates the notion of the total product offering of a retail store. He states that the consumer evaluates the total set of experiences realized from patronizing a retailer. These experiences are categorized as: (1) experiences related to being in the store itself, and (2) experiences related to consuming the products obtained from the retailer. These two categories are analogous to Olson and Jacoby's (1972) intrinsic cues (such as reacting to the store environment or the ease in moving about in the store) and extrinsic cues (such as style

and durability of the merchandise), respectively. Westbrook concluded that perceived merchandise quality depends on merchandise quality *plus* a well-stocked assortment, a wide selection, and fashionable, stylish merchandise.

To further explore intrinsic and extrinsic attributes contributing to the perception of quality in a retail setting, Gutman and Alden (1985) applied the means-end methodology to study consumers' perceptions of the quality of stores they patronize as well as stores where they choose not to shop. Their research resulted in a list of intrinsic and extrinsic attributes that the respondents related to perceived quality. The attributes related to service (knowledgeable, helpful and attentive salespeople), brand selection (fashionable, unique, good fitting merchandise), store interior and display (clean, well-organized, roomy store layout with good displays), and durability (well-made merchandise). All the attributes, with the exception of durability, can be classified as extrinsic attributes. Mazursky and Jacoby (1985) found similar results when they identified the attributes used by consumers to evaluate merchandise and service quality. The four attributes most frequently used by consumers to evaluate merchandise quality were: (1) the store's interior design, (2) brand name, (3) price, and (4) merchandise fabric or material. As with the Gutman and Alden (1985) study, all the attributes, with the exception of one (fabric or material) are extrinsic

attributes. These studies support the position that perceived quality in a retail setting goes beyond simple evaluation of physical product attributes to include evaluation of extrinsic attributes that contribute to the holistic shopping experience. It is concluded from this review that both intrinsic and extrinsic attributes of merchandise are evaluated by customers when forming their perception of merchandise quality in a retail setting and the quality-determinant attribute set in a retail setting is composed primarily of extrinsic attributes (such as style, brand, selection).

For the purpose of this study, perceived merchandise quality is conceptualized as a multi-dimensional construct composed of the factors of selection, durability, and brands. This factor structure is based on the results of the review of literature and the exploratory, qualitative research conducted by this researcher. Items have been developed to measure this proposed underlying factor structure.

Perceived Price-Perceived Merchandise Quality Relationship

Microeconomic theory assumes that individuals have perfect market information and the ability to objectively judge all products in their evoked set. However, it is impossible for individuals to be expert consumers. That is,

they must rely on indicators of quality when making subjective evaluations about purchase alternatives (Scitovszky 1945). Size and success of firm, brand name, store image, previous experience, product attributes, advertising, word-of-mouth, and buyer's intended use for the product have been identified in the literature as cues that influence the evaluation of the good or service (Enis and Stanford 1969; Jacoby, Olson, and Haddock 1971; Monroe 1977; Scitovszky 1945; Valenzi and Eldridge 1973). However, perhaps the most extensively researched indicator of quality is price.

As Scitovszky argued in 1945, the practice of evaluating quality based on price does not necessarily contradict conventional economic theory. Using price as an indicator of quality is actually rational behavior based on the belief that price is determined by the competitive forces in the marketplace. Based on the belief that price in the marketplace is determined by the interaction between competitive supply and demand, "these market forces would lead to a 'natural' ordering of competing products on a price scale, resulting in a strong actual positive relationship between price and product quality" (Dodds, Monroe, and Grewal 1991, p. 308). It is reasonable to view high price as an indication that more research and development as well as a higher level craftsmanship and higher priced raw materials were utilized in the manufacture

of the product. Therefore, the higher price is justified and is an indicator of the higher quality of the product.

The price-quality relationship has been investigated by researchers since 1945 when Scitovszky first introduced into the economics literature the notion that consumers may use price as an indicator of quality. Beginning with Leavitt in 1954, researchers have attempted to empirically validate Scitovszky's (1945) conceptualization. Leavitt (1954) concluded from his experiment that consumers often choose the higher-priced of two alternatives if price is the only differential information. This study provided the first empirical support of the positively sloped demand curve which Scitovszky proposed.

However, subsequent research has not produced conclusive evidence of a relationship between perceived price and perceived quality. Tull, Boring, and Gonsior (1964) reported a price-quality relationship in their study of four consumer packaged goods (i.e., aspirin, table salt, floor wax, and shampoo) in which price was the sole information cue. However, when Gardner (1971) attempted to replicate Tull, Boring, and Gonsior's study, he also expanded the study by adding other cues in addition to price (i.e., product composition differences and brand information). He concluded that when price is the only cue, a price-quality relationship can easily be implied. However, when other information cues are introduced into the

study (merchandise, brand, product knowledge), he found the price-quality relationship is replaced by a brand-quality relationship, thereby, providing empirical evidence that price is not dominant enough to be the primary determinant indicator of quality. Gardner concluded that price influences perceived product quality only when it is the sole information cue, but when other cues are introduced, price is used as an indicator of quality to a much lesser degree than previously assumed. He posited that the price-quality relationship is brand specific and, therefore, is not generalizable.

Albeit the findings in the research stream are inconsistent, Monroe and Krishnan's (1985) integrative review of this research did indicate a positive perceived price-perceived quality relationship. On the other hand, Gerstner (1985) presented results based on data collected by a nonprofit organization that provides information on the overall quality of different brands of consumer goods. From his analysis, Gerstner (1985) concluded that, for many products, higher prices do not signal higher perceived quality. His findings indicate that for many products, the price-quality relationship is weak and product-specific. He found that frequently purchased products exhibit a weaker relationship between price and quality (because the consumer is not as reliant on price as the sole informational cue) and higher priced items display stronger price-quality

relationships. The research summarized by Olson (1977) indicates that when other information about product quality is known (e.g., brand name, store image) the importance of price as a quality indicator diminishes.

In summary, the consensus is that if the only information consumers have about a product is price (based on empirical evidence from single-cue studies), they will naturally evaluate quality based on price information. Whereas, in multi-cue studies when other independent variables are introduced (e.g., brand name, store name, etc.), the primary effect of these additional extrinsic cues has been to moderate the effect of price on perceived quality (Monroe and Dodds 1988).

These findings would suggest that price is one indicator of quality, albeit a weak indicator and dependent upon the other cues that are available to consumers. From this literature review, it is concluded that: (1) higher perceived price may indicate higher perceived merchandise quality, (2) higher perceived merchandise quality may indicate the acceptability of a higher perceived price, and (3) the strength of the price-merchandise quality relationship decreases as other merchandise quality cues are present.

Therefore, based on this review of literature, the following hypothesis was developed and was tested:

H1: Perceived price and perceived merchandise quality are positively correlated.

Perceived Service Quality

An exhaustive review of the service quality literature would necessarily include a discussion of a wide range of topics, including organizational processes such as designing and delivering services, managing service environments, training and empowering service employees, managing service encounters, improving service recovery, and managing relationships with members of the channel, including customers and suppliers. These topics are incorporated into the Model of a Service Delivery System which will be investigated in future studies. Therefore, the review of the service quality literature is limited to the aspects of the construct that are relevant to the dissertation, namely issues related to the definition and measurement of the construct of service quality.

Conceptually, there is little consensus in the literature on the definition of service quality. Recognizing the problem, Lehtinen and Lehtinen (1985) state that because defining service itself is difficult, the definition of service quality is at least equally problematic. In spite of the extensive investigation into this area over the last decade, researchers and practitioners have not yet agreed on a single

conceptualization of the construct. Conceptual issues related to the understanding of service quality center around concepts that have been borrowed from the satisfaction literature and incorporated into the service quality literature. These issues include the application of the confirmation/disconfirmation paradigm, identification of appropriate standards of comparison, the use of difference versus performance only measures, and the underlying factor structure of service quality.

Confirmation/Disconfirmation Paradigm

Service quality is traditionally conceptualized as a disconfirmation process (Bitner 1990, Bolton and Drew 1991, Grönroos 1983, Parasuraman, Zeithaml, and Berry 1985, 1988). In a manner similar to the satisfaction literature, these authors, among others, propose that customers possess expectations of performance on each service attribute or dimension, observe actual performance and then compare their expectations to their perceptions of performance. Assuming that meeting expectations is desirable, a positive disconfirmation (perceptions exceed expectations) indicates the service provider is delivering a high level of service quality, and conversely, a negative disconfirmation (expectations exceed perceptions) indicates delivery of a low level of service quality (from the customer's

perspective). When perceptions match expectations, zero disconfirmation (or confirmation) neither enhances or decreases the customer's evaluation of service quality (Oliver 1993).

Lewis and Booms (1983) report a consumer perspective in defining quality of service based on an element of "appropriateness". They contend that service quality depends on the fitness for the purpose of the user and evaluation of service quality is distinguishing between what is acceptable to the consumer and what is not. Specifically, they define service quality as "a measure of how well the service level delivered matches customer expectations" (p. 99). Basing his conceptualization of service quality on the consumer choice literature (Hansen 1972; Bettman 1986), Gronröos (1984) agreed with Lewis and Booms and expanded on the comparative aspect of service quality. He stated that total service quality is perceived by the customer as comparison between the expected service and the perceived service, which the customer feels he or she in fact has received.

The idea of comparing perceptions to expectations was further investigated by Parasuraman, Zeithaml, and Berry (1985). They expanded on the idea of service quality from the customer's view and introduced a disconfirmation model, the Gap model, into the services marketing literature. Their model defines service quality as the difference

between one's expectations of a service compared to the perception of the outcome of the encounter or experience. They propose a customer's assessment of overall service quality depends on the gap between expectations and perceptions of actual performance levels. In other words, personal evaluations by the consumer define quality, therefore, the focus of the definition is on the consumer from his or her perspective.

Standards of Comparison

Adoption of the confirmation/disconfirmation paradigm requires the specification of comparison standards; however, there is some difference of opinion as to the types of expectations that influence perceptions of service quality (Folkes 1994). The understanding of comparison standards has evolved in the literature from early definitions of expectations to recent discussions about different types of standards of comparison.

Early researchers in the field of satisfaction/dissatisfaction (LaTour and Peat 1979, 1980; Miller 1976; Oliver 1980; Olson and Dover 1979) conducted their research under the assumption that expectations were the operating standard. Expectations were defined as consumer pretrial beliefs or predictions that a product will achieve a certain performance level on important attributes. Miller (1976)

suggested a taxonomy of expectations that distinguishes among consumer ideals, expected, minimum tolerable, and desirable expectations. On the other hand, Swan and Trawick (1980) suggested only two classes of expectations -- desired and predictive.

However, the use of expectations as the standard of comparison has been questioned by some researchers. Disconfirmation may be operative not only on expectations, but on other forms of standards as well (Woodruff, Cadotte, and Jenkins 1983). In his review of consumer psychology, Bettman (1986) stated that a major issue facing researchers is how to determine an appropriate norm for performance or a reference point.

To that end, a variety of alternative standards has been introduced into the literature (Olshavsky and Spreng 1989). Woodruff, Cadotte, and Jenkins (1983) argue that Miller's (1976) classification of expectations is a misnomer:

"...though Miller called all of them 'expectations,' clearly the latter three are more than predictions of the brand's performance. The notions of 'ideal' and 'deserved,' for example, imply normative standards of performance."

Therefore, Woodruff, Cadotte, and Jenkins introduced three types of norms -- experience-based, brand-based, and product-based -- as bases of comparison which can vary depending on the use situation which is being evaluated. Tse and Wilton (1988) offered equitable and ideal

performance standards, while Westbrook and Reilly (1983) suggested that consumers compare the product's performance against their own personal values.

The concept of customer expectations and customer perceptions was introduced into the service quality literature by Lewis and Booms (1983). They defined service quality as a measure of how well the service level delivered matches customer expectations; delivering quality service means conforming to customer expectations on a consistent level. Two years later, Parasuraman, Zeithaml, and Berry (1985) made a significant contribution to the service quality literature when they published their Gap model. They claim that consumers have preconsumption expectations of performance that they compare to their perceptions of the performance, resulting in a "gap" (or difference) that is the measure of the service quality they received.

Parasuraman, Zeithaml, and Berry (1988) subsequently offered a scale for measuring service quality (SERVQUAL) that collected data related to both expectations and perceptions. The expectations section of the instrument is worded such that customers indicate their expectations relative to an excellent service provider, much like the ideal expectations of Miller (1976). Using excellence as the standard permits the customer to use his own referent (or adaptation level), thereby making it possible to use different standards across customers (Oliver 1993). In

1990, Zeithaml, Parasuraman, and Berry modified their definition of expectations. They explained that the service expectations were customers' normative expectations representing an ideal standard of performance. Parasuraman, Berry, and Zeithaml (1991) then recognized two levels of service expectations: desired (what the customer hopes to receive) and adequate (what the customer finds acceptable). To improve their conceptualization of service quality, Zeithaml, Berry, and Parasuraman (1993) presented expectations as falling within a "zone of tolerance" between "desired" and "adequate" expectations. This new conceptualization relates to the "zone of indifference" from the satisfaction literature (Miller 1976; Parasuraman, Zeithaml, and Berry 1994b; Woodruff, Cadotte, and Jenkins 1983).

Woodruff, Cadotte, and Jenkins (1991) discuss various types of sources of standards as alternatives to expectations, which are the most frequently accepted standard in the customer satisfaction literature for evaluating perceived performance. In addition to expectancy theory, the authors identify equity theory, experience-based norms, desires/values, ideal, and promises as possible standards of comparison in the disconfirmation process. When measuring and interpreting customer perceptions of performance, the academic researcher, as well as the practitioner, must be sensitive to which standard is

actually being used by customers in their evaluations. Different standards may lead to different evaluations, which may indicate different interpretations and different actions. The researcher should specify the standard that is most applicable to the research question.

Similarly, in their review of different comparison standards used in service quality research, Liljander and Strandvik (1993) offer a classification scheme that categorizes various standards into four types: transaction, relationship, industry standard, and ideal. Transaction standards include the classical way of looking at the interaction between a customer and a service provider, including predictive expectations. Whereas, relationship standards (e.g., expectations over time, image, or brand norm) reflect a more dynamic approach, where the customer's relationship with the provider is considered. Industry standards include best brand, product norm and adequate comparisons. Ideal standards of comparison refer to the "ideal" or "excellent" standard. There is no consensus regarding which standard to use when measuring service quality, but the suggested classification system assists in the understanding of the various standards currently being used in consumer research and the measurement of service quality.

Based on the review of literature related to comparison standards, it is concluded that: (1) customer standards of

comparison or reference points are a critical element in the assessment of service quality, and (2) because customers use various and multiple standards of comparison when evaluating service quality, assessment of service quality should be compared to the standard that is most appropriate for the purpose of the study. For example, if a marketer is interested in the positioning of their brand compared to what the customer wants, using the standard of best brand may be appropriate. If the management of a retail store is interested in how their store is perceived in the marketplace, comparison to the competition may be the appropriate standard. For the purpose of the present study, the constructs of perceived price, perceived service quality and perceived merchandise quality were evaluated by the customer relative to other stores where the respondent regularly shops. Retail organizations are most interested in how customers perceive their operation relative to the competition.

Difference Scores versus Direct Comparison Measures

Closely related to the discussion about standards of comparison is the ongoing debate in the literature centered around disconfirmation versus the direct comparison approach as possible measures of service quality (Cronin and Taylor 1992, 1994; Parasuraman, Berry, and Zeithaml 1993;

Parasuraman, Zeithaml, and Berry 1994b; Teas 1993, 1994). This discussion in the literature addresses the issues related to using a difference score (a mathematical calculation of perceptions-minus-expectations) or a performance score (a direct mental calculation of perceptions-minus-expectations) framework to measure service quality. Difference scores, the subtraction of one measure from another to create a measure of a distinct construct, possess recognized psychometric problems in the areas of reliability, discriminant validity, spurious correlations, and variance restriction. Namely, difference scores typically are less reliable than other measures, they may appear to demonstrate discriminant validity when this conclusion is not warranted, they may be only spuriously correlated to other measures because they do not discriminate from at least one of their components, and they may exhibit variance restriction. Therefore, researchers are cautioned against using them in consumer research (Peter, Churchill, and Brown 1993).

Because of the potential problems with difference scores, some researchers recommend the use of direct comparison measures of service quality (Boulding, et al. 1993; Cronin and Taylor 1992, 1994) rather than the difference score proposed by other researchers (Parasuraman, Zeithaml, and Berry 1988). As described by Peter, Churchill, and Brown (1993), the direct comparison

operationalization approach requires subjects to mentally consider differences rather than have the researcher calculate an arithmetic difference for them.

There is little doubt that consumers use standards of some sort when making service-related judgments. Consumers are likely to be thinking of some standard when rating a service provider's performance. That is, the standard may be *implicit* in the evaluation and performance measures themselves may be *inherently* comparative (Gardial et al. 1993). Therefore, using the direct comparison approach allows consumers to combine their thoughts as they wish rather than have an arbitrary calculation imposed on them (Peter, Churchill, and Brown 1993).

A direct comparison score is an inferred difference score because it is a mental calculation of the difference between the standard stated in the scale (expectations, competition, or other standard) and perceived performance. And this type of measure does not suffer from the psychometric problems of an arithmetic calculation (i.e., actually subtracting the expectations score from the perceptions score). So expectations data are not needed explicitly, but can be inferred. A direct comparison measure returns the same diagnostic power as a calculated difference score, with none of the related psychometric problems. Measuring service quality using direct comparison with a specified standard (appropriate for the purpose of

the study) yields a score that has the diagnostic power of an explicit difference score without the psychometric problems of a calculated difference score. Therefore, for the purpose of the present study, direct performance comparison scores are the preferred measure of service quality because they suffer from none of the psychometric problems of difference score while taking into account the comparison standard.

Dimensions of Perceived Service Quality

A prerequisite to the measurement and improvement of quality is to first understand what quality is (Gummesson 1992). In order to gain a deeper understanding of quality, one must identify the components or dimensions of quality. The majority of the research related to the identification of dimensions of quality has been conducted in a manufacturing context focusing on internal, customer-oriented quality dimensions, rather than on external, management-oriented quality dimensions (Gummesson 1992). If perceived quality (from the customer's perspective) is to be understood, research must be conducted in a context that focuses on the external dimensions of quality that the customer deems important.

One classification of external quality dimensions has been offered by Garvin (1988). He identified the dimensions

of performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality. His eight dimensions of quality were based on his study of a tangible, manufactured good, namely air-conditioning equipment. Although Garvin compiled his list of dimensions based on empirical data from the manufacturing sector, he positioned them as applicable to both goods and services:

"Each category is self-contained and distinct, for a product or service can be ranked high on one dimension while being low on another." (emphasis added)

However, investigation of his dimensions reveals that some of the dimensions are not applicable to services. For example, serviceability is meaningful for capital goods but is meaningless for services, and perceived quality is now an accepted definition of quality and not just a dimension (Gummesson 1994).

Baker (1987) and Norman (1988) present quality dimensions that focus on external, customer-oriented dimensions of an offering that are more closely related to services. Baker (1987) investigated the impact of environment on service delivery and identified three fundamental types of factors that influence perceived quality: ambient or background factors, such as cleanliness, scent, noise, etc.; design factors of aesthetics and functionality, such as interior display and layout; and social factors, such as the appearance and behavior of other

customers and the service personnel. Baker's dimensions can readily be generalized to a setting offering a product, a service, or a combination of both.

Norman (1988) offered a set of dimensions from a psychological perspective. He identified aspects that influence people's ability to interact with tangible goods. Even though he mentions services only in reference to retail store outlets and repair services, his seven dimensions -- visibility, mapping, affordance, constraints, customer control, knowledge in the world and in the head, and feedback -- are highly pertinent in a service context.

Because the characteristics of heterogeneity, perishability, and inseparability of production and consumption are unique to services, the construct of perceived service quality is more complex and elusive than the construct of perceived merchandise quality. Not relying on the quality dimensions identified for manufactured goods, Parasuraman, Zeithaml and Berry (1985) embarked on their extensive investigation of the dimensions of service quality. Through exploratory, qualitative research employing interviews and focus groups, they developed a conceptualization of service quality depicting a set of gaps. They also identified ten determinants, or dimensions, of service quality that emerged from the interviews and focus groups. In a subsequent study, Parasuraman, Zeithaml, and Berry (1988) developed a multiple-item scale for

measuring service quality (called SERVQUAL). The original 97-item instrument was purified in accordance with Churchill's (1979) paradigm, resulting in a 22-item scale. The a priori conceptual ten-factor structure was not supported by the data collected using this scale. Further analysis (i.e., oblique rotation) produced a five factor structure (three of the original factors plus two factors that are combinations of the other seven dimensions). These dimensions of service quality are labeled Tangibles, Reliability, Responsiveness, Assurance, and Empathy (see Figure 4). All of these dimensions can be classified as customer-oriented, external quality dimensions (cf. Gummeson 1994). Reliability is related to the outcome of the service, or *what* the customer received, whereas the other four dimensions are process dimensions, related to *how* the service was delivered. By determining the SERVQUAL scores on each dimension, researchers can not only assess the overall quality of service as perceived by customers, but also identify factors on which management should focus its quality-improvement efforts (Zeithaml, Parasuraman, and Berry 1990).

Researchers have attempted to test and/or adapt the SERVQUAL instrument in various service settings (see Table 1). These settings include: a health care setting (Babakus and Mangold 1989); a dental school patient clinic, business school placement center, tire store, and acute care hospital

Table 1. Summary of Selective SERVQUAL Replication Studies

Study	Instrument	Analysis	Factor Structure
Babakus and Mangold 1989	15 of original 22 items	Exploratory factor analysis	One meaningful factor was found. Could not identify the five a priori factor structure.
Carman 1990	Modifications of SERVQUAL including 21 to 12 of original items	Principal-axis factor analysis followed by oblique rotation	Five to nine factors were identified.
Brensinger and Lambert 1990	All of original 22 items	Principal-axis factor analysis followed by oblique rotation	A five-factor structure was found, but only four had eigenvalues > 1.
Finn and Lamb 1991	All of original 22 items	Confirmatory factor analysis	The five-factor structure had a poor fit. No other structures were analyzed.
Babakus and Boller 1991	All of original 22 items	Principal-axis factor analysis followed by oblique rotation as well as confirmatory factor analysis (CFA)	The five-factor structure was not supported and no other structures were analyzed. CFA resulted in two-factor structure.
Pitt, Oosthuizen, and Morris 1992	All of original 22 items	Principal components factor analysis followed by promax rotation	The only study to obtain a five-factor structure. However, the factors were different from SERVQUAL with reliability and responsiveness loading on one factor.
Guiry, Hutchinson, and Weitz 1992	51 items (15 from the original 22 items plus 36 added items)	Exploratory factor analysis	A seven-factor structure was found.
Cronin and Taylor 1992	All of original 22 items	Confirmatory factor analysis followed by OBLIMIN oblique factor rotation	The five factor structure had a poor fit.
Bowers and Swan 1992	Focus groups	Qualitative methodologies	Identified the five original factors, plus four others.

(Carman 1990); business-to-business services (Brensinger and Lambert 1990); department stores (Finn and Lamb 1991; Guiry, Hutchinson, and Weitz 1992); a utility company (Babakus and Boller 1991); the computer software industry (Pitt, Oosthuizen, and Morris 1992); banking, pest control, dry cleaning, and fast food (Cronin and Taylor 1992); and health care (Bowers and Swan 1992). Generally, these studies do not provide empirical evidence to support the factor structure posited by Parasuraman, Zeithaml, and Berry (1988).

Carman (1990) offered suggestions for adapting the instrument for more efficient use in various applications. He tested the SERVQUAL instrument mainly in service settings which did not sell a tangible good, i.e. a dental school patient clinic, a business school placement center, and an acute care hospital. The one exception was a tire store, which is an example of a retailer that offers a mix of merchandise and services. Carman found nine factors of service quality, rather than the five presented by Parasuraman, Zeithaml, and Berry (1988). He, therefore, concluded that the five dimensions were not generic and that adopters of the scales could adapt the scale to their particular environments by adding items to factors that might be pertinent to their situation.

In an attempt to test the appropriateness of SERVQUAL in a retail environment, Finn and Lamb (1991) employed

SERVQUAL to measure service quality in four different types of retail stores, ranging from stores "like Kmart" to stores "like Neiman Marcus". Using confirmatory factor analysis, Finn and Lamb were unable to find a good fit to the proposed five factor structure and concluded that SERVQUAL, without modification, could not be used as a valid measure of service quality in a retail setting and that the five dimensions of service quality as defined by Parasuraman, Zeithaml, and Berry (1988) may not be applicable to all industries, particularly to department stores.

Guiry, Hutchinson, and Weitz (1992) followed up on Finn and Lamb's (1991) call for refinement of SERVQUAL on an industry by industry basis. They recognized that the factor structure in a retail environment that offers a mix of merchandise and services may differ from that in a pure service environment. In an unpublished paper, they expand the original 22-item instrument to a 51-item instrument by dropping seven items and adding 36 new items designed to measure service attributes at the retail store level. Expectation and perception data were collected from credit card holders at one of the three department stores included in the study. Exploratory factor analysis revealed seven dimensions, differing from the five dimensions of service quality as defined by Parasuraman, Zeithaml, and Berry (1988). The seven factors describe the following retail store service dimensions: 1) personal service during

interaction with employees, 2) merchandise assortment, 3) store transaction procedure reliability, 4) employee availability in the store before interaction, 5) tangibles, 6) store service policy reliability, and 7) price. Although this study represents a good start toward the development of a service quality scale for the retail setting, the research was based on exploratory factor analysis and not on a theory-based factor structure.

Researchers have attempted to identify the factor structure, or dimensions, of service quality in a myriad of other settings. Albrecht and Zemke (1985) report that the four quality dimensions identified by British Airways for the service of air travel as: care and concern, problem solving, spontaneity or flexibility in solving problems smoothly, and recovery when dealing with unexpected problems. Thomasson (1989) in his study of automobile repair found confidence to be one overriding dimension with the sub-dimensions of honesty/reliability, personal contact with the mechanic, willingness to receive the customer's automobile, attitude, and professional competence. In the setting of pharmacies, Hedvall and Paltschick (1991) found the four dimensions of professionalism, commitment, confidentiality and milieu. It can be concluded from these various findings that there is no one consistent set of quality dimensions that can be generalized to all service settings.

In a related study, Singh (1991) examined the structure of consumers' evaluations of service delivery in a hospital setting. He found that the evaluations of objects, or attributes, rather than the dimensions of the construct provide the major source of variation in evaluations of service delivery. This implies that the object evaluations constitute the major factors in consumers' judgments. Therefore, evaluations of service delivery should be measured at the object, or attribute, level, as well as at the dimension level.

Based on a review of the research related to identifying the dimensions of service quality, it is concluded that since service quality dimensions are contextually defined and are not generalizable across all service settings, the dimensions of perceived service quality for a market offering that consists of a mix of merchandise and service must be identified and empirically tested.

As with the constructs of perceived price and perceived merchandise quality, the evaluation of service quality is a subjective judgement of the customer. Perceived service quality is the consumer's subjective evaluation of the superiority or excellence of the service. It is the consumers' perceptions of objective reality (if indeed, objective reality exists) that direct and influence consumer behavior. Therefore, it is the construct of perceived

service quality that is of interest to academics and practitioners (Iacobucci, Grayson, and Ostrom 1994).

The underlying factor structure for Perceived service quality adopted for this study is based on previous research conducted by this researcher and two colleagues. Dabholkar, Thorpe, and Rentz (1996, forthcoming) proposed and tested a five-factor conceptualization of Perceived service quality. A 28-item scale was developed and tested to measure the dimensions of Reliability, Personal Interaction, Problem Solving, Physical Aspects, and Policy. The resulting fit of the five-factor model was good (AGFI=.92). For the purpose of this study, this factor structure of Perceived service quality is assumed.

Perceived Price-Perceived Service Quality Relationship

In spite of the interest in the perceived price-perceived quality relationship, the phenomenon has primarily been investigated in the context of physical goods. Few researchers have dealt with the price-quality relationship as it relates to consumer services. Gerstner (1985) has posited some hypotheses that imply the relationship is also applicable to services. He proposed that the price-quality relationship may be stronger for classes for which quality is more easily observed (implying that the relationship may be different, and therefore exists, for intangibles such as

services, as compared to tangibles, such as products). In addition, he proposed that the price-quality relationship may be stronger for classes about which word-of-mouth information is more likely to be generated (e.g., for services which rely heavily on word-of-mouth communication for promotion).

Among the few researchers who have studied the relationship between the perceptions of price and quality in a service setting, Johnson and Kellaris (1988) conducted two studies designed to extend price-perceived quality research into the realm of consumer services. The researchers concluded that: (1) the extent of belief in positive price-quality relationships varies across service types, and (2) prior familiarity, expectations of quality, and demographic characteristics influence customers' perceptions of price-quality relationships. While their findings only suggest and do not "prove" the existence of the perceived price-perceived quality relationship in the context of consumer services, their study does make a contribution to the service quality literature by addressing this phenomenon that heretofore was studied only in the context of tangible goods.

The review of literature results in the following hypotheses that are tested:

- H2:** Perceived price and perceived service quality are positively correlated.

- H3:** Perceived service quality and perceived merchandise quality are positively correlated.

Perceived Value

Perceived value is an indistinct, elusive construct that is not well differentiated from other constructs such as perceived price, perceived benefit or perceived quality (Zeithaml 1988; Dodds, Monroe, and Grewal 1991). Because it is perceived value that ultimately attracts a customer or lures a customer away from a competitor (Rust and Oliver 1994), an understanding of customers' value perceptions is of interest to researchers as well as to providers of services as they plan and implement a marketing oriented strategy.

Generally, a tradeoff approach to value has been adopted. That is, perceived value involves a tradeoff between what is sacrificed (price) and what is received (benefit, quality). This evaluative comparison between perceptions of quality and perceptions of price results in the perception of value. Olshavsky (1985) addresses the tradeoff component of value when he posits that not all consumers want to buy the *highest* quality offering. If the consumer is not willing or able to spend the money (or time) to acquire the offering, its value will not be perceived as being as great as the offering with lower (perceived)

quality but a more affordable price (or acceptable sacrifice).

The literature offers support for a two-dimensional conceptualization of Perceived value. Holbrook and Corfman (1985) define value as including both a cognitive and an affective component. Value involves preference -- a "liking, positive affect, or pro-attitude" (p. 40) -- as well as a relativistic, comparative component -- "it depends on a rating or ranking of one object against another" (p. 40). This comparative component represents the cognitive element of value. In addition, through a means-end methodology, Zeithaml (1988) identified the tradeoff, or cognitive element of value, as well as the affective, psychological, emotional payoff element of value. Therefore, a rich conceptualization of perceived value should include both dimensions of the construct.

Early researchers investigated the relationships between perceived goods quality and perceived value. In their study of intrinsic and extrinsic quality cues related to women's hosiery, Szybillo and Jacoby (1974) found that value was more strongly related to purchase intention than is perceived quality. They concluded that the goal of businesses should be to design products that will provide the best (perceived) value for the money rather than the highest perceived quality. This finding can be considered a precursor to the current emphasis on customer value

delivery. That is, the concept of customer value as the distinctive competency, or source of unique strategic competitive advantage for a firm (Webster 1994a).

In his work on pricing theory, Monroe (1990) conceptualized value as a ratio between perceived quality and price. Dodds and Monroe (1985) built on this definition by expanding the conceptualization of perceived value. They posited that perceived value and perceived quality are distinct constructs. While perceived quality is purely an evaluative measure, perceived value is represented as a tradeoff between perceived quality and sacrifice. They conceptualized perceived value as a quadratic function in which perceived value increases as price and perceived quality increase to some acceptable range, then perceived value decreases as price continues to increase because the sacrifice demanded becomes too great in the tradeoff equation. Later, Dodds, Monroe, and Grewal (1991) add to perceived price the perceptions of brand and store as two additional external cues which influence perceptions of quality and value. Previous studies have found that price and brand have a significant but moderate effect on quality perceptions, while store name has a small and nonsignificant effect (Rao and Monroe 1989). The effect of these external cues on perceived value has not been studied.

In 1988, Zeithaml classified both quality and value as higher level abstractions. However, she identified two

differences between the two constructs: (1) value is more individualistic and personal than quality which positions it in the means-end chain as a higher level abstraction than quality, and (2) as stated by Dodds and Monroe (1985), value (unlike quality) involves a tradeoff of give and get components. Therefore, she concluded that value increases as the quality-price ratio increases.

Gale (1991) adopts the dual-component approach to perceived value by defining perceived value as the consumers' own personal assessment of what they get in relation to the price they are able and willing to pay. He expanded the meaning of quality in the quality-price ratio to include not only goods quality but service quality as well. He defined value to the customer as a function of the quality of goods and services included in the offering and of the price.

Typically, researchers have conceptualized and measured value at the attribute level. However, researchers at the University of Tennessee have advanced understanding of perceived value beyond this attribute-based view; that is, to the consequence level (Woodruff et al. 1991, 1993, Burns 1993). Through a means-end approach, they have investigated value from the customer's perspective and have revealed a hierarchy or value chain (cf. Gutman 1982, 1990) which maps attributes onto consequences, and consequences onto purpose, all in the context of the use situation. To be truly

market-oriented and meet the needs of customers, organizations must understand value from the customer's point of view. This implies that the identification and measurement of customers' preferred attributes only is not sufficient to understanding what customers value. Marketers must relate these attribute preferences to a larger configuration of attribute combinations which map onto a consequence or benefit that represents what the customer truly values. Through an understanding of the value chain of their customers, managers can be more creative in developing value delivery strategies and more successful in delivering value to their customers.

For the purpose of this dissertation, the researcher made the rational decision to use an attribute-based conceptualization and measurement approach rather than a consequence-based approach. Because the consequence-based approach is a new methodology in the developmental stage, it was deemed reasonable to adopt the attribute-based conceptualization for this study. Published research related to the measurement of value has employed attribute level measures, and therefore, comparison of the findings of the present research to the extant literature would be facilitated by using the same type of measures.

An important issue facing researchers and service marketers today is the determination of the relationships among perceived value and perceived price and perceived

quality (of both service and merchandise) (Rust and Oliver 1994). A review of the literature reveals that the relationships between value and the constructs of perceived price, perceived service quality and perceived merchandise quality are not consistently conceptualized.

Various theoretical models depicting the relationships among these constructs have been proposed in the literature. In her means-end model, Zeithaml (1988) indicates a direct linkage between perceived monetary price and perceived quality (goods quality, in this case) and an indirect relationship between perceived monetary price and perceived value, mediated by perceived nonmonetary price and perceived sacrifice.

In their empirical investigation of the relationships among price, quality of products, and value, Chang and Wildt (1990, 1994) conclude that perceived price has a positive influence on perceived quality and a negative influence on perceived value, while perceived quality has a positive influence on perceived value. Of particular interest are their findings that a trade-off between perceived price and perceived quality leads to perceived value and that perceived value is a primary factor influencing behavior. Consistent with the findings of Szybillo and Jacoby (1974), they conclude that perceived value has a stronger influence on purchase intentions than either perceived quality or perceived price. Perceived value mediates the direct

relationship of either perceived quality or perceived price with purchase intention.

Bolton and Drew (1991) built on Zeithaml's (1988) work to introduce the concept of perceived service value analogous to perceived product value. They conclude from Zeithaml's definition of perceived value that service value can be considered to involve a trade-off between a customer's evaluation of the benefits of using a service and its cost. Bolton and Drew conceptualize direct relationships between both service quality and sacrifice (price) and service value. In agreement with Zeithaml, they position service value as a direct influence on behavior.

Investigating perceptions of price, quality, and value of customers of a retail store, Kerin, Jain, and Howard (1992) demonstrated that store-related stimuli defined as the shopping experience in a retail context also influence price, quality, and value perceptions. Based on focus group participant comments, the researchers identified five store-related stimuli that measure characteristics of the shopping experience (i.e., cleanliness, check cashing policy, friendliness of store personnel, waiting time, and availability of merchandise). These stimuli are similar to criteria used to measure service quality. Therefore, the four variables used in the study (i.e., shopping experience perceptions, merchandise price perceptions, merchandise quality perceptions, and store value perceptions are

analogous to four of the primary constructs in the present study (i.e., perceived service quality, perceived price, perceived merchandise quality, and perceived value, respectively). The authors conceptualized the relationships among the four variables as follows: store shopping experience perceptions directly influence merchandise price perceptions which influence perceived store value; store shopping experience perceptions directly influence merchandise quality perceptions which influence perceived store value; store shopping experience perceptions influence merchandise price perceptions which influence merchandise quality perceptions; and, store shopping experience perceptions directly influence store value perceptions. Even though in their model, Kerin, Jain and Howard position store shopping experience as the pivotal construct, their hypothesized relationships are nevertheless similar to the linkages proposed in the Process Model of Business Performance Outcomes of Service Quality. That is: (1) perceived service quality is related to both perceived price and perceived merchandise quality, and (2) perceived price, perceived merchandise quality and perceived service quality influence perceived value. Using LISREL VII for their data analysis, Kerin, Jain, and Howard (1992) found support for all of their proposed relationships. These findings lend support to the proposed relationships in the present study.

Based on this review of the literature related to perceived value and its conceptualization, the following hypotheses are developed and tested:

- H4:** Perceived price negatively influences perceived value.
- H5:** Perceived service quality positively influences perceived value.
- H6:** Perceived merchandise quality positively influences perceived value.

Based on the theoretical linkages between these constructs and the lack of understanding of how they are related (Rust and Oliver 1994), the following hypothesis were tested:

- H7:** Perceived price, perceived service quality, and perceived merchandise quality jointly determine the customer's perception of value.

Customer Behavioral Outcomes

The literature provides supporting evidence of a relationship between perceived value and customer behavioral responses. Szybillo and Jacoby (1974) suggested the relationship when they concluded that perceived value has a stronger relationship to purchase intentions than to perceived quality. Since then, researchers have modeled behavior intentions and behavior as consequences of

perceived value (Bolton and Drew 1991; Burns and Woodruff 1990; Zeithaml 1988).

As Zeithaml (1988) claims, few empirical studies have explicitly investigated the proposed role of perceived value as an intervening variable between perceived quality and purchase. However, the limited number of studies that have addressed this relationship have found promising results. In their conceptual model, Dodds, Monroe and Grewal (1991) indicate perceived quality and perceived sacrifice as antecedents to perceived value and willingness to buy as a consequence of perceived value. Based on their data, they accepted the hypothesis that the relationship between buyers' perceptions of value and their willingness to buy is positive.

Voss (1993) drew a similar conclusion from his study of price, quality and value perceptions. Although he conceptualizes perceived value differently from Dodds, Monroe, and Grewal, he found support for his hypothesis that perceived value has a positive relationship to willingness to buy.

Recently, Chang and Wildt (1990, 1994) contribute further evidence of the relationship between perceived value and customer behavioral outcomes. They found support for their hypothesis that purchase intention is influenced positively by perceived value. They conceptualize perceived value as a trade-off between perceived price and perceived

quality which directly influences customers behaviors, such as purchase intention. That is, if value is perceived to be low, purchase intention is predicted to be low, and vice versa.

Loyalty

These customer purchase behavioral responses (e.g., purchase intention and willingness to buy) are subsumed in the construct of loyalty. It has been claimed in the popular press (Power 1994), as well as in the academic literature (Reichheld 1993), that customer loyalty is earned by consistently delivering superior value. Bitner and Hubbert (1994) posit that strong conclusions regarding the causality between the constructs is premature, but call for research to determine the predictors and consequences of customer loyalty.

Different definitions and levels of measurement have been utilized to characterize customer loyalty. Customer loyalty subsumes various loyalty concepts discussed in the literature. Although most research has focused on frequently purchased packaged consumer goods (brand loyalty), customer loyalty also applies to industrial goods (vendor loyalty), service (service loyalty), and retail establishments (store loyalty) (Dick and Basu 1994). As Webster (1994a, p. 26) states:

The concept of "customer loyalty" replaces brand loyalty in the new marketing concept. In this sense, loyalty becomes a two-way street: Customers remain loyal to the company that serves their needs and preferences...The commitment to deliver superior value to customers contains an explicit commitment to manage customer loyalty.

According to Webster, a loyal customer develops a relationship with the company, not just with a product or brand.

Store loyalty is the construct of interest in the present study. Customer loyalty is conceptualized as the "umbrella" term which encompasses brand loyalty and store loyalty, that is, customers may be loyal to a brand or to a store. In the case of retailers that offer private labels, such as The Gap and Victoria's Secret, etc., brand loyalty and store loyalty are synonymous, because the customer is loyal to the store-brand.

The construct of loyalty is also discussed and measured on different levels. Level refers to the unit of analysis, or the number of consumers associated with a numerical observation. Loyalty can be discussed and measured at the individual (or micro) level or at the aggregate (or macro level). The micro level measure assumes loyalty to be one of the psychological variables involved in the individual's decision-making process, while the macro approach focuses on the behavior of the entire sample for the purpose of forecasting or predicting gross market phenomena such as brand share (Jacoby and Chestnut 1978).

The conceptualization of loyalty has developed from the early definition based on purchase behavior alone to the current dual-component conceptualization. Led by Jacoby and Olson (1970), Jacoby (1971), and Day (1969), investigators of the underlying process of loyalty now consider the phenomenon to be a two-dimensional construct consisting of both attitudinal and behavioral components. These researchers conclude that by including attitude (along with behavior) in the measure of loyalty they gain a deeper understanding of the dynamics of the process of loyalty development. In addition, managers benefit from the dual-component conceptualization which provides marketing implications which were lacking with the one-dimensional (purchase behavior only) measure. Through an understanding of customer attitudes, marketers can impact customers' behavior by influencing their attitudes.

The traditional method for measuring loyalty was based solely on operational measures of purchase behavior. These measures were operationalized as a sequence or pattern of purchase, proportion of purchase or market share held by a brand, or probability of purchase. Day (1969) addressed the weakness of these one-dimensional measures. He states that loyalty measures, based on report of purchase decisions, do not distinguish between true or "intentional" loyalty and "spurious" loyalty. In other words, the purchase behavior may be a reflection of the fact that there are no

alternatives readily available or because a brand offers a long series of deals, a better shelf location or display. This phenomenon was revealed to this researcher who was told by a respondent in exploratory depth interviews that she was not "loyal" to the store, but she was "held captive" by the store because she had no alternatives available. Measurement of her purchase history alone may have resulted in the conclusion that she was a loyal customer when in reality she did not have a loyal attitude and would have shopped elsewhere if she had the opportunity.

Jacoby and Olson (1970) and Jacoby (1971) distinguish between brand loyal behavior and brand loyal attitude. They define brand loyal behavior as the overt act of selective repeat purchasing and brand loyal attitude as the underlying predisposition to behave favorably toward the brand. Loyalty requires both conditions; neither condition in isolation is a sufficient condition for true loyalty. In their recent proposed conceptual framework for the study of customer loyalty, Dick and Basu (1994) define customer loyalty as the strength of the relationship between an individual's relative attitude and repeat patronage. These researchers, therefore, adopt the dual-component conceptualization of loyalty and they propose to study loyalty at the micro level.

Attitude

A loyal attitude toward an attitude object is a required condition of loyal behavior. Jacoby (1971) defines loyal behavior as the "overt act of selective repeat purchasing based on evaluative psychological decision processes" and a loyal attitude as the "underlying predisposition to behave in such a selective fashion" (p. 26). As early as 1935, Gordon Allport concluded from his review of current literature regarding attitude theory and research, that most researchers agree that an attitude is a learned predisposition to respond to an object (store, brand, vendor or service) or class of objects in a consistently favorable or unfavorable manner (Allport 1935).

For this study, Fishbein's (Fishbein and Aizen 1975) Attitude-Toward-Behavior Model serves as the conceptual framework for the attitude construct. The focus of the model is the individual's attitude or predisposition toward behaving or acting with respect to an object rather than the attitude toward the object itself. This approach is consistent with the focus of the study, which is the customer's attitude toward shopping at the store. Theoretically, the more favorable the customer's attitude toward the behavior (i.e., shopping at the store), the more she should intend to perform the behavior (i.e., patronize the store).

To measure attitude toward the behavior, any standard scaling procedure could be used (Aizen and Fishbein 1980). These standard measures include: Thurstone's (1928) method of equally appearing intervals, Likert's (1932) method of summated ratings, Guttman's (1944) scalogram analysis, and Osgood, Suci, and Tannenbaum's (1957) semantic differential. These measures all result in a single score representing a person's evaluation, or affect, of an attitude object or behavior. In providing a measure of affect the standard scaling procedures already take into account cognitions, conations, or both. Whether measures are based on statements concerning beliefs, feelings, intentions, or behaviors, the results are much the same. Separate assessment of all three components of attitude is unlikely to lead to improved behavioral prediction (Aizen and Fishbein 1980). For this study, three scales measuring the affective component of the attitude toward shopping at the store were used to measure the construct of attitude.

Repeat Purchase

Purchases over time (or repeat purchases) is the second required condition of loyal behavior. Cohen and Houston (1972) refer to this condition of purchases over time in their study of toothpaste consumers. Brand loyalty leads to routinized behavior so the consumer can spend time

and effort elsewhere. In other words, repeat purchases are a strategy used by consumers to reduce cognitive effort.

Jacoby and Kyner (1973) made a significant contribution to the theoretical link between brand loyalty and repeat purchasing behavior. Through their experimental study, they supported their hypothesis that although repeat purchasing behavior and brand loyalty appear to be one and the same, they are indeed separate constructs. Their underlying dynamics are different. The researchers found that observation of behavior solely is not a valid measure of brand loyalty. They affirm that, although repeat purchases can certainly result from brand loyalty, they cannot be the only measure of brand loyalty used by marketers.

In his study with laundry detergent consumers, Hoyer (1984) found that brand loyalty is an antecedent to repeat purchases. Purchases made frequently over time are based on the judgments of brand satisfaction which occur in the post-purchase evaluation stage after usage. Resulting brand loyalty functions as a simple decision heuristic when the brand is repeatedly purchased. Although LaBarbera and Mazursky (1983) accept this assumption that the cognitive process, i.e. using heuristics, is important in predicting repurchase behavior, they assert that situational factors also mediate the relationship between brand loyalty and repeat purchase. These situational factors include coupons, sales, and consumers' prior experiences with the brand. In

studying data from a consumer panel in Connecticut, they measured brand loyalty based on the number of successive purchases of the same brand. This operationalization of brand loyalty supports the interrelatedness of brand loyalty and repeat purchases, but differs from Jacoby and Kyner's (1973) assertion that brand loyalty and repeat purchases are separate constructs.

In their study of more than 600 branded consumer goods, Tranberg and Hansen (1986) investigated determinants of brand loyalty. They found a relationship between store loyalty and brand loyalty; consumers who tend to be more store loyal also tend to be more brand loyal. This connection could result from the fact that consumers who shop in a limited number of stores are introduced to few new brands so they are inclined to purchase the same brands over and over.

Investigation of the process of loyalty development has been conducted primarily in the arena of consumer goods. However, there is interest in understanding the loyalty concept as it relates to services. The empirical testing of Oliva, Oliver and MacMillian's (1992) catastrophe model suggests that service quality affects customer loyalty which ultimately leads to repeat purchasing. The PIMS data (Buzzell and Gale 1987) imply that businesses with a superior service offering clearly outperform other firms on stronger customer loyalty and repeat purchases. Although

Buzzell and Gale (1987) do not recognize a causal relationship as Oliva, Oliver and MacMillan (1992) do, they do imply that these behavioral outcomes precede financial outcomes. Because repeat purchases, or sales, function as the transition from behavioral outcomes to financial outcomes, further research is required to investigate the determinants of repeat purchasing and the direct effect customer loyalty has on repeat purchases.

Loyalty Measurement

According to Jacoby and Chestnut (1978), more than fifty different measures of loyalty are evident in the literature. These measures can be classified into three categories: (1) Behavioral measures which reflect purchase-oriented behavior, e.g. repeat purchase, patterns of purchase, proportion of purchase to total purchases in the category, probability of purchase, (2) Attitudinal measures which are based solely on brand preferences and intentions to purchase, and (3) Composite measures which incorporate both a behavioral and an attitudinal component.

Probably the most valid measures of loyalty are the composite measures which are extended to include both a behavioral and an attitudinal component (e.g., Pessemier 1959; Cunningham 1967; Newman and Werbel 1973; Lutz and Winn 1974). One of the earliest composite measures was proposed

by Day (1969). Day argued that ordinary behavioral measures overrepresented the existence of loyalty by classifying "spurious" loyalty (behavior of those customers held "captive" by the brand or store) as "true" loyalty. To improve the sensitivity of the measure, he proposed a Loyalty Index (L_i) as a ratio of the proportion of purchases ($P[B_i]$) and the initial attitude toward the object (A_i ; low values of attitude being favorable). True or "intentional" loyalty is assumed only when customers satisfy both the behavioral and attitudinal criteria (Jacoby and Chestnut 1978). Therefore, Day's index was useful in screening out "spuriously loyal" consumers and consequently increasing the accuracy of the measure of loyalty.

Snyder (1984) adapted Day's Index of Loyalty to a service context. He investigated the usefulness of the Lovelock service typology in distinguishing between broad categories of consumer services based on the degree of service loyalty each were accorded. Although his study failed to support his research hypotheses, he did establish a reliable and valid measure of service loyalty based on the brand loyalty measure reported by Day (1969). He conceptualized and tested the construct of service loyalty as: $SL_i = P(SP_i/A_i)$, where SL_i is the service loyalty score of the i^{th} consumer of service rendered by a service provider, $P(SP_i)$ is the proportion of total service category purchases that consumers devoted to that service provider

over the last year in the service category, and A_1 is the composite attitude measure toward that service provider. Day intended for the measure of attitude to reflect the respondent's *initial* (at the beginning of the study) attitude toward the attitude object. This value remains constant as the index is recalculated over time. Ideally, as the proportions of total purchases increase and the attitude value remains constant, the loyalty index increases over time. This study further tests this index in an environment that offers a product with accompanying services.

Measures of Store Loyalty

Of particular interest to the present study are the measures of store loyalty presented in the retail literature. Enis and Paul (1970) recognized that store loyalty is related to a firm's profit objectives, but in order to convince the marketing manager of the relationship, the construct of store loyalty must be operationalized and empirically measured. They conceptualize loyalty as manifest only through action and present a measure of store loyalty in terms of purchase behavior only. They measure the degree of store loyalty as a percentage index composed of the means of: 1) the percentage of budget allocated to the given store during a given period, 2) the number of

stores patronized during the given period, and 3) the number of switches or changes in the store (Burford, Enis, and Paul 1971). Although this measure contributes to the understanding of loyalty measurement, it fails to consider the attitudinal component of loyalty.

On the other hand, Reynolds, Darden, and Martin (1974) propose an attitudinal index of store loyalty, composed of a four-item, six-point scale. The four items are as follows:

1. I do most of my shopping in the same stores I have always shopped in.
2. Once I get used to where things are in a store, I hate to change stores.
3. I like things the old, established way.
4. Once I have made a choice of which store to buy clothes in, I am likely to shop there without trying other stores.

The data for the four items are summated to give a total store loyalty score. Although the researchers concluded that the scale has sufficient construct validity and represents a generalized dimension of store loyalty, the scale is deficient in that it measures attitude only.

A more promising measure of store loyalty is the composite measure offered by Bellenger, Steinberg and Stanton (1976). They measure store loyalty by a composite of the following factors:

1. Percentage of shopping done at the test store.
2. Ranking among competitive stores in order of preference on such criteria as product line, distance and time involved in shopping, attitude

of store personnel, climate or atmosphere of the store, and availability of parking. Ranks for a given store are reversed and used to weight the percent obtained in Step 1.

3. The propensity to shop at the test store when the shopper needs an item he thinks the store carries. This factor is measured by the responses to the statement, "I shop in (test store) when I need an item I think they carry." A five-point scaling is used with the anchors of strongly agree, agree, neutral, disagree, and strongly disagree. This response is used to weight the result of Step 2.

The output of Step 3 is the measure of store loyalty developed for each respondent.

Although their proposed measure is intuitively appealing, their study offers no statistical assumptions or theory upon which the index is based. Therefore, the measurement of store loyalty is advanced but not finalized by their work. However, Bellenger, Steinberg, and Stanton (1976) do contribute to the understanding of the construct of store loyalty by offering a composite measure in terms of estimates and offering a simple approach toward combining the components of (1) proportion of shopping, (2) store preference, and (3) store purchasing intention, to develop a multivariate measure of store loyalty. This measure was further tested in this study.

Based on the above review of literature, the following hypotheses are developed and tested:

- H8:** Perceived value positively influences attitude.
- H9:** Perceived value positively influences repeat purchase behavior.

H10: Perceived value positively influences customer loyalty.

Word-of-Mouth

The last customer behavioral variable in the model to be tested is word-of-mouth communication. Word-of-mouth communication, defined as informal communication directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers (Westbrook 1987), is a consequence of the attitude component of loyalty. Westbrook (1987) states that product consumption-based affective responses (i.e., attitude) are held to lead to word-of-mouth communication.

The Process Model of Business Performance Outcomes of Service Quality depicts the two pathways to business performance -- customer retention and customer attraction. Word-of-mouth plays a critical role in the attraction of new customers to a business firm. Kordupleski, Rust, and Zahorik's (1993) model of how market share results from quality focuses on the critical role word-of-mouth plays in achieving market share through offensive marketing. A customer who perceives a high level of service quality is more likely to engage in positive word-of-mouth. Potential new customers may then be swayed by positive word-of-mouth and be attracted to the firm.

Word-of-mouth is of particular significance to retailers. Through a review of previous retail research, Mazursky and Jacoby (1986) identify the seven dimensions most frequently discussed through word-of-mouth by customers of department stores. These aspects of retailing are: merchandise quality, pricing, merchandise selection and assortment, locational convenience, general service, and salesclerk service. In their study of the amount of word-of-mouth communications about retailers, Higie, Feick, and Price (1987) developed a similar set of dimensions based on a pilot study and pretest. They collected data on the dimensions of quality of merchandise, special sales, usual or everyday prices, helpfulness and friendliness of employees, variety of products available, availability of particular brands, and the return policy. They concluded that customers of department stores share word-of-mouth communications about these dimensions with someone on an average of 1.5 times a month. Communication about these aspects influences potential customers opinions of the store. Indeed, Samli (1970) reported that up to 40 per cent of a retailer's customer base is attracted to the store by recommendations of friends.

Based on this review of literature, the following hypothesis is tested:

H11: Attitude positively influences word-of-mouth.

Business Performance

The final relationships in the Process Model of Business Performance Outcomes of Service Quality are the linkages between performance and the two primary pathways to that end -- trial or attraction of new customers and repeat purchase or retention of existing customers (Kordupleski, Rust, and Zahorik 1993; Webster 1994a). Rust and Zahorik (1993) describe these two means to generating sales as offensive and defensive marketing strategies.

Traditionally, businesses have focused on the offensive marketing paradigm, or generating new customers through promotional campaigns, generation of positive word-of-mouth, etc. This limited perspective ignores the potential for generating sales volume (at less cost) through the defensive strategy of delivering superior value to existing customers who become loyal which leads to customer retention.

Defensive marketing recognizes that allocating marketing resources to keeping existing customers may be more cost-effective than trying to attract new ones (Fornell and Wernerfelt 1987). Peters (1988) reports that the U.S. Office of Consumer Affairs concluded from research that it may be five times as costly to attract a new customer as to keep an old one (Rust and Zahorik 1993). Therefore, retention of loyal customers should be an underlying objective of any business enterprise and represents an

important basis for developing a sustainable competitive advantage (Dick and Basu 1994; Anderson and Fornell 1994) in the marketplace.

The link between customer retention, as a component of loyalty, and performance is supported in the literature and was explicitly tested in this study. In their discussion of performance outcomes, Day and Wensley (1988) describe customer loyalty as a measure of competitive advantage. The researchers claim that the depth and quality of the customer franchise, or customer loyalty, toward the firm's products is a response that precedes market share and profitability. They state that "strong brand loyalty is the most common indicator of a valuable customer franchise" (Day and Wensley, p. 15).

Raj (1985) concluded that there is a positive relationship between a brand's user share and its loyalty franchise. He proposes that brands that seek to improve their market share must be able to increase the number of share users and develop their loyalty.

The outcome process progresses from behavioral to financial outcomes at the point of transition from repeat purchases to performance (defined as sales, market share, etc.). Data from PIMS businesses support the hypothesis that more repeat purchases from loyal customers lead to market share improvements. Surprenant (1977) based her experiment in customer satisfaction on the premise that

desirable consequences such as repeat purchases lead to increased market share. Because the attraction of new customers, or offensive marketing, is not directly investigated in this study, the relationship between attraction and performance was not tested.

The assumption that business performance is the desired and inevitable outcome of service quality and perceived value does not enjoy consensus of agreement nor has it been empirically tested. Ruekert and Walker (1987) state that the benefits of high quality service may be offset by higher operating and administrative costs and the "efforts to improve service to current customers may divert resources and attention from the more critical objectives of new product and market development." (p. 28). Proponents of service quality claim theoretical and empirical evidence exists which indicates firms that provide higher levels of service enjoy higher profits than those who do not (Oliva, Oliver and MacMillan 1992). However, close scrutiny of the studies often cited reveals these studies deal with the benefits of *goods* quality, not *service* quality. On the other hand, PIMS data suggest that the more service-sensitive the marketer, the higher the profitability of the business (Thompson, DeSouza and Gale 1985). Although the PIMS data have been criticized based on theoretical and methodological weaknesses (Curry and Faulds 1985; Oliva, Oliver and MacMillian 1992; Wind and Mahajan 1981), the fact

remains that their data provide strong empirical evidence for a positive relationship between service quality and business performance.

Kohli and Jaworski (1990) state that the literature offers few empirical studies of the consequences of a market orientation. Their model of the antecedents and consequences of a market orientation closely follows A Model of the Service Quality Delivery System (Figure 8), including management, interdepartmental and organization processes which are moderated by supply-side and demand-side players in the system. They claim three types of consequences -- customer responses, employee responses and business performance. In their interviews with business managers, they found that favorable business performance was defined as ROI, profits, sales volume, market share, and sales growth. Therefore, they stated the proposition that the greater the market orientation of an organization, the higher its business performance. Their hypothesis implies that customer responses and financial business performance occur simultaneously. It is the premise of the Process Model of Business Performance Outcomes of Service Quality Process that the customer responses are actually antecedent to business performance outcomes; they are the first step in the two step outcome process.

The proposition offered by Kohli and Jaworski was tested by Narver and Slater (1990). These researchers

concluded that a market orientation is a determinant of profitability. However, this finding was based on managers' perceptions of the effectiveness and efficiency of their firm in performing the processes that deliver service quality. The researchers then conclude that if the processes are being performed to the satisfaction of the customer (in the opinion of the managers), then this performance is reflected in the firm's profitability. Even though they admit that market orientation encompasses a continuum (Narver and Slater 1990, p.23), they do not discuss the stages of business performance.

The relationship between market share and profitability is similar to that of customer satisfaction and service quality in that researchers seem to agree they are related but there is lack of consensus regarding the nature of the relationship. Early research by Catry and Chevalier (1974), supported by the Marketing Science Institute, found market share to be positively related to profitability. This finding derives from the concept of break even--the higher the sales, the higher the profit. In 1975, however, Bloom and Kotler questioned this belief. They asserted that large market share can create problems for a company as well as profits, and that some companies may reach a point at which expected costs and risks of expanding market share actually outweigh the gains in profitability.

Even though the PIMS data are frequently cited as examples of how market share has a positive impact on profit, the data are often questioned. In Wind and Mahajan's (1981) review of market share literature, they compare industry specific studies with PIMS findings and find some discrepancies. While PIMS data imply a cause and effect relationship between market share and profit, these industry specific studies yielded mixed results. The implication of these differing results is that the PIMS models may be misleading because they are based on pooled data over different industries of different sizes.

In spite of the lack of agreement on the temporal and causal relationships between market share and profit, researchers and practitioners position the payoff of delivering superior customer service as market share and profitability (Day and Wensley 1988). Business performance outcomes should be operationalized as a measure that is meaningful to the managerial decision-making process, whether the measure is market share, profit, ROI, sales volume, comparable sales, or some other indicator of performance.

For the purpose of this study, business performance is measured by two data points provided by corporate management. Store profitability (i.e., earnings before interest and taxes divided by gross sales) and sales per square foot for each store, which are commonly used

indicators of performance in the retail sector, were considered appropriate measures of store business performance.

Based on the above discussion, the following hypotheses are tested:

- H12: Repeat customer purchases positively influence business performance.
- H13: Perceived service quality influences business performance through the moderating variables of perceived value and repeat purchase behavior.

Summary of Review of Literature

The literature review adequately supports the conceptual model proposed to direct this research, as well as the guiding hypotheses derived from the model. The following chapter describes the methodology employed to empirically test the theory proposed in the model by testing the relationships predicted in the research hypotheses.

CHAPTER 4

RESEARCH METHODOLOGY

The purpose of this study is to test the hypotheses developed in the previous chapter which delineate the interrelationships among the variables of interest in the model. Hypothesis 13 addresses the primary research question, that is, the proposed linkage between perceived service quality and business performance of the firm. Hypotheses 1 - 12 are the supporting hypotheses that test the relationships in the process that leads to the resulting linkage between perceived service quality and business performance.

This study utilizes a survey research design to assess the relationships among the four customer perception variables and the five outcome variables based on a sample of customers of a multi-store retail organization. The four customer perception variables are: (1) perceived price, (2) perceived service quality, (3) perceived merchandise quality and (4) perceived value. The five outcome variables are: the customer behavioral responses of (1) attitude, (2) customer retention/repeat purchase, (3) loyalty, (4) word-of-mouth, and the profit-related variable of (5) business performance. The relationships among these variables are depicted in Figure 10. A survey research design was deemed

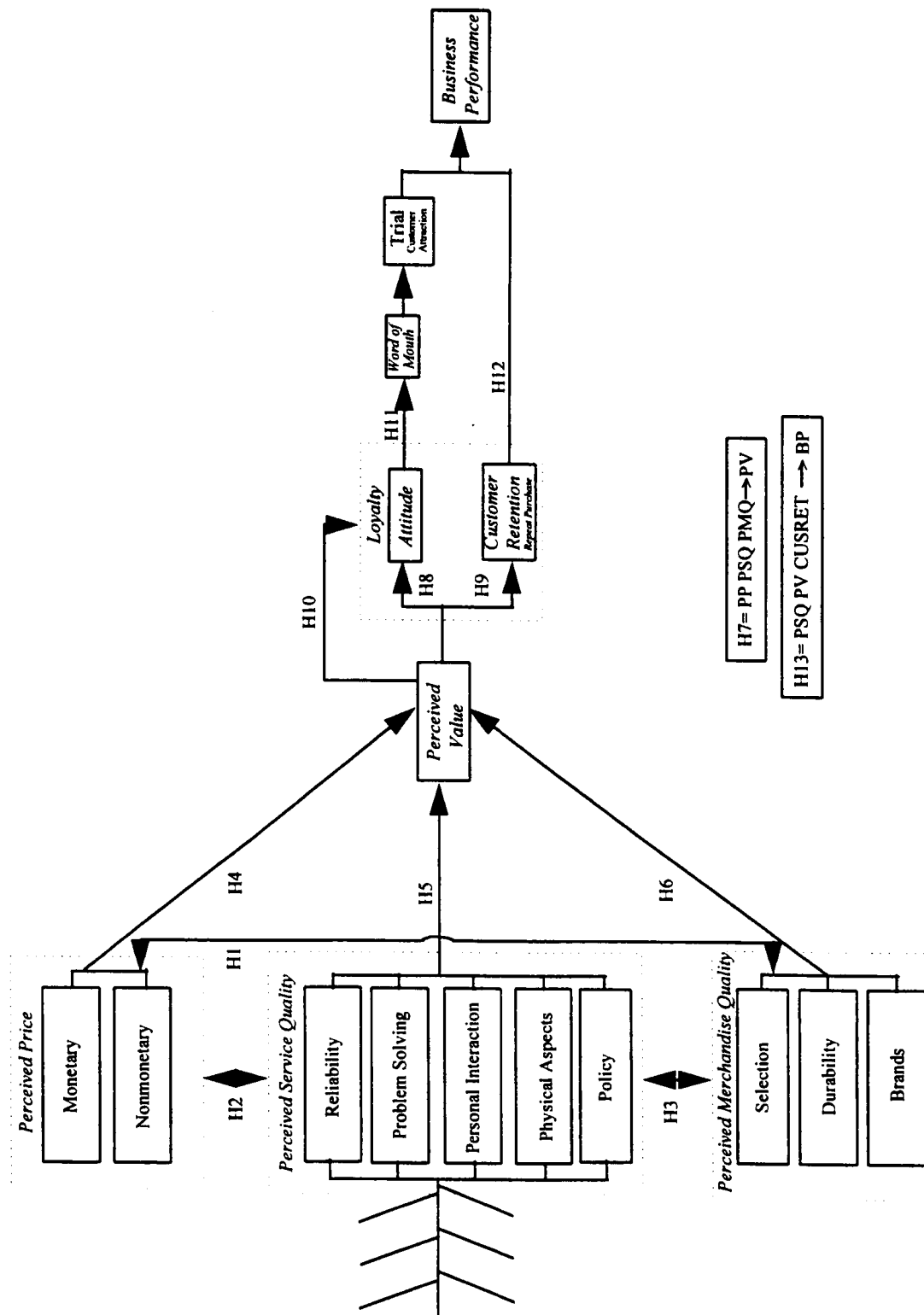


Figure 10: Hypotheses to be Tested

appropriate for the dissertation for two reasons: (1) survey research is best adapted to obtaining personal and psychosocial data (i.e., perceptions, attitudes, intentions, etc.) from a large population, and (2) the variables of interest cannot be feasibly manipulated in an experimental design.

Scale Development -- Background Studies

The overall scale development methodology (see Figure 11) follows the procedures recommended by Churchill (1979) and updated by Gerbing and Anderson (1988). That is, the definition of each construct is based on a combination of a review of the existing literature and the findings of exploratory research conducted for the purpose of this study. The goal of the survey instrument is to fully capture the essence of the constructs in the context of a firm that offers a product augmented by supporting services. The scale developed for this study evolved from a combination of exploratory, qualitative research, a previous study conducted by this writer and two fellow researchers (Dabholkar, Thorpe, and Rentz 1996, forthcoming) and a review of the retail literature.

The first step toward developing a measure is to specify the domain of the constructs of interest with some precision (Churchill 1979). To this end, the researcher

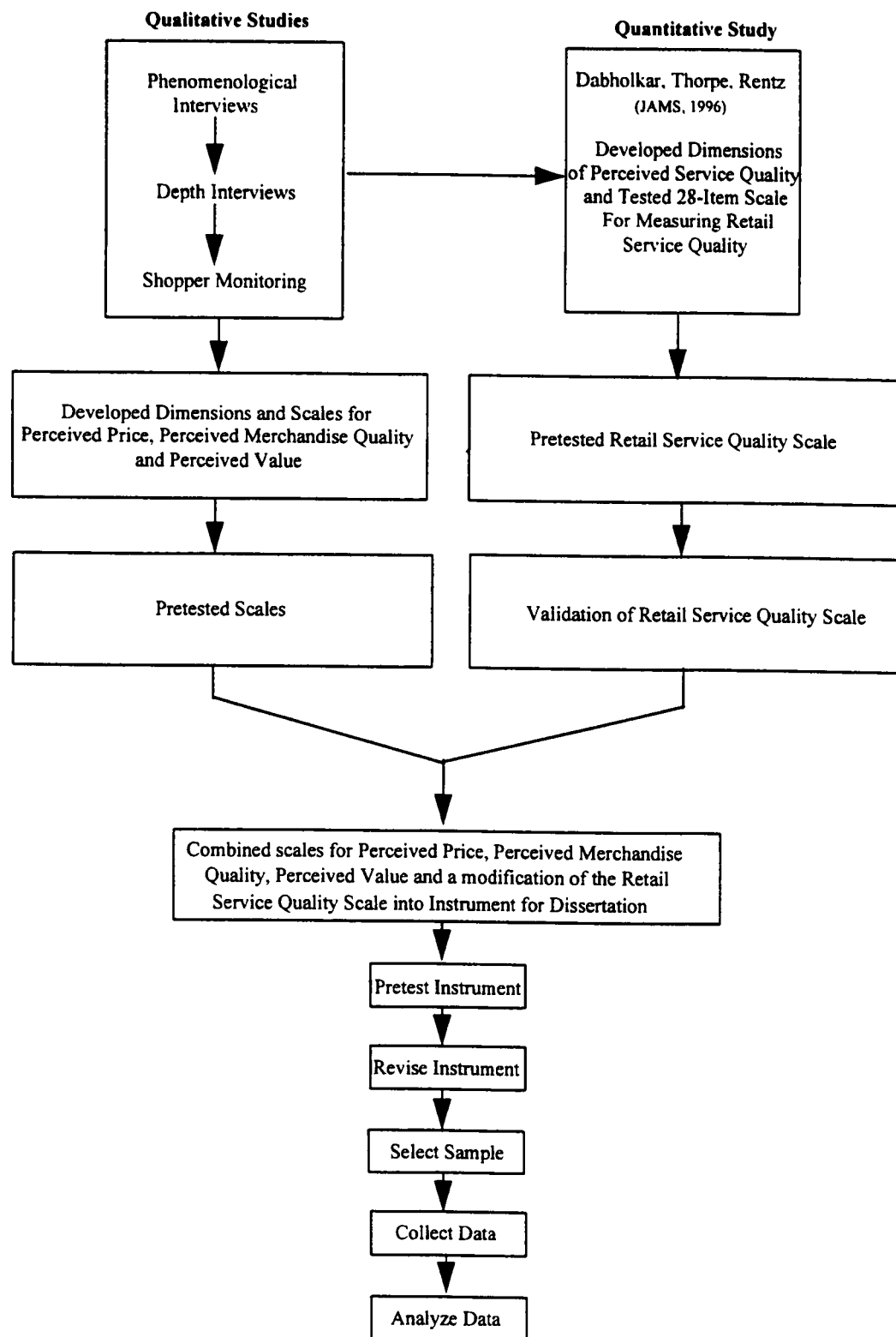


Figure 11: Flowchart of Methodology

conducted a review of literature, in addition to completing four research studies. The four studies include three qualitative, exploratory investigations and one quantitative project (Dabholkar, Thorpe, and Rentz 1996, forthcoming).

Three qualitative methodologies -- phenomenological interviews, exploratory depth interviews, and tracking of the customer through the store to monitor evaluations of the shopping experience -- were employed to gain a deeper understanding of the constructs of interest. The first study consisted of three phenomenological interviews conducted by the researcher to identify the shopping experience themes in the customer's meaning structure by analyzing the customer's interactions with the retail store from the customer's perspective. This methodology allows flexibility in the research design which enhances exploration, revelation, and discovery.

The phenomenological interview is an application of symbolic interactionism. The interviewer assigns meaning to the shopping experience as the participant sees it, not as the researcher perceives it. The researcher uses the participants' own words in follow-up questions to probe for the emic perspective of the meaning of the phenomenon of interest. Phenomenological interviews are effective data collection methods when the goal is to collect large amounts of deep, contextualized data in a relatively short period of time.

Three common themes emerged from the phenomenological interviews. The themes, based on clear and consistent patterns evidenced by repetition, frequency, and regularities in the data, are: (1) *temporal theme*, which focuses on concepts related to time, lack of time, and the need for an efficient shopping experience, (2) *spatial theme*, which focuses on concepts related to store layout, floor traffic patterns, displays, and merchandise arrangements, and (3) *familial theme*, which focuses on issues related to family members accompanying the shopper and their special needs (Thorpe 1994).

A second study employing six depth interviews was also conducted to discover relevant determinants of the customer's evaluation of the shopping experience not yet identified. Depth interviews allow the researcher: 1) to delve into the complexities of the meaning of perceived service quality, perceived merchandise quality, and perceived price, 2) to discover relevant determinants of perceived service quality, perceived merchandise quality, and perceived price not yet defined, 3) explore informal or unstructured relationships between the customer and the retail outlet, and 4) to gain a deeper understanding of the phenomena in the context of the retail environment from the customer's point of view, based on feelings, thoughts, actions, and intentions.

The methodology of using depth interviews differs from the method of phenomenological interviews in two ways. That is, when conducting depth interviews: (1) the interviewer has a priori assumptions that she attempts to confirm through the data collection and (2) the interviewer follows a pre-set interview guide consisting of questions designed to confirm the a priori assumptions. The researcher derived assumptions from the phenomenological interviews that were incorporated into an interviewer's guide. These questions were used in the depth interviews to further explore the constructs of interest and confirm the researcher's assumptions based on the phenomenological interviews.

After analyzing the depth interviews, the researcher conducted a third qualitative study. This study employed a "tracking" method to monitor the thought processes of three customers as they evaluated a specific shopping experience. A portable tape recorder with a lavalier microphone was inconspicuously attached to the participant's clothing. As the customer moved through the store, interacted with merchandise and store employees, and made a purchase decision, she spoke aloud her thoughts, observations, and reactions, which were tape recorded. By unobtrusively "monitoring" the customer's experience in the store, information regarding identified service quality components (e.g., store layout, displays, availability of sales associates at the cash register, etc.), and the customers'

interactions with them, was collected without significantly altering the natural flow of the experience.

These three qualitative studies yielded consistent results. It was found that ease of shopping (e.g., merchandise availability and ease of finding what the customer is looking for), as well as spatial concerns (e.g., ease of moving around the store) are important to the customer during the retail store shopping experience.

Multiple qualitative studies were conducted as a triangulation technique in an effort to ensure the trustworthiness of the study. Triangulation of data collection methods is employed in an attempt to avoid biased data. Consistency in the data provided by the participants in the three studies demonstrates the credibility and dependability of the findings which the researcher incorporated into the measure employed in the dissertation.

Concurrently, the fourth methodology, a quantitative examination of data collected from customers of seven stores operated by two retail organizations headquartered in the southeast, was conducted with two other researchers (Dabholkar, Thorpe, and Rentz 1996, forthcoming). College students majoring in retailing, who were assigned to the stores as a requirement of their senior field experience, as well as store employees, collected data for a sample of 227 customers. The researchers developed and tested a 28-item Retail Service Quality Scale (see Table 2) for measuring

Table 2. Measures of Perceived Service Quality (PSQ), Perceived Merchandise Quality (PMQ), Perceived Price (PP), and Perceived Value (PV)

ITEM	Variable/ Dimension	DTR Study PSQ Dimension
Part 1-1. is more likely to have merchandise available when I want it	PSQ/Reliability (PSQ1)	Reliability (P10)
Part 1-15. is more likely to do what they promise to do	PSQ/Reliability (PSQ4)	Reliability (P7)
Part 1-16. makes fewer clerical errors	PSQ/Reliability (PSQ5)	Reliability (P11)
Part 1-17. is more likely to do things right the first time	PSQ/Reliability (PSQ7)	Reliability (P9)
Part 3-1. are better at telling me exactly when services will be performed	PSQ/Reliability (PSQ21)	Reliability (P8)
Part 1-18. is more willing to handle returns and exchanges	PSQ/Problem Solving (PSQ7)	Problem Solving (P21)
Part 1-20. is more flexible in how I can pay for merchandise	PSQ/Problem Solving (PSQ9)	
Part 3-2. are better able to handle my complaints	PSQ/Problem Solving (PSQ22)	Problem Solving (P23)
Part 1-22. shows a more sincere interest in solving my problems	PSQ/Problem Solving (PSQ10)	Problem Solving (P22)
Part 3-5. understand my specific needs better	PSQ/Personal Interaction (PSQ25)	Dropped
Part 3-6. are more willing to help me	PSQ/Personal Interaction (PSQ26)	Dropped
Part 3-7. have more knowledge to answer my questions	PSQ/Personal Interaction (PSQ27)	Personal Interaction (P12)
Part 3-8. seem to have more time to help me	PSQ/Personal Interaction (PSQ28)	Personal Interaction (P17)
Part 1-13. gives me more individual attention	PSQ/Personal Interaction (PSQ3)	Personal Interaction (P18)
Part 1-31. is more likely to have my best interests at heart	PSQ/Personal Interaction (PSQ15)	Dropped

ITEM	Variable/ Dimension	DTR Study PSQ Dimension
Part 1-32. makes me feel safer in my transactions	PSQ/Personal Interaction (PSQ16)	Personal Interaction (P14)
Part 3-3. are more courteous to me	PSQ/Personal Interaction (PSQ23)	Personal Interaction (P19)
Part 3-4. give me more personal attention	PSQ/Personal Interaction (PSQ24)	Dropped
Part 3-9. are more courteous to me on the telephone	PSQ/Personal Interaction (PSQ29)	Personal Interaction (P20)
give me prompt service		Personal Interaction (P15)
tell me exactly when services will be performed		Personal Interaction (P16)
are more likely to instill confidence in me		Personal Interaction (P13)
Part 1-24. makes it easier for me to find what I need in the store	PSQ/Physical Aspects (PSQ12)	Physical Aspects (P5)
Part 1-25. makes it easier for me to get around in the store	PSQ/Physical Aspects (PSQ13)	Physical Aspects (P6)
Part 2-1. has equipment and fixtures that are more modern-looking	PSQ/Physical Aspects (PSQ17)	Physical Aspects (P1)
Part 2-2. has physical facilities that are more visually appealing	PSQ/Physical Aspects (PSQ18)	Physical Aspects (P2)
Part 2-3. has materials that are more visually appealing	PSQ/Physical Aspects (PSQ19)	Physical Aspects (P3)
Part 2-4. has cleaner, more attractive restrooms and dressing rooms	PSQ/Physical Aspects (PSQ20)	Physical Aspects (P4)
Part 1-5. offers higher quality merchandise	PSQ/Policy (PSQ2)	Policy (P24)
Part 1-19. is more likely to accept the credit cards I carry	PSQ/Policy (PSQ8)	Policy (P24 and P28)
Part 1-23. provides plenty of parking	PSQ/Policy (PSQ11)	Policy (P25)

ITEM	Variable/ Dimension	DTR Study PSQ Dimension
Part 1-27. has more convenient operating hours	PSQ/Policy (PSQ14)	Policy (P26)
Part 1-9. offers more merchandise that I cannot find at other stores	PMQ/Selection (PMQ4)	
Part 1-10. is more likely to offer the assortment of merchandise that I am looking for	PMQ/Selection (PMQ5)	
Part 1-12. offers merchandise that is more stylish	PMQ/Selection (PMQ7)	
Part 1-21. offers merchandise that is more up-to-date	PMQ/Selection (PMQ8)	
Part 1-6. offers more quality brand names	PMQ/Brands (PMQ1)	
Part 1-7. offers more brand names that I trust	PMQ/Brands (PMQ2)	
Part 1-8. offers more merchandise with their own store label	PMQ/Brands (PMQ3)	
Part 1-11. offers merchandise that is better made	PMQ/Durability (PMQ6)	
Part 1-34. offers merchandise that holds up better after wearing and washing	PMQ/Durability (PMQ9)	
Part 1-2. offers bigger price reductions when they have a sale	PP/Monetary (PP1)	
Part 1-3. has more merchandise I can afford	PP/Monetary (PP2)	
Part 1-4. has lower prices	PP/Monetary (PP3)	
Part 1-14. has sales people that provide me quicker service	PP/Nonmonetary (PP4)	
Part 1-26. makes me spend less time at the cash register while my purchase is rung up	PP/Nonmonetary (PP5)	
Part 1-28. locations are more convenient to me	PP/Nonmonetary (PP6)	
Part 1-29. makes it is easier for me to get in and out of the store quickly	PP/Nonmonetary (PP7)	
Part 1-30. is less likely to waste my time while I am shopping there	PP/Nonmonetary (PP8)	
Part 1-33. makes me wait in fewer long lines	PP/Nonmonetary (PP9)	

ITEM	Variable/ Dimension	DTR Study PSQ Dimension
Part 4-2. I get what I pay for at this store.	PV/Cognitive (PV2)	
Part 4-3. I am willing to pay more for what I buy at this store because of the service I get.	PV/Cognitive (PV3)	
Part 4-4. Shopping at this store is worth the time and effort it takes me to shop there.	PV/Cognitive (PV4)	
Part 4-6. For what I pay, I get good service at this store.	PV/Cognitive (PV6)	
Part 4-14. I shop at this store because of the service, even if they don't always have the merchandise I want.	PV/Cognitive (PV14)	
Part 4-5. Given all the tradeoffs I have to make when I shop, I think I have made the right decision when I shop at this store.	PV/Cognitive (PV5)	
Part 4-12. I get value for my money at this store.	PV/Cognitive (PV12)	
Part 4-1. The prices offered by this store are consistent with the quality of the merchandise.	PV/Cognitive (PV1)	
Part 4-7. I receive better overall value when I shop at this store.	PV/Cognitive (PV7)	
Part 4-15. I think I get more for my money at this store because the merchandise is better.	PV/Cognitive (PV15)	
Part 4-8. When I shop at this store I feel I have bought better merchandise at a price I can afford.	PV/Affective (PV8)	
Part 4-10. I am pleased with my shopping experiences at this store.	PV/Affective (PV10)	
Part 4-11. I feel I am a wise shopper when I shop at this store.	PV/Affective (PV11)	
Part 4-9. I do not regret buying what I do at this store.	PV/Affective (PV9)	
Part 4-13. I really feel good about what I buy at store.	PV/Affective (PV13)	

customer evaluations of service quality for retail stores that offer services in conjunction with the sale of merchandise.

Based on the findings of this preliminary, exploratory research in conjunction with the review of literature, the following conceptual definitions were developed to guide this research:

Perceived Price--Perceived sacrifice, both actual monetary (objective) price and other nonmonetary costs, such as time, search, and mental effort. Perceived price represents the sacrifice "given up" by the customer.

Perceived Service Quality--Customer's overall judgment or evaluation of a combination of aspects related to the service provided. Perceived service quality represents a component of the benefit received, or what the customer "got" in exchange for the sacrifice.

Perceived Merchandise Quality--Perceived excellence of merchandise, based on evaluation of brand, selection, and durability. Perceived merchandise quality represents a component of the benefit received, or what the customer "got" in exchange for the sacrifice.

Perceived Value--Customer's overall assessment of the utility of a product/service based on perceptions of the tradeoffs between what is received (service and merchandise quality) and what is given up (monetary and nonmonetary price), composed of a cognitive and an affective dimension; derived from the net of perceived service quality, perceived merchandise quality and perceived price.

Loyalty--Composite of a customer's attitude and past and future purchase behavior related to the store.

Attitude--A component of loyalty that measures favorable or unfavorable predisposition toward the attitude object or behavior, in this case, the feelings about shopping at the store.

Customer Retention/Repeat Purchase--Past customer shopping behavior on a regular basis and intentions to patronize the store in the future.

Word-of-Mouth--The process by which consumers express their opinions and make recommendations to others regarding, in this case, a particular retail organization.

Business Performance--financial outcome measures employed by business firms to evaluate the success of the operation, e.g. sales per square foot and profitability.

Measures of Perceived Service Quality

Based on the findings of the qualitative and quantitative studies and the review of literature, Dabholkar, Thorpe, and Rentz (1996, forthcoming) propose a hierarchical factor structure to capture dimensions of service quality important to retail customers. This factor structure is composed of 29 indicators loading onto five factors which, in turn, load onto a second order factor, perceived service quality. In this concurrent study, the researchers identified these five factors as physical aspects, reliability, personal interaction, problem solving, and policy. Table 2 delineates the factor structure and the items which measure each factor. Confirmatory factor analysis based on the partial disaggregation technique (Bagozzi and Heatherton 1994; Hull, Lehn, and Tedlie 1991), as well as cross-validation using a second sample, provided empirical evidence to support the scale as a good measure of overall service quality in a retail environment. These items comprise the Retail Service Quality Scale.

For the current study, a five-factor structure was conceptualized that corresponds to the five dimensions measured by the Retail Service Quality Scale (Dabholkar, Thorpe, and Rentz 1996, forthcoming). Perceived service quality is conceptualized as a second order factor comprised of the proposed first order factors of reliability, problem solving, personal interaction, physical aspects, and policy. Five items are predicted to load on reliability, four items on problem solving, ten items on personal interaction, six items on physical aspects, and four on policy (see Table 2). Twenty-four of the 29 items are identical to items in the Retail Service Quality Scale and are predicted to load on the same factors as was concluded by Dabholkar, Thorpe, and Rentz (1996, forthcoming). In the concurrent study, four items were dropped from the proposed Retail Service Quality Scale as a result of the confirmatory factor analysis. However, these four items were retained for the purpose of the present study (see Table 2). These four items were retained in the measurement of perceived service quality because the participants in the qualitative studies conducted for this study mentioned these attributes as important in their shopping experiences. Finally, based on the qualitative research, one item (i.e., "is more flexible in how I can pay for merchandise" was added to measure the flexibility offered the customer in paying for merchandise (e.g., bank credit cards, store credit card, layaway, etc.).

Westbrook (1981) and Mazursky and Jacoby (1985) report that an important criterion on which customers evaluate stores is the credit and charge account policies of the store. The convenience of the sales transaction and the record of the purchase that are concomitant with credit card usage are an indication of the retailer's commitment to making the shopping experience as free of problems as possible.

Four items from the Retail Service Quality Scale were not included in the measure of perceived service quality in the present study. "Instill confidence in me" was dropped at the pretest stage in the present study because the respondents commented that they were unsure of the meaning of the item. "Tells me exactly when services will be performed" was dropped because respondents found it to be repetitious with "do what they promise to do". The two items in the Retail Service Quality Scale related to credit cards (i.e., "will accept most major credit cards" and "will offer their own credit card") were combined into one item (i.e., "are more likely to accept the credit cards I carry") in the present study. Finally, the item relating to the need for prompt service was hypothesized to load on perceived price rather than perceived service quality. Dabholkar, Thorpe, and Rentz (1996, forthcoming) did not include the construct of perceived price in their study. They found that all aspects of the shopping experience loaded on the one construct of interest, that is, perceived

service quality. However, in the present study, the concept of sacrifice is incorporated into the model through the construct of perceived price. Because the participants in the qualitative studies strongly indicated the importance of the temporal element -- the need to devote as little time as possible to shopping -- the item relating to the lack of prompt service is hypothesized to measure a perceived cost of shopping and, consequently to load on perceived price.

In sum, the 29 items measuring perceived service quality for the purpose of this study, are a combination of 24 of the 28 items from the Retail Service Quality Scale, plus the four that were dropped from the Retail Service Quality Scale, in addition to one new item. The purpose for including additional items in the scale to measure perceived service quality is to more fully develop and test a scale that captures the essence of the complex, multiattribute construct of perceived service quality.

Because of the interrelatedness of the independent variables, two of the items measuring perceived service quality are expected to also measure perceived price and one is expected to also measure perceived merchandise quality. The two items related to store layout ("makes it easier for me to find what I need in the store" and "makes it easier for me to get around in the store") were predicted to double load on perceived service quality (physical aspects dimension) and perceived price (nonmonetary dimension).

Store layout characteristics are physical attributes of the store as well as a contributing factor to the difficulty with which the customer can maneuver through the store. In addition, the item related to quality merchandise offerings (i.e., "offers higher quality merchandise") is expected to double load on the policy dimension of perceived service quality and on the selection dimension of perceived merchandise quality. The merchandise carried by a retail store must be consistent with the merchandising strategy of management, while, at the same time, the quality of the merchandise offered is an attribute the customer judges when forming perceptions of merchandise quality.

At least two-thirds of the items measuring a factor were hypothesized to load only on that factor (i.e., three of the five items measuring physical aspects and three of the four policy items). Double loadings are acceptable given the condition that at least three of the items measuring the factor load on *only* that factor (Ladd 1994). This condition fulfills the requirement stated by Gerbing and Anderson (1988) that measures must be acceptably unidimensional. The existence of at least 3 items that load only on the factor indicates that the factor is unidimensional, because the set of three indicators share only a single underlying factor.

Measures of Perceived Price

Perceived price is conceptualized as a second order factor consisting of two dimensions -- monetary and nonmonetary price. Monetary price is defined as the objective cost of the merchandise, while nonmonetary price includes the other "costs" of the transaction (e.g., time consumed, energy expended, search effort, inconvenience, etc.). A total of nine items were designed to measure these dimensions. The three items designed to measure monetary price were developed for the purpose of the present study. Six additional items were designed to measure aspects of the nonmonetary sacrifices "given up" by the customer. These items measure: waiting in fewer lines, not wasting shopper's time, getting in and out of store quickly, spending less time at the cash register, salespeople that provide quicker service, and convenient locations (see Table 2). In our fast-paced society, customers view shopping as an activity requiring time and energy. Customers view this cost as a significant sacrifice they give up to get what they want from a retail store (Anonymous 1993). This emphasis on the temporal dimension of the service quality is supported by the findings of the phenomenological interviews, as evidenced by the following quotes:

"Most of the time I'm in a hurry. I hate to always be in a hurry, but it seems like you're always rushing from one thing to the next nowadays, and they've always been a real hassle-free type place for me to shop."

"When I'm in a hurry, if I get, like somebody who's new on the cash register and they don't know how to do my charge card or if they can't sign...if I'm in a hurry, I don't want that to slow me down."

"If someone hasn't acknowledged my presence within five minutes, I will leave, because...and I know they're busy, but, it's...I get very frustrated."

"I just like people to be efficient and prompt. You know, do what I need to be done and get me out of there."

Items developed to measure these temporal aspects of the shopping experience are added to the instrument for use in the dissertation.

Measures of Perceived Merchandise Quality

For the purpose of the dissertation, nine items were developed to measure the perceived quality of the physical good being offered as part of the integrated product. These items are based on a combination of findings from the qualitative studies and a review of the retail literature and were expected to load on the dimensions of selection, durability, and brands (see Table 2). Four items were expected to load on selection, two items on durability, and three on brand. The dimensions of selection, durability, and brand represent the first order factors comprising perceived merchandise quality as a second order factor.

Measures of Perceived Value

Based on the review of the literature and on the findings from the exploratory research, fifteen items were developed to measure perceived value (see Table 2). Even though they did not use the word "value", the participants in the qualitative studies consistently mentioned price, merchandise quality, and service quality when relating their evaluations of the shopping experience. It was apparent that they were weighing their perceptions of what they "got" from the experience, relative to what they "gave", to form their evaluation of the overall value they received from the experience. Since value is conceptualized as a tradeoff between the costs and benefits of an action, the items designed to measure this component of perceived value were phrased as possible tradeoffs between perceived price, perceived service quality, and perceived merchandise quality.

In addition to this cognitive evaluation, participants in the qualitative research revealed an affective response to their consumer decision. They indicated that they knew they had made the appropriate decision when they were "thrilled" with their purchase or when they "felt like a good shopper". Analysis of the data from the exploratory, qualitative studies indicated that for the consumer to perceive "value" from their purchase and its consumption,

both components of the construct -- cognitive and affective -- were required. Therefore, a two-dimensional conceptualization of value is proposed in this study. The cognitive evaluation of the tradeoffs between price, merchandise quality and service quality, in conjunction with the affective response to their decision, is proposed to comprise the customer's perception of value. These two dimensions -- cognitive and affective -- represent the first order factors comprising the second order factor of perceived value.

Pretest of Perception Measures

A pretest of the items designed to measure perceived price (9 items), perceived service quality (29 items), perceived merchandise quality (9 items), and perceived value (15 items) yielded promising results. A mailing including a cover letter, a stamped return envelope and a questionnaire, was mailed to a random sample of 100 preferred customers of a local department store. The first mailing was followed up with a second mailing including a cover letter, a stamped return envelope and another copy of the questionnaire. Eleven returned surveys were unusable due to insufficient address, unknown addressee, or incomplete responses. Thirty-one usable questionnaires were returned yielding a response rate of 35% (i.e., 31 of 89 remaining surveys). By

analyzing item-to-total correlations and correlation matrices of the pretest data, the researcher provided evidence that the scale was tapping the constructs of interest and is a reasonable measure of the perceptions of price, service quality, merchandise quality and value. Table 3 describes the results of the correlation analysis. The internal consistency of the measures is also supported by the results of the pretest. Cronbach's alpha was calculated as an indicator of the reliability of the scales. The alpha for each construct was as follows: perceived service quality .940, perceived merchandise quality .918, perceived price .902, and perceived value .963.

Table 3. Pretest Correlation Among Items for Each Customer Perception Construct (n=31)

Construct	# Items	Cronbach's α	Correlation Range	Correlation with Items Outside the Construct
PSQ	29	.940	.214 - .809	.009 - .659 (mostly .2 - .3)
PMQ	9	.918	.324 - .806	.040 - .752 (mostly .1 - .2)
PP	9	.902	.368 - .823	.049 - .607 (mostly .1 - .2)
PV	15	.963	.563 - .916	.046 - .679 (mostly .3 - .4)

This pretest of the measures of the perceptions constructs was conducted as a partial requirement for the doctoral seminar on measurement. The questionnaire did not

include the measures for the customer behavior variables or for business performance, which had not been developed at that point in time.

Measures of Attitude

The most commonly accepted attitude measurement procedures arrive at a single number designed to index the general evaluation or feeling toward the behavior in question (Fishbein 1967). Consistent with this view, a three-item scale for measuring the construct of attitude is included in Question 1 of Part V of the instrument (see Appendix A). These three items explicitly measure the attitude as an affective construct (adapted from Dabholkar and Thorpe 1994). The three items measure the feelings the respondent has toward behavior related to the attitude object (i.e., shopping at the store) using a seven-point semantic differential (e.g., Contented=1 to Frustrated=7).

Measure of Customer Retention/Repeat Purchase

Customer retention is one component of store loyal behavior. To measure store loyalty in the past as well as continued loyalty in the future, the measures of repeat purchase should include not only past behavior but also intended behavior for the future. The measures of repeat

purchase were developed to collect data regarding both elements of customer retention. Part V of the questionnaire (see Appendix A) includes a scale measuring past purchase behavior (item 10) and four measures (adapted from Dabholkar and Thorpe 1994) measuring behavior intentions (items 2 [two measures], 6 and 12). Item 10, measuring past purchase behavior, required the respondent to indicate the percentage of the clothing budget that was spent at the store in the last twelve months. Similarly, item 12, measuring purchase intention, required the respondent to indicate the percentage of the clothing budget that would be spent at the store in the next twelve months. The other three behavior intention items (item 2 [two measures] and item 6) measured behavior intentions using five- and seven-point Likert scales (e.g., Likely=1 to Unlikely=7).

Measures of Word-of-Mouth

Word-of-mouth communication has traditionally been measured through self-report data regarding past behavior of the senders of the communication (Richins 1983, Westbrook 1987). A richer measure of word-of-mouth includes scales to capture not only past behavior, but future intentions. Therefore, four scales were used in this study to measure word-of-mouth. The three scales measuring future intentions are included in Part V of the instrument (see Appendix A).

These items (Item 4 [2 scales] and 8) measure the customer's plans to recommend the store and intentions to recommend using five- and seven-point Likert scales (e.g., Definitely will recommend=5 to Definitely will not recommend=1). Item 14 measures the customer's past behavior; the customer indicates how often she tells other about the store (Higie, Feick, and Price 1987) based on a range of responses from 1=Never to 5=Once a week or more.

Measure of Loyalty

For the purpose of this study, loyalty was not measured directly, but was derived from a calculation of attitude and repeat purchase measures. This procedure is based on Day's Index of Loyalty as discussed in Chapter 3. That is, loyalty is measured as a ratio of the proportion of purchases ($P[B_i]$) made at the store and the initial attitude the customer had toward the store (A_i ; low values of attitude being favorable).

Measure of Business Performance

Measures of business performance include market share, sales volume, return on investment, and return on assets. Based on input from the management of the participating retailer and discussion with a nationally known expert on

the retail industry, the decision was made to use two measures to calculate business performance. For the purpose of this study, performance of each sample unit (i.e., store) is measured as a standardized composite score including two indicators: (1) store profitability (earnings before interest and taxes divided by gross sales) and (2) store sales per square foot. Sales per square foot and profitability are commonly used, equally important indicators of store performance -- sales per square foot being a customer-driven indicator and profitability representing a manager's ability to control operational variables. Each store owned by the organization that had been operating for the twelve months of the previous fiscal year was ranked on these two variables ($n=124$). Then the data, provided by corporate management, were standardized (i.e., the mean sales per square foot=\$147 and mean profitability=.048 were subtracted from each value and divided by the standard deviation, i.e., σ for sales=\$34.75 and σ for profitability=.056). Given no evidence of the relative importance of the two measures of business performance, the two resulting values were weighted equally (cf. Nunnally and Bernstein 1994, p. 154) and summed for each store to obtain a Total Standardized Performance Score for each store. These scores were used to preselect the purposive sample for this study.

To summarize, the scores for each of the constructs to be utilized in the hypothesis testing were calculated as follows:

Perceived Service Quality Score -- The average of the responses to the indicators of perceived service quality in comparison to the standard of competition, using the individual customer as the unit of analysis.

Perceived Price Score -- The average of the responses to the indicators of perceived price in comparison to the standard of competition, using the individual customer as the unit of analysis.

Perceived Merchandise Quality Score -- The average of the responses to the indicators of perceived merchandise quality in comparison to the standard of competition, using the individual customer as the unit of analysis.

Perceived Value Score -- The average of the responses to the indicators of perceived value using the individual customer as the unit of analysis.

Loyalty Score -- Adopting Day's (1969) Loyalty Index, loyalty was calculated as a ratio of the repeat purchase score (i.e., Part V, items 2 [2 measures], 6, 10, 12) and the attitude toward the behavior (i.e., Part V, item 1 [3 measures], low values of attitude being favorable).

Attitude Score -- The average of the responses to the three indicators of attitude (i.e., Part V, item 1 [3 measures]).

Repeat Purchase Score -- The average of the responses to the five items measuring repeat purchase (i.e., Part V, items 2 [2 measures], 6, 10, 12).

Word-of-Mouth Score -- The average of the responses to the four indicators of word-of-mouth communication (i.e., Part V, items 4 [2 measures], 8, 14).

Business Performance Score -- A composite measure of the two standardized indicators of store performance (i.e., profitability [earnings before interest and taxes divided by gross sales] and sales per square foot).

Format of Instrument

The consumer perceptions constructs of price, service quality, and merchandise quality are measured using competing stores as the standard of comparison in the performance disconfirmation scale. Each item measuring these three constructs is phrased so the aspect of the shopping experience is evaluated by the respondent relative to a competing store where they also shop. In an attempt to position the respondents in the context of competing stores, they are asked to list at the beginning of the instrument one other department store where they shop for clothing for themselves or for their family. This store would then be "top of mind" as they respond to the items measuring their perceptions of the store against the competition, as they define competition. The performance questions measuring perceived price, perceived service quality, and perceived merchandise quality were worded in such a way that the respondent evaluated the store on each item relative to the comparison standard.

Even though reverse wording keeps the respondent alert and avoids nay-saying or halo effects, negatively worded items were written positively because reverse items tend to add to respondent confusion and fatigue. Therefore, reverse coded items are not used in the items measuring the perception constructs. As recommended by Parasuraman,

Zeithaml, and Berry (1991), the seven-point rating scale used in SERVQUAL was reduced to a five-point scale (1=Strongly Disagree, 5=Strongly Agree). To accommodate those respondents who may not have the experience to respond to the question (e.g., cleanliness of restrooms, courteousness of store personnel on telephone), a "No experience" response option was added to the instrument. This adaptation to SERVQUAL has subsequently been supported by the developers of the instrument in a working paper (Parasuraman, Zeithaml, and Berry 1994b). In addition, to avoid respondent boredom, the service quality, merchandise quality and price perceptions items were organized into three sections, each with specific directions. Part II of the instrument contains items related to the physical facility itself, Part III pertains to the employees of the store, and Part I contains the remaining items.

Perceived value is measured using a format similar to that of the first three consumer perceptions. However, these items were phrased as a tradeoff between a benefit and a sacrifice, rather than as a performance disconfirmation using competition as the standard. These items are found in Part IV of the instrument.

Part V of the instrument contains the items measuring attitude, customer retention, and word-of-mouth. These measures use a combination of Likert scales and semantic differential scales. The last seven questions in the survey

are designed to collect demographic data related to the respondent.

Research Design

Sample Size and Selection

The sample was selected based on a two-step sampling plan; the study first sampled stores and then customers of those stores. First, the store sample was drawn from store units owned and operated by a multiunit retail ready-to-wear organization based in the southeastern United States. Two samples of thirty -- thirty stores that were performing well and thirty that were performing poorly -- were selected from the total sample ($n=124$). The selection of the top thirty and bottom thirty stores, based on the Standardized Performance Score calculated for each store, yielded the sample of high performance and low performance stores (respectively). Standardized performance scores ranged from -1.05 to -4.63 for the low performance stores and from 0.96 to 4.42 for the high performance stores.

Because the store is the unit of analysis for some statistical analyses, a sample size of thirty stores was determined to be sufficient. An n of 30 is sufficient because the Central Limit Theorem applies to samples of

thirty or more and the Power Curve levels out at sample sizes greater than thirty.

The second step in the sampling plan related to the sample of customers from each store. In an effort to gather a representative sample, a total of thirty customers from each store were surveyed. For the same reasons mentioned above, a sample size of thirty for each store was deemed sufficient. Every third customer entering the store was asked two qualifying questions -- "Have you shopped at this store before?" and "Do you have time to complete a survey?" To capture responses from different types of shoppers, ten customers were sampled from each of three time periods -- weekdays between opening and 5:00 PM, weekdays after 5:00 PM and weekends.

This type of nonprobability sampling, also referred to as "purposive sampling" (Kerlinger 1986), is characterized by the use of managerial and researcher judgment in a deliberate effort to obtain a representative sample by including presumably typical characteristics in both groups. A benefit of this type of sampling plan is the ability of the researcher to control for some of the extraneous variables that may affect the relationships being tested.

Control Variables

Extraneous variables which might affect the hypothesized relationships were identified. The variables identified as extraneous variables should be substantially related to the dependent variable (Kerlinger 1986) as well as to the independent variables (Narver 1994). Therefore, three variables that impact business performance -- (1) the store's competitive situation, (2) the location of the store, and (3) average household income in the store's trading area -- were identified. These variables were divided into three levels with an inherent ranking (i.e., strong, moderate, and weak competition; desirable, average, and undesirable location; high, medium, and low household income) and each store was categorized on each of the three variables. The judgements related to competition and location were made based on subjective data supplied by the district manager responsible for each store. This information related to market conditions, such as competition and its strengths, customer base, and economic base. These subjective measures can be used with confidence based on previous research which has found a strong correlation between subjective assessments and their objective counterparts (Narver and Slater 1990, Dess and Robinson 1984). Objective household income data were

obtained by each store manager from local resources, such as the Chamber of Commerce.

Each store sample was analyzed to insure that each group of stores was representative of the three extraneous variables. That is, to avoid the possibility of confounding variables, each sample contains stores from each of the three levels of competition. Likewise, both samples include a representation of stores categorized in each of the three levels of the other two extraneous variables. These three extraneous variables were considered continuous, independent variables with an inherent ranking in the analysis of hypotheses in which business performance was the dependent variable.

Data Collection Procedure

Data were collected by the researcher in fifteen locations and by personnel appointed by corporate management in the remaining sample units. In the cases where the researcher was not personally on site, a letter explaining the project, detailed instructions and a supply of questionnaires were sent to each store manager. In addition, a follow-up telephone call to each store manager was conducted and each questionnaire administrator was contacted to answer any questions or concerns before data collection began. Several additional follow-up telephone

calls were made to each store during the data collection process.

The data collection procedure for this study was previously employed in the quantitative study referred to earlier conducted by the researcher and two colleagues (Dabholkar, Thorpe and Rentz 1996, forthcoming). This procedure differs from previous studies on retail service quality. Finn and Lamb (1991) asked respondents if they had ever shopped at stores like those mentioned by the interviewer. This methodology introduces bias because the interviewer does not know if the respondent has actually shopped at the stores mentioned. The present study collected store specific responses from actual customers of the store which are more desirable than "retail in general" responses.

This study employed a questionnaire, self-administered at the store location. The rationale for this data collection method is based on the assumption that respondents are more attentive to the task of completing a questionnaire, and therefore respond more meaningfully, when they are contextualized in the environment which they are evaluating. Being in the natural environment (i.e., shopping setting) is preferable to sitting at the kitchen table at home amidst distractions (e.g., children demanding attention, dinner cooking, etc.) that take precedence over the task of attending to and completing the survey.

The data were collected from the sample units during an eight-week time period. Because the goal of the data collection was to measure customers' global judgements about the retailer's overall excellence based on past experience, the data were collected as the customer was entering the store, *before s/he* had an experience in the store that day. If the data were collected as the customer was exiting the store, the immediate response to the specific transaction that took place that day (defined in this study as customer satisfaction) would be measured.

To achieve a random sample, every third adult customer entering the store, *before* having an experience in the store that day, was asked to complete the questionnaire provided they had previously shopped at the store and were willing to complete the questionnaire as *s/he* entered the store. Because perceptions of price, service quality, and merchandise quality, as well as attitudes and intentions related to the store, are based on past experience, customers who had not previously shopped at the store were excluded from the sample. If a customer declined to participate (or did not qualify), each successive customer was asked until someone agreed to complete the survey, and the researcher returned to asking every third customer.

The questionnaires were self-administered by the respondents who were afforded a chair in a quiet area near the entrance and a clip board for their convenience while

completing their questionnaires. A coupon for a ten percent discount off a future purchase was offered to each qualified respondent as an incentive.

Based on the researcher's personal experience of collecting 360 of the 1545 completed questionnaires, the cooperation rate was approximately 20% (i.e., one out of every five customers that were randomly selected to participate agreed to do so). The most common reason for refusal to participate was lack of time (e.g., on lunch hour, husband waiting in the car, etc.), as opposed to a lack of interest.

This procedure yielded responses from 812 customers of 29 high performance stores and 744 customers from 28 low performance stores, for a total of 1556 customers of 57 stores.

Research Question and Hypotheses

Hypotheses 1 to 12 test the supporting relationships in the process model (see Figure 10) while the primary research question (H13) investigates the indirect relationship between perceived service quality and business performance.

The relationship between perceived service quality and business performance is modeled as an indirect relationship; that is, the antecedent of perceived service quality is expected to affect the consequence of business performance

indirectly through the influence of perceived value and repeat purchase behavior. The Process Model of Business Performance Outcomes of Service Quality depicts this relationship stated in hypothesis 13 as follows:

H13_c: Perceived service quality positively influences business performance through the moderator variables of perceived value and customer repeat purchase behavior.

The conceptual hypotheses (**H_c**) developed in Chapter 3 are rephrased in this chapter as statistical hypotheses (**H_s**) to more closely reflect the analyses that were employed to test the relationships delineated in the hypotheses. Therefore, H13 is rephrased as:

H13_s: Structural equation modeling of perceived service quality, perceived value, customer retention, and the control variables of competition, income, and location (independent variables) on business performance (dependent variable) yields an acceptable fit and significant path coefficients for the three equations in the model (unit of analysis=customer).

Hypotheses 1 - 12, stating the supporting relationships in the process model, were also tested (see Figure 10). Hypotheses 1 - 11 were tested using the customer as the unit of analysis. These hypotheses are stated both conceptually and statistically as follows:

H1_c: Perceived price and perceived merchandise quality are positively correlated.

H1_s: Correlation of perceived price score and perceived merchandise quality score yields a correlation coefficient (*r*) that is positive and significant (unit of analysis=customer).

- H2_c: Perceived price and perceived service quality are positively correlated.
- H2_s: Correlation of perceived price score and perceived service quality score yields a correlation coefficient (r) that is positive and significant (unit of analysis=customer).
- H3_c: Perceived service quality and perceived merchandise quality are positively correlated.
- H3_s: Correlation of perceived service quality score and perceived merchandise quality score yields a correlation coefficient (r) that is positive and significant (unit of analysis=customer).
- H4_c: Perceived price negatively influences perceived value.
- H4_s: Regression of perceived price score (independent variable) on perceived value score (dependent variable) yields a negative regression coefficient (unit of analysis=customer).
- H5_c: Perceived service quality positively influences perceived value.
- H5_s: Regression of perceived service quality score (independent variable) on perceived value score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).
- H6_c: Perceived merchandise quality positively influences perceived value.
- H6_s: Regression of perceived merchandise quality score (independent variable) on perceived value score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).
- H7_c: Perceived price, perceived service quality, and perceived merchandise quality jointly determine the customer's perception of value.
- H7_s: Regression of perceived price score, perceived service quality score, and perceived merchandise score (independent

variables) on perceived value score (dependent variable) yields positive regression coefficients (unit of analysis=customer).

H8_c: Perceived value positively influences attitude.

H8_s: Regression of perceived value score (independent variable) on attitude score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).

H9_c: Perceived value positively influences repeat purchase behavior.

H9_s: Regression of perceived value score (independent variable) on repeat purchase score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).

H10_c: Perceived value positively influences customer loyalty.

H10_s: Regression of perceived value score (independent variable) on loyalty score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).

H11_c: Attitude positively influences word-of-mouth.

H11_s: Regression of attitude score (independent variable) on word-of-mouth score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).

For the final supporting hypothesis, the unit of analysis shifts from the customer to the store.

H12_c: Repeat customer purchase positively influences business performance over and above the influence that competition, location, and customer income have on business performance.

H12_s: Regression of repeat purchase score, and the control variables of competition, location, and customer income (independent variables)

on business performance (dependent variable) yields a positive regression coefficient for customer retention (unit of analysis=store).

Summary of Research Methodology

The purpose of this chapter has been to present the methodology used in this study to test the model presented in Chapter 2 and the hypotheses developed in Chapter 3. The research design employed modifications of established measures, as well as new measures developed for the purpose of this study. This chapter describes the scale development process, the scales used to measure the constructs of interest, sample selection, and the data collection procedure. Finally, this chapter presents the research hypotheses in both conceptual and statistical form. Results of the analyses used to test these hypotheses are provided in the next chapter.

CHAPTER 5

DATA ANALYSIS AND RESULTS

The purpose of this chapter is to present the data analyses detailed in Chapter 4 and to report the research results. The analysis required to investigate the research question and the hypotheses that guide this study involved four steps and four statistical analytic methods (see Table 4).

First, descriptive and diagnostic statistical analyses were applied to the data to provide an understanding of the data and to prepare the data for analysis. The data were examined to determine characteristics of the data, including the effect of missing values on the analysis, the influence of outliers, and possible multicollinearity among the variables. A description of the sample is also reported.

Next, confirmatory factor analysis was employed to test the proposed factor structures underlying the four measures of customer perceptions -- perceived price, perceived service quality, perceived merchandise quality, and perceived value.

Once the researcher had evidence to support the validity of the measures of the dimensions of the perceptions constructs, the next stage in the analysis was undertaken. The testing of the hypotheses indicated in Figure 10 was conducted using correlation, regression,

Table 4. Data Analysis Procedure

Step	Analysis	Purpose
Data Preparation	Descriptive Statistics Frequencies Means Standard deviations Minimum and maximum values	To summarize data and inspect the data for data entry errors
	Analysis of Residuals	To test for linear relationships among variables
	Analysis of Influential Observations	To identify outliers for investigation and possible removal from data set
Test Proposed Factor Structure	Confirmatory Factor Analysis	To test proposed factor structure underlying the four customer perception constructs
Test Hypotheses	Correlation and Regression	To test Hypotheses 1 - 11 (unit of analysis = customer)
	Logistic Regression	To test Hypothesis 12 (unit of analysis = store)
	Structural Equation Modeling	To test Hypothesis 13 (unit of analysis = customer)
Post Hoc Analyses of Hypotheses 12 and 13	Analysis of Covariance and Regression	To explore possible inclusion of additional independent variables in the model Consider possibility of higher order relationships (interaction terms)

logistic regression, and structural equation modeling. Finally, post hoc analyses using analysis of covariance, logistic regression and structural equation modeling were conducted to further explore the relationships proposed in hypotheses 12 and 13.

Because hypotheses 1 - 11 test the relationships between variables at the individual respondent level, correlation and regression analyses are employed using the customer as the unit of analysis. However, because hypothesis 12 is tested using business performance (a store level variable) as the dependent variable, the independent variables in this hypothesis were converted to store level variables. Because the dependent variable (business performance) is a categorical, binary variable and the independent variables (customer retention, location, competition, customer income) are continuous, logistic regression is used to test the relationship proposed in this hypothesis.

Structural equation modeling is used to test the path hypothesized in hypothesis 13 (i.e., from perceived service quality, to perceived value, to customer retention, to business performance). For the hypothesis to be supported, the overall fit of the model, as well as the path coefficients for each of the three equations in the model, is required to be significant.

Step 1: Data Preparation

Before submitting the questionnaires to data entry, the researcher coded each questionnaire on nine variables. These nine variables included: customer identification number, store number, high/low performance classification (0=Low, 1=High), store performance score (ranging from -4.63 to 4.42, $\sigma=2.56$), daypart from which data were collected (1=Weekday before 5:00PM, 2=Weekday 5:00PM to closing, 3=Weekend), competition category (1=Strong, 2=Moderate, 3=Weak), location category (1=Desirable, 2=Average, 3=Undesirable), average household income category (1=Over \$35,000, 2=\$20,000-\$35,000, 3=Less than \$20,000), and competitive standard. The competitive standard categories were determined by the researcher based on the store that the respondent indicated on the questionnaire as the other store where s/he shopped most frequently for family clothing. Each store mentioned by a respondent was categorized into one of three categories, i.e., 1=Specialty store, 2=Department store, 3=Discount store.

After coding and entering the questionnaire data into the computer, the data were edited. Because data entry was controlled by a computer program written to allow only valid entries into each field, the data required minimal editing.

Various descriptive statistics were then computed using the data. Results of the analysis (i.e., means, standard

deviations, kurtosis, skewness, minimum and maximum values) are presented in Appendix B. Distributions of the variables are included in Appendix C. These descriptive statistics were also used to check for data entry errors. Examination of the means of each variable detected incorrect data resulting from researcher error during the coding process (e.g., incorrect performance measures in stores 21 and 125, incorrect customer identification numbers in store 125). These inaccuracies were corrected.

Next, the "0" responses indicating "No Experience" on the items measuring perceived service quality, perceived price, perceived merchandise quality, and perceived value were converted to missing values in the data set. This treatment drew attention to the perceived service quality item measuring courtesy on the telephone (PSQ29). One-third of the respondents indicated "No Experience" ("0") to this item. Since the statistical analyses in this study employ only those cases that provide responses to every question, retention of this item would reduce the sample size for analyses using perceived service quality from 1029 to 865. The decision was made to delete this item from all subsequent data analysis, including the confirmatory factor analysis.

Further preparation of the data was conducted through analysis of residuals and diagnostic procedures to detect influential observations. Residual plots of the

relationships among the variables of interest were examined. Analysis of these plots revealed influential observations which were identified using Cook's D (values greater than 1.0 indicating substantial influence) in conjunction with the studentized residual values (values greater than 2.0 indicating substantial influence). Observations that exceeded the threshold values for both diagnostic measures were considered candidates for designation as outliers. After examining the questionnaires of these identified cases, eleven influential cases (i.e., 15, 176, 432, 433, 434, 524, 842, 844, 1033, 1087, 1096) were eliminated from the data set because these cases were unique in comparison to the remainder of the population. Examination of these eleven questionnaires revealed responses that would contribute to measurement error (e.g., inconsistent responses, omission of entire sections of the questionnaire, global response to all items). The purpose of the identification and deletion (if appropriate) of influential observations is to create a data set that is most representative of the actual population, and to ensure validity and generalizability of the results of the study (Hair et al. 1995, p. 157).

The data preparation process also involved testing the underlying assumptions of multivariate analyses employed in this study. Because of the large number of variables (i.e., 79), which tends to exacerbate potential distortions and

biases when the assumptions are violated, testing of the data for the assumptions of normality, linearity and homoscedasticity is particularly crucial in this case (Hair et al. 1995). In addition, the large sample size tends to mask the indications of assumption violations that may be more apparent with a smaller sample. None of the variables exhibit sufficient non-normality in their distributions that would indicate the need for data transformation. The measures of kurtosis (-1.77 to 3.93) and skewness (-2.26 to .87) are within acceptable ranges to support the assumption of univariate normality.

In addition to the detection of influential observations, the residuals plots were examined to test two additional assumptions of regression analysis -- linearity and homoscedasticity. To test for the assumption of linearity, each of the predictor variables (perception constructs) was regressed onto the dependent variable (business performance). For all four variables, no nonlinear pattern was indicated, thus meeting the assumption of linearity for each predictor variable. Similarly, analysis of the plots showed no systematic pattern of increasing or decreasing residuals. This finding supports the assumption of homoscedasticity (i.e, equal error variance) across the predictor variables.

Multicollinearity among independent variables included in the regression models being tested in the proposed

hypotheses has substantial effects on the results of the regression procedure. Correlation among the predictor variables makes it more difficult to determine the contribution of each variable in the model. Therefore, assessing the degree of collinearity is essential to the correct interpretation of the regression results. Examination of the correlation matrix for the independent variables reveals a degree of correlation among the four customer perception variables (see Table 5).

Table 5. Correlations Among Independent Variables

	PSQ Score	PP Score	PMQ Score	PV Score	Attitude	Cusret Score
PSQ Score	1.000	.826	.782	.798	.312	.294
PP Score	.826	1.000	.667	.728	.357	.337
PMQ Score	.782	.667	1.000	.717	.319	.261
PV Score	.798	.728	.717	1.000	.457	.428
Attitude	.312	.357	.319	.457	1.000	.593
Cusret Score	.294	.337	.261	.428	.593	1.000

However, the correlation coefficients do not exceed levels which would signal substantial collinearity. Likewise, the variance inflation factor (VIF), which is a measure of the degree to which each independent variable is

explained by the other independent variables, indicates that three of the customer perception variables (perceived service quality, perceived price, and perceived value) may be involved in linear dependencies. However, none of the VIF values exceed a level that would decrease the reliability of the coefficient estimates. Therefore, it can be concluded that although correlations among the independent variables exist (as might be expected with social science data), the degree of collinearity does not require any corrective action.

Description of the Sample

The two step sampling procedure described in Chapter 4 yielded responses from 806 customers of 29 high performance stores and 739 customers from 28 low performance stores, for a total of 1545 customers of 57 stores. Because of incomplete data collection from some of the stores, the sample size is less than the projected 1800 customers from 60 stores, but was deemed more than adequate to test the hypotheses set forth in the study.

The respondents included in the customer sample tended to be married women, 18 to 55 years old, with at least a high school or technical school degree living in households that earn an average income of \$30,000. In fact, the average income of the respondents was fairly evenly

distributed across the categories below \$70,000. The demographic profile of the sample closely matches the description of the customer base offered by the sponsoring organization. Table 6 presents demographic information relating to the sample. Totals less than 1545 indicate the failure of some customers to respond to that question.

Step 2: Test of Proposed Factor Structures

After completion of the examination of the descriptive and diagnostic statistics, confirmatory factor analysis (using LISREL VII, Jöreskog and Sörbom 1989) was employed to test the proposed factor structure underlying the four customer perceptions constructs -- perceived price, perceived service quality, perceived merchandise quality, and perceived value. Because these constructs are measured using a composite score (i.e., an unweighted sum), the unidimensionality of the measures must be determined before further analysis can be conducted (Gerbing and Anderson 1988). Confirmatory factor analysis of each model separately (because of the large number of indicators for each model) was used to determine if the set of proposed indicators loaded on the hypothesized factors. Table 2 indicates which items were hypothesized to load on each of the factors of the four perception constructs -- perceived

Table 6. Characteristics of the Sample

Item	Category	n	%
Gender	Female	1325	(87.4%)
	Male	191	(12.6%)
Age	Less than 18	113	(7.6%)
	18 - 25	294	(19.9%)
	26 - 35	395	(26.7%)
	36 - 45	370	(25.0%)
	46 - 55	170	(11.5%)
	56 - 65	100	(6.8%)
	66 - 75	33	(2.2%)
	Over 75	4	(.2%)
		35.45 Average	
Marital Status	Married	931	(61.5%)
	Not Married	580	(38.4%)
Education	Less than four years of high school	98	(6.5%)
	High school graduate	547	(36.2%)
	Technical or trade school	112	(7.4%)
	Some college	405	(26.8%)
	College graduate	255	(16.9%)
	Graduate school	96	(6.3%)
Income	Less than \$20,000	281	(20.1%)
	\$20,000 - \$34,999	416	(29.8%)
	\$35,000 - \$49,999	358	(25.6%)
	\$50,000 - \$69,999	236	(16.9%)
	\$70,000 or more	106	(7.6%)
		\$30,000 Average	

service quality, perceived merchandise quality, perceived price, and perceived value.

Scale Purification

Each of the four perceptions constructs was first individually subjected to confirmatory factor analysis. Two different fit indices were examined to determine the degree to which the data fit the model. The Adjusted Goodness of Fit (AGFI) reported by the LISREL program addresses the overall fit of the model to the data, while the Comparative Fit Index (CFI) compares the fit of the measurement model to the fit of a referent model. The referent model used in this study is the null model which represents the worst possible fit in which all variables are independent, i.e., there is no covariation among the variables. The CFI is calculated by subtracting from 1 the ratio of the difference between the χ^2 and degrees of freedom of the measurement model and the difference between the χ^2 and degrees of freedom of the null model. Because the CFI is insensitive to sample size (versus other fit indices such as the Chi-Square test), it was deemed an appropriate evaluation of fit against the measurement model in this study which employs a large sample size ($n=1545$). As a rule of thumb, a CFI over .90 is considered an acceptable evaluation of fit (Bentler and Bonett 1980).

The initial models yielded an acceptable fit for two of the constructs -- perceived merchandise quality (AGFI=.93, CFI=.96) and perceived price (AGFI=.83, CFI=.89). Even though the CFI for perceived price is below the .90 criteria, the fit was deemed adequate because examination of the modification indices and standardized residuals indicated that a crucial indicator (i.e., "convenient locations") be dropped to improve the fit. This option was not theoretically acceptable because participants in the qualitative research stressed store location as one criteria for evaluating the time (i.e., driving and parking) and effort necessary to patronize a particular store. Therefore, the CFI of .89 was considered acceptable. An unacceptable fit was determined for the remaining two constructs -- perceived service quality (AGFI=.79, CFI=.84) and perceived value (AGFI=.79, CFI=.90).

As Bollen (1989, p. 296) recognizes, initial models often do not fit the data well. These low measures of overall fit may be caused by a misspecified model resulting from the incorrect inclusion (or exclusion) of a variable. A common response to this condition is respecification of the model. This iterative process was applied to the models of perceived service quality and perceived value. Analysis of modification indices and standardized residuals was used to guide the respecification. However, theoretical considerations were the most important and overriding

criteria for determining if a change indicated by the analysis was a theoretically sensible change to the model.

A review of three items proposed to measure perceived service quality resulted in their elimination from the scale. Scrutiny of Item PSQ8 ("is more likely to accept the credit cards I carry"), lead to the deletion of this proposed indicator of Policy. Discussion with management of the retail organization supported this decision. The organization does not offer a store credit card and a very small percentage of customer transactions are charge purchases. Therefore, the attribute of credit cards was deemed unimportant to customers of the store and the item was dropped. A second item, PSQ12 ("makes it easier for me to find what I need in the store") was difficult to interpret because of its ambiguity. The respondent might interpret the question in the context of store personnel, store layout, signage, or to departmental arrangement. Therefore, this item did not clearly load on any one factor and was dropped from the physical aspects dimension. Finally, PSQ21 ("are better at telling me exactly when service will be performed") was dropped from the reliability dimension. This item may overlap with two other reliability indicators -- PSQ4 "is more likely to do what they promise to do" and PSQ6 "is more likely to do things right the first time." Since the goal of confirmatory factor analysis is to capture the essence of the construct in the most

parsimonious manner, PSQ21 was dropped based on the empirical and theoretical evidence that it was superfluous to the analysis. Confirmatory factor analysis of the respecified model of perceived service quality (including the remaining 25 indicators) returned an improved fit (AGFI=.82, CFI=.90).

The initial model of perceived value also required respecification. Following the steps described above, two items were dropped from the original scale. Upon reflection, items PV7 ("I receive better overall value when I shop at the store.") and PV12 ("I get value for my money at this store."), are overall measures as opposed to the remaining items which indicate a tradeoff between a benefit against a sacrifice of shopping at the store. For this reason, these two items did not clearly load on one factor and were dropped from the scale. Confirmatory factor analysis of the new model of perceived value revealed an improved fit (AGFI=.86, CFI=.90).

As was mentioned earlier, the initial models of the other two perceptions constructs -- perceived merchandise quality and perceived price -- had an acceptable fit with the data. Figure 12 depicts the model specification reflecting the results of this scale purification process. Table 7 presents the measurement model specifications for the four constructs.

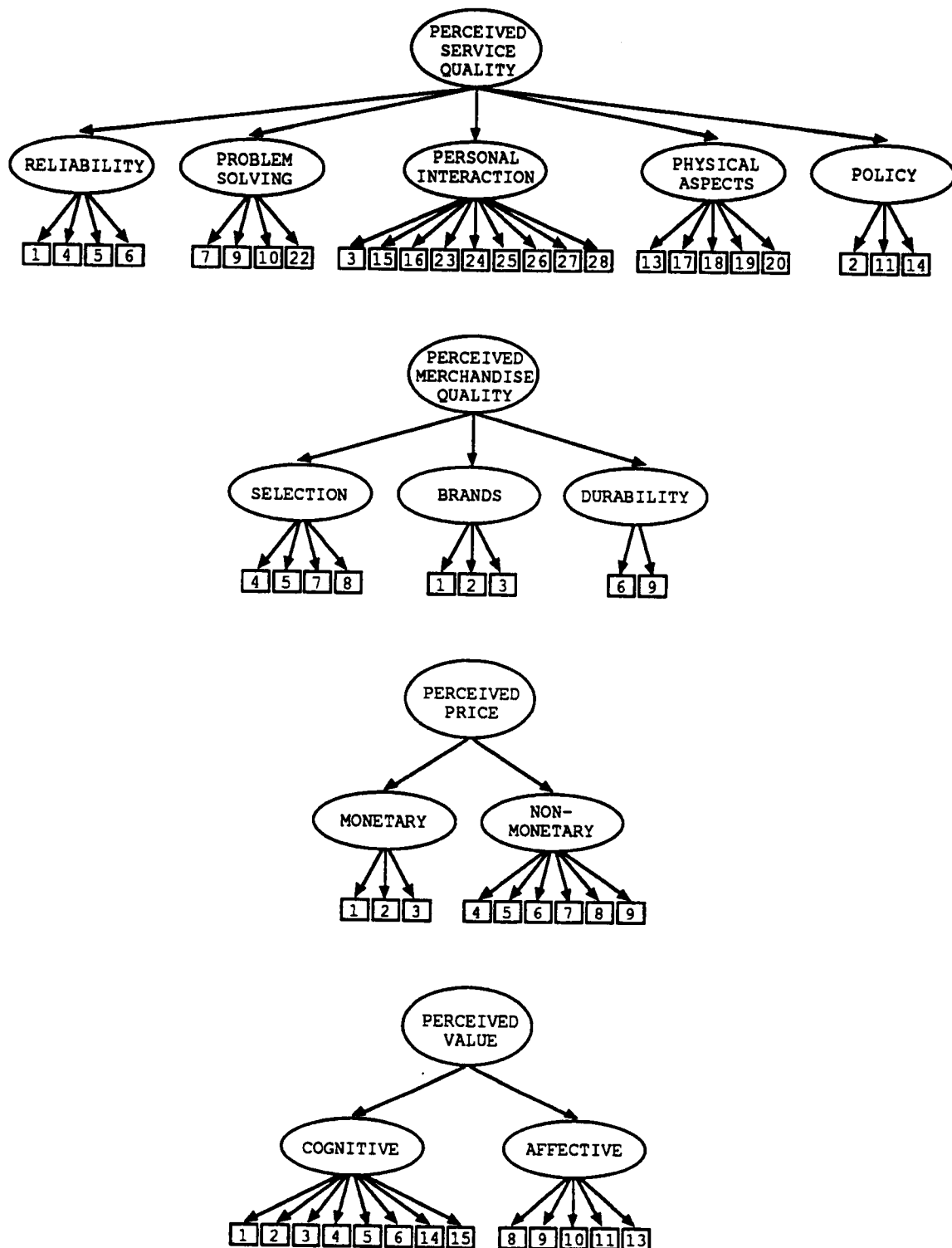


Figure 12: Proposed Factor Structure of Four Customer Perception Constructs

Table 7. Measurement Model Specifications

Construct	χ^2	df	GFI	AGFI	CFI
Perceived Service Quality					
First Order	2955.19	270	.85	.82	.90
Null Model	26661.50	300	.16	.09	
Second Order	2462.20	270	.88	.85	.92
Perceived Price					
First Order	708.90	28	.89	.83	.87
Null Model	6025.29	36	.43	.28	
Second Order	703.59	25	.89	.81	.89
Perceived Merchandise Quality					
First Order	303.88	27	.96	.93	.96
Null Model	7232.51	36	.33	.16	
Second Order	298.34	24	.96	.92	.96
Perceived Value					
First Order	1583.49	66	.86	.80	.90
Null Model	14985.96	78	.20	.07	
Second Order	1542.46	63	.86	.80	.90

Cronbach's alpha for each factor was also computed as a measure of the internal consistency within the twelve different factors underlying the four constructs.

Investigation of the coefficient alphas revealed that the internal consistency of the indicators of each of the four latent variables exceeded Nunnally's (1994, p. 265) criteria of .70 for construct validation research. Table 8 reports the findings of this analysis. Based on the evidence provided by Cronbach's alpha, it was concluded that the reliability of the proposed factor structure was supported.

Test of Second Order Perceptions Models

After the proposed first order factor structure of each perceptions construct was supported, the next step was to determine if each perception construct may be viewed as a higher order factor to these dimensions as is proposed in the Process Model of Business Performance Outcomes. Using the same models as specified above, each construct was modeled as a second order construct. That is, each first order model was tested to determine whether the latent variables directly influencing the observed variables are influenced by a higher order latent variable that does not directly affect the observed variables (Bollen 1989). Confirmatory factor analysis found an excellent fit for each of the four second order models (perceived service quality

Table 8. Coefficient Alpha for Underlying Factors of Each Perception Construct

Construct and Factor	Number of Items	Coefficient Alpha
Perceived Service Quality		
Reliability	4	.829
Policy	3	.722
Personal Interaction	9	.937
Problem Solving	4	.839
Physical Aspects	5	.867
Perceived Merchandise Quality		
Selection	4	.831
Brand	3	.731
Durability	2	.769
Perceived Price		
Monetary	3	.815
Nonmonetary	6	.846
Perceived Value		
Cognitive	8	.907
Affective	5	.917

AGFI=.85, CFI=.92; perceived price AGFI=.81, CFI=.89; perceived merchandise quality AGFI=.93, CFI=.96; perceived value AGFI=.80, CFI=.90). The model characteristics and fit indices for each construct are provided in Table 7. Based on the results of the second order factor analysis, it is concluded that the second order factor structure of the four perceptions constructs is well supported.

In addition to verifying the reliability of the measures of the four customer perception constructs, the reliability of the measures of the customer behavior variables was also verified. Cronbach's alpha was calculated for the measures of attitude, word-of-mouth, and repeat purchase behavior. For the three items measuring attitude, the reliability of .96 is sufficient (Nunnally and Bernstein 1994, p. 265) to indicate the internal consistency of the measure. The Cronbach alpha ($\alpha = .79$) for the five items measuring repeat purchase behavior indicates adequate reliability of this measure as well. And finally, the internal consistency of the four-item measure of word-of-mouth is also satisfactory, as is indicated by the reliability of .75.

Step 3: Test Hypotheses

To test the theory proposed in the Process Model of Business Performance Outcomes of Service Quality, the

research hypotheses are tested. Hypotheses 1 - 12 state the relationships among the variables in the process model (see Figure 10). Hypotheses 1 - 11 are tested using the customer as the unit of analysis, whereas hypothesis 12 is based on the store as the unit of analysis. The bi-directional relationships proposed in hypotheses 1 - 3 are tested using correlation analysis. Hypotheses 4 - 11 predict unidirectional relationships and, therefore, are tested using regression analysis to objectively assess the degree and character of the relationship between the dependent and independent variables in each hypothesis. Hypothesis 12 is tested using logistic regression with store as the level of analysis, business performance as a binary, categorical variable, and customer retention and the three control variables as continuous independent variables. Finally, hypothesis 13 is tested using the Structural Equation Modeling procedure with customer as the level of analysis. Figure 13 depicts the results of the hypotheses tests which are discussed in the balance of this chapter.

Hypothesis 1

The first hypothesis, stated both conceptually and statistically is:

H1_c: Perceived price and perceived merchandise quality are positively correlated.

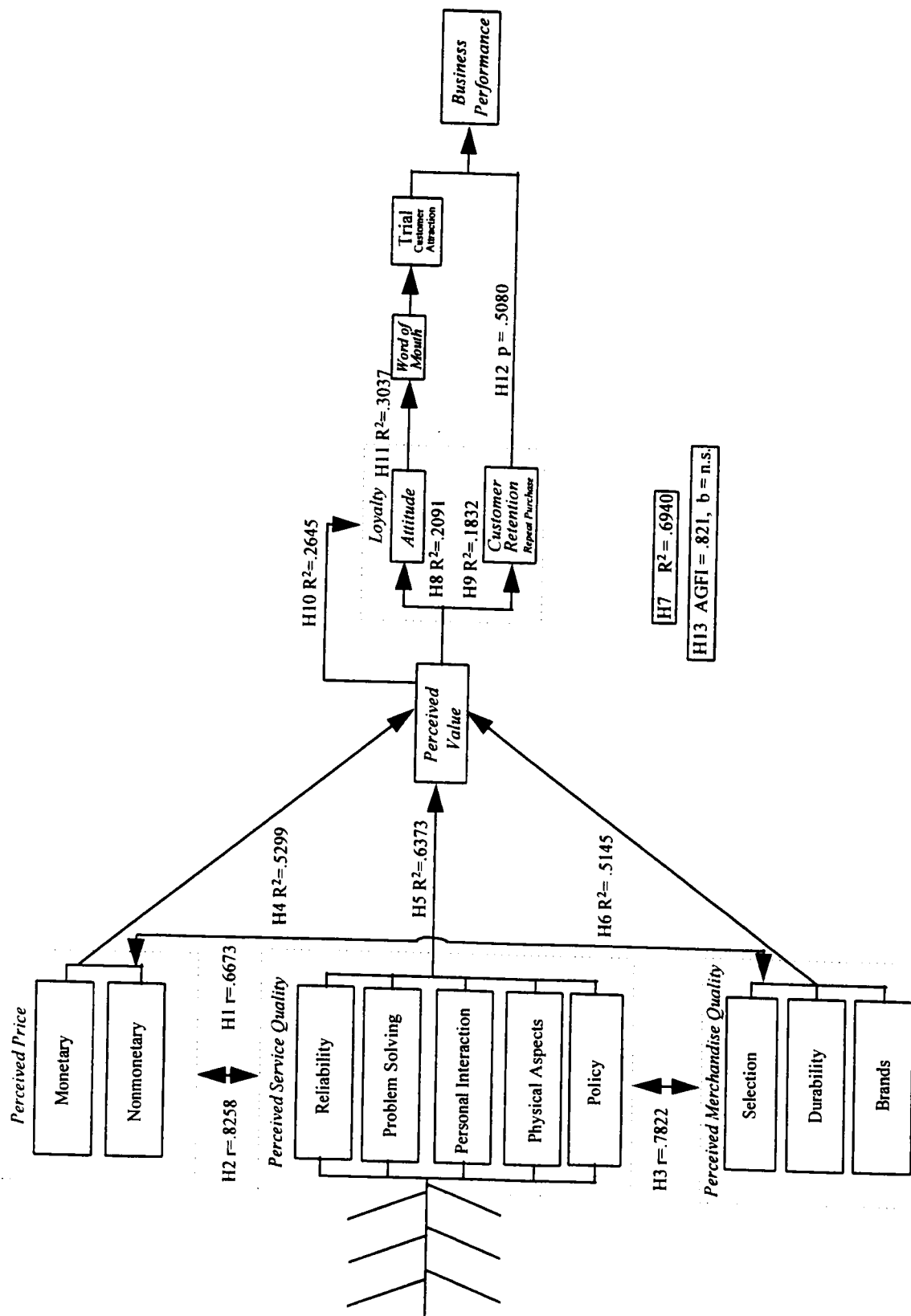


Figure 13: Summary of Results of Hypotheses Tests

H1₁: Correlation of perceived price score and perceived merchandise quality score yields a positive correlation coefficient (r) (unit of analysis=customer).

As supported by the price-quality literature and depicted in the model, perceived price and perceived merchandise quality are closely associated. That is, customers' perceptions of price are related to their perceptions of merchandise quality, and vice versa. This proposed relationship was tested with correlation analysis. The results of the analysis are presented in Table 9.

Table 9. Results of Correlation Analysis of Hypothesis 1

Variables	n	r	p
Perceived Price Score	1255	r=.6673	.0001
Perceived Merchandise Quality Score			

The correlation coefficient (r=.6673) indicates a strong, positive, and significant (p<.0001) relationship between perceived price and perceived merchandise quality. Therefore, hypothesis 1 is supported.

Hypothesis 2

The second hypothesis, stated both conceptually and statistically is:

H2_c: Perceived price and perceived service quality are positively correlated.

H2_s: Correlation of perceived price score and perceived service quality score yields a positive correlation coefficient (r) (unit of analysis=customer).

Much like hypothesis 1, this hypothesis is based on the price-quality relationship literature. However, rather than merchandise quality, this hypothesis relates service quality to price. In other words, consumers' perceptions of price are associated with their perceptions of the quality of service they receive, and vice versa.

This proposed relationship was tested with correlation analysis of the two variables, perceived price and perceived service quality. The results of the analysis are presented in Table 10.

Table 10. Results of Correlation Analysis of Hypothesis 2

Variables	n	r	p
Perceived Price Score	997	r=.8258	.0001
Perceived Service Quality Score			

The high correlation coefficient ($r=.8258$) indicates a strong, positive, and significant ($p<.0001$) relationship between perceived price and perceived service quality. In other words, customers who perceive higher prices in a department store tend to also perceive higher levels of

service than customers who perceive the prices to be lower. Therefore, hypothesis 2 is supported.

Hypothesis 3

The last two-directional hypothesis in the model, hypothesis 3, is stated both conceptually and statistically as follows:

H3_c: Perceived service quality and perceived merchandise quality are positively correlated.

H3_s: Correlation of perceived service quality score and perceived merchandise quality score yields a positive correlation coefficient (r) (unit of analysis=customer).

This hypothesis is based on the concept that consumers' perceptions of service quality and merchandise quality are related. In other words, consumers' perceptions of quality of merchandise influences their perceptions of the service they receive, and vice versa.

This relationship was tested with correlation analysis. The results of the analysis are presented in Table 11.

Table 11. Results of Correlation Analysis of Hypothesis 3

Variables	n	r	p
Perceived Service Quality Score	939	$r = .7822$	.0001
Perceived Merchandise Quality Score			

The high correlation coefficient ($r=.7822$) indicates a strong, positive, and significant relationship ($p<.0001$) between perceived service quality and perceived merchandise quality. Therefore, hypothesis 3 is supported.

Once the relatedness of the three perception constructs had been empirically tested and supported, the next step was to test the directional relationships between each of these constructs and perceived value. These relationships were tested with hypotheses 4, 5, and 6.

Hypothesis 4

The first directional hypothesis is stated both conceptually and statistically as follows:

- H4_c:** Perceived price negatively influences perceived value.
- H4_s:** Regression of perceived price score (independent variable) on perceived value score (dependent variable) yields a negative regression coefficient (unit of analysis=customer).

The value literature espouses an inverse relationship between price and value (i.e., as price increases value decreases). Therefore, a negative relationship between perceived price and perceived value was hypothesized. Simple least squares regression analysis was used to test hypothesis 4 by regressing perceived price on perceived value. The results are presented in Table 12.

The coefficient of determination, $R^2=.5299$, indicates that the predictor variable, perceived price, explains more

Table 12. Results of Regression Analysis of Hypothesis 4

Source	df	Sum of Squares	Mean Square	t Value	Prob< t
Model	1	367.455	367.455	39.051	0.0001
Error	1353	326.015	0.241		
Corrected Total	1354	693.469			

than half of the variance in the criterion variable, perceived value. However, the valence of the regression coefficient is positive ($b=.7444$, $p<.0001$). Therefore, perceived price influences perceived value in a positive direction, rather than in a negative direction, as hypothesized. That is, as perceived price increases, perceived value also increases. Based on these findings, hypothesis 4 is not supported. That is, there is a relationship between perceived price and perceived value, but the relationship is positive.

Albeit inconsistent with extant literature related to value and price, this finding is plausible. Researchers generally conceptualize value as a ratio of perceived quality to perceived price (Zeithaml 1988; Dodds, Monroe, and Grewal 1991), positing that as the ratio increases,

perceived value increases. However, Dodds and Monroe (1985) expanded this conceptualization by introducing the notion of perceived value as a quadratic function. That is, perceived value increases as perceived price and perceived quality increase to some acceptable range, then perceived value decreases as perceived price continues to increase because the sacrifice demanded becomes too great in the tradeoff equation. It is possible that for the customers of the stores in this study, their perceptions of price have not passed the acceptable range and, therefore, perceptions of price are varying in the same direction as perceptions of value (i.e., as price increases, value also increases). This explanation is reasonable, given that the stores sampled in this study offer low-to-moderate priced family clothing.

Hypothesis 5

The second directional hypothesis (H5) is stated both conceptually and statistically as follows:

- H5_c:** Perceived service quality positively influences perceived value.
- H5_s:** Regression of perceived service quality score (independent variable) on perceived value score (dependent variable) yields a positive regression coefficient (unit of analysis= customer).

Again, simple least squares regression analysis was used to test hypothesis 5 by regressing the independent variable, perceived service quality, on the dependent variable, perceived value. The results are presented Table 13.

Table 13. Results of Regression Analysis of Hypothesis 5

Source	df	Sum of Squares	Mean Square	t Value	Prob< t
Model	1	338.091	338.091	41.728	0.0001
Error	991	192.423	0.194		
Corrected Total	992	530.514			

In this test, the R^2 of .6373, indicates that the predictor variable, perceived service quality, explains a large proportion of the variance in the dependent variable, perceived value. In addition, the valence of the regression coefficient is positive ($b=.8217$, $p<.0001$) as predicted. That is, as the customer's perception of service quality increases, the perception of value received also increases. The positive, significant ($p<.0001$) regression coefficient supports hypothesis 5.

Comparison of the results of hypotheses 4 and 5 reveals that when perceived price and perceived service quality are considered independently, perceived service quality explains

a greater percentage of the variance in perceived value than does perceived price.

Hypothesis 6

The model proposes one more customer perception -- perceived merchandise quality -- as a component of perceived value. This relationship is stated in hypothesis 6.

H6_c: Perceived merchandise quality positively influences perceived value.

H6_s: Regression of perceived merchandise quality score (independent variable) on perceived value score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).

Regression analysis was used to test hypothesis 6 by regressing the independent variable, perceived merchandise quality, on the dependent variable, perceived value. The results are presented in Table 14.

Table 14. Results of Regression Analysis of Hypothesis 6

Source	df	Sum of Squares	Mean Square	t Value	Prob> t
Model	1	367.455	367.455	39.051	0.0001
Error	1353	326.015	0.241		
Corrected Total	1354	693.469			

The coefficient of determination, $R^2=.5145$, indicates that the predictor variable, perceived merchandise quality, explains over half of the variance in the criterion variable, perceived value. The regression coefficient is positive and significant ($b=.6963$, $p<.0001$). Therefore, hypothesis 6 is supported and it can be concluded that perceived merchandise quality influences perceived value as predicted. That is, as perceived merchandise quality increases, perceived value also increases.

Hypothesis 7

Whereas hypotheses 4, 5, and 6 test the independent influence of perceived price, perceived service quality and perceived merchandise quality on perceived value, hypothesis 7 tests the joint effect of these three customer perceptions on the perception of value. The hypothesis testing the proposed relationship is stated as follows:

- H7_c: Perceived price, perceived service quality, and perceived merchandise quality jointly determine the customer's perception of value.
- H7_s: Regression of perceived price score, perceived service quality score, and perceived merchandise score (independent variables) on perceived value score (dependent variable) yields positive regression coefficients (unit of analysis=customer).

Again, simple least squares regression analysis was used to test hypothesis 7 by regressing the three predictor

variables, perceived price, perceived service quality, and perceived merchandise quality on to the criterion variable, perceived value. The results are presented in Table 15.

Table 15. Results of Regression Analysis of Hypothesis 7

Source	df	Sum of Squares	Mean Square	F Value	Prob>F
Model	3	332.443	110.814	678.721	0.0001
Error	898	146.616	0.163		
Corrected Total	901	479.059			

The regression coefficients for the three independent variables differ from the earlier tests. That is, b_1 for perceived price in this test is .2694 ($p < .0001$), compared to .7444 in H4 when price was the only independent variable in the model. Likewise, the regression coefficients for perceived service quality ($b_2 = .3903$, $p < .0001$) and perceived merchandise quality ($b_3 = .2471$, $p < .0001$) differ from the previous hypotheses in which each construct was the sole independent variable in the model ($b_1 = .8217$ and $b_1 = .6963$, respectively).

The reason for the different regression coefficients is that the three independent variables are correlated (as tested by hypotheses 1, 2, and 3). When independent variables are highly intercorrelated, as in this case, the

regression coefficient of any independent variable depends on which other independent variables are included in the model. In other words, the regression coefficient of one independent variable reflects only the marginal or partial effect of that variable, given which other correlated independent variables are included in the model. For example, the regression coefficient of perceived service quality in H7 reflects that variable's marginal influence on perceived value, given that perceived price and perceived merchandise quality are also in the model. The degree to which perceived service quality explains the total variance in perceived value must be viewed in the context of the other independent variables included in the model, i.e., perceived price and perceived merchandise quality.

Based on the results that show all three regression coefficients to be positive and significant, H7 is supported.

The coefficient of determination ($R^2=.6940$) indicates that the joint influence of the three independent variables (customer perceptions) explains a greater proportion of the variance in perceived value than any one of the variables independently. Therefore, a model including all three independent variables is more effective in predicting perceived value than a model including any one of the three variables individually.

Because H7 tests the influence of three customer perceptions (i.e., price, service quality and merchandise quality) on their perception of value, this conceptualization provides researchers and practitioners a richer understanding of the customer's evaluation of value in a context that offers tangible products, as well as accompanying services.

Hypothesis 8

The next step in the progressive process to provide empirical evidence that contributes to the validation of the model was to test the proposed relationships involving the customer behavioral outcomes of attitude, customer retention, loyalty and word-of-mouth communication. Hypothesis 8, as stated below, tests the first such relationship -- between perceived value and attitude.

- H8_c:** Perceived value positively influences attitude.
- H8_s:** Regression of perceived value score (independent variable) on attitude score (dependent variable) yields a positive regression coefficient (unit of analysis=customer).

Simple least squares regression analysis was used to test hypothesis 8 by regressing the independent variable, perceived value, on the dependent variable, attitude. The results are presented in the Table 16.

The coefficient of determination, $R^2=.2091$, indicates that the predictor variable, perceived value, explains over 20% of the variance in the criterion variable, attitude. The regression coefficient is positive and significant ($b=.8511$, $p<.0001$). Therefore, hypothesis 8 is supported

Table 16. Results of Regression Analysis of Hypothesis 8

Source	df	Sum of Squares	Mean Square	t Value	Prob> t
Model	1	342.310	342.310	15.773	0.0001
Error	941	1294.792	1.376		
Corrected Total	942	1637.103			

and it can be concluded that perceived value influences attitude as predicted. That is, as perceived value increases, attitude also increases.

Hypothesis 9

The next relationship involving customer behavioral outcomes as the criterion variable is posited by hypothesis 9, stated as follows:

H9_e: Perceived value positively influences repeat purchase behavior.

H9_s: Regression of perceived value score (independent variable) on repeat purchase score (dependent variable) yields a positive

regression coefficient (unit of analysis=customer).

Regression analysis was used to test hypothesis 9 by regressing the independent variable, perceived value, on the dependent variable, repeat purchase. The results are presented in the Table 17.

Table 17. Results of Regression Analysis of Hypothesis 9

Source	df	Sum of Squares	Mean Square	t Value	Prob> t
Model	1	71.500	71.500	13.437	0.0001
Error	805	318.764	0.396		
Corrected Total	806	390.264			

The R^2 of .1832 indicates that the predictor variable, perceived value, explains about 18% of the variance in the criterion variable, repeat purchase. The regression coefficient is positive and significant ($b=.4229$, $p<.0001$). Therefore, hypothesis 9 is supported and it can be concluded that perceived value influences repeat purchase as predicted. That is, as a customer's perception of value increases, repeat purchase behavior also increases.

Hypothesis 10

Hypothesis 10, as stated below, tests the third relationship -- between perceived value and customer loyalty.

H10_c: Perceived value positively influences customer loyalty.

H10_d: Regression of perceived value score (independent variable) on loyalty score (dependent variable) yields a positive regression coefficient.

Regression analysis was used to test hypothesis 10 by regressing the predictor variable, perceived value, on the criterion variable, loyalty. The results are presented in Table 18.

Table 18. Results of Regression Analysis of Hypothesis 10

Source	df	Sum of Squares	Mean Square	t Value	Prob> t
Model	1	516.085	516.085	16.75	0.0001
Error	780	1434.720	1.839		
Corrected Total	781	1950.804			

The coefficient of determination, $R^2=.2645$, indicates that the independent variable, perceived value, explains 26% of the variance in the dependent variable, loyalty. The regression coefficient is positive and significant ($b_1=.1527$, $p<.0001$). Therefore, hypothesis 10 is supported

and it can be concluded that perceived value influences loyalty as predicted. That is, as perceived value increases, loyalty also increases.

Hypothesis 11

Hypothesis 11 employs a customer behavioral outcome as both the predictor and the criterion variable in the model. This relationship is stated as follows:

H11_c: Attitude positively influences word-of-mouth.

H11_r: Regression of attitude score (independent variable) on word-of-mouth score (dependent variable) yields a positive regression coefficient.

Again, simple least squares regression analysis was used to test hypothesis 11 by regressing the independent variable, attitude, on the dependent variable, word-of-mouth. The results are presented in Table 19.

Table 19. Results of Regression Analysis of Hypothesis 11

Source	df	Sum of Squares	Mean Square	t Value	Prob> t
Model	1	209.410	209.410	18.727	0.0001
Error	804	480.091	0.597		
Corrected Total	805	689.501			

The coefficient of determination, $R^2=.3037$, indicates that the predictor variable, loyalty, explains approximately one-third of the variance in the criterion variable, word-of-mouth. The regression coefficient is positive and significant ($b_1=.3943$, $p<.0001$). Therefore, hypothesis 11 is supported. Customer loyalty influences word-of-mouth communication as predicted. That is, as loyalty increases, word-of-mouth also increases.

The support of hypotheses 8 - 11 is important for marketers because the relationships tested by these hypotheses represent the link between customer perceptions and the concomitant customer behaviors. Therefore, this study provides empirical evidence for practitioners and researchers that, indeed, customer perceptions of price, service quality, merchandise quality, and value do influence the desired customer behavior outcomes of attitude, repeat purchase, loyalty, and word-of-mouth. These findings support the need for engendering desired customer behaviors as the first, and necessary step, in the process of achieving business performance outcomes.

Hypothesis 12

The outcome process shifts from consumer behavioral outcomes to financial outcomes at the point of transition from repeat purchases (a customer behavior) to business

performance (a financial outcome). The transitional hypothesis, hypothesis 12, is the final supporting hypothesis to the primary hypothesis (H13) and is stated as follows:

H12_c: Repeat customer purchase positively influences business performance over and above the influence that competition, location, and customer income have on business performance.

H12_d: Regression of repeat purchase score, and the control variables of competition, location, and customer income (independent variables) on business performance (dependent variable) yields a positive regression coefficient for customer retention (unit of analysis = store).

Because the dependent variable in H12 (i.e., financial business performance) is measured at the store level, the store is the unit of analysis employed for testing this hypothesis. The dependent variable is a binary, discrete variable which assigns the value of 1 to a store with high business performance or the value of 0 to a store with low business performance. The data for the measure of repeat purchase, the quantitative independent variable in the model, was transformed to store level data by calculating a store mean for the repeat purchase score (i.e., the average of the five items measuring repeat purchase). To control for the effects of additional determinants of business performance, three control variables -- competition, location, and average household income -- were incorporated into the model as independent variables. These variables

are treated as qualitative independent variables that are ordered (i.e., the levels of competition, location, and household income have an inherent ranking). The control variables are included as additional independent variables in the model to explain a portion of the variance of error terms in the tested model. Consequently, the resulting model contains both quantitative (repeat purchase/customer retention) and continuous (competition, location, and customer income) independent variables. Because the dependent variable, business performance, is a dichotomous variable and the independent variables are continuous, logistic regression was employed to test the model proposed in hypothesis 12. The results of this analysis are presented in Table 20.

Table 20. Results of Logistic Regression Analysis of Hypothesis 12

Source	df	Regression Coefficient	Chi Square	Prob
Intercept	1	-2.6338	0.26	.6080
Customer Retention (b_1)	1	0.6962	0.44	.5080
Competition (b_2)	1	-0.6903	3.27	.0708
Location (b_3)	1	1.0084	4.33	.0375
Income (b_4)	1	-0.3294	0.34	.5589

The large p-value ($p=.5080$) indicates that customer retention (b_1) does not significantly contribute to the

prediction of business performance, when included in a linear combination with competition, location, and customer income. Therefore, hypothesis 12 is not supported. This finding is further investigated using post hoc analyses.

Hypothesis 13

Hypotheses 1 through 12 were tested to provide empirical evidence to support the relationships comprising the process underlying the primary research question. That is, before the model could be accepted, each progressive step in the process must be statistically tested. Once the researcher has a degree of confidence in the theory proposed in the model, the primary research hypothesis can be tested.

Regression analysis of the individual paths represented in the primary research hypothesis (i.e., perceived service quality to perceived value, perceived value to customer retention, and customer retention to business performance) would not allow one to infer that perceived service quality influences business performance. For this conclusion to be drawn, structural equation modeling is employed.

Hypothesis 13 is stated as follows:

- H13_c:** Perceived service quality positively influences business performance through the moderator variables of perceived value and customer repeat purchase behavior.
- H13_d:** Structural equation modeling of the independent constructs of perceived service

quality (latent exogenous variable), perceived value, customer retention (latent endogenous variables) on the dependent construct of business performance (latent endogenous variable) yields an acceptable fit and significant path coefficients for the three equations in the model (unit of analysis=customer).

LISREL VII (Jöreskog and Sörbom 1989) with generalized least squares estimation was used to examine the relationships between the independent variable of perceived service quality and the dependent variables of perceived value, customer repeat purchase behavior, and business performance. To test hypothesis 13, only the first order models of the constructs were included in the structural model. The estimation method of maximum likelihood was attempted but failed to allow the iterations to converge and return a fit. Generalized least squares is an acceptable estimation method that employs an inverted s (sample) matrix rather than the inverted sigma (Σ) matrix used in maximum likelihood estimation. Because store level data ($n=58$) would not yield a sample large enough for LISREL to function, customer level data ($n=1545$) were used in the structural equation modeling procedure. Customer level data differentiates high performing stores from low performers because, in the data set, each observation (i.e., customer) from a high performing store was assigned a value of 1 and each observation from a low performing store was assigned a value of 0. In interpreting the results from this analysis,

one must realize that there may be a lack of independence in the data. Because approximately 30 customers from each store responded to the questionnaire, it may be possible that these respondents represent homogeneous groups that lack independence within their group, but are independent of the responses across the other groups.

With the correlation matrix as input, the model had a GFI=.84 and an AGFI=.82 and a root mean square residual of .371. Given that the model does not meet the usual standards for structural equation modeling (i.e., the complexity of the model including four constructs with 44 indicators and a large sample), and the possibility of other unmeasured variables influencing business performance, these fit indices were deemed to approach acceptable standards. However, for the hypothesis to be accepted, the path coefficients for each structural equation in the model must also be significant. As shown in Figure 14, perceived service quality contributes directly and significantly to perceived value ($\gamma=.255$, $t=14.624$), which contributes directly and significantly to customer retention ($b=.534$, $t=11.414$). However, contrary to the proposed conceptualization, the data do not support a significant path between customer retention and business performance ($b=-.027$, $t=-.930$). This finding was anticipated based on the results of the test of hypothesis 12 and may suggest

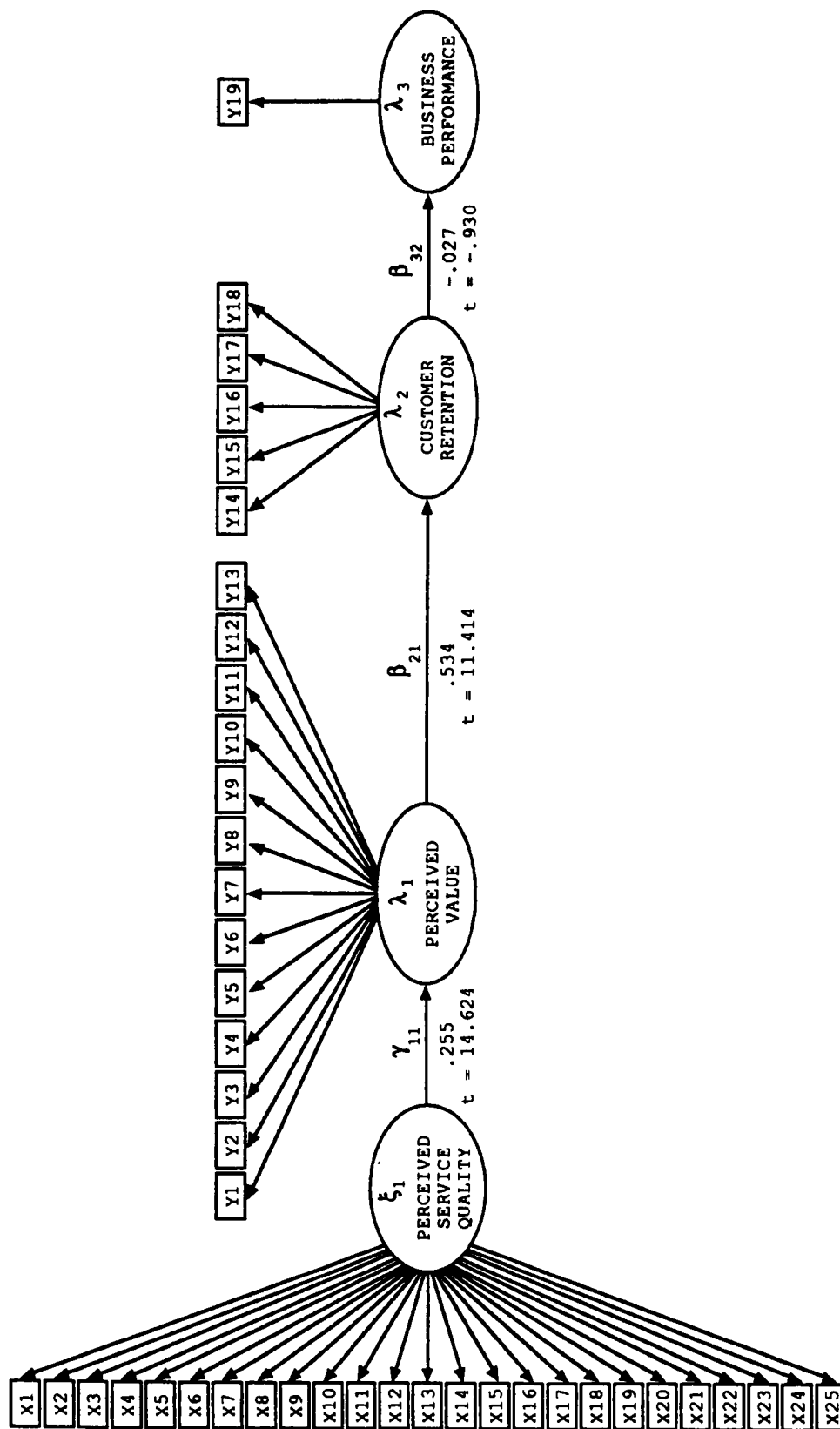


Figure 14: Structural Equation Model of Hypothesis 13

other unmeasured variables have a greater influence on business performance than does customer retention. Therefore, hypothesis 13 is not supported. That is, based on the data in this study, one cannot conclude that perceived service quality influences business performance through the indirect path as hypothesized. The implications of this finding are discussed in the next chapter.

Step 4: Post Hoc Analysis of Hypotheses 12 and 13

Failure to accept hypotheses 12 and 13 led to further investigation of the relationships proposed in these two hypotheses. Even though negative findings are valuable and powerful (Kerlinger 1986, p.23), the researcher was interested in exploring possible explanations for the lack of support for these hypotheses that test influences of independent variables on the dependent variable of business performance.

An explanation for the lack of support for these two hypotheses may be due to the nature of the relations between the independent variables and the dependent variable of business performance. That is, should any independent variables not yet included be considered for possible inclusion in the model? For example, the market orientation literature suggests several variables (e.g., environmental conditions, characteristics of employees, costs and

expenses, etc.) which may impact the influence of market orientation on business performance (Kohli and Jaworski 1990, Jaworski and Kohli 1993). This study considered the extraneous variables of competition, location and average household income. However, there may be additional independent variables whose marginal contribution to the reduction of error could result in a significant relationship between the independent variables and the dependent variable (i.e., business performance).

Discussions with corporate personnel and store managers of the sponsoring organization indicated that the stores included in the sample may vary according to the geographic region in which they are located. The company assigns each store to one of these three geographic regions -- northern, central or southern. Therefore, region was included as a dummy variable that represents division of the sample based on the formation of three categories. Each store was coded by region and this variable was considered a discrete independent variable (with no inherent ranking) that could account for a portion of the variance by removing additional extraneous influences from the criterion variable, i.e., business performance.

With the inclusion of region as an added predictor, hypothesis 12 was tested again using analysis of covariance. The possibility of a higher order model was considered and the interaction term between the independent variables of

region and customer retention was included in the model. For this analysis, both region and the interaction term representing the joint effect of region and customer retention were included as additional independent variables (in addition to the control variables of competition, location and average income). A small p-value ($p=.0011$) for the interaction term indicates that customer retention varies by region and systematic regional differences exist between the three regions.

Logistic regression using both store and customer level data was then employed to further analyze these regional differences. Table 21 presents the results of the analysis.

Table 21. Results of Post Hoc Logistic Regression Analysis of Hypothesis 12

Region	Customer Level Data	Store Level Data
South	p = .0002 b = .7176	p = .0928 b = 4.7414
Central	p = .0564 b = -.5234	p = .1671 b = -11.2661
North	p = .4204 b = .1958	p = .5650 b = 1.4619

The analysis at both levels of data reveals that the relationship between customer retention and business performance is significant in the southern region for customer level ($p=.0002$) and near significance at the store level ($p=.0928$), near significance in the central region

($p=.1671$ for store level and ($p=.0564$ for customer level), and not significant in the northern region ($p=.5650$ for store level and $p=.4204$ for customer level). Because of the small sample of stores in each region ($n=16$ in the north, $n=20$ in the central, and $n=21$ in the southern region), the customer level data may give more accurate results than the store level data.

The finding of significance in the southern region can be explained by the fact that the organization from which data were collected was founded and is headquartered in the south. Therefore, the stores located in the southern region are the older, more established units of the corporation. These stores may have more loyal customers who have been patronizing the store for a longer period of time. As proposed in the Process Model of the Business Performance Outcomes of Service Quality, the relationship between customer responses (i.e., loyalty and customer retention) and business performance is a long term relationship. That is, it takes time for the effect of customers' behaviors to influence business performance. The impact of customer retention in the newer stores (i.e., the stores in the northern and central regions) may not yet be reflected in the business performance of these store. In addition, these newer stores may be investing more in the development of a customer loyalty (e.g., employee training, customer

incentive programs, etc.) which increases costs and decreases profits, in the short term.

By acknowledging the moderator effect of region on customer retention and including the interaction term in the model, hypothesis 12 can be conditionally accepted. The inclusion of the higher order variable (i.e., the interaction term) yields a model that is a better predictor of business performance. Because this significant finding provides empirical evidence for the last link in the process model (i.e., hypothesis 12), the entire model developed to guide this study (see Figure 9) is conditionally supported.

However, a test of H13 using only the responses from customers of the southern stores (n=566) still failed to support the primary research question (H13), as indicated by the unacceptable fit indices (GFI=.37, AGFI=.31). This suggests that an acceptable overall fit of the model using data from all three regions is possible because the strong relationships between perceived service quality and perceived value and perceived value and customer retention compensate for the weaker relationship between customer retention and business performance (i.e., significant for only a sub-sample of the total sample). Further discussion of the insignificant findings for the test of hypothesis 13 is included in the next chapter.

Summary

This chapter describes the analyses and results of the hypotheses developed in Chapter 3. A summary of the hypotheses tests, variables, measures used, statistical analyses and the results is included in Table 22. The tests of the hypotheses, together with the post hoc analysis, provide support for the model developed to guide this research. Findings suggest that consumers' perceptions of service quality, merchandise quality, and price influence their perceptions of value, which, in turn, influences their behavioral responses of attitude, loyalty, word-of-mouth and repeat purchase. However, the indirect influence of perceived service quality on business performance was not supported by the data in this study. The results of the study provide the framework for a future program of research. An overview of the conclusions, limitations, and contributions of this study, as well possible future research, is presented in the next chapter.

Table 22: Hypotheses, Variables, Measures, Statistical Analyses, and Results

Hypothesis	Variables	Measures	Statistical Analysis	Results
H1: Perceived price and perceived merchandise quality are positively correlated.	PP PMQ	PP1 - PP9 PMQ1 - PMQ9	Correlation Analysis (unit of analysis = customer)	Supported $r = .6673$ $p < .0001$
H2: Perceived price and perceived service quality are positively correlated.	PP PSQ	PP1 - PP9 PSQ1 - PSQ25	Correlation Analysis (unit of analysis = customer)	Supported $r = .8258$ $p < .0001$
H3: Perceived service quality and perceived merchandise quality are positively correlated.	PSQ PMQ	PSQ1 - PSQ25 PMQ1 - PMQ9	Correlation Analysis (unit of analysis = customer)	Supported $r = .7822$ $p < .0001$
H4: Perceived price negatively influences perceived value.	IND = PP DEP = PV	PP1 - PP9 PV1 - PV13	Regression Analysis (unit of analysis = customer)	Not supported $b_1 = .7444$ $p < .0001$ $R^2 = .5299$
H5: Perceived service quality positively influences perceived value.	IND = PSQ DEP = PV	PSQ1 - PSQ25 PV1 - PV13	Regression Analysis (unit of analysis = customer)	Supported $b_1 = .8217$ $p < .0001$ $R^2 = .6373$
H6: Perceived merchandise quality positively influences perceived value.	IND = PMQ DEP = PV	PMQ1 - PMQ9 PV1 - PV13	Regression Analysis (unit of analysis = customer)	Supported $b_1 = .6963$ $p < .0001$ $R^2 = .5145$
H7: Perceived price, perceived service quality, and perceived merchandise quality determine the customer's perception of value.	IND = PP IND = PSQ IND = PMQ DEP = PV	PP1 - PP9 PSQ1 - PSQ25 PMQ1 - PMQ9 PV1 - PV13	Regression Analysis (unit of analysis = customer)	Supported $b_1 = .2694$ $b_2 = .3903$ $b_3 = .2471$ $p < .0001$ $R^2 = .6940$
H8: Perceived value positively influences attitude.	IND = PV DEP = ATT	PV1 - PV13 ATT1 - ATT3	Regression Analysis (unit of analysis = customer)	Supported $R^2 = .2091$ $b_1 = .8511$ $p < .0001$
H9: Perceived value positively influences repeat purchase behavior.	IND = PV DEP = Custret	PV1 - PV13 GSHPIINT1 GSHPIINT2 GSHPIINT3 GPURPAST GPURINT	Regression Analysis (unit of analysis = customer)	Supported $b_1 = .4230$ $p < .0001$ $R^2 = .1832$
H10: Perceived value positively influences customer loyalty.	IND = PV DEP = Loyalty	PV1 - PV13	Regression Analysis (unit of analysis = customer)	Supported $b_1 = 1.1527$ $p < .0001$ $R^2 = .2645$
H11: Attitude positively influences word-of-mouth.	IND = ATT DEP = WOM	ATT1 - ATT3 GWOMINT1 GWOMINT2 GWOMINT3 GWOMFREQ	Regression Analysis (unit of analysis = customer)	Supported $b_1 = .3943$ $p < .0001$ $R^2 = .3037$
H12: Repeat Customer purchases positively influence business performance.	DEP = SHighlow IND = SCusrets IND = SComp IND = SLocatio IND = SInc	SHighlow SCusrets SComp SLocatio SInc	Logistic Regression Analysis (unit of analysis = store)	Conditional supported (by region) $p = .5080$
H13: Perceived service quality, perceived value, repeat customer purchases positively influence business performance.	DEP = Highlow IND = PSQScore IND = PVSore IND = Cusretsc IND = Comp IND = Location IND = Inc	Highlow PSQScore PVSore Cusretsc Comp Location Inc	Structural Equation Modeling (unit of analysis = customer)	Overall Fit AGFI = .812 n.s. path Custret to Business Performance

CHAPTER 6

CONCLUSIONS AND FUTURE RESEARCH

The purpose of this chapter is to discuss the findings of this research and the implications to academicians and practitioners. The primary research question -- What is the relationship between customers' perceptions of service quality and the business performance outcomes of the firm? -- is discussed within the context of two identified gaps in the literature.

Gap 1 addresses the lack of attention in the literature to the definition and measurement of business performance and to the modeling of the relationship between perceived service quality and bottom line business performance of the organization. Although there are numerous anecdotes and claims in the literature that service quality leads to a more profitable operation, there is a dearth of research studies presenting empirical evidence supporting this relationship.

The second gap relates to the environment in which the extant research has been conducted. The majority of the existing research has been conducted in "pure service" environments in which an intangible product (i.e., service) is the sole offering of the organization. This study addresses this apparent limitation by conducting the research in an environment that offers a mix of tangible

goods and intangible services. The Process Model of Business Performance Outcomes of Service Quality was developed to guide the research which investigates the primary research question (i.e., the relationship between service quality and business performance) while addressing these two identified gaps in the existing literature.

Summary of the Study

The objectives of this study are three fold. The first is a conceptualization and theory development objective. This objective involves identification of the variables involved in the underlying process beginning with customers' perceptions and resulting in organizational performance and hypothesizing the relationships among these identified variables in the process. The Process Model of Business Performance Outcomes of Service Quality was developed to achieve this objective and to provide the framework for the research project.

The second objective is related to the measurement of the constructs in the process model. A thorough review of the literature and four exploratory, qualitative research studies were conducted to develop conceptual definitions of and measures for perceived service quality, perceived price, perceived merchandise quality, perceived value, attitude,

repeat purchase, loyalty, word-of-mouth, and business performance.

The third objective was to test the hypothesized relationships proposed in the Process Model of Business Performance Outcomes of Service Quality using the measures developed for this study. The results of the data analysis provide evidence that the hypothesized relationships exist (except H4) and the proposed Process Model is conditionally supported. Albeit, the primary research hypothesis (i.e., perceived service quality indirectly influences business performance) is not supported, strong relationships are found among the customer perception constructs and the customer behavior variables. Implications of these findings are discussed in this chapter.

The remainder of this chapter is organized into the following sections: (1) implications of the study to academicians, including both conceptual and measurement contributions, (2) implications of the study to practitioners, including suggestions related to the application of the findings, (3) limitations of the study, and (4) future research priorities.

Implications of the Study to Academicians

This study contributes to the academic researcher's understanding of the complex relationships between customer

perceptions and subsequent customer behavioral responses and, ultimately, business performance outcomes.

Contributions of this research to academicians are organized and discussed within two classifications; (1) conceptual and (2) measurement.

Conceptual Contributions and Implications

As stated by Iacobucci et al. (1994), the first step toward tying customer evaluations to ultimate business performance is the collection of good data, together with good methods and modeling, to gain an understanding of the constructs involved. These "real" models should include more of the character of the consumer who is making the evaluations of quality and price. This study makes a contribution to this need by developing a model based on the findings of qualitative studies. The participants in these studies are consumers who presented their evaluations of service quality, merchandise quality, price, and value from their own perspectives. The exploratory, qualitative research studies identified three perceptions -- service quality, merchandise quality, and price -- that function as considerations in a customer's evaluation of the value they receive from a marketer (e.g., retailer).

Rust and Oliver (1994) state that exactly how these perceptions of quality and price combine to form value is

not well understood. A significant contribution of this study is the development and test of a model depicting the relationship between the constructs of perceived service quality, perceived merchandise quality, perceived price, and perceived value.

The proposed underlying factor structures for the four perception constructs were tested and validated using confirmatory factor analysis. Once the conceptualization of the four constructs was validated, regression analysis was employed to test the ability of each construct (i.e., perceived service quality, perceived merchandise quality, and perceived price) to predict perceived value. The results of this analysis supports the hypothesized relationship between each individual construct and perceived value. Interestingly, although the coefficient of determination for each construct was positive and significant, the R^2 for perceived service quality ($R^2=.6373$) indicates it most strongly predicts the customer's perception of value (compared to $R^2=.5299$ for perceived price and $R^2=.5145$ for perceived merchandise quality). The model with perceived service quality, perceived merchandise quality, and perceived price as predictors of perceived value results in an $R^2=.6940$. In other words, for the customers in this study, these three customer perceptions explain 69% of the variation in perceived value.

This conceptualization is consistent with the model

proposed by Parasuraman, Zeithaml, and Berry (1994b). They posit that a customer's overall satisfaction (or perceived value for the purpose of this study) is a function of his or her assessment of service quality, product quality, and price. However, to date, they have not empirically tested their model. The analysis of the data in the present study provides empirical evidence to support the conceptualization of perceived value in the Process Model of the Business Performance Outcomes of Service Quality, as well as in the model proposed by Parasuraman, Zeithaml, and Berry.

The results of the analysis indicate that customers' derivations of their perceptions of value are a function of their perceptions of service quality, merchandise quality and price. This finding significantly contributes to the knowledge base about what evaluations customers use to form their perceptions of value. The challenge to researchers now is to identify the variables that predict the remaining 31% of the variation in perceived value.

The Process Model of Business Performance Outcomes of Service Quality was developed to guide this research. Hypotheses 1 - 12, representing the proposed relationships in the process, were empirically tested. All the hypotheses were supported, except hypothesis 4 which failed to be accepted and hypothesis 12 which was conditionally accepted. These results provide evidence that customers' perceptions of quality and price influence their behaviors of attitude,

repeat purchase, loyalty and word-of-mouth communication. This study advances current research (Zeithaml, Berry, and Parasuraman 1994a; Dabholkar 1996, forthcoming) which focuses on identifying linkages between customer perceptions (particularly perceptions of service quality) and customer behavioral intentions.

The construct of customer behavior (i.e., repeat purchase) used in this study captures not only behavioral intentions, but also actual behavior. Therefore, this study provides evidence that customers' perceptions of not only service quality, but also merchandise quality and price, are linked not only to future behavioral intentions, but more importantly, to actual behavior. The fact that perceived service quality can be linked to customer behaviors, such as customer retention, advances our understanding of the process one step closer to linking service quality to business performance of the organization (Reichheld and Sasser 1990; Rust and Zahorik 1993).

Measurement Contributions and Implications

The insignificant path coefficient between customer retention and business performance (as revealed in the LISREL analysis of hypothesis 13) presents an opportunity to investigate issues related to the dependent variable, business performance. Precedence for the insignificant

relationships is found in the literature. A possible explanation is related to the measurement of business performance. There is lack of agreement in the literature on the merits of using subjective or objective measures of business performance. The marketing strategy literature includes studies which test the influence of market orientation on business performance. This relationship is analogous to the relationship between perceived service quality and business performance which is proposed in this study. Researchers in the area of market orientation have employed managerial judgement, or subjective measures, of business performance with mixed support. That is, Narver and Slater have found significant relationships between subjective measures of business performance and market orientation (Narver and Slater 1990, Slater and Narver 1994). However, Deshpande, Farley, and Webster (1993) found no support for their proposed relationship between performance (measured subjectively) and managers' perceptions of customer orientation. In addition, Jaworski and Kohli (1993) found that market orientation is significantly related to business performance when performance is measured using judgmental, subjective measures, but not when is it measured using objective measures (i.e., market share, return on equity).

Given that the relationships proposed in this study involving business performance as the criterion variable are

similar to the relationships in the cited studies involving market/customer orientation as the independent variable and business performance as the dependent variable, one can conclude the lack of significant findings in hypothesis 13 is not unexpected. The finding may be due to the objective measurement of business performance employed in this study. In an effort to advance the measurement of business performance, the researcher is faced with the challenge of identifying additional extraneous variables that explain more of the variation in business performance. Rather than relying on subjective measures of performance, researchers should strive successfully use objective measures by improving the specification of the model (i.e., include more control variables).

The lack of a significant path from perceived service quality to business performance could also be explained by the fact that perceived service quality is only one component of the complex construct of organizational performance. Service quality is but one of a myriad antecedents to business performance. Factors such as organizational skills, resources, leadership, entrepreneurship, and managerial effectiveness are also significant influences on an organization's performance.

In addition, estimation of the structural equations specifying the relationships between perceived service quality and business performance can be problematic due to

the high levels of multicollinearity between the predictor variables (Rust, Zahorik, and Keiningham 1995). As indicated in the data analysis, the consumer perception variables, as well as the consumer behavior variables, used as independent variables in hypothesis 13, are highly intercorrelated. This intercorrelation among the independent variables creates difficulty in obtaining accurate estimates of individual effects of a single variable (i.e., perceived service quality).

Perhaps a more valid evaluation of the influence of perceived service quality would be a test of its effect on more narrowly defined customer behavior outcomes, such as attitude, loyalty, word-of-mouth communication, and repeat purchase, that function as the antecedents to business performance. A test of the relationships between perceived service quality and each of the customer response variables in this study did reveal a significant R^2 ($p=.0001$) for each of the customer responses (i.e., attitude=.097, loyalty=.155, word-of-mouth=.113, and repeat purchase=.087).

Another contribution of this study related to measurement issues is the development of a two-dimensional conceptualization and a multi-item scale to measure the construct of value. Measures of perceived value in current literature are limited to single-item measures (Kerin, Jain, and Howard 1992; Voss 1993; Chang and Wildt 1994). This method of measurement fails to capture the richness of the

complex construct of perceived value. This practice, however, reflects the absence of acceptable, accessible multi-item scales (Chang and Wildt 1994).

Qualitative research conducted for this dissertation revealed a cognitive (trade-off) component of value as well as an affective (psychological) component. As described in Chapter 5, a multi-item scale to measure this two-dimensional conceptualization of value was developed and tested. Researchers may adapt the 13-item scale to their particular context and managers may benefit by adapting the scale to their particular environment to gain a deeper understanding of the process their customers undergo to judge the value they receive from the marketer.

Implications of the Study to Practitioners

Managers are inundated with anecdotes and case studies of successful companies which claim that businesses that provide higher levels of service quality are rewarded for their efforts by achieving improved profitability. However, there is little empirical evidence to support these claims. This study fills this void by more specifically identifying the elements of service quality and providing a framework for understanding how consumers' perceptions of these elements of service quality impact their behavioral responses.

This study provides an understanding of the underlying process through which perceived service quality (and other perceptions) influence customer behavioral responses. The findings of this research move practitioners beyond intuitive, anecdotal evidence of the proposed relationship between service quality and profitability to a more empirically-based understanding of the process.

Understanding of this process is critical to a marketer's success. In spite of the lack of support for the proposed indirect relationship between perceived service quality and business performance, this study makes a valuable contribution to the services marketing literature by empirically testing and supporting the process that underlies this relationship.

This research provides managers with evidence that consumers' perceptions of service quality, merchandise quality and price lead to their perceptions of value. It is this perception of value that, in turn, influences customer behavioral outcomes of attitude, loyalty, word-of-mouth communication and, maybe most significantly, repeat purchase behavior.

Contributions of this research to practitioners are organized and discussed within two classifications; (1) conceptual and (2) application.

Conceptual Contributions and Implications

In this age of customer value, practitioners are striving to deliver the highest level of value possible to their customers. The findings of this study assist managers in achieving this goal. As proposed and empirically supported, customers derive their perception of value from their evaluations of not only price, but of service and merchandise quality. In other words, there is more to value than just low prices. Managers can influence their customers' perceptions of value by committing the necessary resources to assuring high levels of service and merchandise quality as well as low prices. This includes employee training, employee empowerment, modeling appropriate behaviors from top management down to front line employees, selecting and merchandising the most desirable merchandise, etc. Practitioners can have a significant influence on customers' evaluations of value by being proactive in enhancing customers' perceptions of service quality, merchandise quality, as well as price. As empirically tested and supported in this dissertation, all three perceptions are antecedent to customers' perceptions of value, and all three constructs command the attention of the manager.

More significantly, this research has demonstrated the linkage between perceived value and loyalty. The test of

hypothesis 10 revealed that customer's perceptions of value explain over 26% of the variation in loyalty. Customer loyalty has been claimed to be the key to the long-term success of an organization. The goal of relationship marketing and developing partnerships and alliances is to convert indifferent customers into loyal ones (Berry 1995). It has been demonstrated that the strategy of developing and retaining loyal customers is much more cost effective than attracting new ones (Rust and Zahorik 1993). Therefore, based on the literature and the empirical findings of this study, when managers are effective in influencing customers' perceptions of value, they are consequently solidifying customer loyalty in a cost effective manner.

Building customer loyalty is critical to a firm's long term success because one component of loyalty (as conceptualized in this study) is customer retention. For the purpose of this research, customer retention is measured as both actual past behavior and behavior intentions. This measurement is an improvement over most existing studies in which retention is measured as repurchase intention rather than actual behavior (e.g., Rust, Zahorik, and Keiningham 1995). As measured in this study, customer retention is an indicator of actual purchases in the past (e.g., percent of budget spent at the store in the last 12 months) and intentions to repurchase (e.g., percent of budget planned to be spent at store in next 12 months). These purchases

represent sales volume for the firm which is the immediate antecedent to business performance. In fact, it has been documented that small increases in retention rates can have a dramatic effect on the profits of a company (Rust, Zahorik, and Keiningham 1995). Even though the data in this study did not support this direct relationship (i.e., between customer retention and objective business performance), the study does provide empirical evidence that customers' perceptions of value do strongly predict the desirable customer response of loyalty, which is comprised of attitude and repeat purchase behavior.

Based on the findings of this study, one might ask if practitioners are being realistic in expecting service quality to impact business performance. It is evidenced that perceptions of service quality do significantly predict customer behaviors, such as attitude, loyalty, word-of-mouth and retention. However, this evidence does not preclude the necessity for managers to efficiently and effectively manage the cost side of their operations. Developing customer loyalty, and consequently customer retention, may not be sufficient to realize desired financial goals established by the organization. Practitioners must also focus on the managerial processes and cost-effective practices that influence business performance.

These internal processes are depicted in the Model of the Service Quality Delivery System. Attention to the

design, delivery, measurement, and improvement of organizational processes, along with a focus on employees and suppliers, are required to reach the business performance objectives of the firm. A firm's financial success depends not only on developing loyal customers, but also on effective management of the costs and expenses related to doing business.

The elements of loyalty -- attitude and repeat purchase behavior -- are closely related to customer's perceptions of loyalty. The test of hypothesis 8 indicates that perceived loyalty explains 21% of the variation in attitude, while hypothesis 9 reveals that perceived loyalty explains 18% of the variation in repeat purchase behavior. Therefore, managers can indirectly influence customer behaviors by directly influencing their perceptions of value, which drive behavioral responses.

Application Contributions and Implications

Managers need to understand the concept of service quality to achieve their ultimate goal of service quality improvement. This study offers an instrument that marketers who offer mix of goods and services can use to measure consumers' perceptions and behaviors. Given that this study provides but a "snapshot" of the process in a particular organization, the development of a systematic information

system by collecting a series of "snapshots" over time will guide effective and efficient service improvement efforts (Berry 1995, p.58). Managers can monitor the scores on the individual indicators of each customer perception (service quality, merchandise quality, price, and value). Analysis of this data will identify opportunities for improvement of a specific element of the customers' perceptions. Managers can then commit resources to the improvement of the specific aspect of the operation with the confidence that the improvement will, in turn, positively influence the customers' perceptions. The instrument also provides measures of customer behavioral responses. Therefore, subsequent data collection using the instrument provides a measure of the implications of the improvements by monitoring changes in customers' attitudes, loyalty, word-of-mouth, and repeat purchase behavior.

Limitations of the Study

Conclusions drawn from this investigation should be considered in the context of the inherent limitations of the study. These limitations may be classified as conceptual and methodological limitations.

Conceptual Limitations

In an effort to make the study manageable, one self-imposed delimitation restricts the analysis to certain variables in the model. Only one of the two possible pathways to business performance is tested (i.e., repeat purchases or customer retention). Word-of-mouth data was collected, but it is difficult (if not impossible) to measure the impact that this informal communication actually has on attracting new customers to the firm. Therefore, testing of the second pathway (i.e., word-of-mouth communication leading to new customer attraction) is omitted from the analysis.

Typically, researchers have conceptualized and measured value at the attribute level. However, as discussed in Chapter 3, researchers at the University of Tennessee have advanced understanding of perceived value beyond this attribute-based view; that is, to the consequence level (Woodruff et al. 1991, 1993, Burns 1993). These researchers have investigated value from the customer's perspective and have revealed a hierarchy or value chain (cf. Gutman 1982, 1990) which maps attributes onto consequences, and consequences onto purpose, all in the context of the use situation. As discussed in Chapter 3, the researcher made the rational decision to use an attribute-based conceptualization and measurement approach rather than a

consequence-based approach. This conceptualization of value may be viewed as a weakness in the study. In future studies, perceived value can be conceptualized at the consequence level in an effort to move the understanding of perceived value beyond the attribute level.

Methodological Limitations

Although the study did include three control variables (i.e., location, competition, and average household income) in an effort to account for variation in business performance, the investigation did not include a cost/expense control variable. Since effective cost management practices strongly affect business performance measures, inclusion of this additional control variable may have accounted for an incremental degree of variation sufficient enough to detect significant relationships between business performance and the independent variables (particularly, between business performance and customer retention).

The literature presents conflicting evidence regarding the ability of importance weights to improve measurement approaches by capturing more variation in the constructs. Cronin and Taylor (1992) found empirical evidence that unweighted scores actually explained more variance in the construct of interest than the weighted measurement

approach. Conversely, in their review of 42 empirical studies of multi-attribute attitude models, Wilkie and Pessimier (1973) conclude that the inclusion of importance weights is not likely to reduce explanatory power. However, neither do importance weights add strikingly to prediction. Given this lack of consensus, the researcher made the rational decision to assign equal weights to the elements of each score calculated to test the hypotheses set forth in this dissertation.

Data collection conducted by several different individuals is never the optimal method to employ in a research study. Less potential error would have been introduced if the same person could have collected all the data. In addition, because the cross-sectional study is conducted at one point in time in the context of a retail store offering a mix of ready-to-wear and supporting services, generalizability of the findings may be limited to similar environments.

Given these specified (and any unspecified) limitations, this study has made valuable contributions to the understanding of perceived service quality and its relationship to perceived value and subsequent customer behavioral responses. The knowledge base of both academicians and practitioners has been enhanced by the findings of this study. Indeed, the deficiencies in this

study create opportunities for future investigation, as discussed in the next section.

Future Research Priorities

This dissertation provides the foundation for a program of future research that hopefully could enhance the knowledge base regarding services marketing. Specifically, several contributions can be made to the literature based on the following investigations.

Future Conceptual and Theoretical Study

The analysis conducted in this dissertation is the first step in an ongoing effort to fully understand the hypothesized relationships and the appropriateness of the entire model. To further analyze the model, structural equation modeling may be used to examine the entire set of equations simultaneously, and determine total direct and indirect effects of each of the independent variables on the dependent variable. Allowing the indicators of the dimensions of the perception constructs will be allowed to double load, as was proposed in the methodology chapter of this dissertation.

Application of the partial disaggregation technique may be employed to further analyze the complex model. This

procedure retains all the advantages of structural equation modeling while allowing meaningful analysis of a large model without using the common practice of total aggregation of items within dimensions (Bagozzi and Heatherton 1994, Dabholkar, Thorpe, and Rentz 1996, forthcoming). This additional analysis could provide additional evidence to support the Process Model of Business Performance Outcomes of Service Quality.

The Model of the Service Quality Delivery System depicts the relationships between the antecedents, processes, and players that impact the delivery of service quality to the ultimate consumer. Examination of these organizational elements and how they influence consumers' perceptions of service quality provides a myriad opportunities for programmatic research that could make valuable contributions to the development of services marketing theory.

Recognizing the progress being made at the University of Tennessee in understanding the customer's value hierarchy, a worthwhile extension of this dissertation would be the investigation of the constructs of perceived quality and perceived value at the consequence level. This would require new data collection through the methodology of laddering interviews to identify the means-end chain of customers when evaluating their shopping and consumption experiences. A by-product of this examination of perceived

value at the consequence level may be the discovery of variables (in addition to perceived service quality, perceived merchandise quality, and perceived price considered in this study) that contribute to the customer's perception of value.

Finally, extended analysis, not directly related to the research question in the dissertation, but of interest, could be conducted on hypotheses 1-12. That is, the proposed relationships in the model could be tested by comparing the group of high performance stores to the group of low performance stores. This investigation can provide both a deeper understanding of the constructs and their relationships, as well as significant information for practitioners.

Future Measurement Study

How to measure the financial payback of the resources invested in the delivery of service quality (and consequently of perceived value) is one of the most difficult tasks facing researchers and managers today. As evidenced in this study and others (Jaworski and Kohli 1992), researchers using objective measures of business performance, such as financial measures (e.g., profitability ratios, sales volume, return on investment), have not been successful in finding a relationship between service quality

(or market orientation) and business performance. Day and Wensley (1988) criticized these objective measures for their inadequate handling of intangible, unmeasured influences on business performance.

It is possible that tracking financial data alone is insufficient (Rust, Zahorik, and Keiningham 1994). These measures indicate how the firm has performed in the past, but have little ability to predict future performance. Financial performance measures characterized by a future orientation (e.g., shareholder earnings) may be more appropriate for evaluating the managerial decision to commit resources to the delivery of service quality (Bharadwaj, Varadarajan, and Fahy 1993). The opportunity exists to continue to address this measurement problem. By identifying more of the intangibles that predict profitability and including them in the equation, researchers may be able to develop more reliable measures of business performance.

Because the effect of customers' perceptions of service quality takes time to impact the bottom line, perhaps measuring the leading indicators of financial performance (i.e., customer behavioral responses), rather than the objective accounting measures, may be a better predictive measure of the success of a service quality delivery system. Performance can be measured by customer responses. If the customer is satisfied with the quality and price of the

"service product", he or she will exhibit favorable word-of-mouth and repeat purchase behavior. According to Grönroos (1994), these customer behaviors indicate that a "good marketing effect is achieved". As this study found, measures that anticipate future business performance, such as customers' attitudes, loyalty, and repeat purchase behavior, are highly correlated with customers' perceptions of service quality and value. In addition, because the impact of service quality on the bottom line is a long term process involving a "lag" time, conducting longitudinal studies, as opposed to the current cross sectional studies, could enable the researcher to measure the results of improvements in the service quality delivery system over time.

Future Application Study

Scientific research requires the replication of a study to confirm, disconfirm or generalize conclusions drawn from a single study. Recognizing that the findings of this dissertation may be specific to this particular sample, confidence in the results may be enhanced by reproducing the study in other settings. Replication of this study using an organization that is positioned as a customer-oriented firm and focuses on service quality would lend credibility to the findings reported in this dissertation. The environment for

conducting the replication may also be broadened from the original organization, whose product offering was limited to ready-to-wear, to organizations that offer various product mixes, e.g., grocery stores, home improvement stores, do-it-yourself outlets, etc. Services marketing theory would be advanced by adding reproduced, substantive findings to the knowledge base related to service quality.

Conclusions

This study investigates a topic of utmost interest and importance to academic researchers and practitioners. An understanding of the process that: (1) begins with consumers' perceptions of service quality, merchandise quality, price, and value, then (2) influences their behavioral responses in the marketplace, and (3) ultimately affects the business performance of the organization, is crucial to the success of business firms.

The goal of this dissertation is to make a contribution to the understanding of the linkage between consumers' perceptions of service quality and business performance in the context of a firm which offers a mix of goods and services. Results of the study suggest that the linkage is an indirect relationship involving consumers' perceptions of service quality, merchandise quality, price, and value, which are directly related to customer behavioral responses

of attitude, repeat purchase, loyalty, and word-of-mouth communication. The lack of a significant link between these customer behaviors (i.e., repeat purchase) and business performance is credited to a deficiency in measurement rather than to the actual absence of such a relationship.

Because it is perceived value that ultimately attracts a customer or lures a customer away from a competitor (Rust and Oliver 1994), an understanding of customers' value perceptions is of interest to researchers and practitioners alike. Furthermore, perceived value cannot be understood until the construct of perceived quality (service and merchandise) has been understood. This dissertation makes a valuable contribution to the understanding of customers' perceptions which impact their perceptions of value. As we move into the next era -- the era of customer value -- service quality must be understood because, as evidenced in this study, it is a component of value delivery to customers.

Delivery of service quality is a profit strategy because consumers' perceptions of service quality directly affect how they will behave toward that firm in the future. Whether a firm has adopted the marketing concept or moved forward to a focus on customer value, delivery of service quality is at the very core of successful implementation of that philosophy.

Based on the findings of this dissertation, a foundation has been laid for a program of research to further explore the intricacies of the Model of the Service Quality Delivery System and the Process Model of Business Performance Outcomes of Service Quality. Consequently, valuable contributions can be made to the services marketing literature by enhancing the knowledge base related to service quality and its implications for the success of an organization.

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APPENDICES

APPENDIX A
Questionnaire

Customer Service Survey

We are interested in how your shopping experience at Store X compares to your experience at other stores where you shop for clothing for yourself or for your family. Your opinions do make a difference to us. Your comments will help make your shopping experiences at Store X more pleasant in the future.

Please list one other store, other than Store X, where you shop most often for clothing for yourself or for your family.

Special Instructions:

- Please answer the questions while thinking about your experiences when you are shopping for clothing for yourself or for your family.
 - Keeping in mind the other store that you just listed, tell us how your shopping experience at Store X compares to your shopping experience at this store. Based on your experience as a customer of these two stores, please respond to each statement below. If you strongly disagree with the statement, circle the number 1. If you strongly agree with the statement, circle 5. If you feel less strongly, circle one of the numbers in the middle. If you do not have the experience needed to answer a question, please circle 0.
-

Part I. Compared to the other store where I shop for clothing, Store X...		Strongly Disagree	Neither Agree nor Disagree		Strongly Agree	No Experience
1.	is more likely to have merchandise available when I want it	1	2	3	4 5	0
2.	offers bigger price reductions when they have a sale.	1	2	3	4 5	0
3.	has more merchandise I can afford	1	2	3	4 5	0
4.	has lower prices	1	2	3	4 5	0
5.	offers higher quality merchandise	1	2	3	4 5	0
6.	offers more quality brand names	1	2	3	4 5	0
7.	offers more brand names that I trust . . .	1	2	3	4 5	0
8.	offers more merchandise with their own store label	1	2	3	4 5	0
9.	offers more merchandise that I cannot find at other stores	1	2	3	4 5	0
10.	is more likely to offer the assortment of merchandise that I am looking for . .	1	2	3	4 5	0
11.	offers merchandise that is better made	1	2	3	4 5	0
12.	offers merchandise that is more stylish	1	2	3	4 5	0
13.	gives me more individual attention	1	2	3	4 5	0
14.	has sales people that provide me quicker service	1	2	3	4 5	0
15.	is more likely to do what they promise to do	1	2	3	4 5	0
16.	makes fewer clerical errors	1	2	3	4 5	0
17.	is more likely to do things right the first time	1	2	3	4 5	0

Part I. (cont.) Compared to the other store where I shop for clothing, Store X...		Strongly Disagree	Neither Agree nor Disagree			Strongly Agree	No Experience
18.	is more willing to handle returns and exchanges	1	2	3	4	5	0
19.	is more likely to accept the credit cards I carry	1	2	3	4	5	0
20.	is more flexible in how I can pay for merchandise (layaway, charge, check, etc.)	1	2	3	4	5	0
21.	offers merchandise that is more up-to-date	1	2	3	4	5	0
22.	shows a more sincere interest in solving my problems	1	2	3	4	5	0
23.	provides plenty of convenient parking	1	2	3	4	5	0
24.	makes it easier for me to find what I need in the store	1	2	3	4	5	0
25.	makes it easier for me to get around in the store	1	2	3	4	5	0
26.	makes me spend less time at the cash register while my purchase is rung up	1	2	3	4	5	0
27.	has more convenient operating hours . .	1	2	3	4	5	0
28.	has locations that are more convenient to me	1	2	3	4	5	0
29.	makes it easier for me to get in and out of the store quickly	1	2	3	4	5	0
30.	is less likely to waste my time while I am shopping there	1	2	3	4	5	0
31.	is more likely to have my best interests at heart	1	2	3	4	5	0

Part I. (cont.) Compared to the other store where I shop for clothing, Store X...	Strongly Disagree	Neither Agree nor Disagree			Strongly Agree	No Experience
32. makes me feel safer in my transactions	1	2	3	4	5	0
33. makes me wait in fewer long lines	1	2	3	4	5	0
34. offers merchandise that holds up better after wearing and washing	1	2	3	4	5	0

Part II. Compared to the other store where I shop for clothing, the Store X's <u>store</u> ...	Strongly Disagree	Neither Agree nor Disagree			Strongly Agree	No Experience
1. has equipment and fixtures that are more modern-looking	1	2	3	4	5	0
2. has physical facilities that are more visually appealing	1	2	3	4	5	0
3. has materials, such as shopping bags and signs, that are more visually appealing	1	2	3	4	5	0
4. has cleaner, more attractive restrooms and dressing rooms	1	2	3	4	5	0

Part III. Compared to the employees of the other store where I shop for clothing, the <u>employees</u> of Store X...	Strongly Disagree	Neither Agree nor Disagree			Strongly Agree	No Experience
1. are better at telling me exactly when services will be performed	1	2	3	4	5	0
2. are better able to handle my complaints	1	2	3	4	5	0
3. are more courteous to me	1	2	3	4	5	0
4. give me more personal attention	1	2	3	4	5	0

Part III. Compared to the employees of the other store where I shop for clothing, the employees of Store X...

	Strongly Disagree		Neither Agree nor Disagree		Strongly Agree	No Experience
5. understand my specific needs better . . .	1	2	3	4	5	0
6. are more willing to help me	1	2	3	4	5	0
7. have more knowledge to answer my questions	1	2	3	4	5	0
8. seem to have more time to help me . . .	1	2	3	4	5	0
9. are more courteous to me on the telephone	1	2	3	4	5	0

Part IV. Please circle the number that best indicates your agreement with each of the following statements when you shop at Store X for clothing.

	Strongly Disagree		Neither Agree nor Disagree		Strongly Agree	No Experience
1. The prices offered by Store X are consistent with the quality of the merchandise	1	2	3	4	5	0
2. I get what I pay for at Store X	1	2	3	4	5	0
3. I am willing to pay more for what I buy at Store X because of the service I get	1	2	3	4	5	0
4. Shopping at Store X is worth the time and effort it takes me to shop there	1	2	3	4	5	0
5. Given all the tradeoffs I have to make when I shop, I think I have made the right decision when I shop at Store X	1	2	3	4	5	0

Part IV. (cont.) Please circle the number that best indicates your agreement with each of the following statements when you shop at Store X for clothing.

	Strongly Disagree	Neither Agree nor Disagree			Strongly Agree	No Experience
6. For what I pay, I get good service at Store X	1	2	3	4	5	0
7. I receive better overall value when I shop at Store X	1	2	3	4	5	0
8. When I shop at Store X, I think I have bought better merchandise at a price I can afford	1	2	3	4	5	0
9. I do not regret buying what I do at Store X	1	2	3	4	5	0
10. I am pleased with my shopping experiences at Store X	1	2	3	4	5	0
11. I feel I am a wise shopper when I shop at Store X	1	2	3	4	5	0
12. I get value for my money at Store X	1	2	3	4	5	0
13. I really feel good about what I get at Store X	1	2	3	4	5	0
14. I shop at Store X because of the service, even if they don't always have the merchandise I want . . .	1	2	3	4	5	0
15. I think I get more for my money at Store X because the merchandise is better	1	2	3	4	5	0

Part V. Please circle your response to the statements below.

1. Compared to the other store where you shop for clothing, how do you feel about shopping at Store X? (CIRCLE NUMBER)

Contented	1	2	3	4	5	6	7	Frustrated
Pleased	1	2	3	4	5	6	7	Displeased
Good	1	2	3	4	5	6	7	Bad

2. Do you intend to shop at Store X in the future? (CIRCLE NUMBER)

Likely	1	2	3	4	5	6	7	Unlikely
Definitely Will	1	2	3	4	5	6	7	Definitely Will Not

3. Do you intend to shop at the other store in the future (CIRCLE NUMBER)

Likely	1	2	3	4	5	6	7	Unlikely
Definitely Will	1	2	3	4	5	6	7	Definitely Will Not

4. Do you plan to recommend Store X to your friends? (CIRCLE NUMBER)

Likely	1	2	3	4	5	6	7	Unlikely
Definitely Will	1	2	3	4	5	6	7	Definitely Will Not

5. Do you plan to recommend the other store to your friends? (CIRCLE NUMBER)

Likely	1	2	3	4	5	6	7	Unlikely
Definitely Will	1	2	3	4	5	6	7	Definitely Will Not

6. Which of the following best indicates your intentions to shop at Store X in the future? (CIRCLE NUMBER)

Definitely Will Shop	Probably Will Shop	Might or Might Not Shop	Probably Will Not Shop	Definitely Will Not Shop
----------------------	--------------------	-------------------------	------------------------	--------------------------

5	4	3	2	1
---	---	---	---	---

7. Which of the following best indicates your intentions to shop at the other store in the future? (CIRCLE NUMBER)

Definitely Will Shop	Probably Will Shop	Might or Might Not Shop	Probably Will Not Shop	Definitely Will Not Shop
5	4	3	2	1

8. Which of the following best indicates your intentions to recommend Store X to your friends in the future? (CIRCLE NUMBER)

Definitely Will Recommend	Probably Will Recommend	Might or Might not Recommend	Probably Will not Recommend	Definitely Will not Recommend
5	4	3	2	1

9. Which of the following best indicates your intentions to recommend the other store to your friends in the future? (CIRCLE NUMBER)

Definitely Will Recommend	Probably Will Recommend	Might or Might not Recommend	Probably Will not Recommend	Definitely Will not Recommend
5	4	3	2	1

10. What percent of your clothing budget did you spend at Store X during the last 12 months? (CIRCLE NUMBER)

- 1 none of the budget
- 2 one-third of the budget
- 3 one-half of the budget
- 4 three-quarters of the budget
- 5 total budget

11. What percent of your clothing budget did you spend at the other store during the last 12 months? (CIRCLE NUMBER)

- 1 none of the budget
- 2 one-third of the budget
- 3 one-half of the budget
- 4 three-quarters of the budget
- 5 total budget

12. What percent of your clothing budget do you plan to spend at Store X in the next 12 months? (CIRCLE NUMBER)
- 1 none of the budget
 - 2 one-third of the budget
 - 3 one-half of the budget
 - 4 three-quarters of the budget
 - 5 total budget
13. What percent of your clothing budget do you plan to spend at the other store in the next 12 months? (CIRCLE NUMBER)
- 1 none of the budget
 - 2 one-third of the budget
 - 3 one-half of the budget
 - 4 three-quarters of the budget
 - 5 total budget
14. How often do you tell someone about your shopping experiences at Store X? (CIRCLE NUMBER)
- 1 Never
 - 2 A few times a year
 - 3 About once a month
 - 4 A few times a month
 - 5 Once a week or more
15. How often do you tell someone about your shopping experiences at the other store? (CIRCLE NUMBER)
- 1 Never
 - 2 A few times a year
 - 3 About once a month
 - 4 A few times a month
 - 5 Once a week or more

The following questions are for classification purposes only and will be confidential.

1. What is your gender? (CIRCLE NUMBER)
 - 1 Male
 - 2 Female
2. What is your age in years? _____ (ENTER NUMBER)
3. What is your marital status (CIRCLE NUMBER)
 - 1 Married
 - 2 Not married
4. What category best describes your level of education? (CIRCLE NUMBER)
 - 1 Less than four years of high school
 - 2 High school graduate
 - 3 Technical or trade school
 - 4 Some college
 - 5 College graduate
 - 6 Graduate school
5. Which one of the following categories includes your total household income before taxes in 1993? (CIRCLE NUMBER)
 - 1 Less than \$20,000
 - 2 \$20,000 - \$34,999
 - 3 \$35,000 - \$49,999
 - 4 \$50,000 - \$69,999
 - 5 \$70,000 or more
6. For how long have you been shopping at Store X? (CIRCLE NUMBER)
 - 1 less than 3 months
 - 2 3 to 6 months
 - 3 6 months to 1 year
 - 4 1 to 2 years
 - 5 more than 2 years
7. For how long have you been shopping at the other store? (CIRCLE NUMBER)
 - 1 less than 3 months
 - 2 3 to 6 months
 - 3 6 months to 1 year
 - 4 1 to 2 years
 - 5 more than 2 years

Is there anything else you would like to tell us about your shopping experience at this store or at Store X? If so, please use the space below. Your comments will be appreciated.

We thank you for your cooperation, and if you have any questions about the questionnaire, you may contact Dayle Thorpe, 310 Stokely Management Center, Department of Marketing, Logistics and Transportation, University of Tennessee, Knoxville, TN 37996, (615) 974-5311.

The purpose of this survey is to determine customers' opinions about shopping at Store X. The questions involve only your marking the response that most closely reflects your view. Filling out the questionnaire should take no more than 15 minutes. Your participation is voluntary and you may withdraw at any time without penalty. No questionnaire contains any questions or markings to identify you as a respondent. The results will be tabulated and analyzed only in aggregate form, so that anonymity is assured. Your completion of the questionnaire constitutes your informed consent to participate in this study.

APPENDIX B
Descriptive Statistics

Variable	Mean	Std Dev	Kurtosis	Skewness	Minimum	Maximum	N
PSQ1	3.80	1.04	1.14	-.88	0	5	1522
PSQ2	3.66	1.05	-.04	-.55	0	5	1517
PSQ3	3.40	1.18	-.32	-.42	0	5	1518
PSQ4	3.52	1.25	.99	-.97	0	5	1525
PSQ5	3.51	1.33	.96	-1.08	0	5	1524
PSQ6	3.66	1.20	1.52	-1.13	0	5	1527
PSQ7	3.66	1.40	.68	-1.12	0	5	1525
PSQ8	3.44	1.67	-.07	-1.03	0	5	1520
PSQ9	3.68	1.39	1.15	-1.26	0	5	1525
PSQ10	3.36	1.44	.42	-1.00	0	5	1521
PSQ11	4.19	.98	2.37	-1.41	0	5	1524
PSQ12	3.88	1.05	.89	-1.00	0	5	1521
PSQ13	3.61	1.22	-.32	-.71	0	5	1520
PSQ14	3.98	.96	.86	-.86	0	5	1516
PSQ15	3.72	1.10	1.69	-1.02	0	5	1524
PSQ16	3.59	1.12	1.53	-.94	0	5	1524
PSQ17	3.55	1.12	.38	-.65	0	5	1524
PSQ18	3.58	1.12	.48	-.73	0	5	1519
PSQ19	3.44	1.20	.11	-.59	0	5	1521
PSQ20	3.42	1.42	.07	-.85	0	5	1523
PSQ21	3.35	1.32	.87	-1.01	0	5	1523
PSQ22	3.32	1.47	.32	-1.01	0	5	1525
PSQ23	3.77	1.06	.52	-.73	0	5	1525
PSQ24	3.56	1.15	.19	-.60	0	5	1525
PSQ25	3.41	1.18	1.37	-.98	0	5	1529
PSQ26	3.67	1.08	.77	-.77	0	5	1532
PSQ27	3.54	1.16	1.25	-.95	0	5	1527
PSQ28	3.49	1.20	.25	-.69	0	5	1526
PF1	4.04	1.04	1.35	-1.18	0	5	1524
PF2	3.95	1.04	.57	-.94	0	5	1518
PF3	3.87	1.04	.35	-.83	0	5	1517
PF4	3.49	1.16	-.38	-.47	0	5	1529
PF5	3.53	1.18	-.30	-.56	0	5	1524
PF6	3.92	1.10	1.02	-1.05	0	5	1521
PF7	3.44	1.67	-.07	-1.03	0	5	1520
PF8	3.89	1.01	1.22	-.98	0	5	1525
PF9	3.53	1.19	-.21	-.60	0	5	1523
PMQ1	3.73	1.05	.36	-.70	0	5	1518
PMQ2	3.70	1.07	.40	-.70	0	5	1512
PMQ3	3.20	1.37	.20	-.76	0	5	1512
PMQ4	3.61	1.09	.59	-.70	0	5	1517
PMQ5	3.84	1.00	.73	-.83	0	5	1518
PMQ6	3.54	1.06	.32	-.54	0	5	1523
PMQ7	3.88	1.00	.81	-.86	0	5	1517
PMQ8	4.03	.94	1.05	-.94	0	5	1519
PMQ9	3.50	1.14	-.03	-.52	0	5	1523
PV1	3.99	.93	1.85	-1.11	0	5	1533
PV2	4.08	.91	1.76	-1.15	0	5	1528
PV3	3.17	1.19	-.33	-.35	0	5	1532
PV4	3.88	.95	.62	-.75	0	5	1535
PV5	3.98	.94	1.46	-.98	0	5	1531
PV6	3.92	.95	.78	-.85	0	5	1534
PV7	3.90	.92	.32	-.64	0	5	1533
PV8	3.88	.95	.71	-.76	0	5	1531
PV9	4.12	.90	1.50	-1.11	0	5	1530
PV10	4.15	.88	1.45	-1.10	0	5	1530
PV11	4.05	.94	1.38	-1.01	0	5	1532
PV12	4.05	.91	1.02	-.96	0	5	1529
PV13	4.09	.89	1.00	-.93	0	5	1531

Descriptive Statistics

PV14	3.48	1.15	-.25	-.48	0	5	1531
PV15	3.70	1.03	.15	-.57	0	5	1533
ATTR1	2.49	1.42	-.11	.72	1	7	1182
ATTR2	2.45	1.43	-.01	.78	1	7	1209
ATTR3	2.40	1.40	-.09	.77	1	7	1121
GSHPINR1	1.78	1.28	2.97	1.82	1	7	1111
GSHPINR2	1.71	1.25	3.22	1.91	1	7	1292
GSHPINT3	4.64	.61	3.93	-1.81	1	5	1511
GWOMINR1	2.06	1.48	1.41	1.44	1	7	1158
GWOMINR2	1.90	1.36	2.19	1.63	1	7	1198
GWOMINT3	4.41	.72	.56	-1.02	1	5	1518
GWOMFREQ	2.83	1.11	-.76	.55	1	5	1507
GPURPAST	2.50	.91	.07	.71	1	5	1487
GPURINT	2.24	.80	1.27	.87	1	5	1441
GENDER	1.87	.33	3.10	-2.26	1	2	1516
AGE	35.45	13.38	-.09	.65	13	82	1479
MARITAL	1.38	.49	-1.77	.48	1	2	1511
EDU	3.30	1.43	-1.16	.19	1	6	1513
INCOME	2.62	1.20	-.81	.32	1	5	1397
GLNGSHOP	4.43	.95	3.41	-1.92	1	5	1515

Descriptive Statistics

APPENDIX C
Multivariate Statistics

Value	Label	Value	Frequency	Percent	Valid Percent	Cum Percent
0		19	1.2	1.2	1.2	
1		21	1.4	1.4	2.6	
2		87	5.6	5.7	8.3	
3		418	27.1	27.5	35.8	
4		543	35.1	35.7	71.5	
5		434	28.1	28.5	100.0	
.		23	1.5	Missing		
	Total	1545	100.0	100.0		



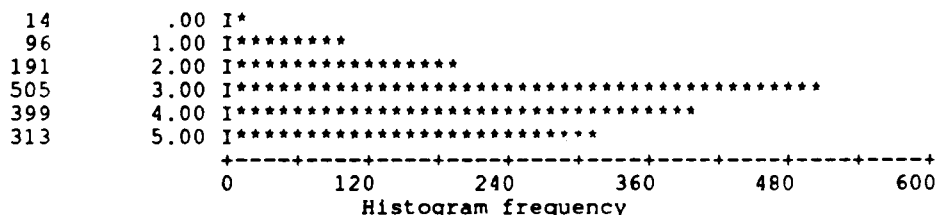
Value	Label	Value	Frequency	Percent	Valid Percent	Cum Percent
0			4	.3	.3	.3
1			49	3.2	3.2	3.5
2			131	8.5	8.6	12.1
3			451	29.2	29.7	41.9
4			520	33.7	34.3	76.1
5			362	23.4	23.9	100.0
.			28	1.8	Missing	
Total			1545	100.0	100.0	



PSQ3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	14	.9	.9	.9
	1	96	6.2	6.3	7.2
	2	191	12.4	12.6	19.8
	3	505	32.7	33.3	53.1
	4	399	25.8	26.3	79.4
	5	313	20.3	20.6	100.0
	.	27	1.7	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 12.00 occurrences

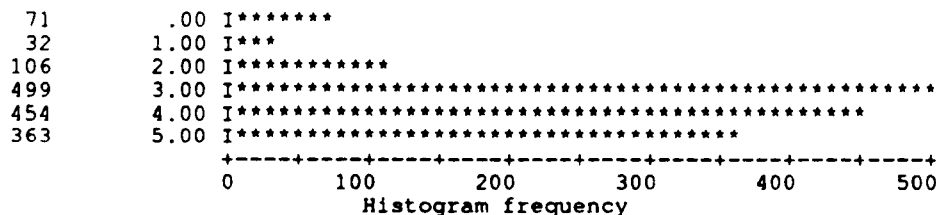


Valid cases 1518 Missing cases 27

PSQ4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	71	4.6	4.7	4.7
	1	32	2.1	2.1	6.8
	2	106	6.9	7.0	13.7
	3	499	32.3	32.7	46.4
	4	454	29.4	29.8	76.2
	5	363	23.5	23.8	100.0
	.	20	1.3	Missing	
	Total	1545	100.0	100.0	

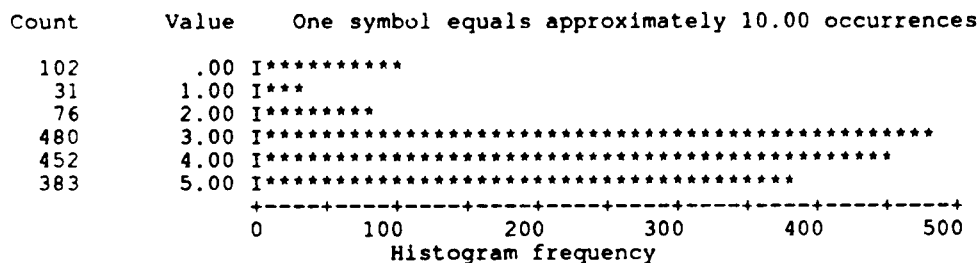
Count Value One symbol equals approximately 10.00 occurrences



Valid cases 1525 Missing cases 20

PSQ5

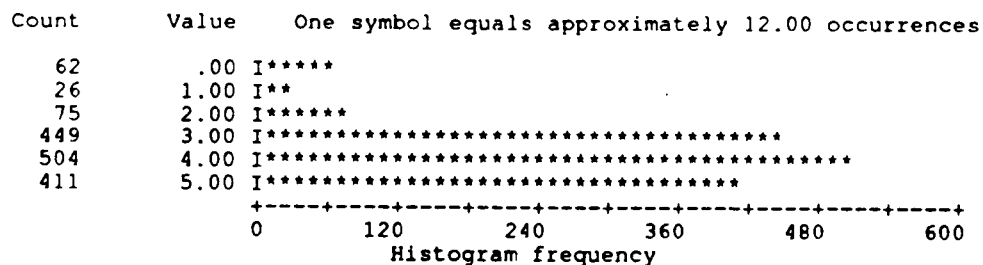
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	102	6.6	6.7	6.7
	1	31	2.0	2.0	8.7
	2	76	4.9	5.0	13.7
	3	480	31.1	31.5	45.2
	4	452	29.3	29.7	74.9
	5	383	24.8	25.1	100.0
	.	21	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1524 Missing cases 21

PSQ6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	62	4.0	4.1	4.1
	1	26	1.7	1.7	5.8
	2	75	4.9	4.9	10.7
	3	449	29.1	29.4	40.1
	4	504	32.6	33.0	73.1
	5	411	26.6	26.9	100.0
	.	18	1.2	Missing	
	Total	1545	100.0	100.0	

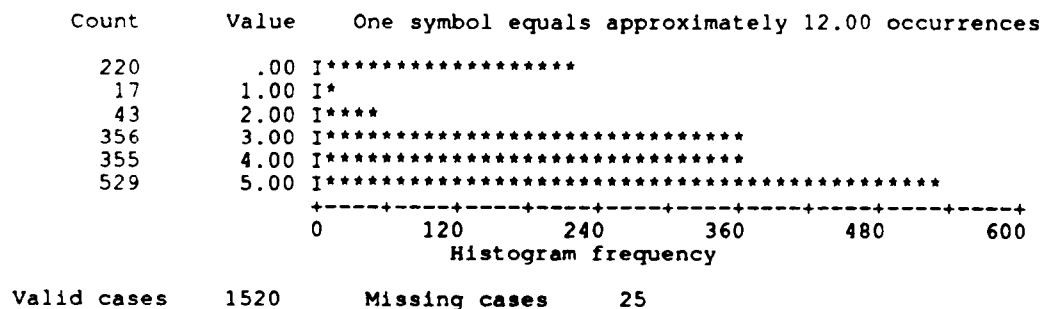


Valid cases 1527 Missing cases 18

Value	Label	Value	Frequency	Percent	Valid Percent	Cum Percent
0			92	6.0	6.0	6.0
1			48	3.1	3.1	9.2
2			100	6.5	6.6	15.7
3			331	21.4	21.7	37.4
4			429	27.8	28.1	65.6
5			525	34.0	34.4	100.0
.			20	1.3	Missing	
Total			1545	100.0	100.0	

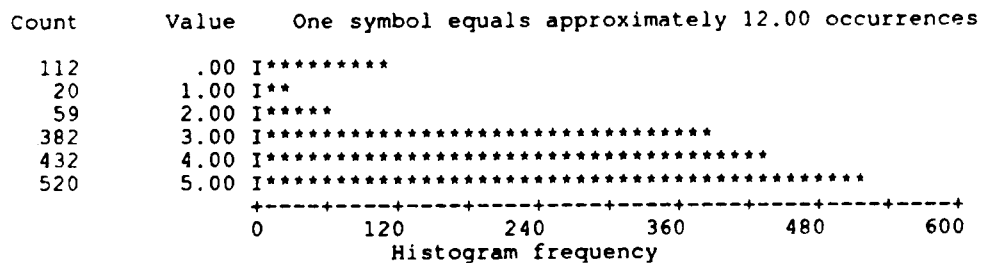


Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
0		220	14.2	14.5	14.5
1		17	1.1	1.1	15.6
2		43	2.8	2.8	18.4
3		356	23.0	23.4	41.8
4		355	23.0	23.4	65.2
5		529	34.2	34.8	100.0
.		25	1.6	Missing	
Total		1545	100.0	100.0	



PSQ9

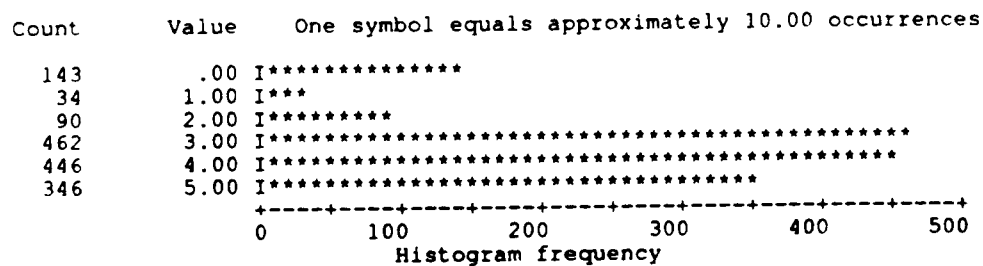
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	112	7.2	7.3	7.3
	1	20	1.3	1.3	8.7
	2	59	3.8	3.9	12.5
	3	382	24.7	25.0	37.6
	4	432	28.0	28.3	65.9
	5	520	33.7	34.1	100.0
	.	20	1.3	Missing	
	Total	1545	100.0	100.0	



Valid cases 1525 Missing cases 20

PSQ10

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	143	9.3	9.4	9.4
	1	34	2.2	2.2	11.6
	2	90	5.8	5.9	17.6
	3	462	29.9	30.4	47.9
	4	446	28.9	29.3	77.3
	5	346	22.4	22.7	100.0
	.	24	1.6	Missing	
	Total	1545	100.0	100.0	



Valid cases 1521 Missing cases 24

Value	Label	Value	Frequency	Percent	Valid Percent	Cum Percent
0		12	.8	.8	.8	
1		21	1.4	1.4	2.2	
2		45	2.9	3.0	5.1	
3		242	15.7	15.9	21.0	
4		477	30.9	31.3	52.3	
5		727	47.1	47.7	100.0	
.		21	1.4	Missing		
Total		1545	100.0	100.0		

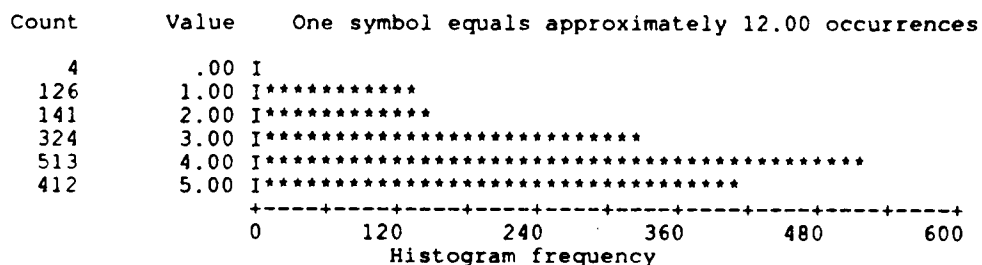


Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
0	8	.5	.5	.5	
1	49	3.2	3.2	3.7	
2	86	5.6	5.7	9.4	
3	308	19.9	20.2	29.7	
4	589	38.1	38.7	68.4	
5	481	31.1	31.6	100.0	
.	24	1.6	Missing		
Total	1545	100.0	100.0		



PSQ13

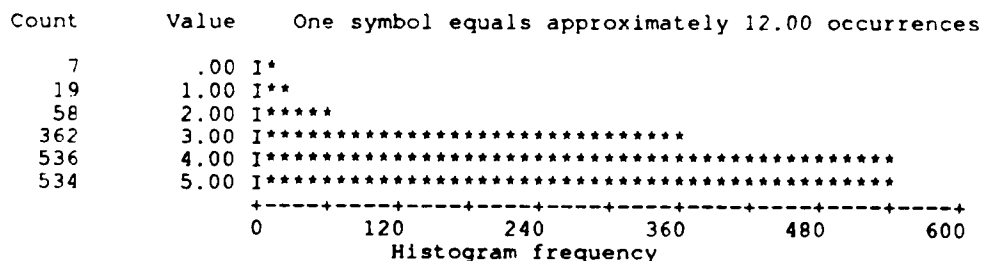
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	4	.3	.3	.3
	1	126	8.2	8.3	8.6
	2	141	9.1	9.3	17.8
	3	324	21.0	21.3	39.1
	4	513	33.2	33.7	72.9
	5	412	26.7	27.1	100.0
	.	25	1.6	Missing	
	Total	1545	100.0	100.0	



Valid cases 1520 Missing cases 25

PSQ14

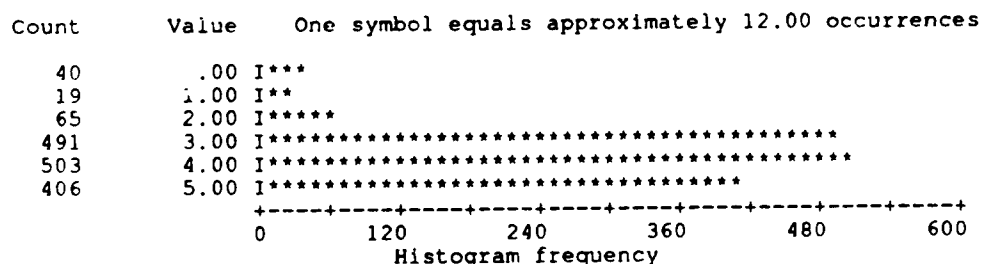
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	7	.5	.5	.5
	1	19	1.2	1.3	1.7
	2	58	3.8	3.8	5.5
	3	362	23.4	23.9	29.4
	4	536	34.7	35.4	64.8
	5	534	34.6	35.2	100.0
	.	29	1.9	Missing	
	Total	1545	100.0	100.0	



Valid cases 1516 Missing cases 29

PSQ15

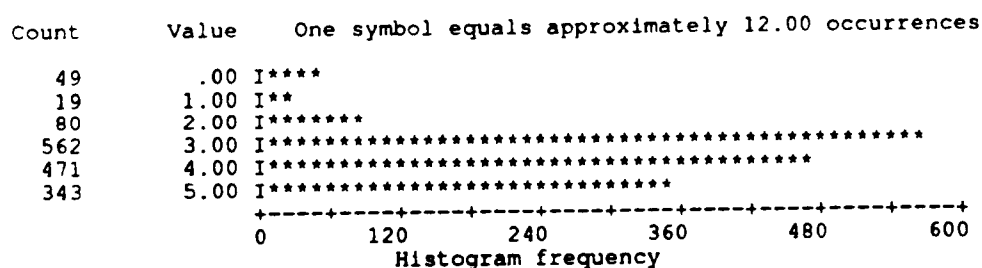
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	40	2.6	2.6	2.6
	1	19	1.2	1.2	3.9
	2	65	4.2	4.3	8.1
	3	491	31.8	32.2	40.4
	4	503	32.6	33.0	73.4
	5	406	26.3	26.6	100.0
	.	21	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1524 Missing cases 21

PSQ16

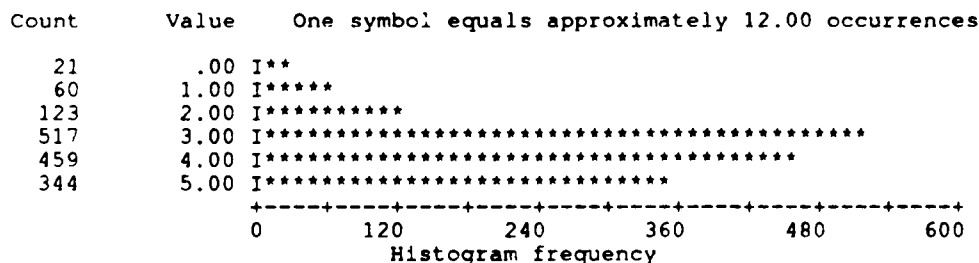
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	49	3.2	3.2	3.2
	1	19	1.2	1.2	4.5
	2	80	5.2	5.2	9.7
	3	562	36.4	36.9	46.6
	4	471	30.5	30.9	77.5
	5	343	22.2	22.5	100.0
	.	21	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1524 Missing cases 21

PSQ17

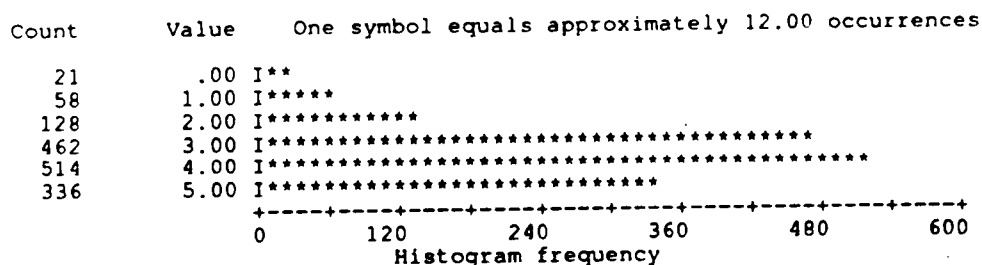
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	21	1.4	1.4	1.4
	1	60	3.9	3.9	5.3
	2	123	8.0	8.1	13.4
	3	517	33.5	33.9	47.3
	4	459	29.7	30.1	77.4
	5	344	22.3	22.6	100.0
	.	21	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1524 Missing cases 21

PSQ18

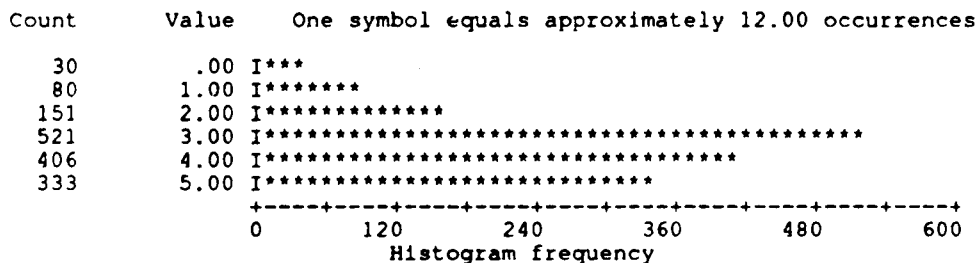
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	21	1.4	1.4	1.4
	1	58	3.8	3.8	5.2
	2	128	8.3	8.4	13.6
	3	462	29.9	30.4	44.0
	4	514	33.3	33.8	77.9
	5	336	21.7	22.1	100.0
	.	26	1.7	Missing	
	Total	1545	100.0	100.0	



Valid cases 1519 Missing cases 26

PSQ19

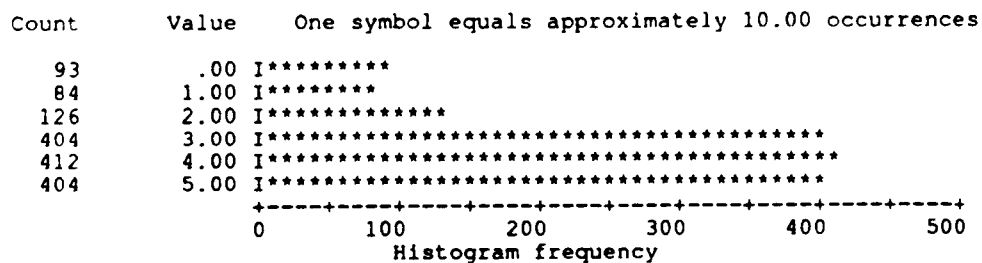
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	30	1.9	2.0	2.0
	1	80	5.2	5.3	7.2
	2	151	9.8	9.9	17.2
	3	521	33.7	34.3	51.4
	4	406	26.3	26.7	78.1
	5	333	21.6	21.9	100.0
	.	24	1.6	Missing	
	Total	1545	100.0	100.0	



Valid cases 1521 Missing cases 24

PSQ20

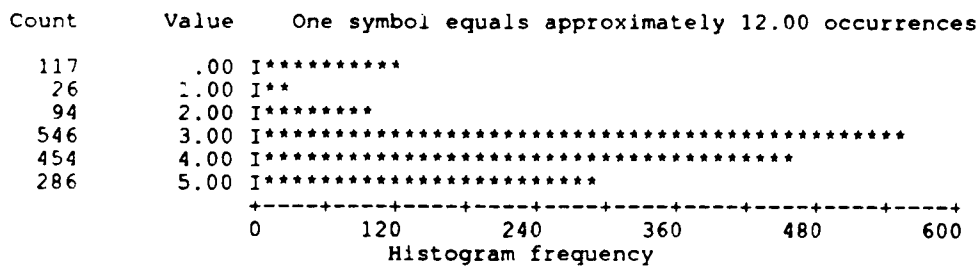
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	93	6.0	6.1	6.1
	1	84	5.4	5.5	11.6
	2	126	8.2	8.3	19.9
	3	404	26.1	26.5	46.4
	4	412	26.7	27.1	73.5
	5	404	26.1	26.5	100.0
	.	22	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1523 Missing cases 22

PSQ21

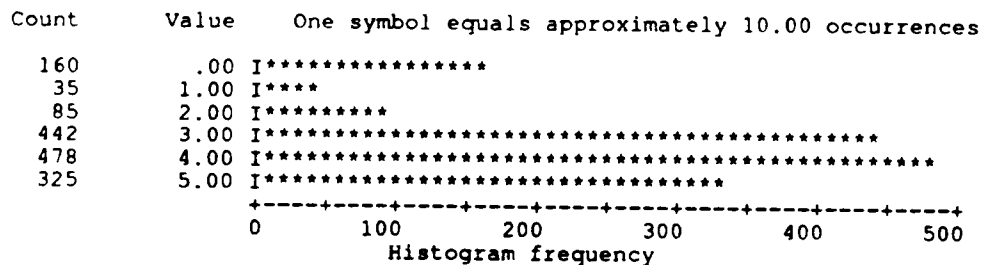
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	117	7.6	7.7	7.7
	1	26	1.7	1.7	9.4
	2	94	6.1	6.2	15.6
	3	546	35.3	35.9	51.4
	4	454	29.4	29.8	81.2
	5	286	18.5	18.8	100.0
	.	22	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1523 Missing cases 22

PSQ22

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	160	10.4	10.5	10.5
	1	35	2.3	2.3	12.8
	2	85	5.5	5.6	18.4
	3	442	28.6	29.0	47.3
	4	478	30.9	31.3	78.7
	5	325	21.0	21.3	100.0
	.	20	1.3	Missing	
	Total	1545	100.0	100.0	

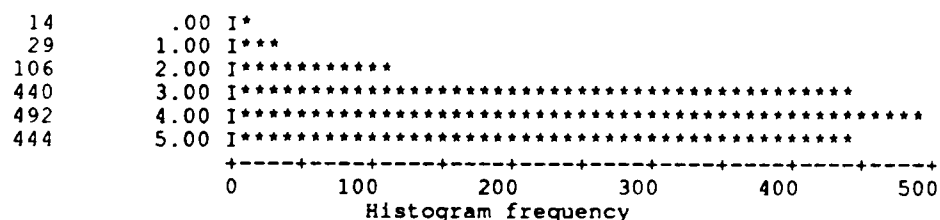


Valid cases 1525 Missing cases 20

PSQ23

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	14	.9	.9	.9
	1	29	1.9	1.9	2.8
	2	106	6.9	7.0	9.8
	3	440	28.5	28.9	38.6
	4	492	31.8	32.3	70.9
	5	444	28.7	29.1	100.0
	.	20	1.3	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 10.00 occurrences

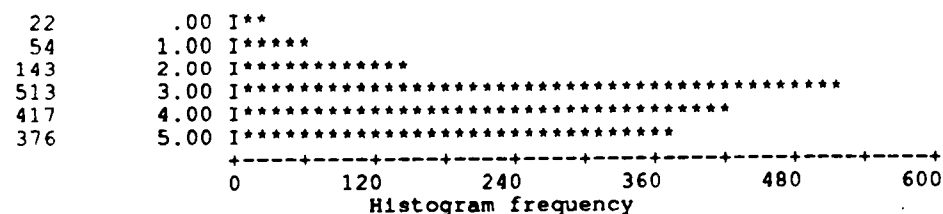


Valid cases 1525 Missing cases 20

PSQ24

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	22	1.4	1.4	1.4
	1	54	3.5	3.5	5.0
	2	143	9.3	9.4	14.4
	3	513	33.2	33.6	48.0
	4	417	27.0	27.3	75.3
	5	376	24.3	24.7	100.0
	.	20	1.3	Missing	
	Total	1545	100.0	100.0	

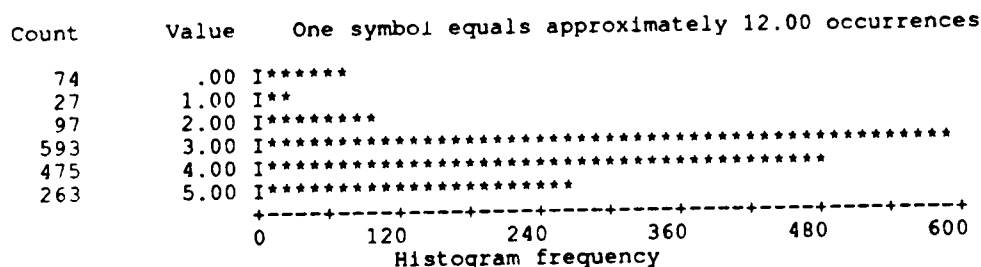
Count Value One symbol equals approximately 12.00 occurrences



Valid cases 1525 Missing cases 20

PSQ25

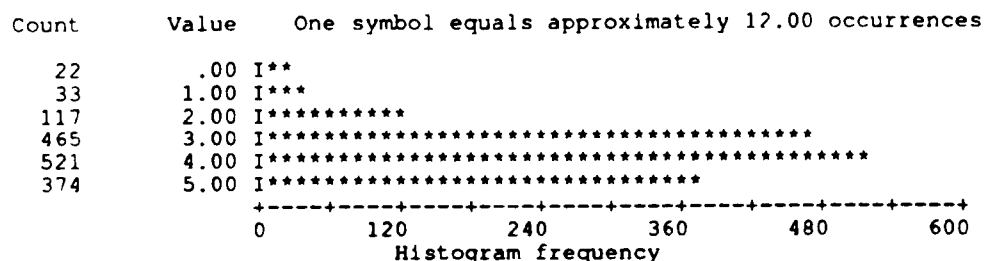
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	74	4.8	4.8	4.8
	1	27	1.7	1.8	6.6
	2	97	6.3	6.3	12.9
	3	593	38.4	38.8	51.7
	4	475	30.7	31.1	82.8
	5	263	17.0	17.2	100.0
	.	16	1.0	Missing	
	Total	1545	100.0	100.0	



Valid cases 1529 Missing cases 16

PSQ26

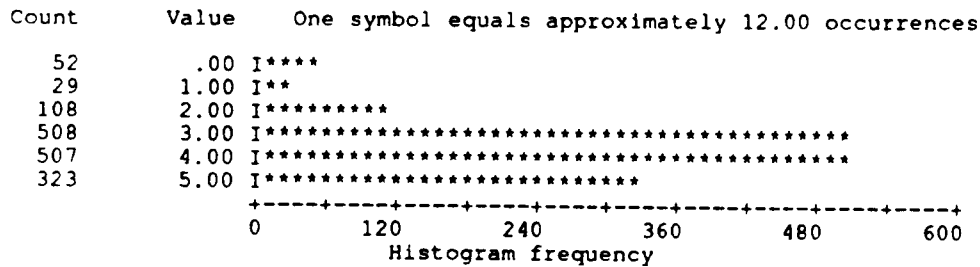
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	22	1.4	1.4	1.4
	1	33	2.1	2.2	3.6
	2	117	7.6	7.6	11.2
	3	465	30.1	30.4	41.6
	4	521	33.7	34.0	75.6
	5	374	24.2	24.4	100.0
	.	13	.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1532 Missing cases 13

PSQ27

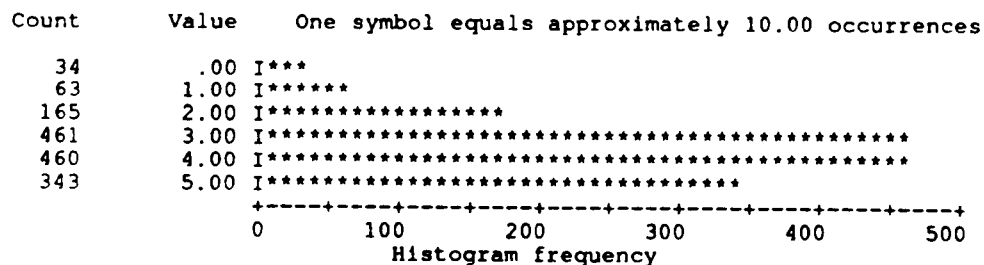
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	52	3.4	3.4	3.4
	1	29	1.9	1.9	5.3
	2	108	7.0	7.1	12.4
	3	508	32.9	33.3	45.6
	4	507	32.8	33.2	78.8
	5	323	20.9	21.2	100.0
	.	18	1.2	Missing	
	Total	1545	100.0	100.0	



Valid cases 1527 Missing cases 18

PSQ28

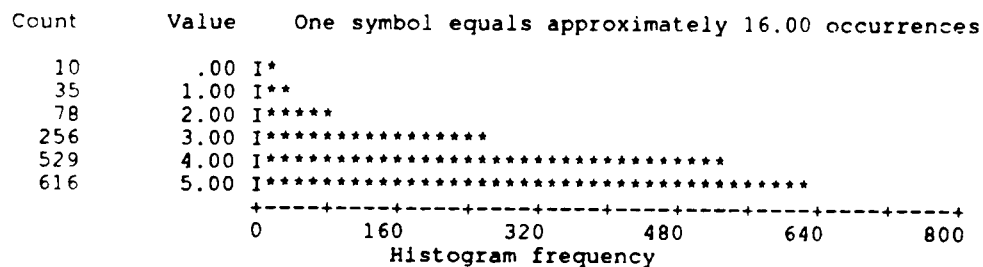
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	34	2.2	2.2	2.2
	1	63	4.1	4.1	6.4
	2	165	10.7	10.8	17.2
	3	461	29.8	30.2	47.4
	4	460	29.8	30.1	77.5
	5	343	22.2	22.5	100.0
	.	19	1.2	Missing	
	Total	1545	100.0	100.0	



Valid cases 1526 Missing cases 19

PP1

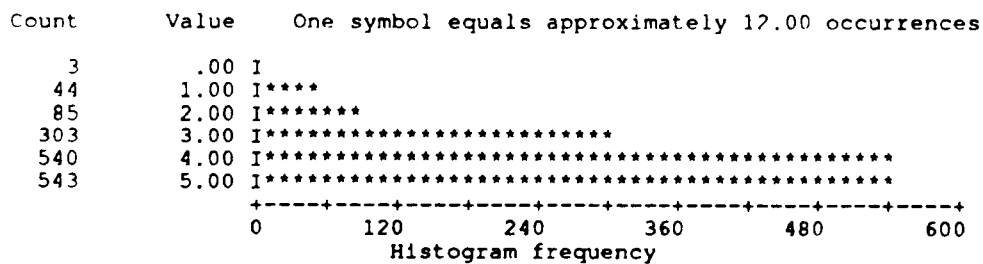
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	10	.6	.7	.7
	1	35	2.3	2.3	3.0
	2	78	5.0	5.1	8.1
	3	256	16.6	16.8	24.9
	4	529	34.2	34.7	59.6
	5	616	39.9	40.4	100.0
	.	21	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1524 Missing cases 21

PP2

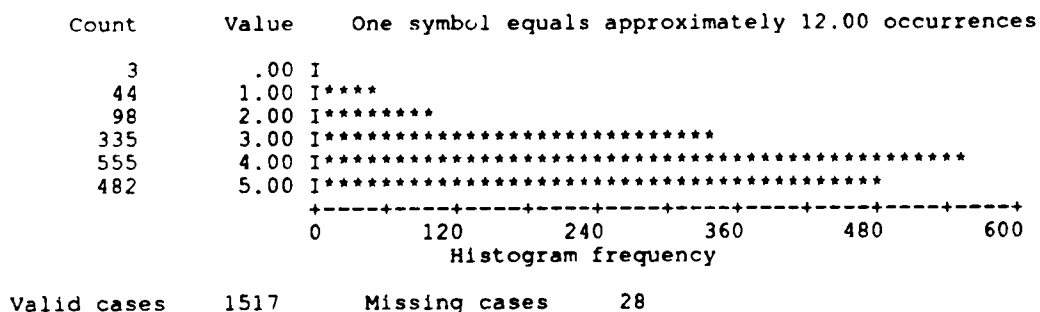
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	3	.2	.2	.2
	1	44	2.8	2.9	3.1
	2	85	5.5	5.6	8.7
	3	303	19.6	20.0	28.7
	4	540	35.0	35.6	64.2
	5	543	35.1	35.8	100.0
	.	27	1.7	Missing	
	Total	1545	100.0	100.0	



Valid cases 1518 Missing cases 27

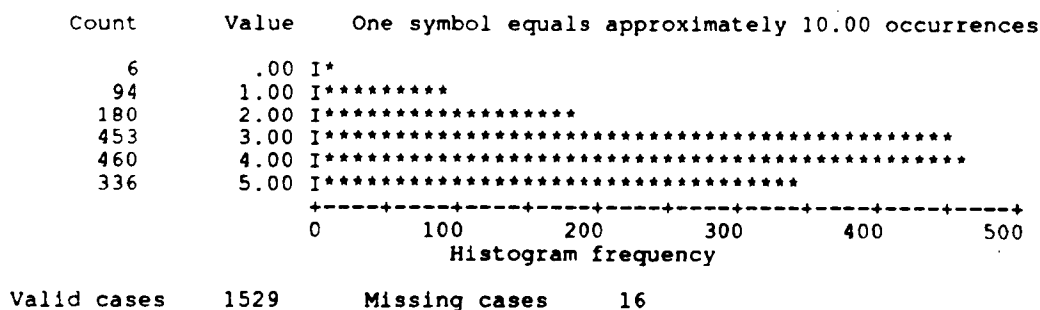
PF3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	3	.2	.2	.2
	1	44	2.8	2.9	3.1
	2	98	6.3	6.5	9.6
	3	335	21.7	22.1	31.6
	4	555	35.9	36.6	68.2
	5	482	31.2	31.8	100.0
	.	28	1.8	Missing	
	Total	1545	100.0	100.0	



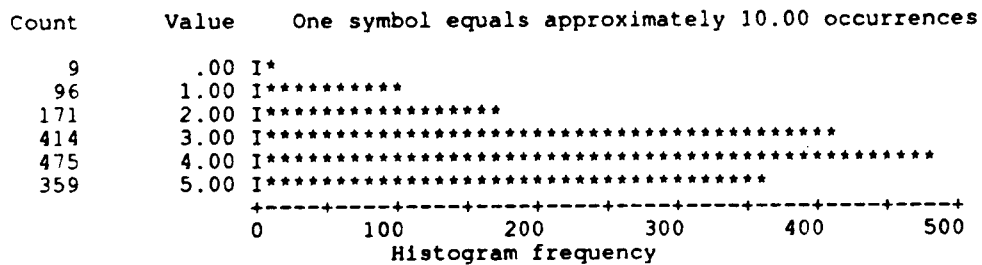
PF4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	6	.4	.4	.4
	1	94	6.1	6.1	6.5
	2	180	11.7	11.8	18.3
	3	453	29.3	29.6	47.9
	4	460	29.8	30.1	78.0
	5	336	21.7	22.0	100.0
	.	16	1.0	Missing	
	Total	1545	100.0	100.0	



PP5

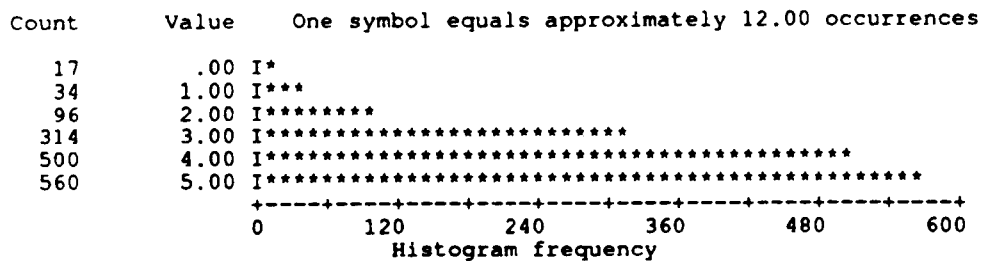
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	9	.6	.6	.6
	1	96	6.2	6.3	6.9
	2	171	11.1	11.2	18.1
	3	414	26.8	27.2	45.3
	4	475	30.7	31.2	76.4
	5	359	23.2	23.6	100.0
	.	21	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1524 Missing cases 21

PP6

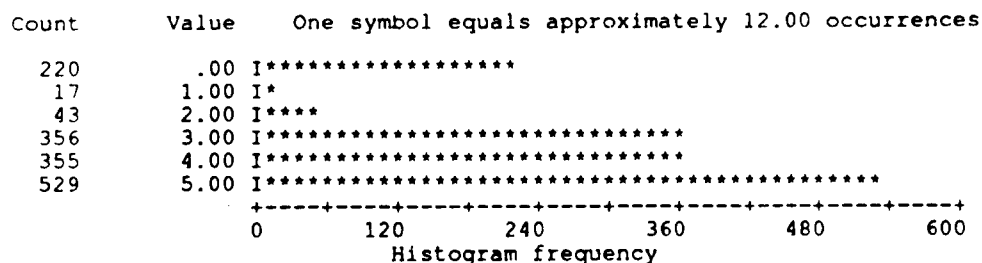
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	17	1.1	1.1	1.1
	1	34	2.2	2.2	3.4
	2	96	6.2	6.3	9.7
	3	314	20.3	20.6	30.3
	4	500	32.4	32.9	63.2
	5	560	36.2	36.8	100.0
	.	24	1.6	Missing	
	Total	1545	100.0	100.0	



Valid cases 1521 Missing cases 24

PP7

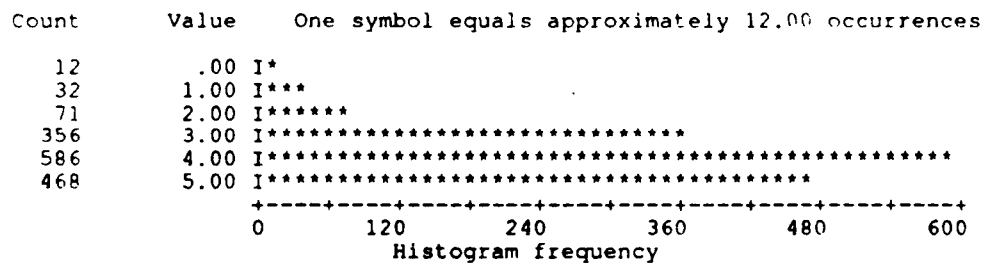
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	220	14.2	14.5	14.5
	1	17	1.1	1.1	15.6
	2	43	2.8	2.8	18.4
	3	356	23.0	23.4	41.8
	4	355	23.0	23.4	65.2
	5	529	34.2	34.8	100.0
	.	25	1.6	Missing	
	Total	1545	100.0	100.0	



Valid cases 1520 Missing cases 25

PP8

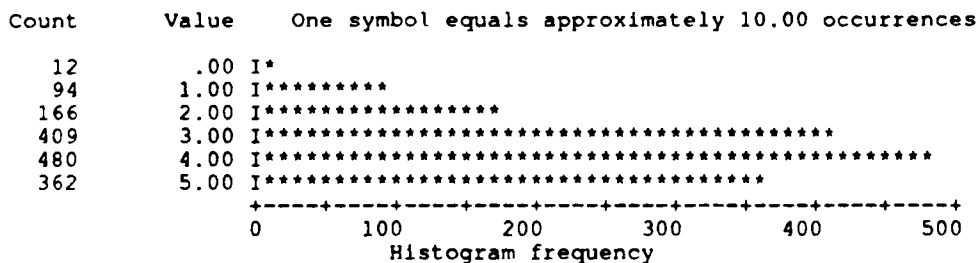
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	12	.8	.8	.8
	1	32	2.1	2.1	2.9
	2	71	4.6	4.7	7.5
	3	356	23.0	23.3	30.9
	4	586	37.9	38.4	69.3
	5	468	30.3	30.7	100.0
	.	20	1.3	Missing	
	Total	1545	100.0	100.0	



Valid cases 1525 Missing cases 20

PP9

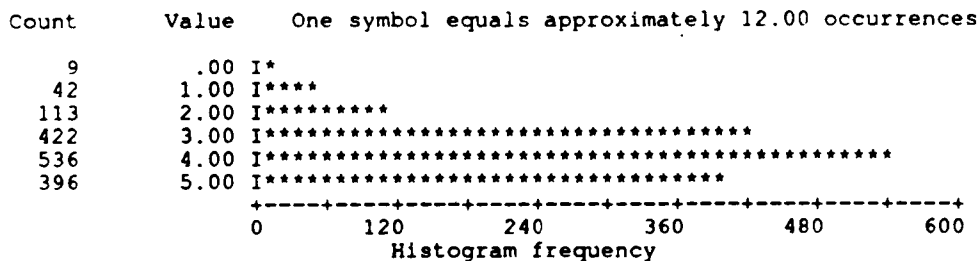
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	12	.8	.8	.8
	1	94	6.1	6.2	7.0
	2	166	10.7	10.9	17.9
	3	409	26.5	26.9	44.7
	4	480	31.1	31.5	76.2
	5	362	23.4	23.8	100.0
	.	22	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1523 Missing cases 22

PMQ1

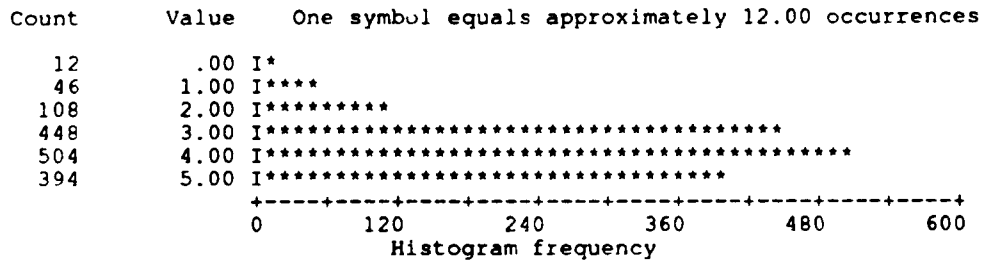
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	9	.6	.6	.6
	1	42	2.7	2.8	3.4
	2	113	7.3	7.4	10.8
	3	422	27.3	27.8	38.6
	4	536	34.7	35.3	73.9
	5	396	25.6	26.1	100.0
	.	27	1.7	Missing	
	Total	1545	100.0	100.0	



Valid cases 1518 Missing cases 27

PMQ2

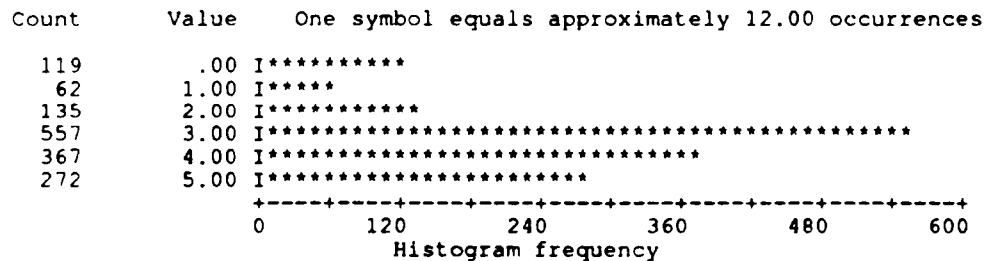
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	12	.8	.8	.8
	1	46	3.0	3.0	3.8
	2	108	7.0	7.1	11.0
	3	448	29.0	29.6	40.6
	4	504	32.6	33.3	73.9
	5	394	25.5	26.1	100.0
	.	33	2.1	Missing	
	Total	1545	100.0	100.0	



Valid cases 1512 Missing cases 33

PMQ3

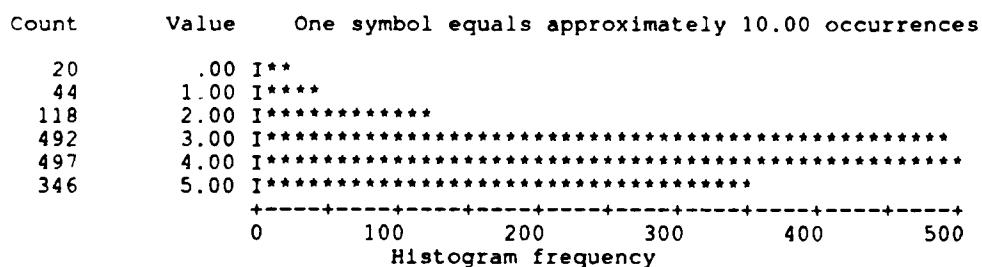
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	119	7.7	7.9	7.9
	1	62	4.0	4.1	12.0
	2	135	8.7	8.9	20.9
	3	557	36.1	36.8	57.7
	4	367	23.8	24.3	82.0
	5	272	17.6	18.0	100.0
	.	33	2.1	Missing	
	Total	1545	100.0	100.0	



Valid cases 1512 Missing cases 33

PMQ4

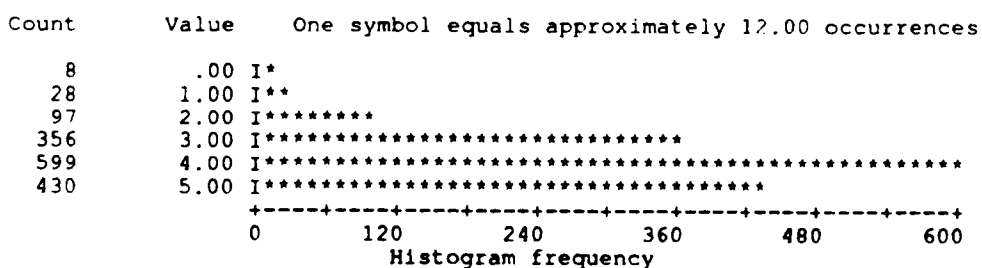
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	20	1.3	1.3	1.3
	1	44	2.8	2.9	4.2
	2	118	7.6	7.8	12.0
	3	492	31.8	32.4	44.4
	4	497	32.2	32.8	77.2
	5	346	22.4	22.8	100.0
	.	28	1.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1517 Missing cases 28

PMQ5

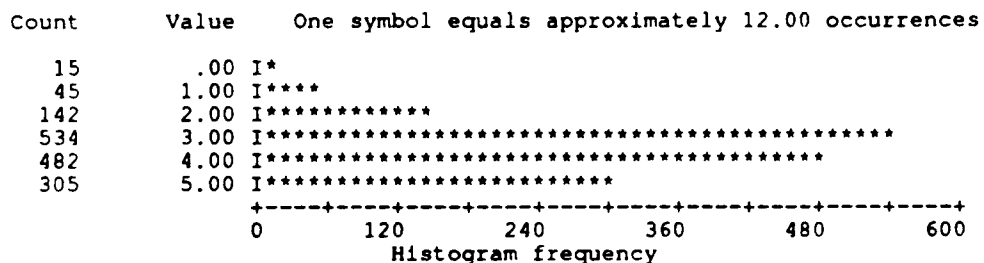
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	8	.5	.5	.5
	1	28	1.8	1.8	2.4
	2	97	6.3	6.4	8.8
	3	356	23.0	23.5	32.2
	4	599	38.8	39.5	71.7
	5	430	27.8	28.3	100.0
	.	27	1.7	Missing	
	Total	1545	100.0	100.0	



Valid cases 1518 Missing cases 27

PMQ6

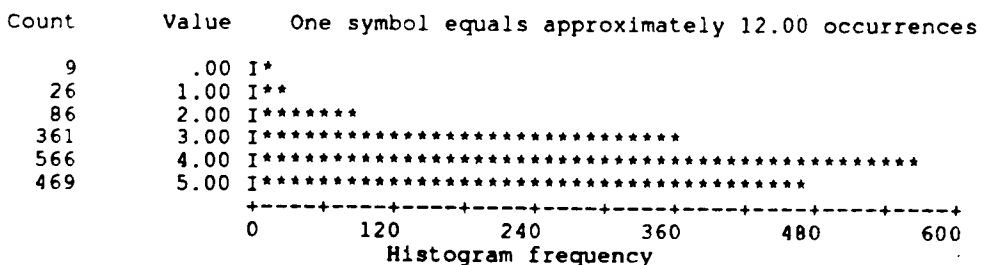
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	15	1.0	1.0	1.0
	1	45	2.9	3.0	3.9
	2	142	9.2	9.3	13.3
	3	534	34.6	35.1	48.3
	4	482	31.2	31.6	80.0
	5	305	19.7	20.0	100.0
	.	22	1.4	Missing	
	Total	1545	100.0	100.0	



Valid cases 1523 Missing cases 22

PMQ7

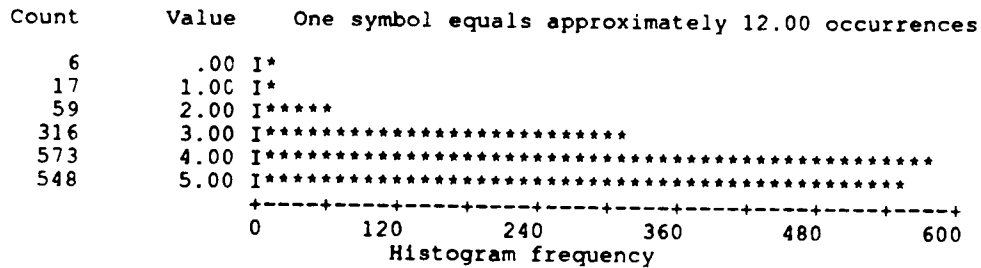
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	9	.6	.6	.6
	1	26	1.7	1.7	2.3
	2	86	5.6	5.7	8.0
	3	361	23.4	23.8	31.8
	4	566	36.6	37.3	69.1
	5	469	30.4	30.9	100.0
	.	28	1.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1517 Missing cases 28

PMQ8

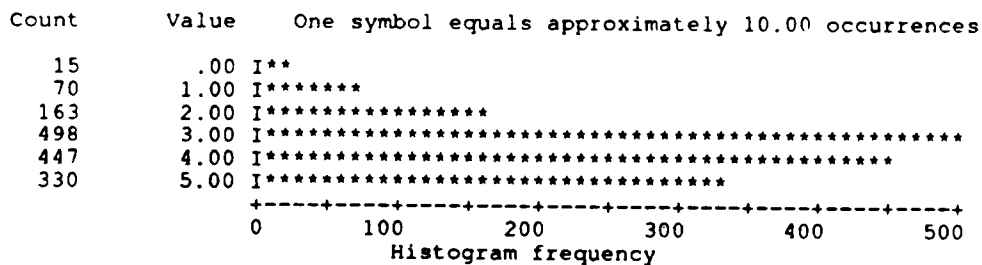
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	6	.4	.4	.4
	1	17	1.1	1.1	1.5
	2	59	3.8	3.9	5.4
	3	316	20.5	20.8	26.2
	4	573	37.1	37.7	63.9
	5	548	35.5	36.1	100.0
	.	26	1.7	Missing	
	Total	1545	100.0	100.0	



Valid cases 1519 Missing cases 26

PMQ9

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	15	1.0	1.0	1.0
	1	70	4.5	4.6	5.6
	2	163	10.6	10.7	16.3
	3	498	32.2	32.7	49.0
	4	447	28.9	29.3	78.3
	5	330	21.4	21.7	100.0
	.	22	1.4	Missing	
	Total	1545	100.0	100.0	

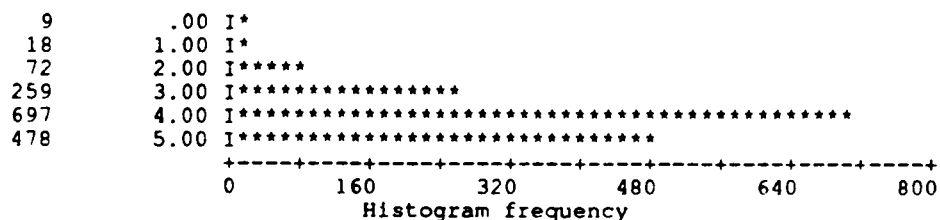


Valid cases 1523 Missing cases 22

PV1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	9	.6	.6	.6
	1	18	1.2	1.2	1.8
	2	72	4.7	4.7	6.5
	3	259	16.8	16.9	23.4
	4	697	45.1	45.5	68.8
	5	478	30.9	31.2	100.0
	.	12	.8	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 16.00 occurrences

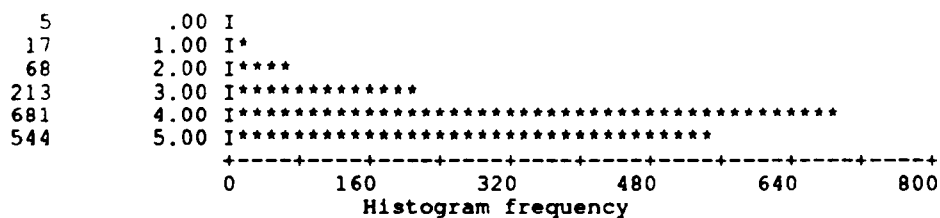


Valid cases 1533 Missing cases 12

PV2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	5	.3	.3	.3
	1	17	1.1	1.1	1.4
	2	68	4.4	4.5	5.9
	3	213	13.8	13.9	19.8
	4	681	44.1	44.6	64.4
	5	544	35.2	35.6	100.0
	.	17	1.1	Missing	
	Total	1545	100.0	100.0	

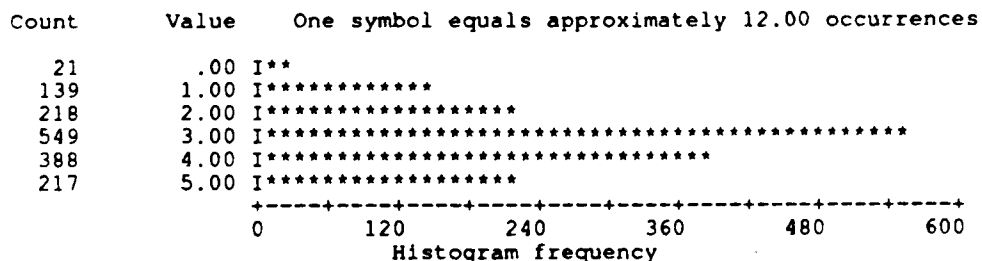
Count Value One symbol equals approximately 16.00 occurrences



Valid cases 1528 Missing cases 17

FV3

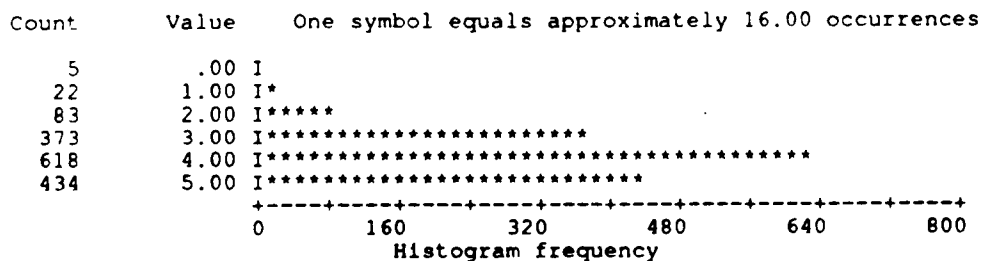
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	21	1.4	1.4	1.4
	1	139	9.0	9.1	10.4
	2	218	14.1	14.2	24.7
	3	549	35.5	35.8	60.5
	4	388	25.1	25.3	85.8
	5	217	14.0	14.2	100.0
	.	13	.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1532 Missing cases 13

FV4

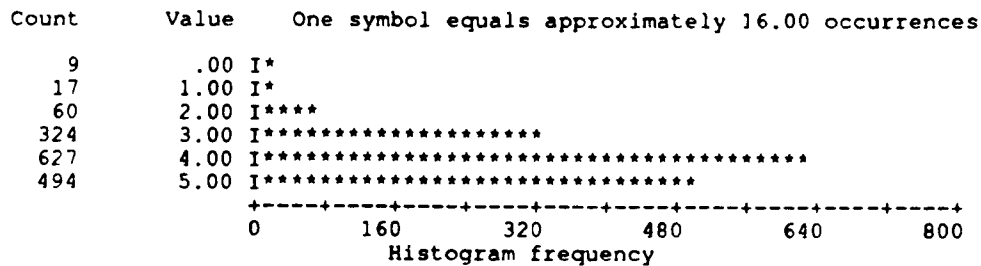
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	5	.3	.3	.3
	1	22	1.4	1.4	1.8
	2	83	5.4	5.4	7.2
	3	373	24.1	24.3	31.5
	4	618	40.0	40.3	71.7
	5	434	28.1	28.3	100.0
	.	10	.6	Missing	
	Total	1545	100.0	100.0	



Valid cases 1535 Missing cases 10

PV5

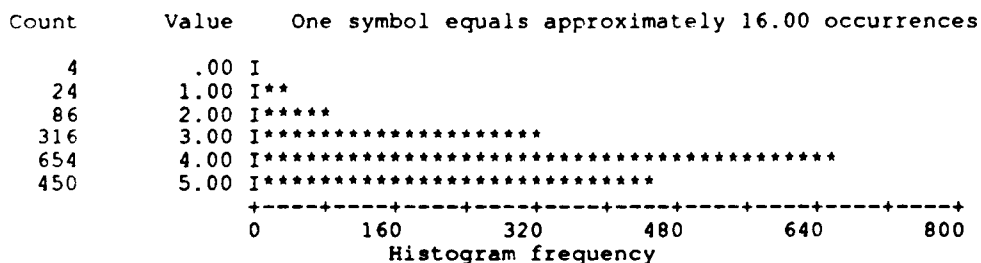
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	9	.6	.6	.6
	1	17	1.1	1.1	1.7
	2	60	3.9	3.9	5.6
	3	324	21.0	21.2	26.8
	4	627	40.6	41.0	67.7
	5	494	32.0	32.3	100.0
	.	14	.9	Missing	
	Total	1545	100.0	100.0	



Valid cases 1531 Missing cases 14

PV6

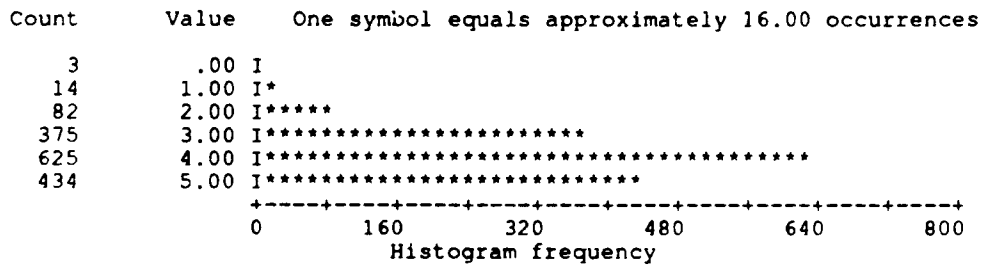
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	4	.3	.3	.3
	1	24	1.6	1.6	1.8
	2	86	5.6	5.6	7.4
	3	316	20.5	20.6	28.0
	4	654	42.3	42.6	70.7
	5	450	29.1	29.3	100.0
	.	11	.7	Missing	
	Total	1545	100.0	100.0	



Valid cases 1534 Missing cases 11

FV7

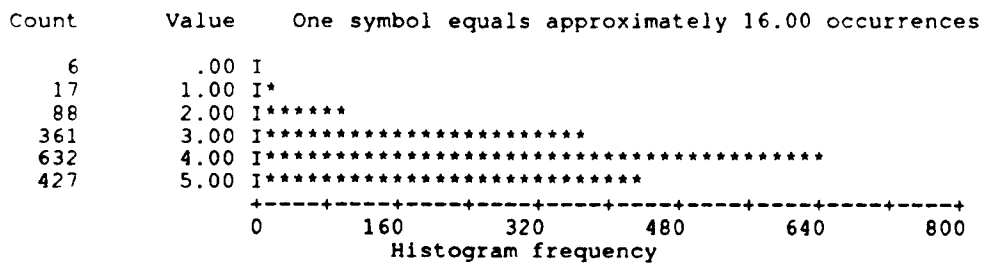
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	3	.2	.2	.2
	1	14	.9	.9	1.1
	2	82	5.3	5.3	6.5
	3	375	24.3	24.5	30.9
	4	625	40.5	40.8	71.7
	5	434	28.1	28.3	100.0
	.	12	.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1533 Missing cases 12

PV8

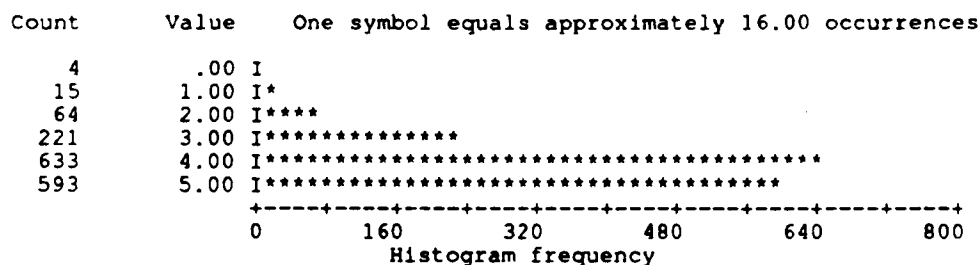
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	6	.4	.4	.4
	1	17	1.1	1.1	1.5
	2	88	5.7	5.7	7.3
	3	361	23.4	23.6	30.8
	4	632	40.9	41.3	72.1
	5	427	27.6	27.9	100.0
	.	14	.9	Missing	
	Total	1545	100.0	100.0	



Valid cases 1531 Missing cases 14

PV9

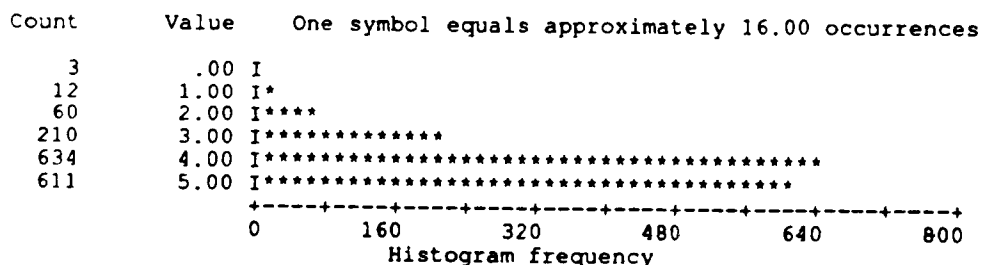
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	4	.3	.3	.3
	1	15	1.0	1.0	1.2
	2	64	4.1	4.2	5.4
	3	221	14.3	14.4	19.9
	4	633	41.0	41.4	61.2
	5	593	38.4	38.8	100.0
	.	15	1.0	Missing	
	Total	1545	100.0	100.0	



Valid cases 1530 Missing cases 15

PV10

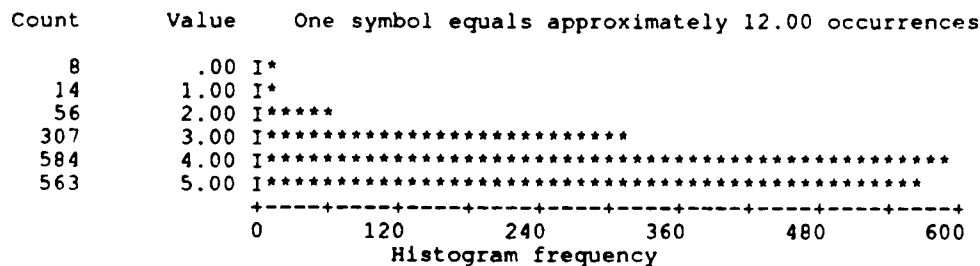
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	3	.2	.2	.2
	1	12	.8	.8	1.0
	2	60	3.9	3.9	4.9
	3	210	13.6	13.7	18.6
	4	634	41.0	41.4	60.1
	5	611	39.5	39.9	100.0
	.	15	1.0	Missing	
	Total	1545	100.0	100.0	



Valid cases 1530 Missing cases 15

PV11

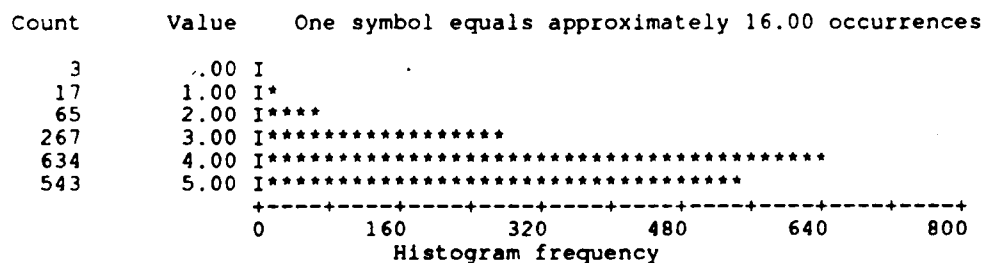
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	8	.5	.5	.5
	1	14	.9	.9	1.4
	2	56	3.6	3.7	5.1
	3	307	19.9	20.0	25.1
	4	584	37.8	38.1	63.3
	5	563	36.4	36.7	100.0
	.	13	.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1532 Missing cases 13

PV12

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	3	.2	.2	.2
	1	17	1.1	1.1	1.3
	2	65	4.2	4.3	5.6
	3	267	17.3	17.5	23.0
	4	634	41.0	41.5	64.5
	5	543	35.1	35.5	100.0
	.	16	1.0	Missing	
	Total	1545	100.0	100.0	

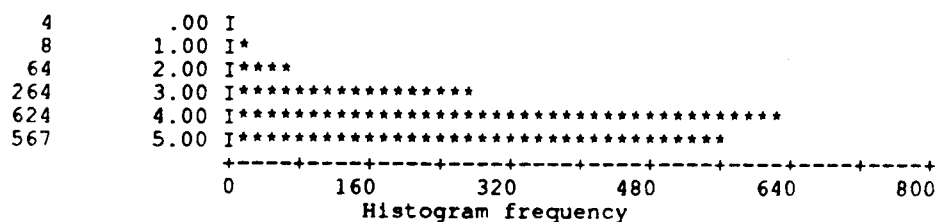


Valid cases 1529 Missing cases 16

PV13

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	4	.3	.3	.3
	1	8	.5	.5	.8
	2	64	4.1	4.2	5.0
	3	264	17.1	17.2	22.2
	4	624	40.4	40.8	63.0
	5	567	36.7	37.0	100.0
	.	14	.9	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 16.00 occurrences

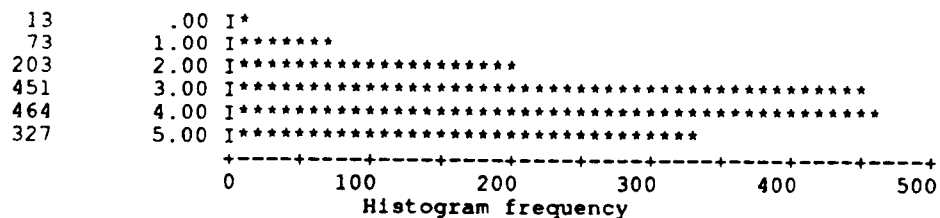


Valid cases 1531 Missing cases 14

PV14

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	13	.8	.8	.8
	1	73	4.7	4.8	5.6
	2	203	13.1	13.3	18.9
	3	451	29.2	29.5	48.3
	4	464	30.0	30.3	78.6
	5	327	21.2	21.4	100.0
	.	14	.9	Missing	
	Total	1545	100.0	100.0	

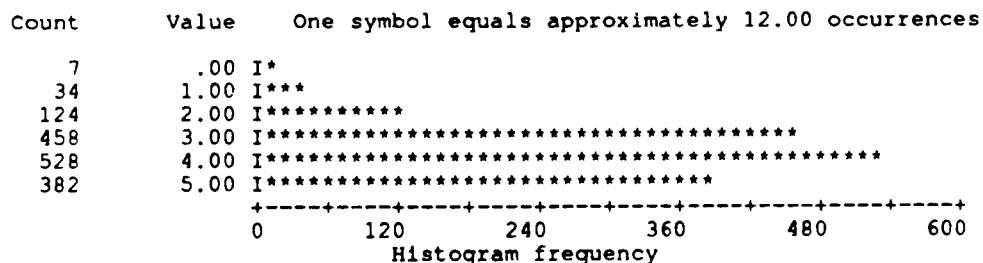
Count Value One symbol equals approximately 10.00 occurrences



Valid cases 1531 Missing cases 14

PV15

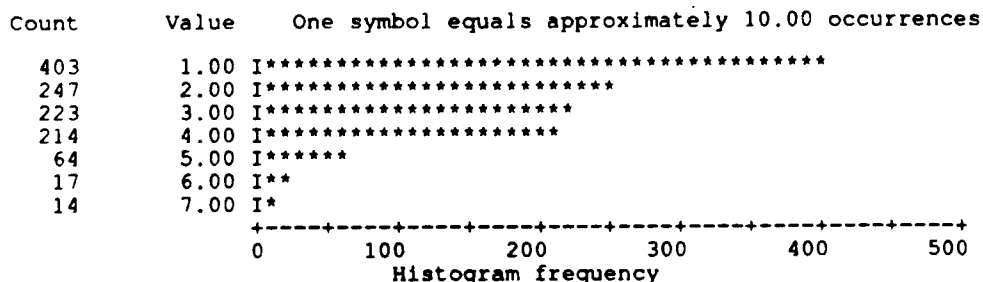
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0	7	.5	.5	.5
	1	34	2.2	2.2	2.7
	2	124	8.0	8.1	10.8
	3	458	29.6	29.9	40.6
	4	528	34.2	34.4	75.1
	5	382	24.7	24.9	100.0
	.	12	.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1533 Missing cases 12

ATTR1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	403	26.1	34.1	34.1
	2	247	16.0	20.9	55.0
	3	223	14.4	18.9	73.9
	4	214	13.9	18.1	92.0
	5	64	4.1	5.4	97.4
	6	17	1.1	1.4	98.8
	7	14	.9	1.2	100.0
	.	363	23.5	Missing	
	Total	1545	100.0	100.0	

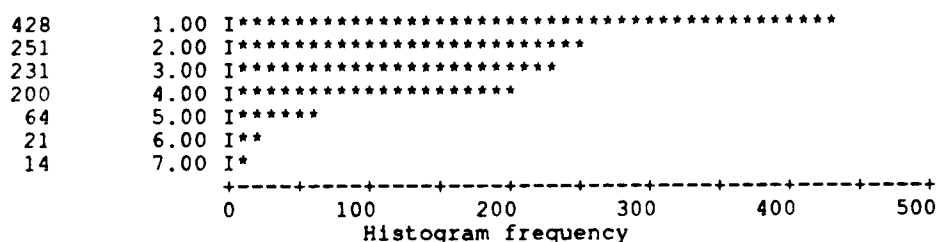


Valid cases 1182 Missing cases 363

ATTR2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	428	27.7	35.4	35.4
	2	251	16.2	20.8	56.2
	3	231	15.0	19.1	75.3
	4	200	12.9	16.5	91.8
	5	64	4.1	5.3	97.1
	6	21	1.4	1.7	98.8
	7	14	.9	1.2	100.0
	.	336	21.7	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 10.00 occurrences

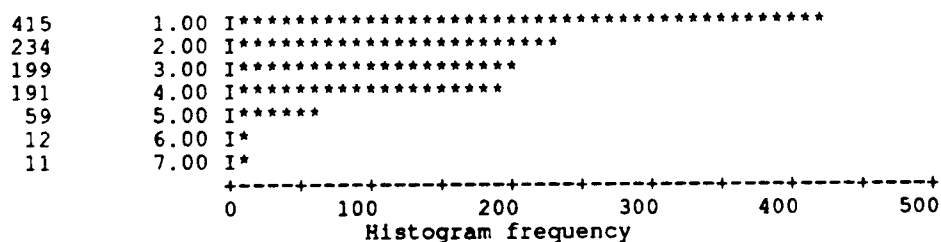


Valid cases 1209 Missing cases 336

ATTR3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	415	26.9	37.0	37.0
	2	234	15.1	20.9	57.9
	3	199	12.9	17.8	75.6
	4	191	12.4	17.0	92.7
	5	59	3.8	5.3	97.9
	6	12	.8	1.1	99.0
	7	11	.7	1.0	100.0
	.	424	27.4	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 10.00 occurrences



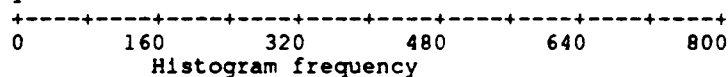
Valid cases 1121 Missing cases 424

GSHPINR1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	708	45.8	63.7	63.7
	2	164	10.6	14.8	78.5
	3	105	6.8	9.5	87.9
	4	79	5.1	7.1	95.0
	5	35	2.3	3.2	98.2
	6	8	.5	.7	98.9
	7	12	.8	1.1	100.0
	.	434	28.1	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 16.00 occurrences

708 1.00 I*****
 164 2.00 I*****
 105 3.00 I*****
 79 4.00 I*****
 35 5.00 I**
 8 6.00 I*
 12 7.00 I*



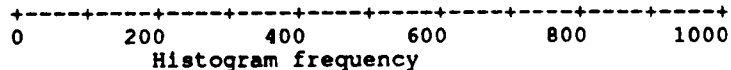
Valid cases 1111 Missing cases 434

GSHPINR2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	881	57.0	68.2	68.2
	2	150	9.7	11.6	79.8
	3	114	7.4	8.8	88.6
	4	87	5.6	6.7	95.4
	5	36	2.3	2.8	98.1
	6	14	.9	1.1	99.2
	7	10	.6	.8	100.0
	.	253	16.4	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 20.00 occurrences

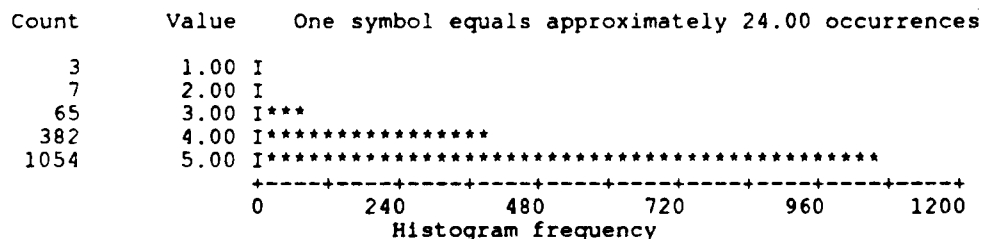
881 1.00 I*****
 150 2.00 I*****
 114 3.00 I*****
 87 4.00 I*****
 36 5.00 I**
 14 6.00 I*
 10 7.00 I*



Valid cases 1292 Missing cases 253

GSHPINT3

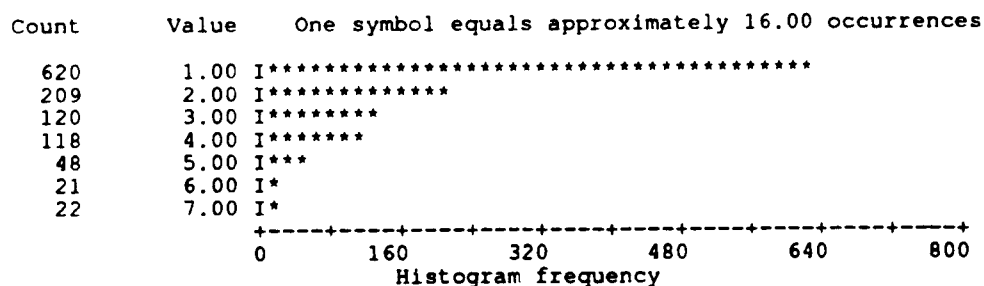
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	.2	.2	.2
	2	7	.5	.5	.7
	3	65	4.2	4.3	5.0
	4	382	24.7	25.3	30.2
	5	1054	68.2	69.8	100.0
	.	34	2.2	Missing	
	Total	1545	100.0	100.0	



Valid cases 1511 Missing cases 34

GWOMINR1

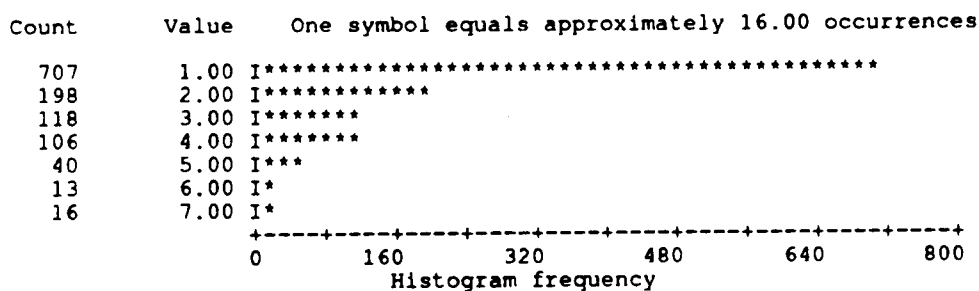
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	620	40.1	53.5	53.5
	2	209	13.5	18.0	71.6
	3	120	7.8	10.4	82.0
	4	118	7.6	10.2	92.1
	5	48	3.1	4.1	96.3
	6	21	1.4	1.8	98.1
	7	22	1.4	1.9	100.0
	.	387	25.0	Missing	
	Total	1545	100.0	100.0	



Valid cases 1158 Missing cases 387

GWOMINR2

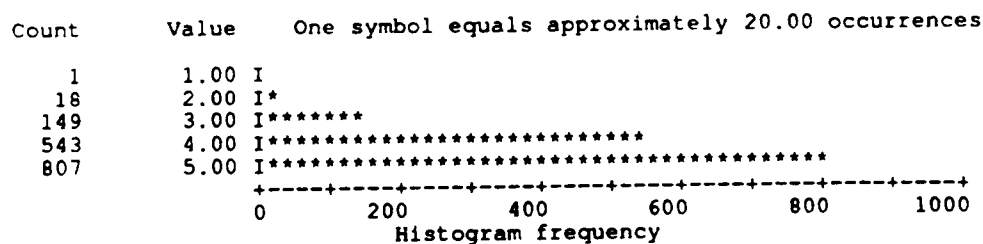
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	707	45.8	59.0	59.0
	2	198	12.8	16.5	75.5
	3	118	7.6	9.8	85.4
	4	106	6.9	8.8	94.2
	5	40	2.6	3.3	97.6
	6	13	.8	1.1	98.7
	7	16	1.0	1.3	100.0
	.	347	22.5	Missing	
	Total	1545	100.0	100.0	



Valid cases 1198 Missing cases 347

GWOMINT3

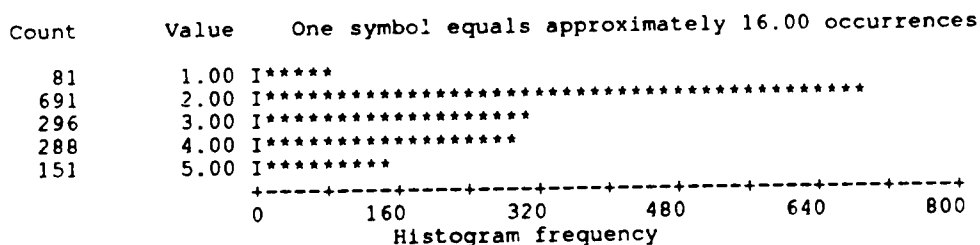
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.1	.1	.1
	2	18	1.2	1.2	1.3
	3	149	9.6	9.8	11.1
	4	543	35.1	35.8	46.8
	5	807	52.2	53.2	100.0
	.	27	1.7	Missing	
	Total	1545	100.0	100.0	



Valid cases 1518 Missing cases 27

GWOMFREQ

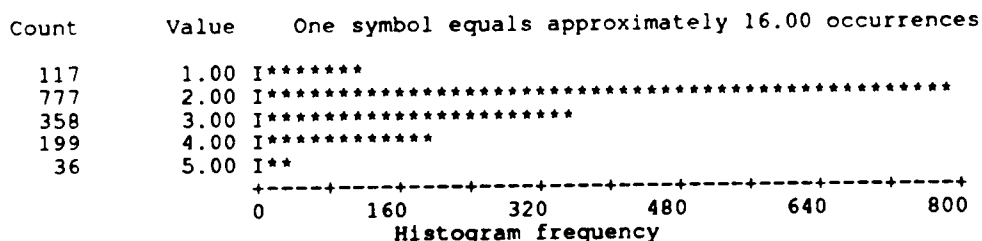
Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	81	5.2	5.4	5.4
	2	691	44.7	45.9	51.2
	3	296	19.2	19.6	70.9
	4	288	18.6	19.1	90.0
	5	151	9.8	10.0	100.0
	.	38	2.5	Missing	
	Total	1545	100.0	100.0	



Valid cases 1507 Missing cases 38

GFURPAST

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	117	7.6	7.9	7.9
	2	777	50.3	52.3	60.1
	3	358	23.2	24.1	84.2
	4	199	12.9	13.4	97.6
	5	36	2.3	2.4	100.0
	.	58	3.8	Missing	
	Total	1545	100.0	100.0	



Valid cases 1487 Missing cases 58

GPURINT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	189	12.2	13.1	13.1
	2	841	54.4	58.4	71.5
	3	309	20.0	21.4	92.9
	4	81	5.2	5.6	98.5
	5	21	1.4	1.5	100.0
	.	104	6.7	Missing	
	Total	1545	100.0	100.0	

Count Value One symbol equals approximately 20.00 occurrences

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189      1.00 I*****
841      2.00 I*****
309      3.00 I*****
81       4.00 I****
21       5.00 I*
+-----+-----+-----+-----+-----+
0          200      400      600      800     1000
Histogram frequency

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Valid cases 1441 Missing cases 104

VITA

Dayle Ingerick Thorpe was born in Canton, Pennsylvania on March 9, 1948. In 1970, she received her Bachelor of Science degree in Fashion Merchandising from Florida State University. After graduation, she worked for ten years in the retail industry. In 1980, she returned to Florida State University and received her Master of Science degree in 1982. In July 1982, she married Steven Ray Thorpe. She received her Master of Business Administration degree from Mercer University in 1984. After working in the health care industry for seven years, she entered the University of Tennessee in January, 1990 and received a Doctor of Philosophy degree in Business Administration in December, 1995. During her doctoral program, she published articles in the *Journal of the Academy of Marketing Science*, the *Journal of Customer Satisfaction/Dissatisfaction and Complaining Behavior*, and the *Service Industries Journal*, as well as several proceedings.